

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12133 Entry Year 2020 Acreage: 2,411 County Iron Management Area: Net River

Revision Date: 2018-08-17

Stand Examiner: Ed Rice

Legal Description:

T44N R34W section 5 T45N R34W sections 16, 20, 21, 23, 27 - 30, 32 T45N R33W sections 17, 20

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:

The compartment is underlain with very fine sandy loams in the south portions to silt loams throughout the remainder. In the lowland stands, the soils transition quickly to muck soils, with a large expanse of peat in section 23. Topography is generally flat, with areas of steep slope leading down to the Net River.

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

The compartment is fairly broken in state ownership. Intermixed are private camp holdings. Large expanses of industrial forest ownership bound the compartment. Active forest management has occurred and will continue within and surrounding the compartment.

Unique Natural Features:

None identified

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Deer wintering area SCA

Watershed and Fisheries Considerations:

The Net River is a warm water fishery in these sections. BMP guidelines should be followed in management activities. Net River area, Mikes Creek (Type 1 Trout Stream), Porter Creek, headwaters of Parks Creek, Little Hemlock River, Nelson Creek, Longs Creek, unnamed trout stream that flows into Net River. Non-designated trout waterbodies should have a 100' buffer plus 5' per 1% increase in slope. For designated trout streams less than 50' in width a 300' buffer is recommended for those areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, a 100' plus 5' per 1% increase in slope.

Wildlife Habitat Considerations:

The featured species for the Net River MA include deer, black bear, marten, wood duck and moose. This compartment includes both wildlife purchased land and DWC. Most of the compartment is used heavily by deer during the winter. Lowland conifer forest types and hemlock should be favored and promoted. Transition zones, movement corridors and conifer component throughout the forage stands are critical in this compartment for both deer and moose. The mature pine component provides both winter cover for deer, and ideal habitat for black bears especially as refuge trees for cub rearing. This area has one of the highest concentration of eagle territories along the river systems and lakes. Super canopy pine are particularly important to meet their habitat requirements for nesting and perching. Movement corridors and mature forest conditions within the riparian zones are critical to marten and fisher.

Mineral Resource and Development Concerns and/or Restrictions

Sand/gravel pits are not located in the area, but there appears to be good sand & gravel potential within the compartment. Abandoned iron mines are located around Amasa. Most of the compartment has low potential for iron ore, but there was some past iron exploration to the east (Sec 20, T45N-R33W), and there could still be some potential. There may be potential for other metallic minerals beneath the compartment. There is no history of mineral leasing within the

compartment. There is no known potential for economic oil and gas production in the UP. The state does not own all of the mineral rights within the compartment

Vehicle Access:

Vehicle access is fair to poor through much of the compartment. There exists the Net River Road which is improved gravel, running north through section 28 and across the Net River. Beyond this, roads are generally unimproved and subject to weather conditions if passable.

Survey Needs:

Several survey corners are needed to be set.

Recreational Facilities and Opportunities:

Net River boat launch. Snowmobile trail

Fire Protection:

In the SW portion of the compartment there are drier spruce/fir fuel types that could carry moderate to high intensity fire for a short distance. For the most part these more problematic fuels are bounded by aspen, hardwoods, and the Net River which provide natural fuel breaks. Access for equipment is generally good with woods roads accessing most areas.

Additional Compartment Information:

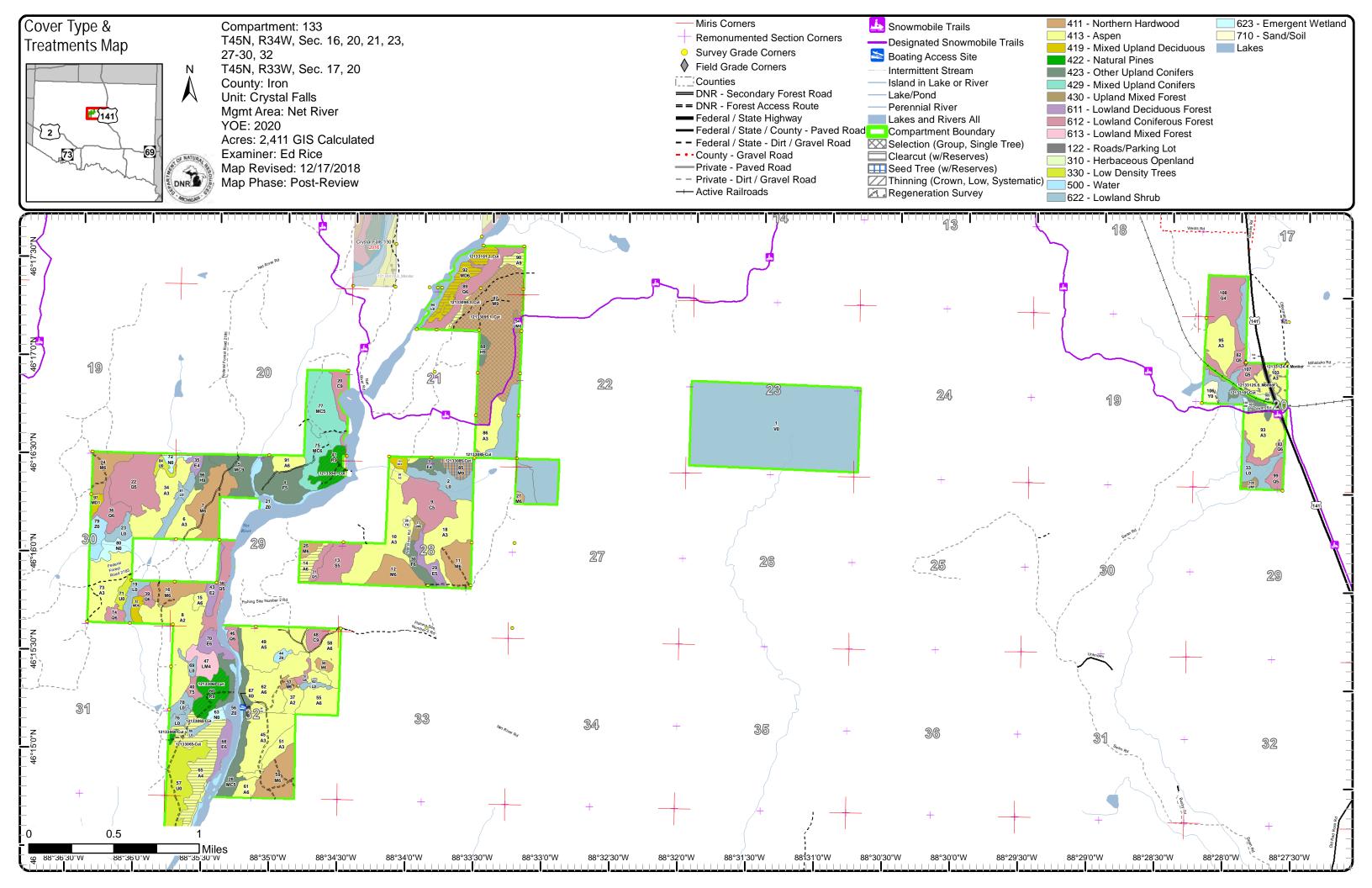
The following reports from the Inventory are attached:

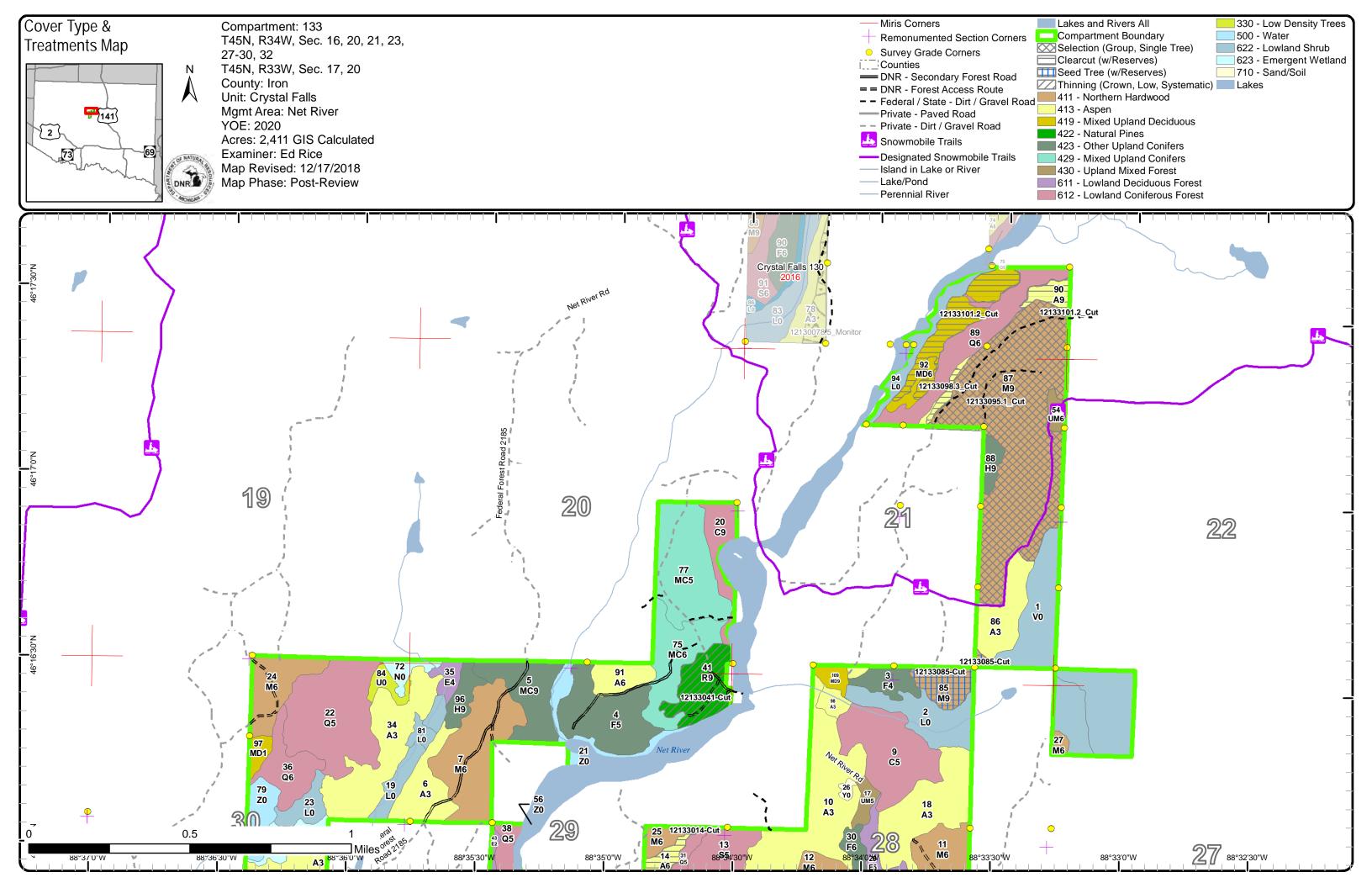
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

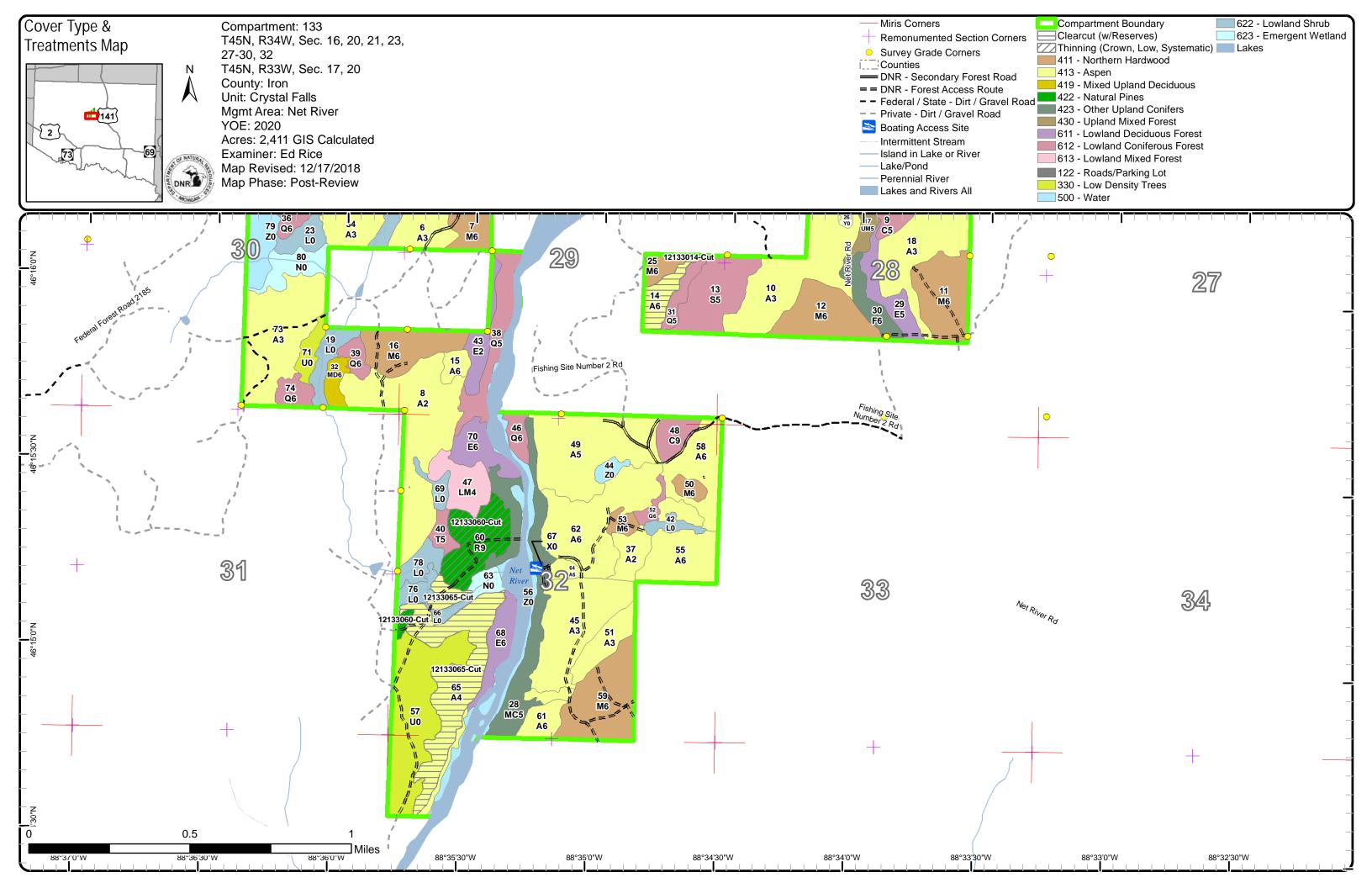
The following information is displayed, where pertinent, on the attached compartment maps: Base feature information, stand boundaries, cover types, and numbers Proposed treatments

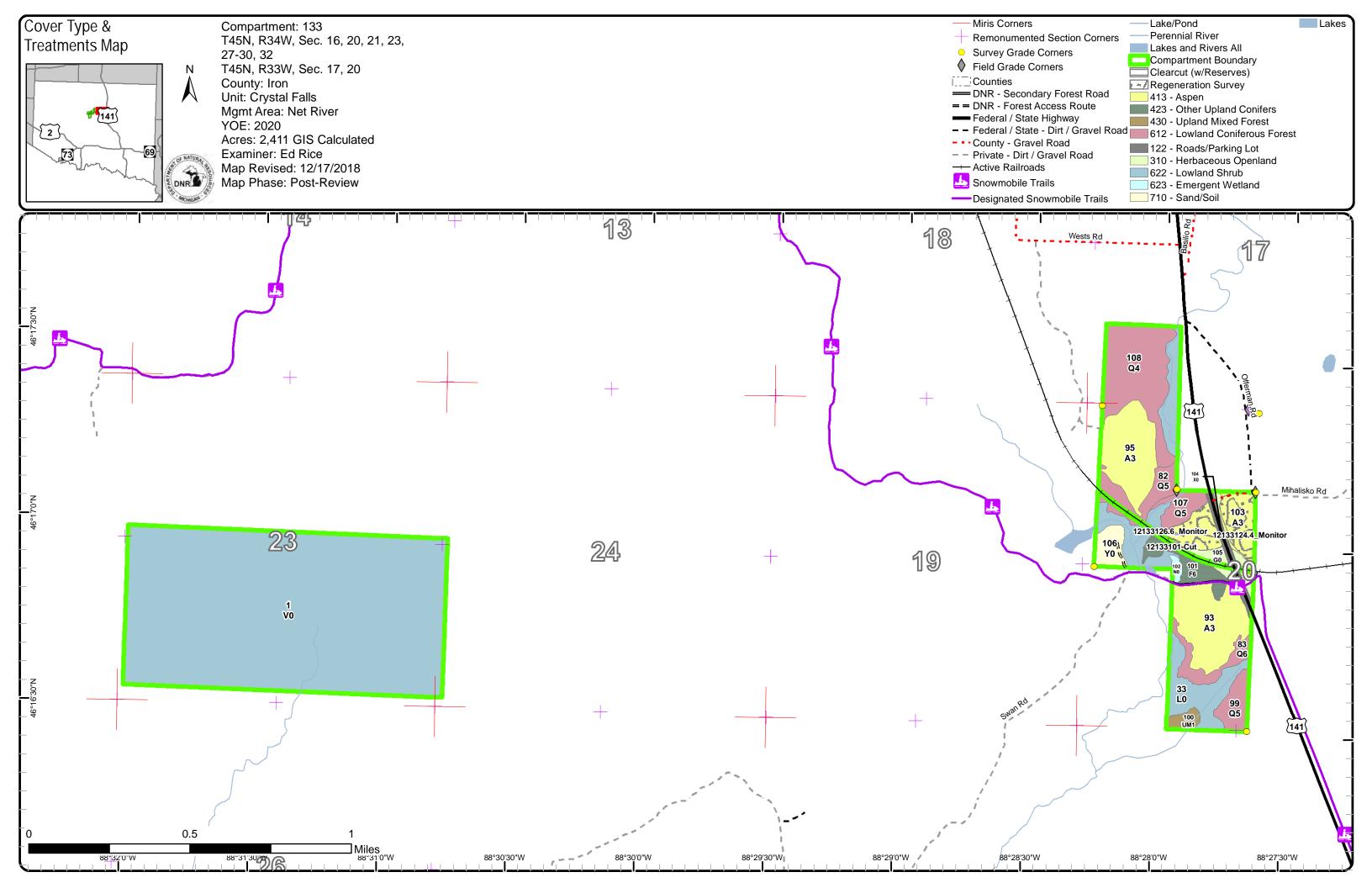
Site condition boundaries

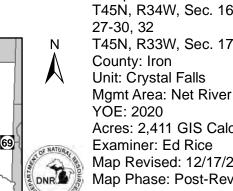
Details on the road access system

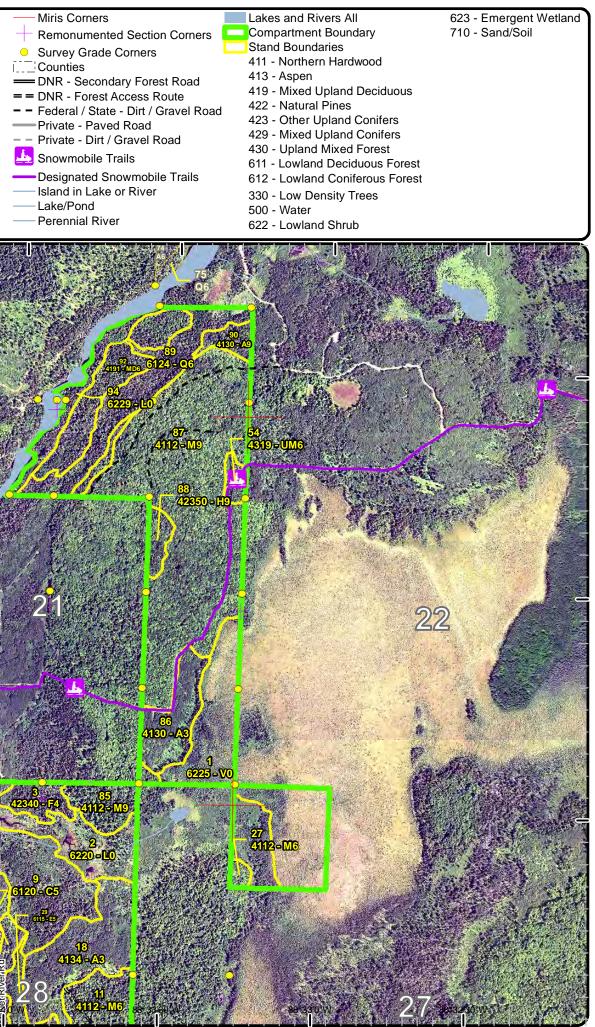


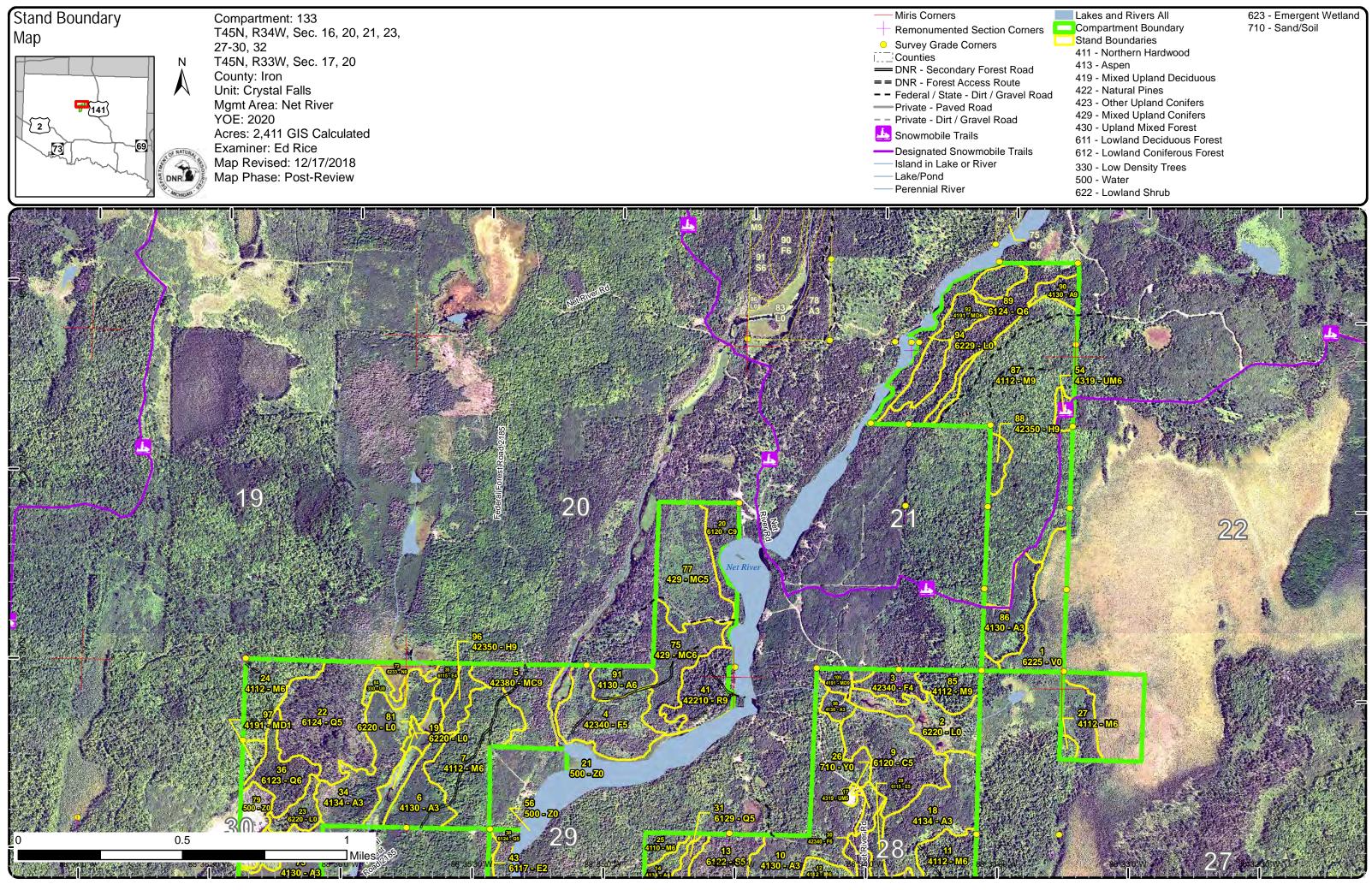






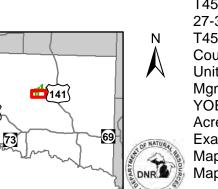




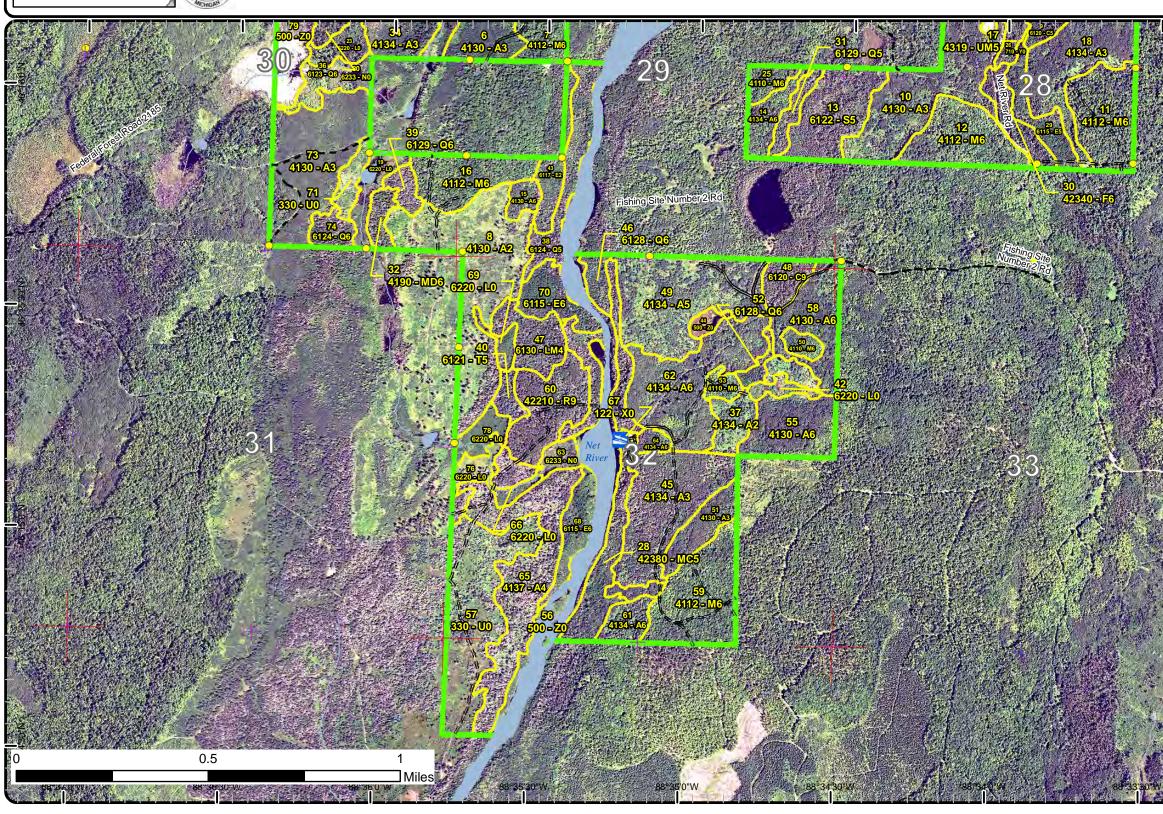


Stand Boundary Map

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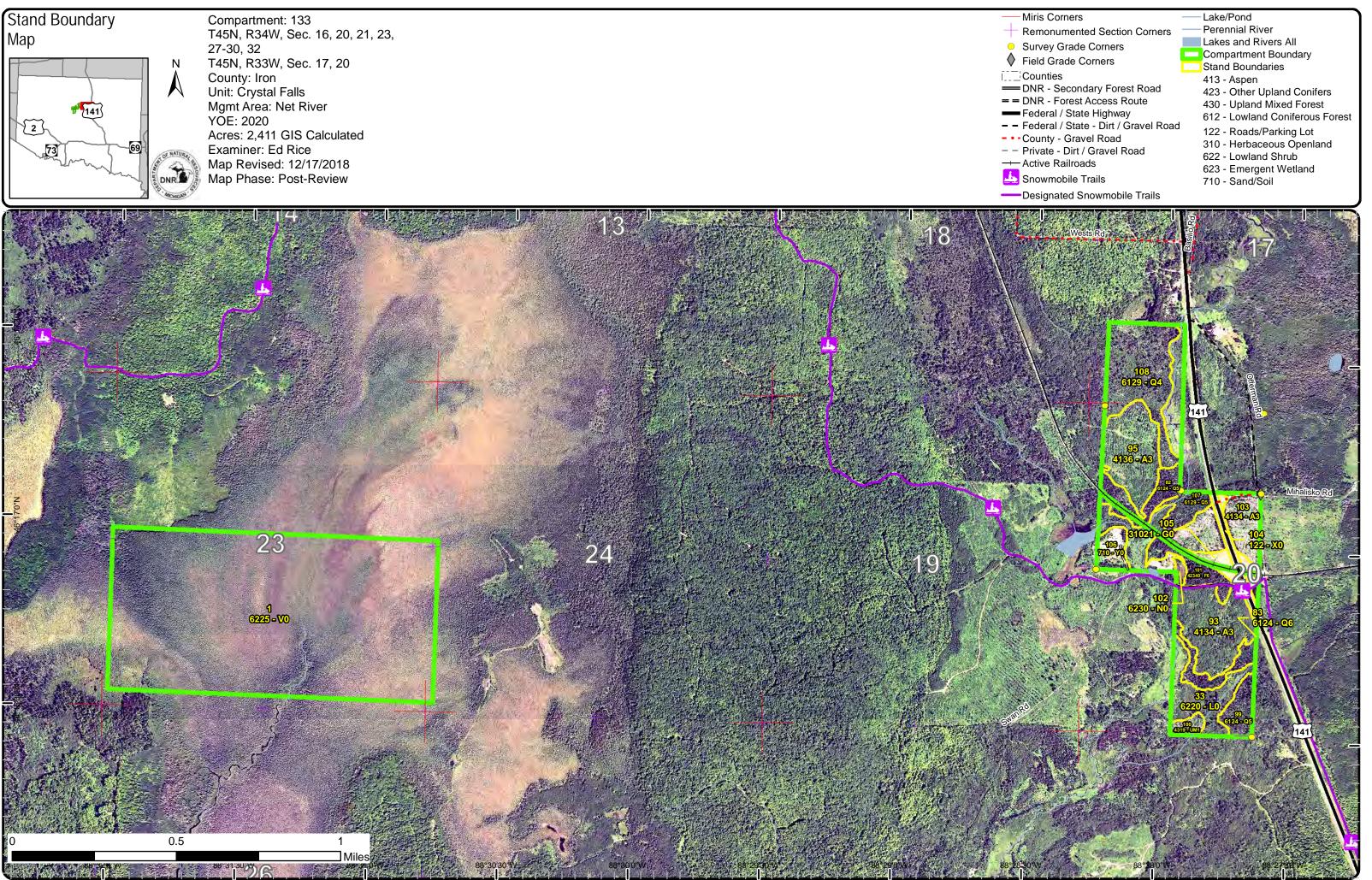


Compartment: 133 T45N, R34W, Sec. 16, 20, 21, 23, 27-30, 32 T45N, R33W, Sec. 17, 20 County: Iron Unit: Crystal Falls Mgmt Area: Net River YOE: 2020 Acres: 2,411 GIS Calculated Examiner: Ed Rice Map Revised: 12/17/2018 Map Phase: Post-Review Miris Corners Remonumented Section Co Survey Grade Corners Counties DNR - Secondary Forest Ro = DNR - Forest Access Route - Federal / State - Dirt / Gravel Road Boating Access Site Intermittent Stream Island in Lake or River Lake/Pond Perennial River Lakes and Rivers All



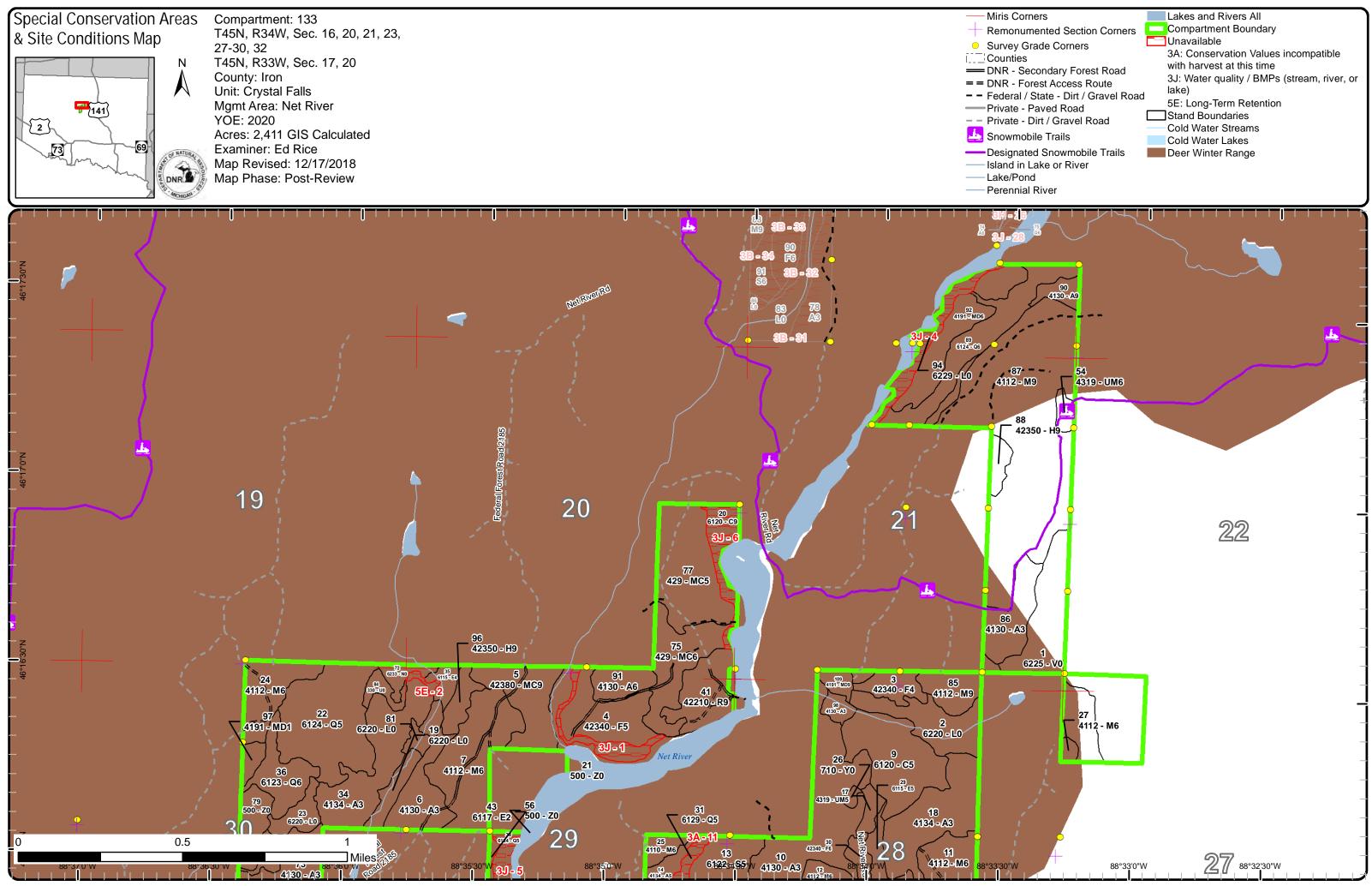
Corners Road ute avel Road ad	Compartment Bound Stand Boundaries 411 - Northern Hardw 413 - Aspen 419 - Mixed Upland 422 - Natural Pines 423 - Other Upland 0 430 - Upland Mixed 611 - Lowland Decid 612 - Lowland Conif 613 - Lowland Mixed 122 - Roads/Parking 330 - Low Density T 500 - Water	wood Deciduous Conifers Forest luous Forest erous Forest d Forest J Lot rees	623 - Emerger	nt Wetland
	622 - Lowland Shrut)		J
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27-30, 32 T45N, R33W, Sec. 17, 20 County: Iron Unit: Crystal Falls Mgmt Area: Net River YOE: 2020 Acres: 2,411 GIS Calculated Examiner: Ed Rice Map Revised: 12/17/2018 Map Phase: Post-Review

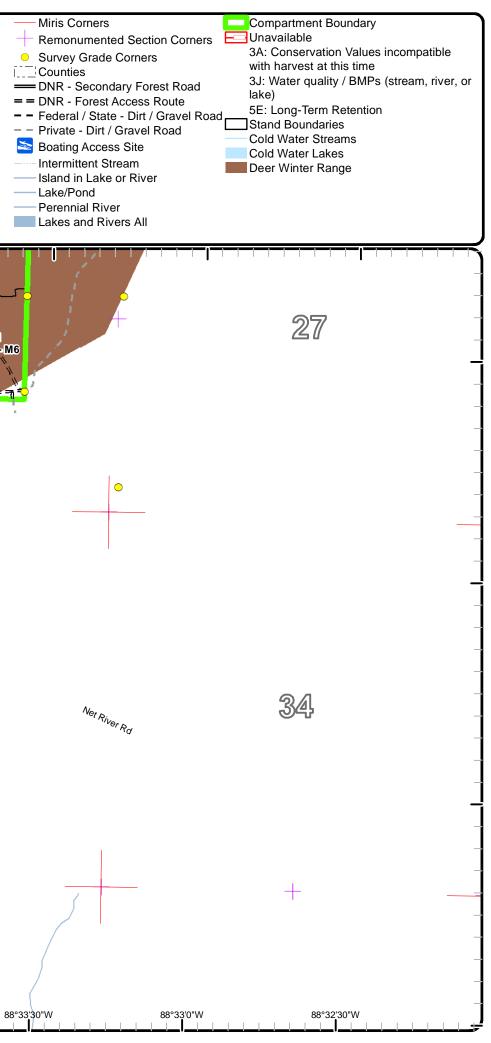


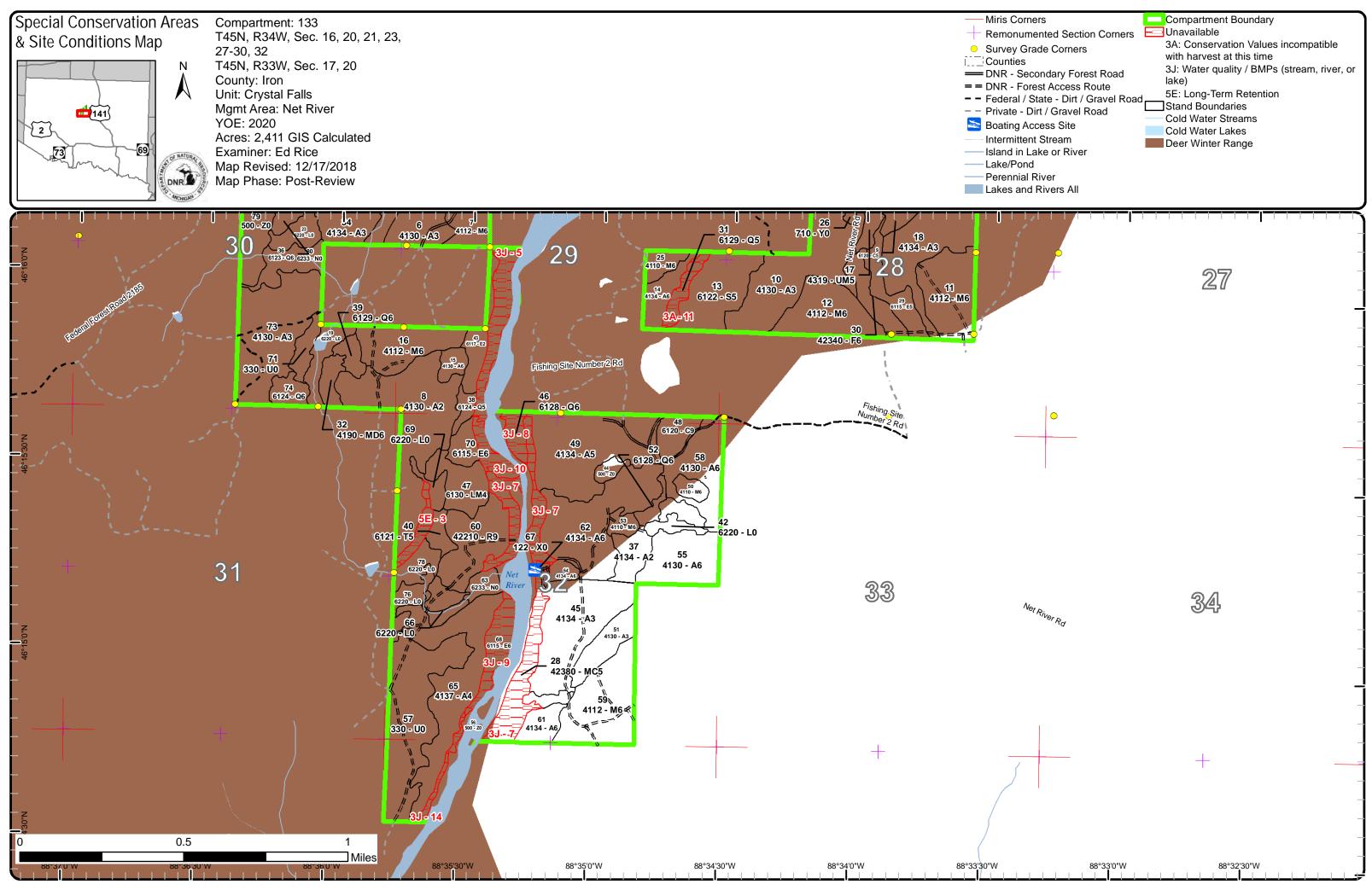
27-30, 32 T45N, R33W, Sec. 17, 20 County: Iron Unit: Crystal Falls Mgmt Area: Net River YOE: 2020 Acres: 2,411 GIS Calculated Examiner: Ed Rice Map Revised: 12/17/2018 Map Phase: Post-Review

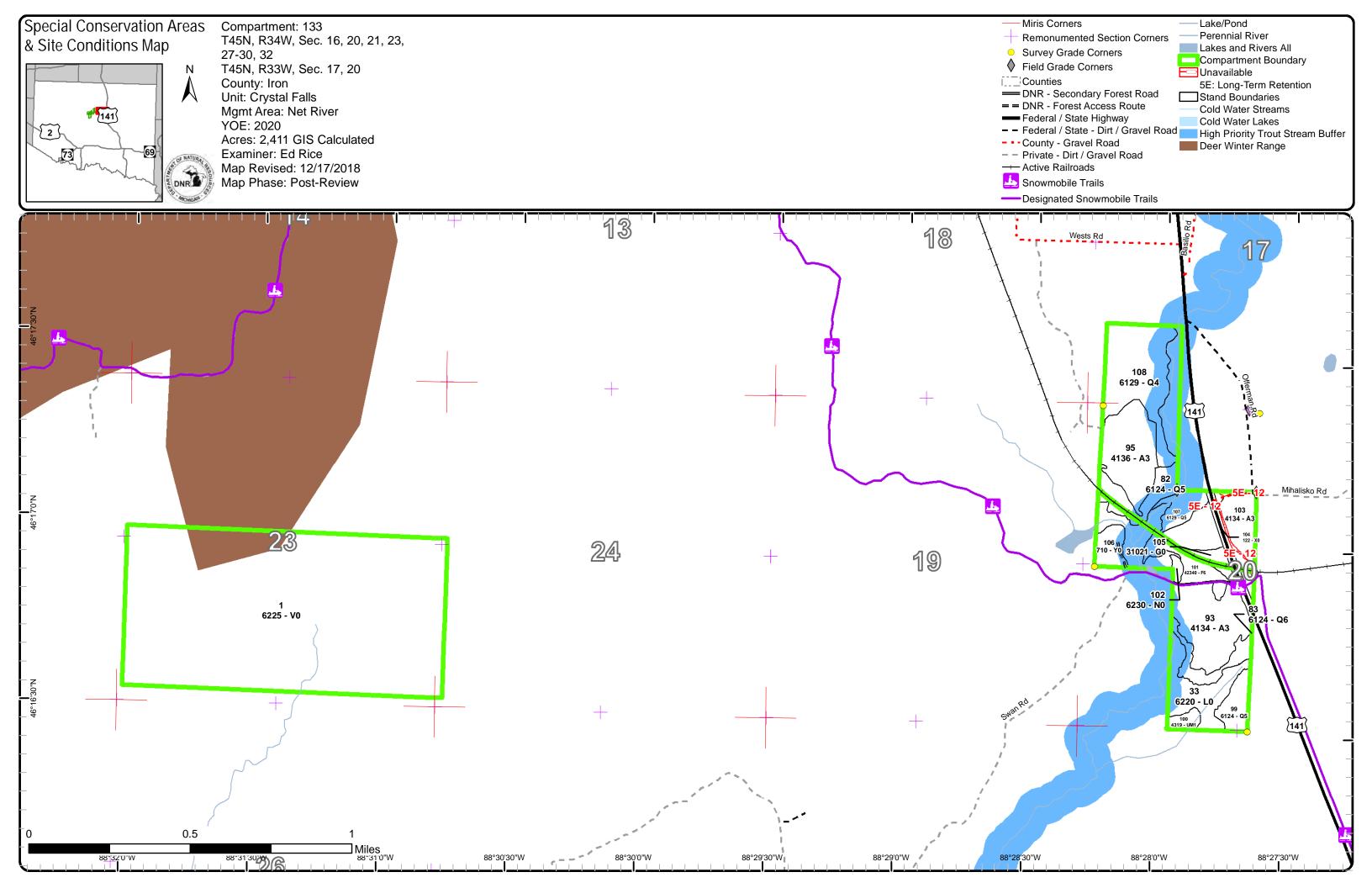




Special Conservation Areas Compartment: 133 T45N, R34W, Sec. 16, 20, 21, 23, & Site Conditions Map 27-30, 32 T45N, R33W, Sec. 17, 20 Ν County: Iron Unit: Crystal Falls Mgmt Area: Net River 141 YOE: 2020 [2] Acres: 2,411 GIS Calculated Examiner: Ed Rice 73 Map Revised: 12/17/2018 DNR Map Phase: Post-Review 79 500 - Z0 **J**4 26 6 4130 - A3 31 6129 - Q5 4112-M6 4134 - A3 710-Y0







Report 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 133 Year of Entry 2020



Age Class

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Aspen	0	83	183	172	162	5	55	19	0	0	0	0	0	0	0	0	0	0	679
Bog	370	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	370
Cedar	0	0	0	0	0	0	0	0	0	0	22	38	0	0	0	0	0	0	60
Hemlock	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	14
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Low-Density Trees	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
Lowland Conifers	0	0	0	0	0	21	104	37	9	0	14	37	0	0	0	0	0	0	221
Lowland Deciduous	0	0	10	0	37	0	5	0	0	0	0	0	0	0	0	0	0	0	52
Lowland Mixed Forest	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Shrub	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
Lowland Spruce/Fir	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26
Marsh	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Mixed Upland Deciduous	0	0	4	0	0	0	32	5	0	0	0	0	0	0	0	0	0	0	40
Northern Hardwood	0	0	0	0	0	0	10	271	14	0	0	0	0	0	0	0	0	37	332
Red Pine	0	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	0	49
Sand, Soil	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Tamarack	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Upland Conifers	0	0	0	0	69	38	0	25	0	0	0	0	0	0	0	0	0	0	132
Upland Mixed Forest	0	0	3	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	11
Upland Spruce/Fir	0	0	0	0	34	21	0	0	0	0	0	0	0	0	0	0	0	10	65
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Water	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90
Total	714	83	200	176	302	105	237	357	23	14	85	75	0	0	0	0	0	47	2414



Acres of Harvest Commercial Harvest - 296 Harvests with Site Condition - 0 Next Step Harvest - 21 Habitat Cut - 21

Cover Type by Harvest Method

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Aspen		61	0	0	0	0	0	0	0	0	61	
Mixed Upland Deciduous		30	0	0	0	0	0	0	0	0	30	
Northern Hardwood		0	133	0	14	0	0	0	0	0	147	
Red Pine		0	0	0	0	0	49	0	0	0	49	
Upland Spruce/Fir		10	0	0	0	0	0	0	0	0	10	
	Total	101	133	0	14	0	49	0	0	0	296	

Proposed and Next Step Treatments by Method

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Current		296	0	0	0	0	0	21	0	0	317	
Next Step		21	0	0	0	0	0	257	0	0	278	
	Total	317	0	0	0	0	0	278	0	0	595	

S t		Crystal	Falls Mgt. Unit		Re	eport 3	Treatme	nts	•	ment: 133 Entry: 2020	DNR DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
14	12133014-Cut	9.7	4134 - Aspen, Spruce/Fir	Poletimber Well	r 65	1-50	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
	<u>itat Cut:</u> No <u>cription</u> cut me <u>cs:</u> treatme	rchantable ent conting	Site Condition aspen, maple, w b gent on private land	pirch, spruce	and fir	. leave w p	bine, y birch an	d associated cedar			
	<u>Step</u> Monito tments:	ring, Natur	al Regen (Re-Inve	ntory)							
<u>Acce</u> Reg	e <u>ptable</u> aspen, en:	maple, sp	ruce, fir								
<u>Othe</u> Com	<u>er</u> ment:										
	osed Start Date	<u>:</u> 10/1 /	/2019								
41	12133041-Cut	21.7	42210 - Natural Red Pine	Sawtimber Well	- 94	141- 170	Harvest	Crown Thinning	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary
	itat Cut: No	ine to 120	Site Condition	_	3 R	hichever (occurs first on	ly cut occasional w	nine if needed for	r equinment ac	cess follow
Spe		uidelines	DA OI TEINOVE NO I		5 DA, W			iy cut occasional w	pille il fleeded to	equipment ac	
	<u>Step</u> tments:										
<u>Acce</u> Rege	eptable_ en:										
		med r pine	e 8-9 sticks tall. sn	nall open are	eas inte	rspersed t	hroughout. E t	o NE end of the sta	ind has a higher s	tocking of w pi	ne 20-24" dbł
Com	<u>ment:</u>			nall open are	eas inte	rspersed t	hroughout. E t	o NE end of the sta	nd has a higher s	tocking of w pi	ne 20-24" dbł
				nall open are Sawtimber Well		rspersed t 111- 140	hroughout. E t Harvest		nd has a higher s 42210 - Natural Red Pine	tocking of w pi	ne 20-24" dbh Draft Field Boundary
Com Prop 60 <u>Hab</u> Pres	ment: osed Start Date 12133060-Cut itat Cut: No cription thin r p	: 10/1 / 27.0	/2019 42210 - Natural	Sawtimber Well <u>:</u> e w pine. cu	- 94	111- 140	Harvest		42210 - Natural		Draft Field
Com Prop 60 Hab Pres Spec	ment: osed Start Date 12133060-Cut itat Cut: No cription thin r p	: 10/1 / 27.0	/2019 42210 - Natural Red Pine Site Condition ng BA by 1/3. leav	Sawtimber Well <u>:</u> e w pine. cu	- 94	111- 140	Harvest		42210 - Natural		Draft Field
Com Prop 60 Hab Pres Spec Next Trea	ment: osed Start Date 12133060-Cut itat Cut: No cription thin r p ss: access Step tments: eptable	: 10/1 / 27.0	/2019 42210 - Natural Red Pine Site Condition ng BA by 1/3. leav	Sawtimber Well <u>:</u> e w pine. cu	- 94	111- 140	Harvest		42210 - Natural		Draft Field
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Com Prop 60 Hab Pres Spec Next Trea Acce Regu Othe Com Prop	ment: osed Start Date 12133060-Cut itat Cut: No cription thin r p se: access Step tments: eptable en: overall ment: unders osed Start Date	10/1 / 27.0 ine reducir through p very well f tory.	/2019 42210 - Natural Red Pine Site Condition ng BA by 1/3. leav wt must be obtaine	Sawtimber Well e w pine. cu d	- 94 t merch	111- 140 antable as	Harvest spen r maple.	Crown Thinning e quality. aspen/r m	42210 - Natural Red Pine aple inclusion in c	Even-Aged	Draft Field Boundary
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S t		Crystal	Falls Mgt. Unit		Re	eport 3	Treatme	nts		tment: 133 Entry: 2020	DNR DNR	
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status	
85	12133085-Cut	13.6	4112 - Maple, Beech, Cherry Association	Sawtimber Well	71	111- 140	Harvest	Seed Tree with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary	
	•		Site Condition maple, cherry, spr cedar. keep harve	uce and fir.	-	/ brich le	eave 1 cherry a	nd/or healthy h ma	ple per cruise poi	nt where poss	ible. no w	
	<u>Step</u> Monitor tments:	ring, Natui	ral Regen (Re-Invei	ntory)								
Rege		voods										
<u>Othe</u> Com	<u>r</u> ment:											
Prop	osed Start Date	10/1	/2019									
87	12133095.1_C ut	133.0	4112 - Maple, Beech, Cherry Association	Sawtimber Well	67	111- 140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Uneven- Aged	Field Boundary	
	<u>itat Cut:</u> No <u>cription</u> Mark tr	ees to a B	Site Condition A of 80 leaving the	-	place.	Do not cu	it red and white	e pine, cedar, hemlo	ock, oak and elm.	Thin around	crop trees	
Spec	<u>s:</u> accordi	ng to the	compleat marker.	Make canop	by gaps	in stand.					·	
	<u>Step</u> Monitor tments:	ring, Natui	ral Regen (Re-Invei	ntory)								
<u>Acce</u> Rege		n hardwoo	od									
Othe		ext step co	omments: Regen si	urvev accord	lina to c	ertificatio	n					
	<u>ment:</u>	·	0	,	Ū							
Prop	osed Start Date	10/1	/2013									
90	12133098.3_C ut	2.3	4130 - Aspen	Sawtimber Well	67	Unspec ified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Field Boundar	
	itat Cut: No	traca 2 in	Site Condition	_	white	aina hami	ook ooder ook	, elm and cherry. (Lut all aprusa and	holoom tho is	6 inches or	
Spec		at a 4 inch	•	epi, reu anu	writte p	Jine, nemi	OCK, CEUAI,OAK	, ein and cherry. C	out all spruce and		o inches of	
	<u>Step</u> Monitor tments:	ring, Natui	ral Regen (Re-Inve	ntory)								
<u>Acce</u> Rege	e <u>ptable</u> aspen, en:	spruce fir										
<u>Othe</u> Com	<u>r</u> Old ne <u>ment:</u>	ext step co	omments: Regen si	urvey accord	ling to c	certification	n.					
Prop	osed Start Date	10/1	/2013									
92	12133101.2_C ut	30.1	4191 - Mixed Upland Deciduous with Conifer	Poletimbe Well	r 55	51-80	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary	
Hab	<u>itat Cut:</u> No		Site Condition	<u>:</u>								
Pres Spec			ches and smaller ex inch stump.	cept red an	d white	pine, herr	llock, cedar, oa	ak and elm and che	rry. Cut all spruce	e and balsam	that is 6 inches	
	<u>Step</u> Monitor tments:	ring, Natur	ral Regen (Re-Inver	ntory)								
<u>Acce</u> Rege	e <u>ptable</u> aspen, en:	spruce fir										
<u>Othe</u> Com	<u>r</u> Old ne ment:	ext step co	omments: Regen si	urvey accord	ling to c	certification	n.					

Proposed Start Date: 10/1 /2013

Crystal Falls Mgt. Unit **Report 3** -- Treatments Compartment: 133 s Year of Entry: 2020 t а Treatment Acres Stand Size Stand BA Treatment Treatment Cover Type Approval Age n Method Objective Name CoverType Density Age Range Type Structure Status d 101 12133101-Cut 9.8 42340 - Upland Poletimber 40 Clearcut with 4319 - Mixed Even-Aged Draft Field Unspec Harvest Spruce/Fir Well ified Retention Upland Forest Boundary Habitat Cut: No Site Condition: Prescription cut merchantable aspen, spruce, fir, tamarack, cherry. leave cherry per cruise point where available. use roads for buffer to small cattail swamp Specs: Monitoring, Natural Regen (Intermediate) Next Step Treatments: Acceptable aspen, spruce, fir Regen: Other Comment: Proposed Start Date: 10/1 /2019 Sapling 103 12133124.4 M 11 1 4134 - Aspen, 2 Immatu Monitoring Natural Regen 4319 - Mixed Even-Aged Draft Field Spruce/Fir Well (Re-Inventory) Upland Forest Boundary onitor re Habitat Cut: No Site Condition: Prescription Specs: Next Step ; Harvest, Clearcut with Retention Treatments: Acceptable aspen, spruce fir Regen: Percent to Treat = 100% Other Comment: Proposed Start Date: 3 /7 /2017 0 Natural Regen Draft Field 12133126.6 M 9.7 6220 - Alder/willow Nonstocked Unspec Monitoring 429 - Mixed Even-Aged 33 (Re-Inventory) onitor ified Upland Conifers Boundarv Habitat Cut: No Site Condition: Prescription Specs: Next Step ; Monitoring, Natural Regen (Re-Inventory); Harvest, Clearcut with Retention Treatments: Acceptable aspen, spruce fir Regen: <u>Other</u> Percent to Treat = 100% Comment: Proposed Start Date: 3 /7 /2017 **Total Treatment** 316.8 Acreage Proposed:

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Compartment: 133 Year of Entry: 2020

Availability for Management

Total	Acres	Acres Avail	Acres		Domina	nt Site	e Cond
Acres	Available	With Condition	Not Available		ЗA	3J	5E
678	563	0	116	Aspen		14	102
370	370	0	0	Bog			
60	47	0	13	Cedar		13	
14	14	0	0	Hemlock			
7	7	0	0	Herbaceous Openland			
59	59	0	0	Low-Density Trees			
221	141	0	80	Lowland Conifers	6	22	52
52	33	0	19	Lowland Deciduous		19	
15	15	0	0	Lowland Mixed Forest			
148	135	0	13	Lowland Shrub		13	
26	26	0	0	Lowland Spruce/Fir			
23	23	0	0	Marsh			
40	40	0	0	Mixed Upland Deciduous			
331	331	0	0	Northern Hardwood			
49	49	0	0	Red Pine			
9	9	0	0	Sand, Soil			
5	5	0	0	Tamarack			
131	25	0	107	Upland Conifers		107	
12	12	0	0	Upland Mixed Forest			
64	30	0	34	Upland Spruce/Fir		34	
7	7	0	0	Urban			
90	90	0	0	Water			
2,411	2,029		382	Total Forested Acres	6	222	154
	84%		16%	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 Dominant Site No. 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)	9	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:						

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2	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	14	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	38	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

				Report 4 – Site Cond	litions	Compartment: 133		
		al Falls Mgt. Unit d Rice : Examiner				Compartment: 13 Year of Entry: 20		
8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified	
	Comments:							
9	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							
11	Unavailable	3A: Conservation Values incompatible with harvest at this time	6	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified	
	Comments: stand heavy to ced	lar						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							
14	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							



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

Compartment: 133 Year of Entry 2020



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.

Conservatio 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 speci- 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 by are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	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 wildl and Waterfowl Production Areas, deer wintering complexes in lo openings and savannas. Habitat areas are distinct from critical h endangered 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	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 o communities are ecologically and socially significant in their effer as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well

S t	Crystal Falls Mgt. Unit			Report 7	– Forested	Stands Compartment: 133
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	42340 - Upland Spruce/Fir	Poletimber Poor	9.5	42	1-50	Aspen has fallen out of the stand creating opening for aspen regeneration. Majority of mature spruce/fir has also fallen down.
4	42340 - Upland Spruce/Fir	Poletimber Medium	34.1	35	Unspecified	aspen did not regenerate well from previous cut. pine site.
5	42380 - Non Pine Upland Conifer, Mixed Deciduous	Sawtimber Well	24.9	60	51-80	highly mixed stand. r maple is very low quality- twisted stems, seams. scattered y birch and b cherry in more upland areas of the stand. widely scattered large w pine. small inclusions of tag alder thickets.
6	4130 - Aspen	Sapling Well	19.2	11	Immature	
7	4112 - Maple, Beech, Cherry Association	Poletimber Well	42.8	63	81-110	timber has fair to poor form - defect is present throughout. pockets of heavy h maple and cherry regeneration.
8	4130 - Aspen	Sapling Medium	60.6	5	Immature	cut in 2013 as sale # 12-081-10-01, Sore Feet Sale. areas with little to no regeneration interspersed throughout stand
9	6120 - Lowland Cedar	Poletimber Medium	38.3	101	Unspecified	
10	4130 - Aspen	Sapling Well	63.5	23	Immature	scattered maple poletimber 6-7" dbh. slight w birch component. pockets of semi open spruce/fir
11	4112 - Maple, Beech, Cherry Association	Poletimber Well	26.2	61	81-110	h maple/r maple sawtimber component 14-18" dbh. h maple form is fair to good with r maple lower quality. h maple saplings 1/2 -2" dbh. scattered w spruce
12	4112 - Maple, Beech, Cherry Association	Poletimber Well	25.2	61	81-110	scattered vernal areas with hemlock. r maple low quality.
13	6122 - Black Spruce	Poletimber Medium	26.2	57	Unspecified	areas with low to no stocking are heavy to tag alder, notably in the E end of stand
14	4134 - Aspen, Spruce/Fir	Poletimber Well	9.7	65	1-50	scattered associated cedar
15	4130 - Aspen	Poletimber Well	4.6	45	Unspecified	
16	4112 - Maple, Beech, Cherry Association	Poletimber Well	21.2	63	81-110	thinned in 2013 as Sore Feet Sale 12-081-10-01.
17	4319 - Mixed Upland Forest	Poletimber Medium	4.5	42	Unspecified	
18	4134 - Aspen, Spruce/Fir	Sapling Well	39.3	23	Immature	small clumps of spruce/fir throughout
20	6120 - Lowland Cedar	Sawtimber Well	13.5	98	Unspecified	

S t	Crystal Falls Mgt. Unit			Report 7	– Forested	Stands Compartment: 133
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	6124 - Lowland Spruce- Fir	Poletimber Medium	52.1	53	51-80	areas of tag alder thicket
24	4112 - Maple, Beech, Cherry Association	Poletimber Well	20.7	63	51-80	cut in 2013 as Sore Feet Sale # 12-081-10-01. low quality sawtimber,
25	4110 - Sugar Maple Association	Poletimber Well	5.6	59	81-110	
27	4112 - Maple, Beech, Cherry Association	Poletimber Well	2.2	64	81-110	fair to low quality, defect is prevalent. r maple is very low quality. component of sawtimber sized h maple and r maple 14 - 20" dbh
28	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Medium	37.6	41	81-110	steep hillside leading down to Net River. throughout stand much of aspen has fallen out and replaced with dense fir. along bottom adjacent to river stand is stocked with cedar and wet. multiple drainages
29	6115 - Lowland Ash	Poletimber Medium	12.3	35	51-80	very wet, small diameter
30	42340 - Upland Spruce/Fir	Poletimber Well	10.9	40	Unspecified	fir/spruce small diameter poletimber with interspersed small open areas heavier to r maple and aspen
31	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	6.0	96	51-80	
32	4190 - Mixed Upland Deciduous with Cedar	Poletimber Well	5.6	53	81-110	dense r maple sapling pockets. mainly upland with low ground interspersed
34	4134 - Aspen, Spruce/Fir	Sapling Well	40.4	13	81-110	regenerating from 2005 windthrow. N end was cut by timber company that owned that parcel at the time.
35	6115 - Lowland Ash	Poletimber Poor	5.0	55	Unspecified	tag alder with b ash. small creek runs S through stand
36	6123 - Lowland Fir	Poletimber Well	17.6	42	Unspecified	
37	4134 - Aspen, Spruce/Fir	Sapling Medium	13.8	34	Immature	very poor aspen - semi open areas, poor form. pine site
38	6124 - Lowland Spruce- Fir	Poletimber Medium	19.8	52	51-80	
39	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	4.9	52	51-80	small pockets of cedar throughout
40	6121 - Tamarack	Poletimber Medium	4.6	53	Unspecified	

S t	Crystal Falls Mgt. Unit			Report 7	– Forested	Stands Compartment: 133 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	42210 - Natural Red Pine	Sawtimber Well	21.7	94	141-170	well formed r pine 8-9 sticks tall. small open areas interspersed throughout. E to NE end of the stand has a higher stocking of w pine 20-24" dbh.
43	6117 - Lowland Deciduous, Mixed Coniferous	Sapling Medium	9.8	13	Immature	over story has fallen out due to old age and 2005 windstorm. regeneration has established. Iow ground with transition to higher ground. S end of stand has higher stocking to aspen
45	4134 - Aspen, Spruce/Fir	Sapling Well	40.4	25	81-110	scattered 1-2 stick aspen.
46	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	5.5	101	81-110	
47	6130 - Fir, Aspen, Maple	Poletimber Poor	14.8	45	Unspecified	widely scattered r pine throughout. poorly stocked aspen with dense tag alder understory. scattered tamarack
48	6120 - Lowland Cedar	Sawtimber Well	8.3	98	51-80	
49	4134 - Aspen, Spruce/Fir	Poletimber Medium	49.2	34	Immature	very semi open stand. Aspen is very low quality - black bark. stand is trying to grow aspen on a pine site. w pine/r pine trying to grow in
50	4110 - Sugar Maple Association	Poletimber Well	3.7	59	81-110	very scattered h maple 22 - 24" dbh. small amount of upland cedar
51	4130 - Aspen	Sapling Well	15.3	26	81-110	tag alder inclusions interspersed throughout.
52	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.2	45	Unspecified	W end of stand has higher stocking of b ash.
53	4110 - Sugar Maple Association	Poletimber Well	3.8	57	81-110	component of h maple/r maple 12-18"dbh. scattered large w pine 24-28" dbh
54	4319 - Mixed Upland Forest	Poletimber Well	3.9	29	81-110	
55	4130 - Aspen	Poletimber Well	22.9	34	Immature	aspen is just moving into poletimber size class. Iower areas with tag alder understory intermixed throughout the stand
58	4130 - Aspen	Poletimber Well	22.3	34	Immature	semi open areas, notably in NE corner
59	4112 - Maple, Beech, Cherry Association	Poletimber Well	33.5	59	81-110	component of h maple logs 12-14" dbh throughout. areas of stand have well stocked M3 - saplings 20-30' tall. scattered sawtimber sized w spruce and upland cedar
60	42210 - Natural Red Pine	Sawtimber Well	27.0	94	111-140	overall very well formed red pine 9-11 sticks tall. some sweep is present but pole quality. aspen/r maple inclusion in center of stand. dense fir understory.

S t	Crystal Falls Mgt. Unit			Report 7	– Forested	Stands Compartment: 133
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	4134 - Aspen, Spruce/Fir	Poletimber Well	7.9	26	81-110	aspen 6-8" dbh. areas of low stocking-semi open
62	4134 - Aspen, Spruce/Fir	Poletimber Well	43.4	34	Immature	just moving into poletimber size class. much of stand is dense to fir understory. scattered large w pine throughout and in small groves.
64	4134 - Aspen, Spruce/Fir	Poletimber Well	3.1	50	81-110	w birch has mainly fallen out. scattered aspen 16-18" dbh
65	4137 - Aspen, Birch	Poletimber Poor	51.9	50	Unspecified	stand is wiped out by SBW - spruce/fir for the most part is dead and stacked
68	6115 - Lowland Ash	Poletimber Well	12.3	38	51-80	scattered r maple. stand lies along Net River. S end has heavier tag alder component
70	6115 - Lowland Ash	Poletimber Well	12.8	38	81-110	
73	4130 - Aspen	Sapling Well	45.8	15	Immature	small tag alder inclusion in center of stand. stand was cut previously to when the state acquired the land
74	6124 - Lowland Spruce- Fir	Poletimber Well	6.3	52	Unspecified	
75	429 - Mixed Upland Conifers	Poletimber Well	28.0	30	Immature	aspen did not regenerate well from previous cut. stand has converted to w pine and fir.
77	429 - Mixed Upland Conifers	Poletimber Medium	40.9	30	Immature	low quality aspen. stand is just moving into poletimber size classes. much of aspen has fallen out of the stand at a early age due to being off site for the species. replaced by w pine and spruce/fir. open areas throughout. where aspen is present is in single trees and small groves.
82	6124 - Lowland Spruce- Fir	Poletimber Medium	12.2	56	81-110	
83	6124 - Lowland Spruce- Fir	Poletimber Well	8.5	71	Unspecified	buffer strip along drainage/creek
85	4112 - Maple, Beech, Cherry Association	Sawtimber Well	13.6	71	111-140	very low quality. unknown access through private
86	4130 - Aspen	Sapling Well	19.6	12	Immature	
87	4112 - Maple, Beech, Cherry Association	Sawtimber Well	132.0	67	111-140	vernal areas holding higher stocking of hemlock and y birch throughout. S end has higher incidence of hemlock groves.
88	42350 - Upland Hemlock	Sawtimber Well	5.6	85	81-110	dense hemlock stand with associated upland cedar, y birch, r maple

S t	Crystal Falls	Mgt. Unit		Report 7	- Forested	Stands Compartment: 133 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
89	6124 - Lowland Spruce- Fir	Poletimber Well	31.8	101	81-110	drainages throughout that are poorly stocked . heavy tag alder through most of stand
90	4130 - Aspen	Sawtimber Well	9.3	67	Unspecified	areas of well stocked maple saplings
91	4130 - Aspen	Poletimber Well	10.4	35	Unspecified	stand area was able to grow slightly better quality aspen than surrounding stands, though they were cut at the same time in the past.
92	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	26.0	55	51-80	aspen 14-16" dbh, 5-6 sticks tatll - deteriorating. majority of the sawtimber sized w spruce is dead. very scattered w pine 18-24" dbh. w birch is moderately stocked in areas of the stand
93	4134 - Aspen, Spruce/Fir	Sapling Well	30.8	12	Immature	spruce/fir inclusions throughout the stand. scattered inclusions of lowland conifer - S6
95	4136 - Aspen, Mixed Conifer	Sapling Well	26.9	12	Unspecified	pockets dense to fir. small areas of semi open throughout
96	42350 - Upland Hemlock	Sawtimber Well	7.9	83	51-80	
97	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	4.2	13	Immature	mainly semi open - clearcut previously before land was acquired by the state.
98	4130 - Aspen	Sapling Well	5.7	23	Immature	NE corner has tag alder/balm inclusion
99	6124 - Lowland Spruce- Fir	Poletimber Medium	8.5	56	51-80	very poor access
100	4319 - Mixed Upland Forest	Sapling Poor	3.3	12	Immature	stand was windthrown in 2005. advanced aspen regeneration, very little mature timber remaining standing. very poor access
101	42340 - Upland Spruce/Fir	Poletimber Well	9.8	40	Unspecified	
103	4134 - Aspen, Spruce/Fir	Sapling Well	22.2	2	Immature	cut in 2016 under Salty Regs sale. S end of stand graduated more towards lowland spruce, wetter ground
107	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	7.5	95	1-50	areas of low stocking ranging to open with heavy tag alder. Little Hemlock River
108	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	37.3	62	51-80	fairly open stand overall, notably in the S 1/2 - heavy to tag alder. tamarack and cedar in pockets with tag alder thickets between. N end of stand has slightly higher stocking.
109	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	4.5	61	81-110	aspen is in rough shape. spruce/fir has been impacted by SBW. scattered log sized r maple 12-14" dbh

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Stand	Cover Type	Acres	Managed Site	General Comments:
1	6225 - Bog	370.1	No	bog with scattered stunted b spruce/tamarack
2	6220 - Alder/willow	36.9	No	tag alder with swamp grass. multiple drainages, old beaver meadows
19	6220 - Alder/willow	20.4	No	tag alder bottom lands with Robinson Creek. scattered beaver ponds
21	500 - Water	24.6	No	Net River and Porter Creek with associated adjacent flooded lowlands
23	6220 - Alder/willow	8.3	No	tag alder with scattered lowland conifer
26	710 - Sand, Soil	1.5	No	gravel pit
33	6220 - Alder/willow	42.9	No	tag alder. Little Hemlock River. scattered lowland conifers. more open ponded areas
42	6220 - Alder/willow	3.9	No	tag alder marsh with cattail
44	500 - Water	3.1	No	small bog pond
56	500 - Water	49.6	No	Net River
57	330 - Low-Density Trees	48.3	No	open to semi open stand. Areas of j pine, spruce, fir. Component of b cherry brush, low quality aspen poletimber, and very scattered r pine poletimber. Slight component of upland tamarack. N end of stand is slightly better stocked to open grown trees.
63	6233 - Wet Meadow	4.8	No	open marsh with tag alder and water
66	6220 - Alder/willow	3.2	No	tag alder with creek
67	122 - Road/Parking Lot	0.7	No	Access site/parking lot to Net River
69	6220 - Alder/willow	3.9	No	tag alder with widely scattered lowland aspen
71	330 - Low-Density Trees	6.1	No	beavers have cut aspen out of this stand in the past creating semi open brush. scattered fir and cherry with tag alder/ hazel
72	6233 - Wet Meadow	5.4	No	old beaver meadow- swamp grass, cattail, old snags

Crystal Falls Mgt. Unit

Compartment: 133 Year of Entry: 2020



Stand	Cover Type	Acres	Managed Site	General Comments:
76	6220 - Alder/willow	5.2	No	open with low willows and swamp grass. very old beaver meadow. seasonally ponded
78	6220 - Alder/willow	7.4	No	heavy tag alder with creek
79	500 - Water	12.5	No	flooded bog
80	6233 - Wet Meadow	11.0	No	old beaver flowage, multiple creek channels
81	6220 - Alder/willow	3.2	No	heavy tag alder with creek
84	330 - Low-Density Trees	4.8	No	semi open where beaver have cut off trees in the past. spruce/fir remain. SE area is heavier to stocked conifer
94	6229 - Mixed lowland shrub	13.2	No	tag alder with scattered conifer and lowland conifer. scattered large w pine. stand lies immediately adjacent to Net River.
102	6230 - Cattail	1.5	No	cattail swamp with ponded water
104	122 - Road/Parking Lot	6.1	No	US 141
105	31021 - Cool Season Grass	7.2	No	US 141/Railroad ROW clearing - weeds/grass
106	710 - Sand, Soil	7.1	No	old gravel pit with scattered conifers growing in. West portion of area especially is used heavily by public as an informal shooting range