

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12026 Entry Year 2021 Acreage: 2,966

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2019-08-04

Stand Examiner: Andrew Church

Legal Description:

T43N, R27W, Sections 1, 2, 11-13, 24

Identified Planning Goals:

Optimize sustainable timber production, enhance wildlife habitat and protect riparian areas.

Soil and topography:

The majority of the upland is dominated by Emmet fine sandy loams. This soil type is well drained. Other minor upland soils include Pemene fine sandy loam, and Mancelona loamy sand. Topography is gently rolling hills. Lowland types are primarily Cathro mucks, with some Greenwood & Dawson peats.

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

Predominantly state-owned land with only a few private parcels used by hunters, fishermen, campers, and trappers. State land surrounds most of the compartment boundary.

Unique Natural Features:

North Branch of Ford River. Esker on north end of compartment.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

Possible Type 1 Old Growth designation.

Watershed and Fisheries Considerations:

The southern region of this compartment borders the North Branch of the Ford River and includes two unnamed waterbodies (streams) which serve as tributaries to the North Branch of the Ford River. Ford River and the unnamed waterbodies are designated Type 1 trout streams less than 50' width. 300' buffers are recommended for the Ford River and unnamed streams in riparian areas 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 is part of the Ralph Ground Moraine MA with woodcock, black bear, northern goshawk, grouse and deer as featured species. This compartment is part of the Arnold-Ford River DWC and provides critical deer migration corridors to winter thermal cover. This compartment has provided ideal habitat for northern goshawk and black bears.

Mineral Resource and Development Concerns and/or Restrictions

The state-owned Buckler Road sand/gravel pit (currently leased to the County Road Commission) is located two miles west, in Section 5, and there is potential for sand & gravel within the compartment on the upland drumlins. Mineral rights within and around the compartment were previously leased for metallic mineral exploration and development as recently as 2016 by Rio Tinto. No known exploration drilling occurred, and potential for metallic minerals beneath the compartment are unknown. There is no known potential for economic hydrocarbon production in the UP. The state does not own all 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:

The Schultz Road serves as primary access through the compartment. The majority of the compartment is accessible by a network of poor dirt roads.

Survey Needs:

Corners may be needed.

Recreational Facilities and Opportunities:

Hunting, camping, fishing, trapping, hiking, canoeing.

Fire Protection:

Felch protection area. Response from Norway or Crystal Falls is likely.

Additional Compartment Information:

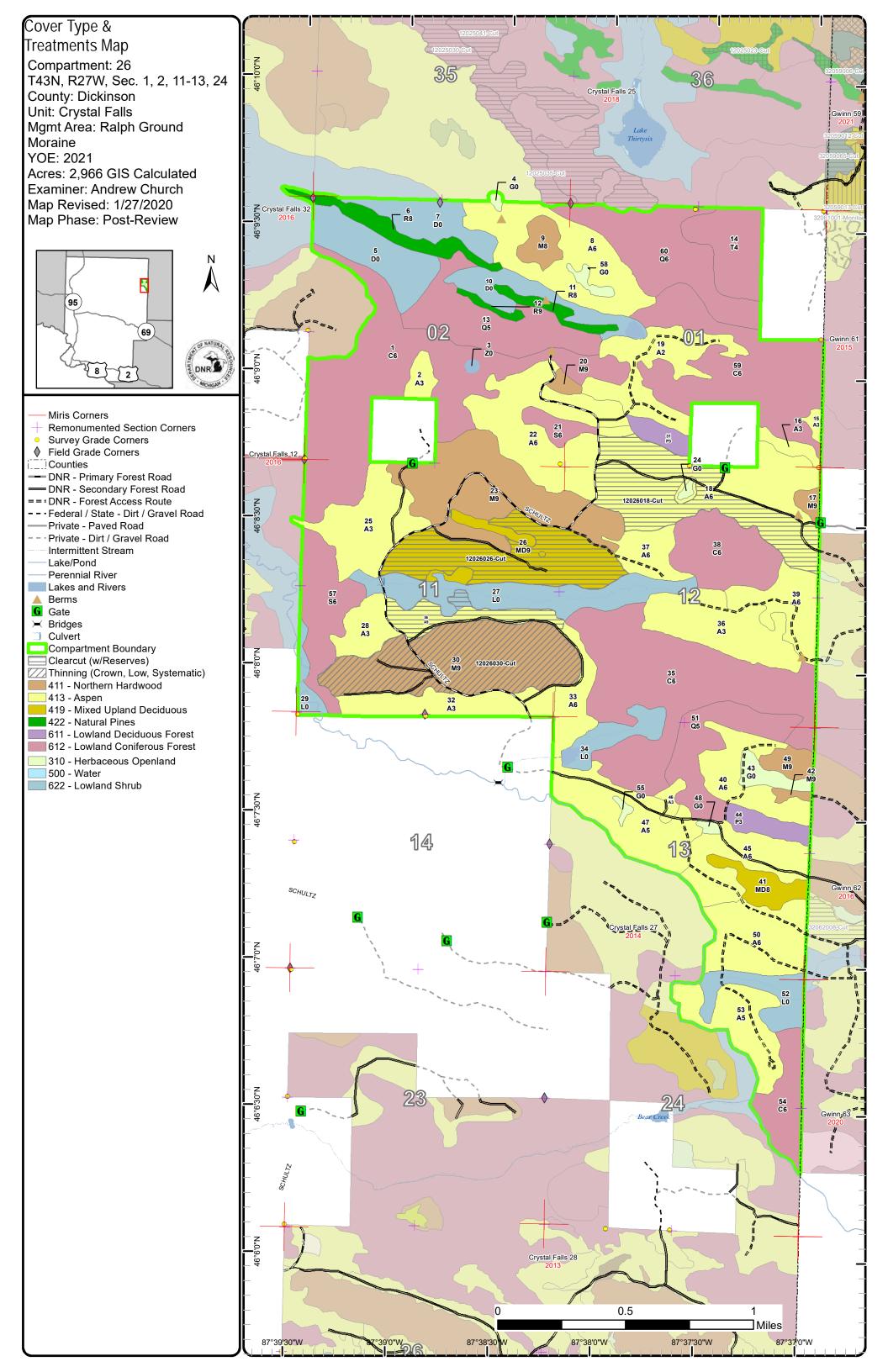
The following reports from the Inventory are attached:

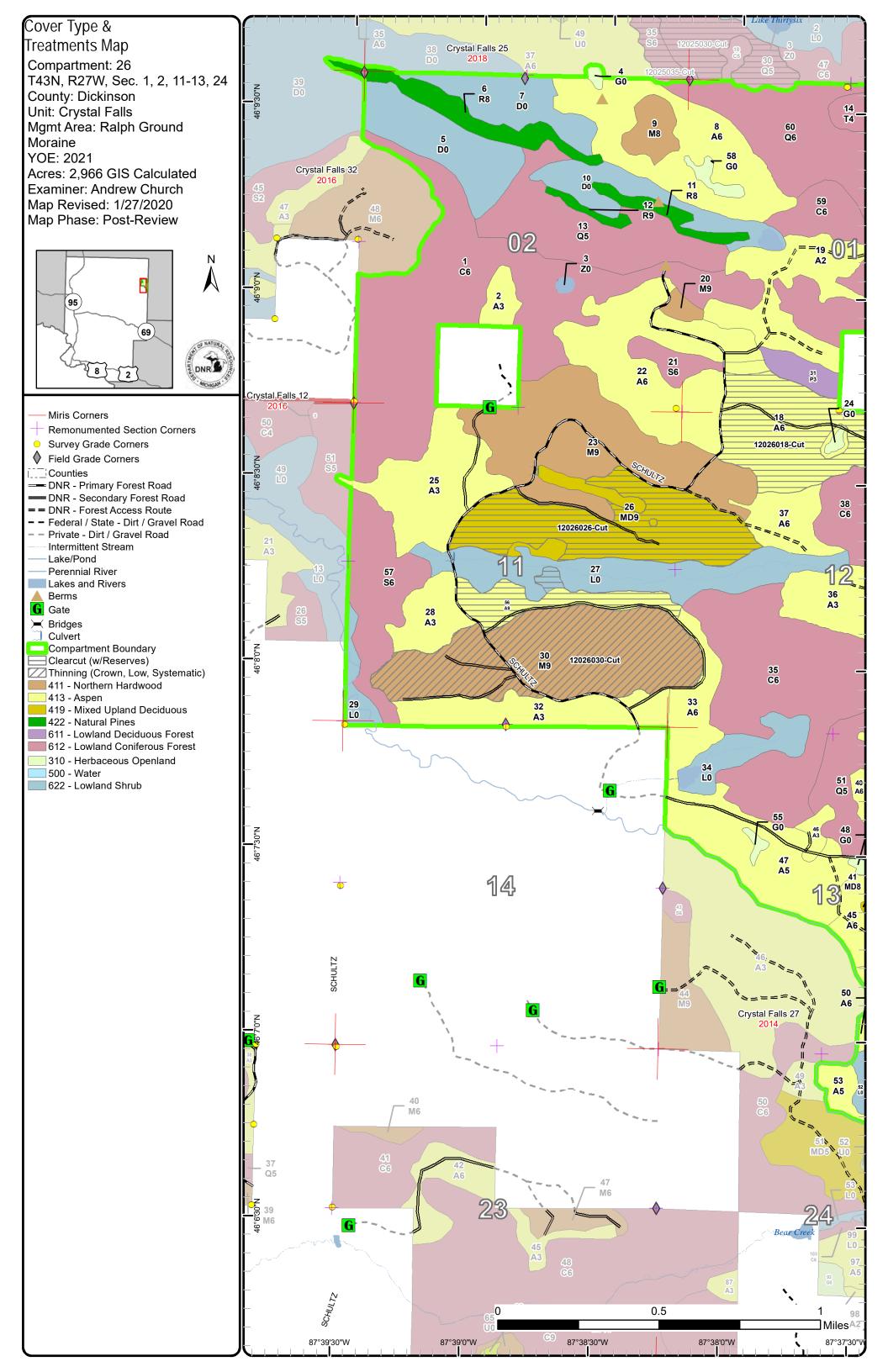
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

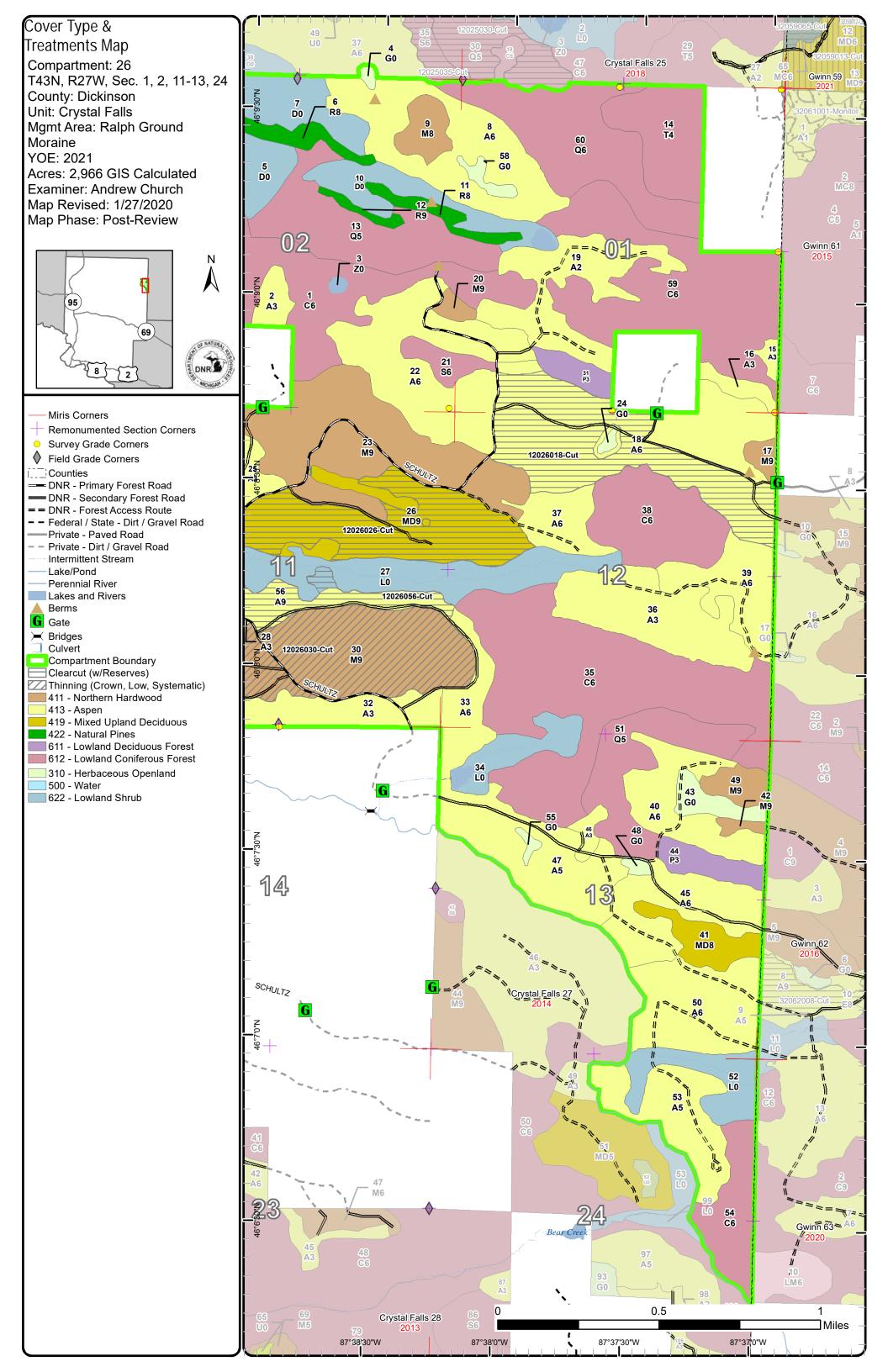
The following information is displayed, where pertinent, on the attached compartment maps:

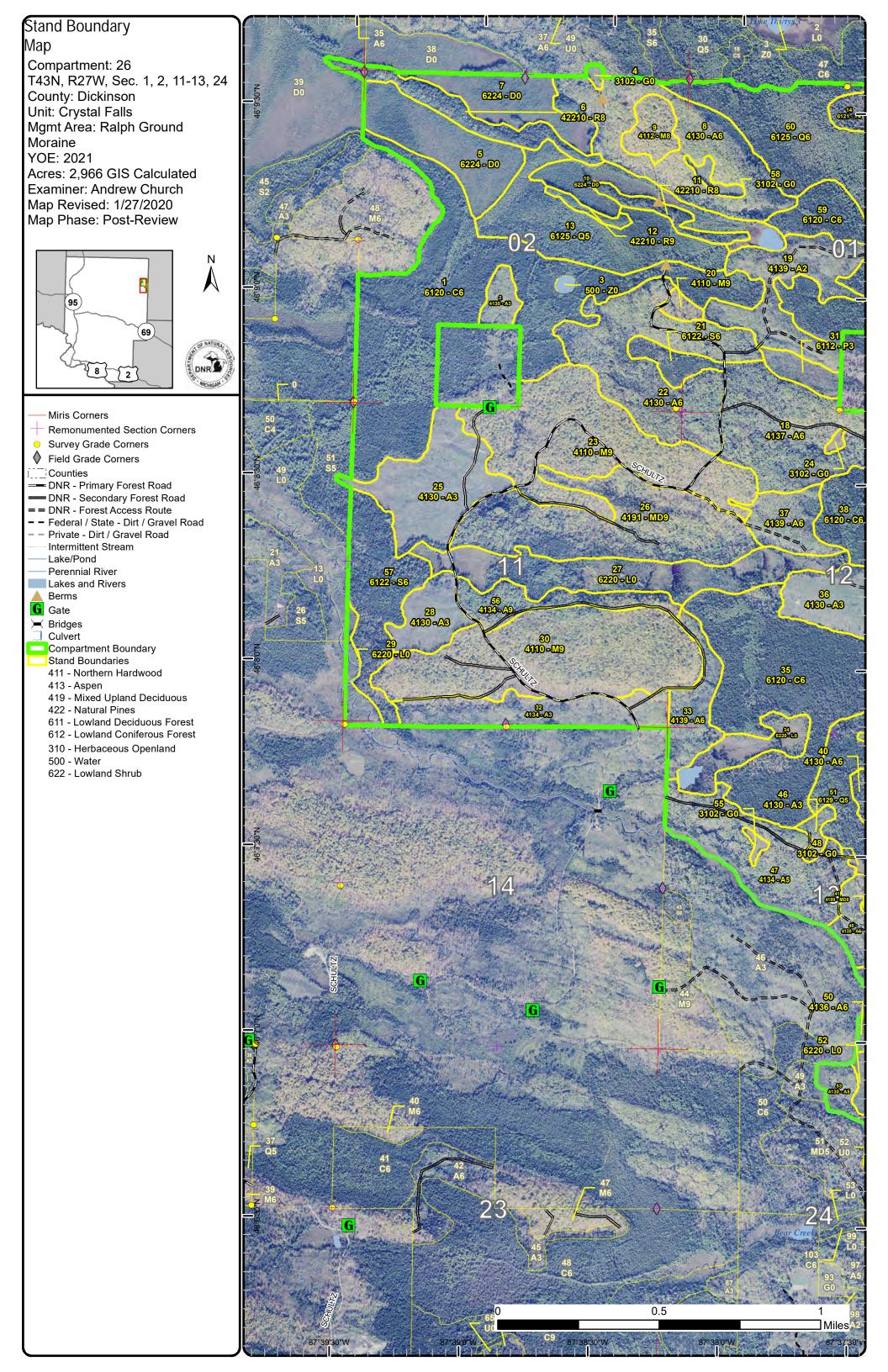
Base feature information, stand boundaries, cover types, and numbers Proposed treatments Site condition boundaries

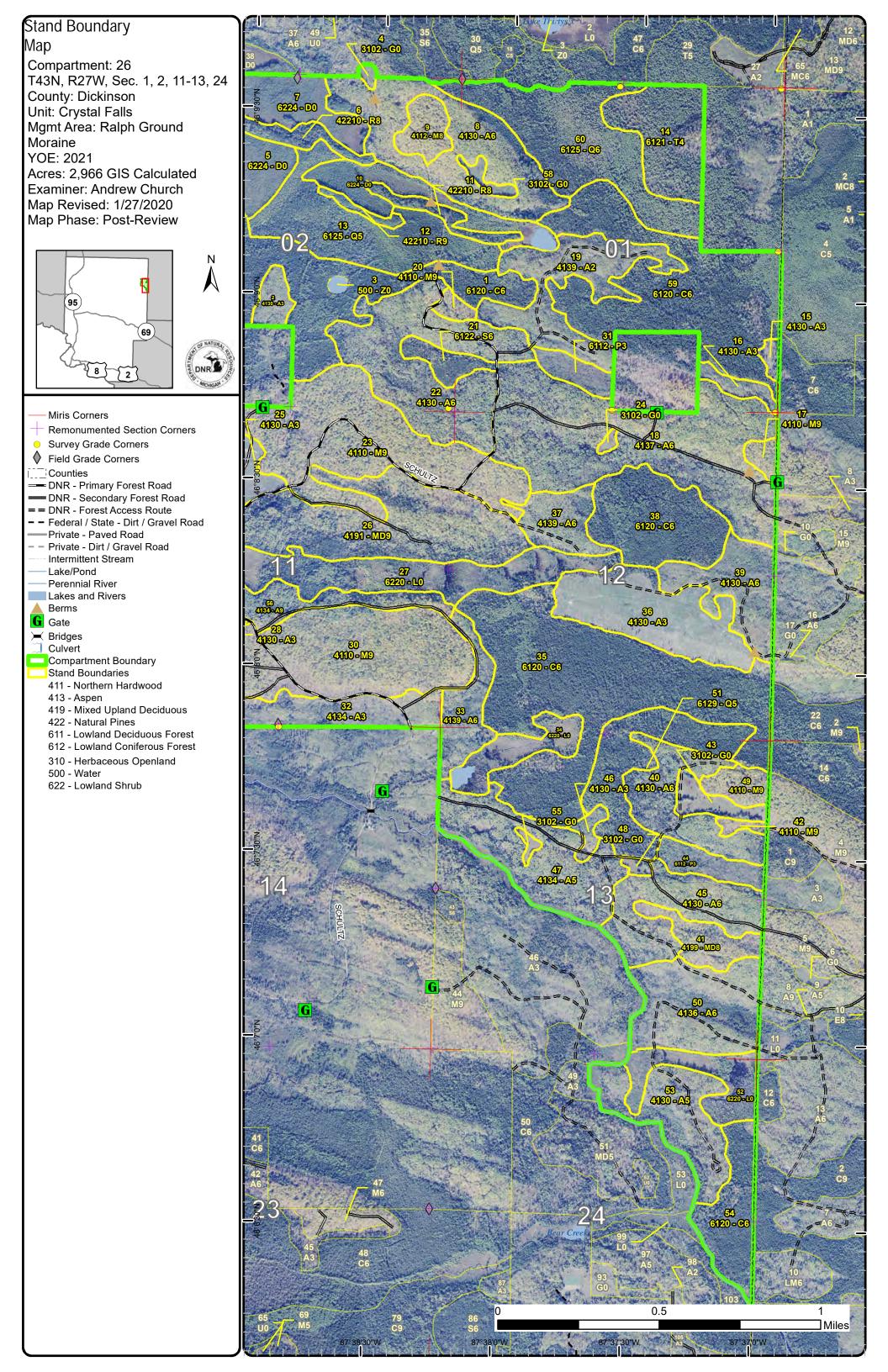
Details on the road access system

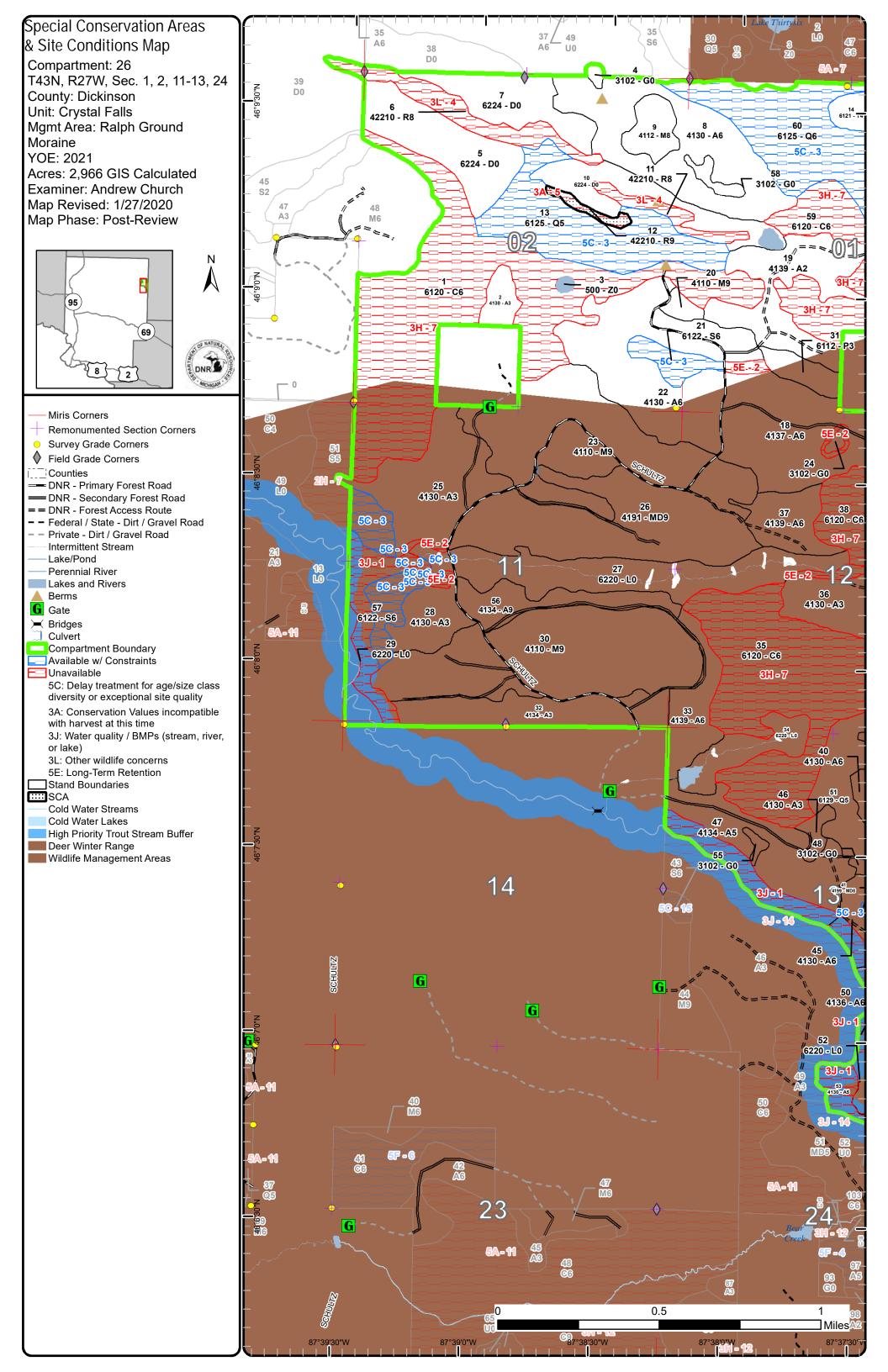


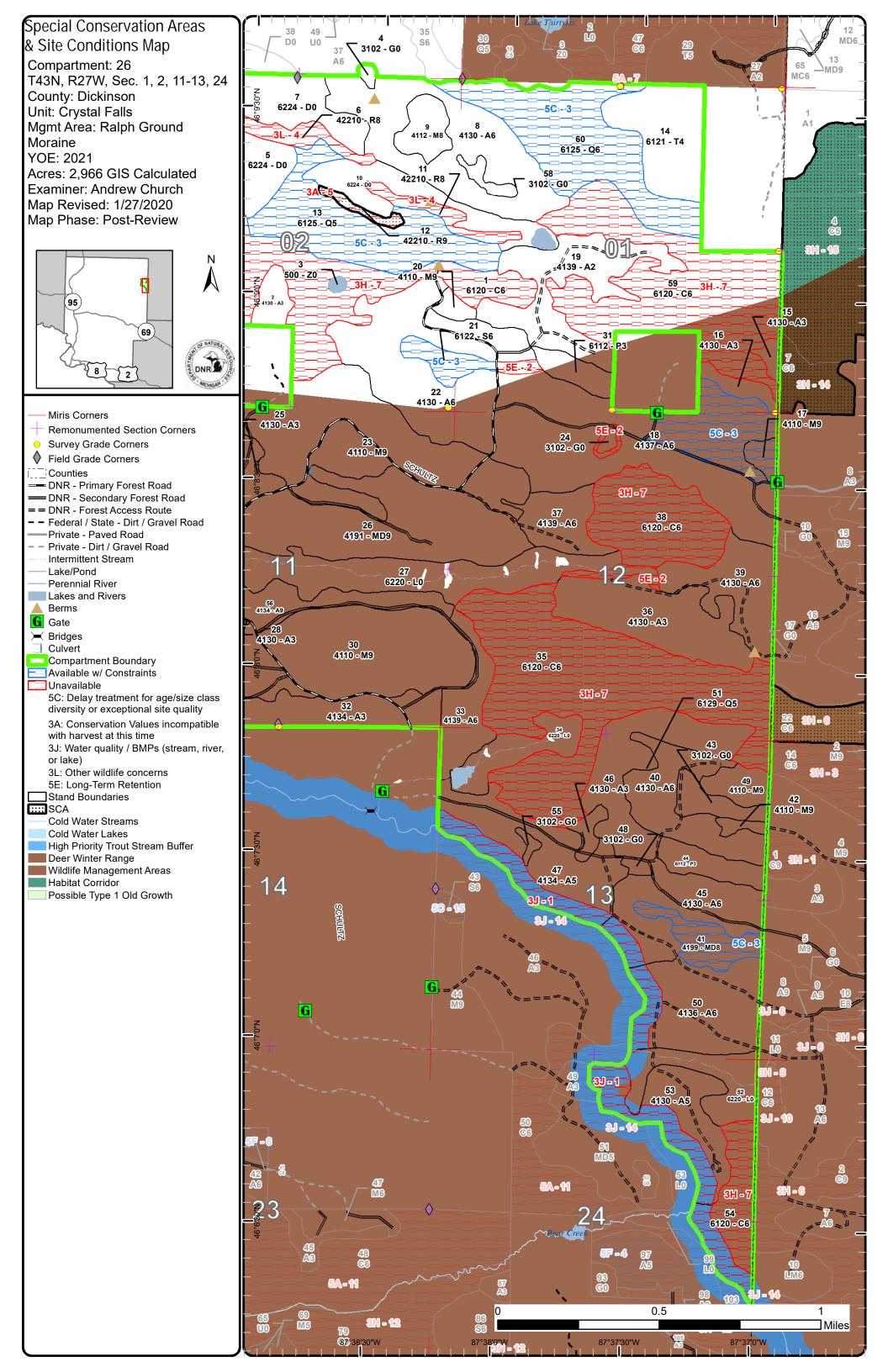












Compartment 26

Year of Entry 2021

Crystal Falls Mgt. Unit
Andrew Church : Examiner



Age Class

	- Jack		3 / 4	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			\$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	/ % /&		R / 8			70,70					Jugar Jugar	100 100 N
Aspen	0	169	0	179	216	345	0	195	0	0	0	0	0	0	0	0	0	0	1103
Cedar	0	0	0	0	0	0	0	0	0	0	269	0	363	40	0	0	0	0	672
Herbaceous Openland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Aspen/Balsam Poplar	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Lowland Conifers	0	0	0	0	0	0	0	0	59	172	0	0	0	0	0	0	0	0	231
Lowland Shrub	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	13	59	0	0	0	0	0	0	0	72
Mixed Upland Deciduous	0	0	0	0	0	0	0	115	0	0	22	0	0	0	0	0	0	0	137
Northern Hardwood	0	0	0	0	0	0	0	0	0	141	153	0	0	0	0	0	0	21	314
Red Pine	0	0	0	0	0	0	0	0	0	0	0	40	5	0	0	0	0	0	45
Tamarack	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	50
Treed Bog	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	311	169	0	209	216	345	50	310	59	326	503	40	368	40	0	0	0	21	2965



Report 2 – Treatment Summary

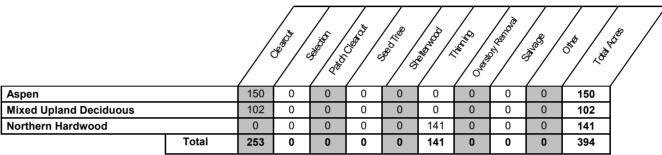
Crystal Falls Mgt. Unit Year of Entry: 2021

Acres of Harvest

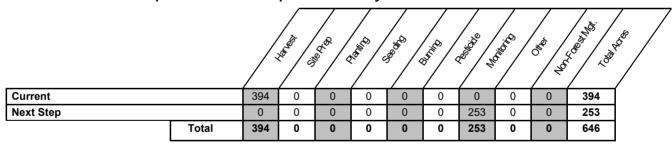
Compartment 26
Total Compartment Acres: 2,966

Commercial Harvest - 394 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

Stand

CoverType

Acres

Report 3 -- Treatments

BA

Range

Compartment: 26 Year of Entry: 2021

Age

Structure

Cover Type

Objective

DNR DICHIGAN

Cut

Proposed Treatments:

Treatment

Name

s

t a

n

d

18 12026018-Cut 117.5 4137 - Aspen, Birch Poletimber 60 81-110 Harvest Clearcut with 413 - Aspen Even-Aged No Well Retention

Treatment

Type

Treatment

Method

<u>Prescription</u> Final harvest using 2" DBH spec. Leave Cedar, Hemlock, Oak, Pine if found. In addition, leave conifers with a 6" stump diameter or less. <u>Specs:</u>

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Mixed Conifers, Mixed Deciduous

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

26 12026026-Cut 102.2 4191 - Mixed Sawtimber 62 81-110 Harvest Clearcut with 413 - Aspen Even-Aged No Retention

with Conifer

<u>Prescription</u> Final harvest using 2" DBH spec. Leave Cedar, Hemlock, Oak, Pine if found. In addition, leave conifers with a 6" stump diameter or less.

Specs: Exclude wet areas along South line from treatment boundary. Buffer water features 100 feet.

Size

Density

Stand

Age

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Mixed Conifers, Mixed Deciduous

Regen:

Other Treatment boundary reshaped to exclude Cedar pocket and Black Ash areas. Also reshaped to exclude low lying portions along Southern

Comment: boundary of stand.

Site Condition

Proposed Start Date: 10/1 /2020

30 12026030-Cut 140.9 4110 - Sugar Maple Sawtimber 89 111- Harvest Crown Thinning 411 - Northern Uneven-No Association Well 140 Hardwood Aged

Prescription Thin targeting 70-80 residual BA. Leave Pine, Cedar, Oak if found. Also leave some Ironwood and large diameter Aspen along Northern

Specs: edge of stand for wildlife concerns.

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 26 S Year of Entry: 2021 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Method Objective Density Age Name CoverType Range Type Structure Cut d 4134 - Aspen, 56 12026056-Cut 32.9 Sawtimber Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Retention Spruce/Fir Well ified Prescription Final harvest using 2" DBH spec. Leave Cedar, Hemlock, Oak, Pine if found. In addition, leave conifers with a 6" stump diameter or less. Exclude pure Cedar pockets from treatment boundary. Include Tamarack in stand to North. Buffer water features 100 feet. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable Aspen, Maple, Mixed Conifers, Mixed Deciduous Regen: **Other** Treatment boundary reshaped to include adjacent stand's Tamarack. Comment:

Total Treatment 393.5 Acreage Proposed:

Proposed Start Date: 10/1 /2020

Site Condition

Report 4 - Site Conditions

Crystal Falls Mgt. Unit

Andrew Church : Examiner

Compartment: 26
Year of Entry: 2021



Availability for Management Total Acres Acres Avail Acres **Dominant Site Conditions** Available With Condition Not Available 5E Acres 5C 2H 3A 3H 3J 3L Aspen Cedar Herbaceous Openland Lowland Aspen/Balsam Poplar **Lowland Conifers** Lowland Shrub Lowland Spruce/Fir **Mixed Upland Deciduous** Northern Hardwood **Red Pine** Tamarack Treed Bog Water 2,966 1,853 **Total Forested Acres**

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)	107	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
2	Unavailable	5E: Long-Term Retention	15	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

62%

10%

28%

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Andrew Church : Examiner



3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	285	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3L: Other wildlife concerns	40	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3A: Conservation Values incompatible with harvest at this time	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Qualifies for Dry No	orthern Forest (Red Pine varian	t) Type	1 old growth. Evidence of fi	re, no evidence of harves	iting.	
7	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	660	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
	Comments: Obligate DWC						

Crystal Falls Mgt. Unit

Compartment: 026
Year of Entry: 2021

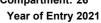


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* 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
	Type 1 or Type 2 Old Growth	Possible Type 1 Old Growth Area	Error	5
Comments				
Dry Northern Forest (Red	Pine variant). Age criteria not met, b	out no evidence of cutting, evidence of	fire.	

Crystal Falls Mgt. Unit Compartment: 26





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 spec 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	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 cond stocked trout populations and those of other coldwater fish spec 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.	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 wildle 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 or covered by species recovery plans that are developed in cooper	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more r endangered species, and are not
SCA	Type 1 and Type 2 Old Growth	Old-Growth forest (also termed primary forest, ancient forest, virgorest, or primeval forest) is an area of forest that has few or not exhibits unique ecological features related to age, composition a are of natural origin. They may be dominated by late succession American beech), or may be a very old example of a stand domi species (i.e. oak, or red pine).	signs of human disturbance and that and associated structure. Old growth forests al forest species (i.e. sugar maple and
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



Stand	d Level 4 Co	over Type	S	ize De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	
1	6120 - Lov	wland Ceda	ır Po	oletimb	er Well	221.6	115	Unspecified	N/A		Many areas of stunted trees due to poor soil conditions.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
No	orthern White Cedar	70	Pole	6	115	Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub		
	Black Spruce	15	Pole/Sapling	5								
	Tamarack	15	Pole/Sapling	7								
2	4130	- Aspen	Ş	Sapling	Well	10.7	27	Immature	N/A		Harvested 1993	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
	Quaking Aspen	100	Sapling/Pole	3	27		Isam Fir	Medium	Variable	Sapling		
3	500 -	· Water	!	Nonsto	cked	1.3		Unspecified	No			
4	3102	- Grass		Nonsto	cked	2.0	0	Unspecified	No			
5	6224 - 1	Γreed Bog	l	Nonsto	cked	54.2		Unspecified	No		trees are stunted, most less than 12' tall & centered in bog.	
6	42210 - Nat				Mediun		100	51-80	N/A		Stand situated on esker in swamp. Young pole sized Jack Pine in understory. Log size Red Pine overstory.	
	Canopy Species		Size Class		Age		nopy Specie		Avg. Height	Size		
	Red Pine	90	Log/Pole/Sap	16	100		ck Spruce	Medium	Variable	Sapling		
							ed Pine	Medium	Variable	Sapling		
							te Spruce	Medium	Variable	Sapling		
						Ja	ick Pine	Medium	Variable	Pole		
7	6224 - 1	Γreed Bog	I	Nonsto	cked	39.7		Unspecified	No		trees are stunted, most less than 12' tall & centered in bog.	
8		- Aspen			er Well	90.3	42	Unspecified	N/A		Maple understory well established, particularly adjacent to Maple stand	
	Canopy Species		Size Class		Age		nopy Specie		Avg. Height	Size	Countries super carriery i mes.	
	Quaking Aspen	100	Pole	7	42	Sug	gar Maple	High	Variable	Sapling		
						Ва	lsam Fir	Low	Variable	Sapling		
9	4112 - Maple, Asso	Beech, Ch ociation	erry Saw	/timber	Mediun	n 16.0	92	51-80	N/A		Thinned 2005. Hardwood pole stand under poor quality log sized overstory. Understory growing well in canopy gaps. Understory suppressed not in canopy gaps. Approx. 50 BA of canopy trees. Tota merchantable BA is approx. 100.	
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
	Sugar Maple	57	Log/Pole/Sap	14	92	Par	per Birch	Low	Variable	Pole		
	Red Maple	30	Log/Pole/Sap	12		Sug	gar Maple	High	Variable	Pole		
10	6224 - 1	Treed Bog		Nonsto	cked	37.7		Unspecified	No			



Stand	l Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed Site		General Comments
11	42210 - Na	tural Red P	ine Sa	wtimbe	r Medium	n 11.9	109	81-110	N/A		Pole sized Jack Pine and Black Spruce in understory of log sized Red
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Pine/Jack Pine stand. Stocking levels highly variable. Basal areas range from 10-150.
	Red Pine	60	Log/Pole/Sap	14	109	Blad	ck Spruce	Medium	Variable	Pole	
	Jack Pine	40	Log/Pole/Sap	14		Ja	ack Pine	High	Variable	Pole	
						R	ed Pine	Medium	Variable	Pole	
12	42210 - Na	tural Red P	ine S	Sawtimb	er Well	4.7	119	201+	N/A		Evidence of fire, no evidence of harvesting. High stocking level of Red
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Pine; 300+ BA.
	Red Pine	95	Log/XLog	14	119	Blad	ck Spruce	High	Variable	Sapling	
						R	ed Pine	Low	Variable	Sapling	
13	6125 - Lowland E	Black Spruc Pine	ce, Jack Po	letimbe	r Mediun	n 78.4	85	Unspecified	N/A		Many non-stocked areas. Majority of stand is very small diameter trees due to low site index.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
No	rthern White Cedar	20	Pole	6		Ba	alsam Fir	Medium	Variable	Sapling	
	Black Spruce	45	Pole/Sapling	5	85	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	Tamarack	30	Pole/Sapling	6							•
14	6121 -	Tamarack	Р	oletimb	er Poor	50.3	55	1-50	N/A		Slow growing trees due to wet soils. Small upland inclusion near private
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	boundary.
	Tamarack	80	Pole/Sapling	5	55	Ta	ag Alder	Full	5 - 10 feet	Tall Shrub	
	Black Spruce	20	Pole/Sapling	5						-1	
15	4130	- Aspen		Saplin	g Well	4.1	6	Immature	N/A		Harvested 2014
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	100	Sapling	1	6	Ва	ılsam Fir	Low	Variable	Sapling	
16	4130	- Aspen		Saplin	g Well	8.6	26	Immature	N/A		Harvested 1994. Many low areas.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	100	Sapling	3	26	Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
					· · · · ·	Pa	per Birch	Medium	Variable	Sapling	
						Ва	ılsam Fir	Medium	Variable	Sapling	
17	4110 - Sugar N	Maple Asso	ciation S	Sawtimb	er Well	6.4	92	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	ourropy openies	,									
	Sugar Maple	80	Log/Pole	12			gar Maple	Medium	Variable	Sapling	



Stand	d Level 4 Co	over Type	S	Size De	nsity	Acres	Stand Age	BA Range	ge Managed Site		General Comments
18		spen, Birch			er Well	165.0	60	81-110	N/A		Age, species composition, densities of trees within stand is highly variable. Many older pockets of Aspen. Mix of lowland areas within
	Canopy Species		Size Class		I Age		nopy Species		Avg. Height	Size	stand. Eastern side has smaller diameters, but more Maple in understory
	Quaking Aspen	25	Log/Pole	10	60		ar Maple	Medium	Variable	Sapling	
	Sugar Maple	10	Pole/Sap/Log	8			d Maple	Medium	Variable	Sapling	
	Paper Birch	20	Log/Pole	10			lsam Fir	Medium	Variable	Sapling	
	Balsam Poplar	15	Log/Pole	10		Whit	te Spruce	Medium	Variable	Sapling	
	Bigtooth Aspen	15	Log/Pole	12							
19	4139 - Aspen, I	Mixed Deci	duous Sa	apling N	Medium	65.3	27	Immature	N/A		Harvested 1993. Many low lying areas holding swamp hardwoods.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Black Ash	10	Sapling	3		Ta	g Alder	Medium	5 - 10 feet	Tall Shrub	
	Quaking Aspen	40	Sapling	3	27	Brac	cken Fern	Medium	Unspecified	Non-Wood	
	Balsam Poplar	30	Sapling	3							
	Paper Birch	10	Sapling	3							
20	4110 - Sugar M	laple Assoc	ciation S	awtimb	er Well	5.2	92	81-110	N/A		Thinned 2005
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	80	Log/Pole	12	92	Sug	ar Maple	Medium	Variable	Sapling	
	Basswood	20	Log/Pole	14		Iro	onwood	Medium	Variable	Sapling	
21	6122 - Bla	ack Spruce	e Po	oletimb	er Well	12.8	87 l	Unspecified	N/A		Wet ground.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Black Spruce	80	Pole/Sapling	5	87	Bla	ack Ash	Medium	Variable	Sapling	
						Blac	k Spruce	Medium	Variable	Sapling	
22	4130	- Aspen	Po	oletimb	er Well	104.4	44 l	Unspecified	N/A		Varying densities, ages, and species composition throughout stand.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	Result from past harvests in '75 and '76. Maple recruitment in understory, particularly North half of stand. Many pockets of older Aspen
	Quaking Aspen	75	Pole/Sap/Log	8	44	Sug	ar Maple	High	Variable	Sapling	present. Wet areas to South.
	White Spruce	10	Pole/Sap/Log	9		Bal	lsam Fir	Medium	Variable	Sapling	•
23	4110 - Sugar M	laple Assoc	ciation Sa	awtimb	er Well	129.3	91	81-110	N/A		Thinned 2005
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Sugar Maple	70	Log/Pole	12	91	Wh	nite Ash	Medium	Variable	Sapling	
	Basswood	20	Log/Pole	14		Sug	ar Maple	Medium	Variable	Sapling	
	Bigtooth Aspen	10	Log/Pole	14							
24	3102	- Grass		Nonsto	ocked	1.8	0 (Unspecified	No		
25	4130	- Aspen	:	Sapling	g Well	67.4	6	Immature	N/A		Harvested 2014
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	100	Sapling	1	6	Brac	ken Fern	Medium	Unspecified	Non-Wood	



Canopy Species % Cover Size Class DBH Age Quaking Aspen	roughout stand. Trees in declining health.
Quaking Aspen20Log/Pole1262Sugar MapleMediumVariableSaplingSugar Maple10Log/Pole/Sap12Red MapleMediumVariableSaplingNorthern White Cedar10Log/Pole10Balsam FirMediumVariableSaplingWhite Spruce10Log/Pole/Sap14White SpruceMediumVariableSaplingPaper Birch15Log/Pole14White SpruceMediumVariableSaplingBalsam Poplar15Log/Pole14No276220 - Alder/willowNonstocked80.1UnspecifiedNo284130 - AspenSapling Well25.86UnspecifiedN/AHarvested 2014Canopy Species% CoverSize ClassDBH AgeSub-Canopy SpeciesDensityAvg. HeightSize	roughout stand. Trees in deciming health.
Sugar Maple 10 Log/Pole/Sap 12 Red Maple Medium Variable Sapling Northern White Cedar 10 Log/Pole 10 Balsam Fir Medium Variable Sapling White Spruce 10 Log/Pole/Sap 14 White Spruce Medium Variable Sapling Paper Birch 15 Log/Pole 14 Balsam Poplar 15 Log/Pole 14 Balsam Poplar Sapling White Spruce Medium Variable Sapling	
Northern White Cedar 10 Log/Pole 10 Balsam Fir Medium Variable Sapling White Spruce 10 Log/Pole/Sap 14 White Spruce Medium Variable Sapling Paper Birch 15 Log/Pole 14 Balsam Poplar 15 Log/Pole 14 Balsam Poplar 15 Log/Pole 14 Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
White Spruce 10 Log/Pole/Sap 14 White Spruce Medium Variable Sapling Paper Birch 15 Log/Pole 14 Balsam Poplar 15 Log/Pole 14 The state of the spruce of the	
Paper Birch 15 Log/Pole 14 Balsam Poplar 15 Log/Pole 14 27 6220 - Alder/willow Nonstocked 80.1 Unspecified No 28 4130 - Aspen Sapling Well 25.8 6 Unspecified N/A Harvested 2014 Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
Balsam Poplar 15 Log/Pole 14 27 6220 - Alder/willow Nonstocked 80.1 Unspecified No 28 4130 - Aspen Sapling Well 25.8 6 Unspecified N/A Harvested 2014 Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
27 6220 - Alder/willow Nonstocked 80.1 Unspecified No 28 4130 - Aspen Sapling Well 25.8 6 Unspecified N/A Harvested 2014 Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
28 4130 - Aspen Sapling Well 25.8 6 Unspecified N/A Harvested 2014 Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
Quaking Aspen 100 Sapling 1 6 Bracken Fern Medium Unspecified Non-Wood	
29 6220 - Alder/willow Nonstocked 11.6 Unspecified No	
areas of Ash/Manle adv	ned 2004. More log sized trees to East. Many ranced regeneration, particularly in canopy gaps.
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	anson regeneration, particularly in carrepy gaper
Sugar Maple 55 Log/Pole/Sap 11 89 Sugar Maple Medium Variable Sapling	
Basswood 20 Log/Pole 11 Ironwood Medium Variable Sapling	
White Ash 20 Log/Pole 12 White Ash Medium Variable Sapling	
31 6112 - Lowland Aspen Sapling Well 12.9 27 Unspecified N/A Harvested 1993	
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
Paper Birch 20 Sapling 3 Tag Alder Medium 5 - 10 feet Tall Shrub	
Black Ash 20 Sapling 3	
Quaking Aspen 40 Sapling 3 27	
Balsam Poplar 15 Sapling 3	
32 4134 - Aspen, Spruce/Fir Sapling Well 51.1 26 Immature N/A Harvested 1994	
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size	
Bigtooth Aspen 40 Sapling 3 26 Balsam Fir High Variable Sapling	
Quaking Aspen 24 Sapling 3 White Spruce High Variable Sapling	
Balsam Fir 31 Sapling 3	



Stand	Level 4 C	over Type	;	Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
33	4139 - Aspen,	Mixed Deci	iduous P	oletimb	er Well	29.4	35	Unspecified	N/A		Harvested 1985. Many lowland areas within stand. Trees starting to
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	Todali polo dizo.
	Quaking Aspen	50	Pole/Sapling	5	35	Sug	gar Maple	Medium	Variable	Sapling	
	Balsam Poplar	40	Pole/Sapling	5		Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	American Elm	10	Pole/Sapling	5							
34	6220 - A	lder/willow		Nonsto	ocked	26.5		Unspecified	No		
35	6120 - Lo	wland Ceda	ar P	oletimb	er Well	204.7	92	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
No	rthern White Cedar	80	Pole/Log	8	92	Blad	ck Spruce	Medium	Variable	Sapling	
	Tamarack	10	Pole/Log/Sap	9		Ta	marack	Medium	Variable	Sapling	
	Black Spruce	10	Pole/Sapling	6		Ва	lsam Fir	Medium	Variable	Sapling	
36	4130	- Aspen		Sapling	y Well	71.6	7	Unspecified	N/A		Harvested 2013
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Bigtooth Aspen	100	Sapling	1	7	Ва	lsam Fir	Low	Variable	Sapling	
37	4139 - Aspen,	Mixed Deci	iduous P	oletimb	er Well	26.4	44	Unspecified	N/A		Many low areas. Harvested 1976
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Quaking Aspen	55	Pole/Sap/Log	·	44	Ва	Isam Fir	Low	Variable	Sapling	
	Balsam Poplar	30	Pole/Sapling	7		BI	ack Ash	Medium	Variable	Sapling	
	Balsam Fir	10	Pole/Sapling	6		Dogv	vood (spp.)	High	5 - 10 feet	Tall Shrub	
38	6120 - Lo	wland Ceda	ar P	oletimb	er Well	64.4	92	Unspecified	N/A		
	Canopy Species	% Cover	Size Class		l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
No	rthern White Cedar	80	Pole/Log	8	92	Blad	ck Spruce	Medium	Variable	Sapling	
	Tamarack	10	Pole/Log/Sap	9		Ta	marack	Medium	Variable	Sapling	
	Black Spruce	10	Pole/Sapling	6		Ва	lsam Fir	Medium	Variable	Sapling	
39	4130	- Aspen	Р	oletimb	er Well	43.6	26	Immature	N/A		Harvested 1994. Several low areas. Trees just starting to reach pole size. Hilly terrain.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	SIZO. THINY COTTAIN.
	Quaking Aspen	100	Pole/Sapling	5	26	Qual	king Aspen	High	Variable	Sapling	
40	4130	- Aspen	P	oletimb		47.2	42	Unspecified	N/A		Some older pockets of Aspen mixed throughout. Very wet along Western edge.
	Canopy Species	% Cover			Age		nopy Specie		Avg. Height	Size	Trodicini cago.
	Quaking Aspen	80	Pole/Sapling	7	42		te Spruce	Medium	Variable	Sapling	
	Balsam Fir	10	Pole/Sapling	6		Suc	gar Maple	Medium	Variable	Sapling	



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
41	4199 - Other Mixe						92	51-80	N/A		Poor quality Aspen/Hardwood stand. Wet along Northern edge holding Black Ash.
	Canopy Species	% Cover	Size Class		l Age	Sub-Ca	anopy Specie		Avg. Height	Size	Black / lottl
	Sugar Maple	31	Log/Pole	14	92	li	ronwood	Medium	Variable	Sapling	
	Basswood	25	Log/Pole	14							
	American Elm	9	Log/Pole	14							
	Quaking Aspen	30	Log/Pole	10							
42	4110 - Sugar N	laple Assoc	ciation §	Sawtimb	er Well	3.7	92	81-110	N/A		Thinned 2003
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	
	Sugar Maple	75	Log/Pole	14	92	I	ronwood	Medium	Variable	Sapling	
	Basswood	20	Log/Pole	14							
43	3102	- Grass		Nonst	ocked	13.4		Unspecified	No		
44	6112 - Lo	wland Aspe	n	Saplin	g Well	17.3	27	Unspecified	N/A		Harvested 1993
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	
	Black Ash	10	Sapling	3			ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Quaking Aspen	40	Sapling	3	27						
	Balsam Poplar	15	Sapling	3							
	Tamarack	30	Sapling	3							
45	4130	- Aspen	F	Poletimb	er Well	57.6	39	Unspecified	N/A		Harvested 1981.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	80	Pole/Sapling	5	39	В	alsam Fir	Low	Variable	Sapling	
	Red Maple	10	Pole/Sapling	5						,	•
	Balsam Fir	10	Pole/Sapling	5							
46	4130	- Aspen		Saplin	g Well	5.9	35	Unspecified	N/A		Harvested 1985
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	60	Sapling/Pole	4	35	В	alsam Fir	Low	Variable	Sapling	
	Tamarack	10	Sapling/Pole	4				<u> </u>			-
	Balsam Poplar	30	Sapling/Pole	4							
47	4134 - Asp	en, Spruce/	Fir Po	oletimbe	r Mediu	m 76.6	46	Unspecified	N/A		Highly variable stocking levels within stand.
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	50	Pole/Log	8	46	В	alsam Fir	Medium	Variable	Sapling	
	White Spruce	10	Pole/Log/Sap	8 c				· · · · · · · · · · · · · · · · · · ·			•
	Balsam Poplar	15	Pole	8							
	Balsam Fir	10	Pole/Sapling	6							



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Stand	Level 4 Co	over Type		ize De	nsity	Acres	Stand Age	BA Range	Managed S	oite	General Comments
48	3102	- Grass		Nonsto	cked	2.7	0	Unspecified	No		
49	4110 - Sugar M	laple Asso	ciation S	awtimb	er Well	13.1	92	81-110	N/A		Thinned 2003
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	ies Density	Avg. Height	Size	
	Sugar Maple	75	Log/Pole	14	92	Iro	onwood	Medium	Variable	Sapling	
	Basswood	20	Log/Pole	14							
50	4136 - Aspen	, Mixed Co	nifer P	oletimb	er Well	67.7	35	Unspecified	N/A		Harvested 1985. Large lowland area in center of stand. Trees starting to
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	ies Density	Avg. Height	Size	reach pole size.
	Quaking Aspen	60	Pole/Sapling	5	35	Ва	lsam Fir	Medium	Variable	Sapling	
	Balsam Poplar	20	Pole/Sapling	5							
	Tamarack	15	Pole/Sapling	5							
51	6129 - Mixed Co Fo	niferous Lo rest	owland Pol	etimber	Medium	58.6	76	Unspecified	N/A		Highly variable stand. Many wet pockets mixed throughout. Lower stocking to South.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	ies Density	Avg. Height	Size	
No	rthern White Cedar	20	Pole	7		Ta	ıg Alder	High	5 - 10 feet	Tall Shrub	
	Tamarack	31	Pole	8		Blac	k Spruce	Medium	Variable	Sapling	
	Black Spruce	49	Pole/Sapling	7	76						
52	6220 - A	lder/willow		Nonsto	cked	32.7		Unspecified	No		
53	4130	- Aspen	Pol	etimber	Medium	າ 54.5	35	Unspecified	N/A		Harvested 1985. Trees starting to reach pole size.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	ies Density	Avg. Height	Size	
	Quaking Aspen	80	Pole/Sapling	5	35	Ва	lsam Fir	Medium	Variable	Sapling	
	Balsam Poplar	20	Pole/Sapling	5							
54	6120 - Lov	vland Ceda	ar P	oletimb	er Well	40.4	125	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	ies Density	Avg. Height	Size	
No	rthern White Cedar	100	Pole	8	125	Ва	lsam Fir	Medium	Variable	Sapling	
55	3102	- Grass		Nonsto	cked	2.2	0	Unspecified	No		



Stand	d Level 4 C	Level 4 Cover Type			Size Density		Stand Age BA Range		Managed Site		General Comments
56	4134 - Aspen, Spruce/Fir			Sawtimber Well		30.0	66 U	Unspecified	N/A		Aspen and Birch in declining health.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	20	Log/Pole	14		Ва	alsam Fir	Medium	Variable	Sapling	
	Bigtooth Aspen 30 Log/		Log/Pole	16	66	Whi	White Spruce		Variable	Sapling	
	Sugar Maple	10	Log/Pole	12		Sug	gar Maple	Medium	Variable	Sapling	
	Paper Birch	15	Log/Pole	12							
	Balsam Fir	10	Pole/Sapling	7							
	White Spruce	15	Log/Pole/Sap	14							
57	6122 - Black Spruce		e Po	Poletimber Well		58.9	94	Unspecified	N/A		Patches of small, stunted trees. Maze of streams throughout stand.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Black Spruce	75	Pole/Sapling	6	94	Ва	Balsam Fir		Variable	Sapling	· -
	Tamarack	20	Pole	8		Black Spruce		High	Variable	Sapling	
58	3102	- Grass		Nonst	ocked	5.2 0		Unspecified	No		
59	6120 - Lowland Cedar Pole		oletimb	er Well	141.2 115 Un		Unspecified	N/A		Many areas of stunted trees due to poor soil conditions.	
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
No	orthern White Cedar	70	Pole	6	115	Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Black Spruce	15	Pole/Sapling	5							
	Tamarack	15	Pole/Sapling	7							
60	6125 - Lowland Black Spruce, Jack Pine			Poletimber Well		93.5	85	Unspecified	N/A		Majority of stand is very small diameter trees due to low site index.
	Canopy Species		Size Class		I Age		nopy Specie		Avg. Height	Size	
No	orthern White Cedar	20	Pole	6		Ва	alsam Fir	Medium	Variable	Sapling	
	Black Spruce	45	Pole/Sapling	5	85	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	Tamarack	30	Pole/Sapling	6							