

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12171 Entry Year: 2027 Acreage: 945 County: Iron Management Area: Brule River

Stand Examiner: Eric Brolin

Legal Description:

T41N-R31W sections 3, 4, 9 and 10

Identified Planning Goals:

Develop age class distribution in aspen type. Develop quality while maintaining diversity in hardwood type. Maintain health of conifer types and increase acreage where possible. Maintain and improve road system.

Soil and topography:

Sarona fine sandy loam. Rolling areas on ground moraines and end morains. Rolling hills with some swamp and drainages.

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

State lands mixed with company lands and private parcels. Land mainly used for hunting and fishing, but some year round residences and camps are present.

Unique Natural Features:

Michigamme Lake. The Menominee River is just to the south of the compartment..

Archeological, Historical, and Cultural Features:

None.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

Minimum buffers should be implemented. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function. Additionally, wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations:

The primary featured species managed for in this compartment include bear and deer. This compartment is greater than 90% aspen and northern hardwood. It has 3 small drainages that provide critical habitat for bears, deer, amphibians and reptile and migrating songbirds. This compartment is part of the historical Camp 5 Deer Wintering Complex. The hemlock, cedar, pine and spruce/fire components of the are are critical to provide winter cover and enable deer to travel along transition zones through the uplands to obtain forage.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of an end moraine of coarse-textured till. The glacial drift thickness varies between 50 and 100 feet. The Proterozoic Michigamme Formation and Archean volcanic and sedimentary rocks subcrop below the glacial drift. There is not a current economic use for these rocks. Abandoned iron mines at Crystal Falls are located ten miles to the northwest. Land near this compartment was previously leased for metallic mineral exploration. There are no visibly active gravel pits in the area, but there is potential. There is no economic oil and gas production in the UP.

Vehicle Access:

Camp 5 Road, Lower Dam Road, Upper Dam Road and woods roads.

Survey Needs:

None.

Recreational Facilities and Opportunities:

Hunting.

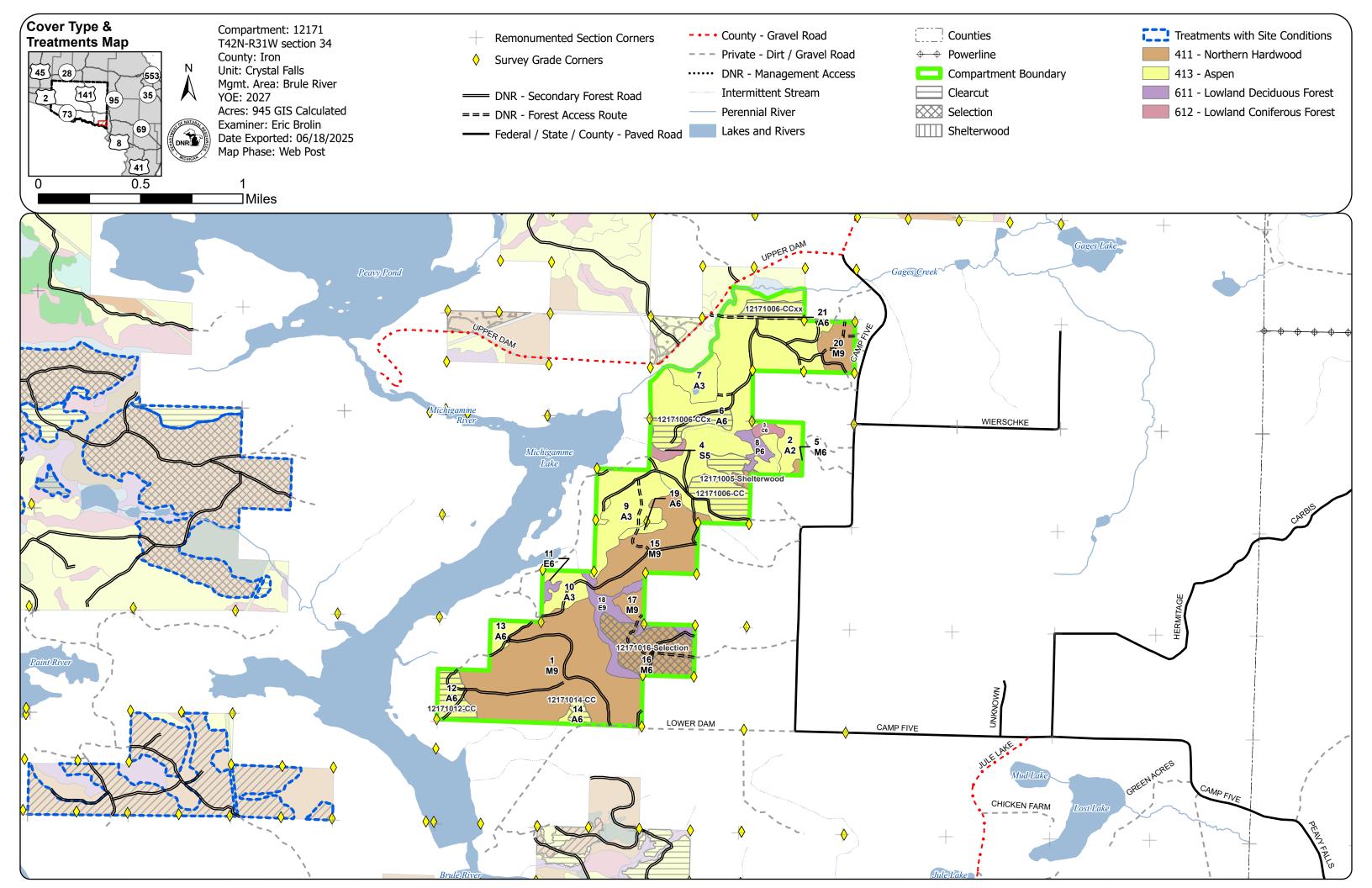
Fire Protection:

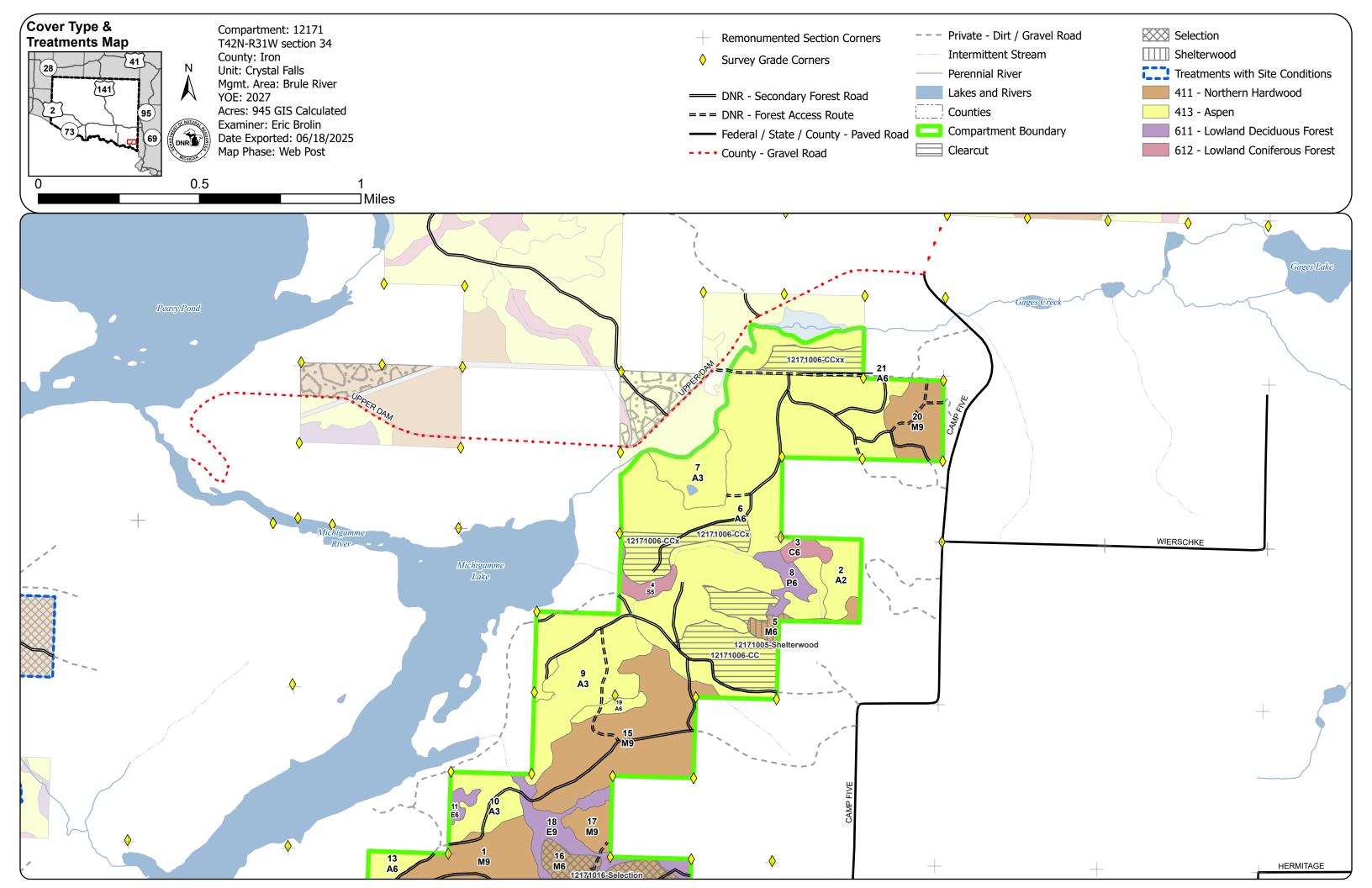
Additional Compartment Information:

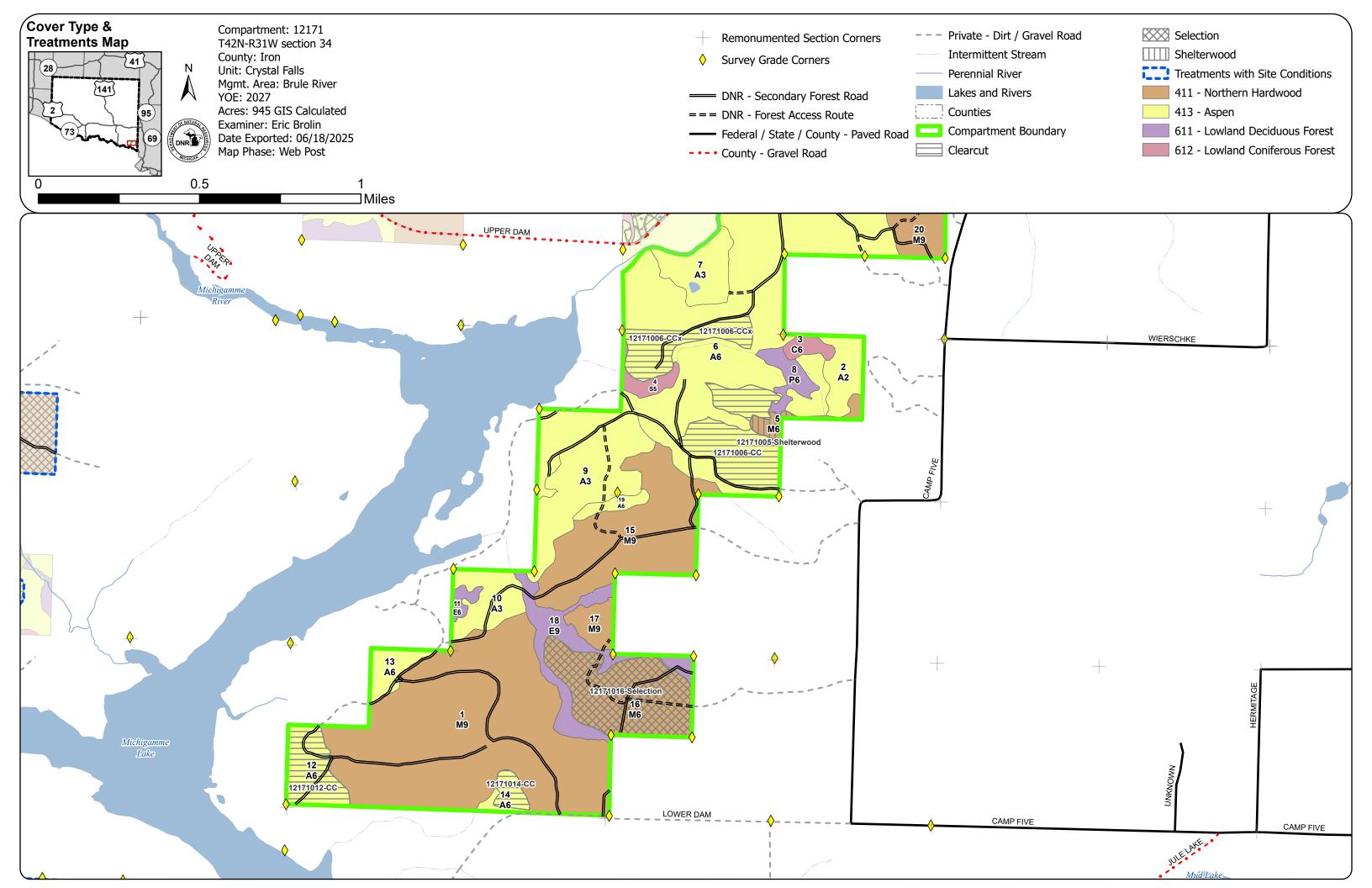
None.

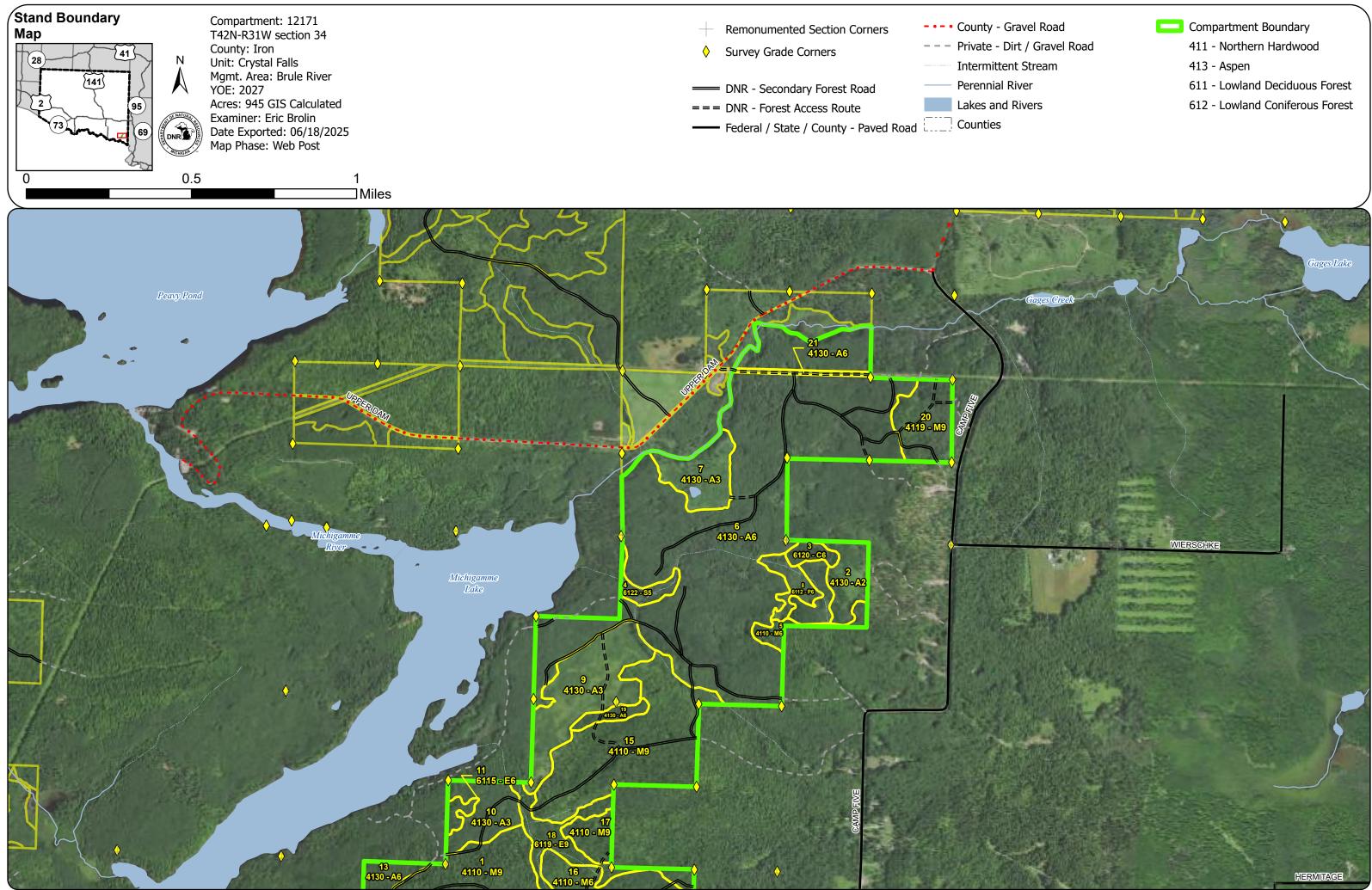
The following reports from the Inventory are attached: Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

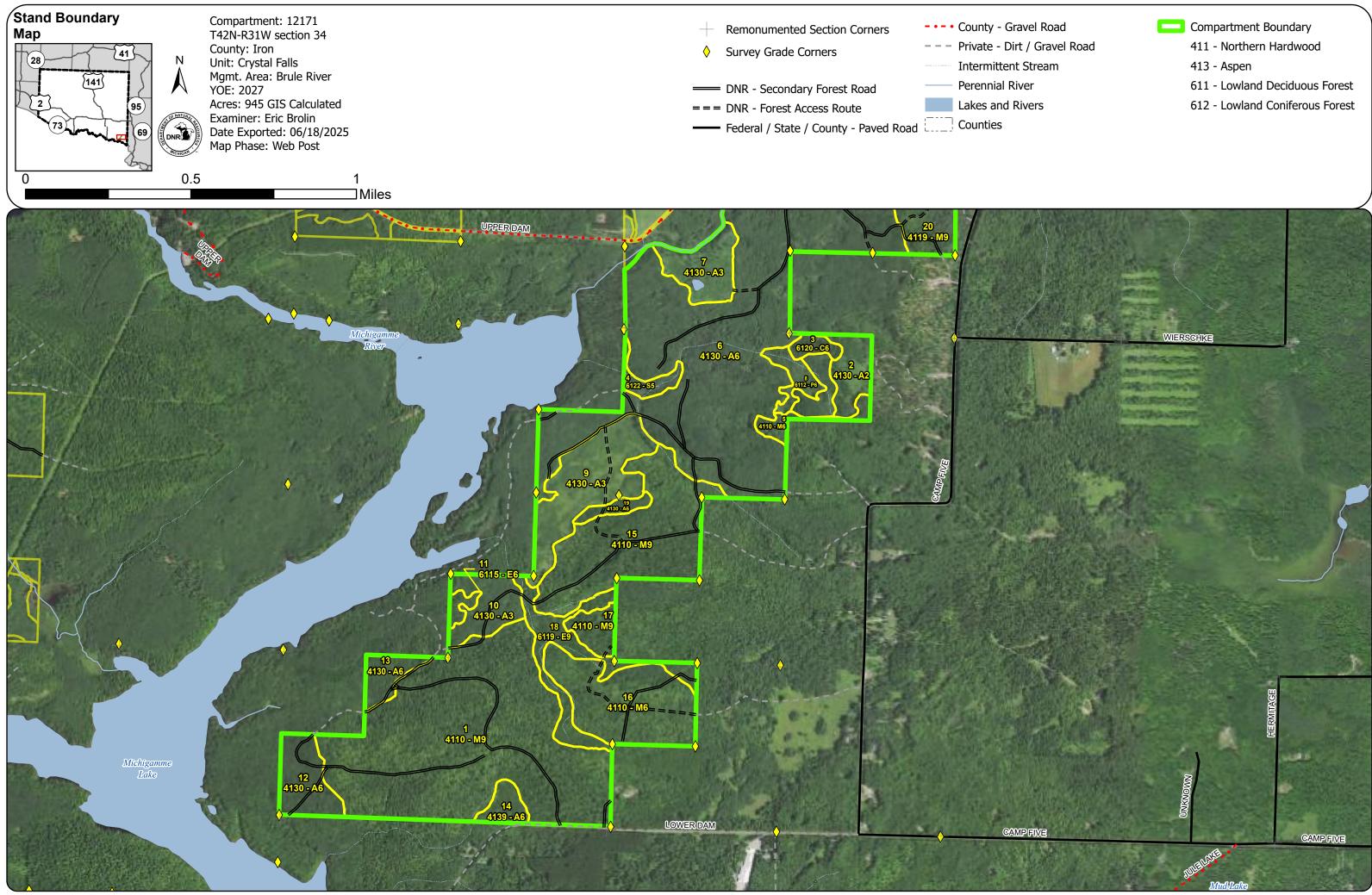
The following information is displayed, where pertinent, on the attached compartment maps: Base feature information, stand boundaries, cover types, and numbers Proposed treatments Site condition boundaries Details on the road access system

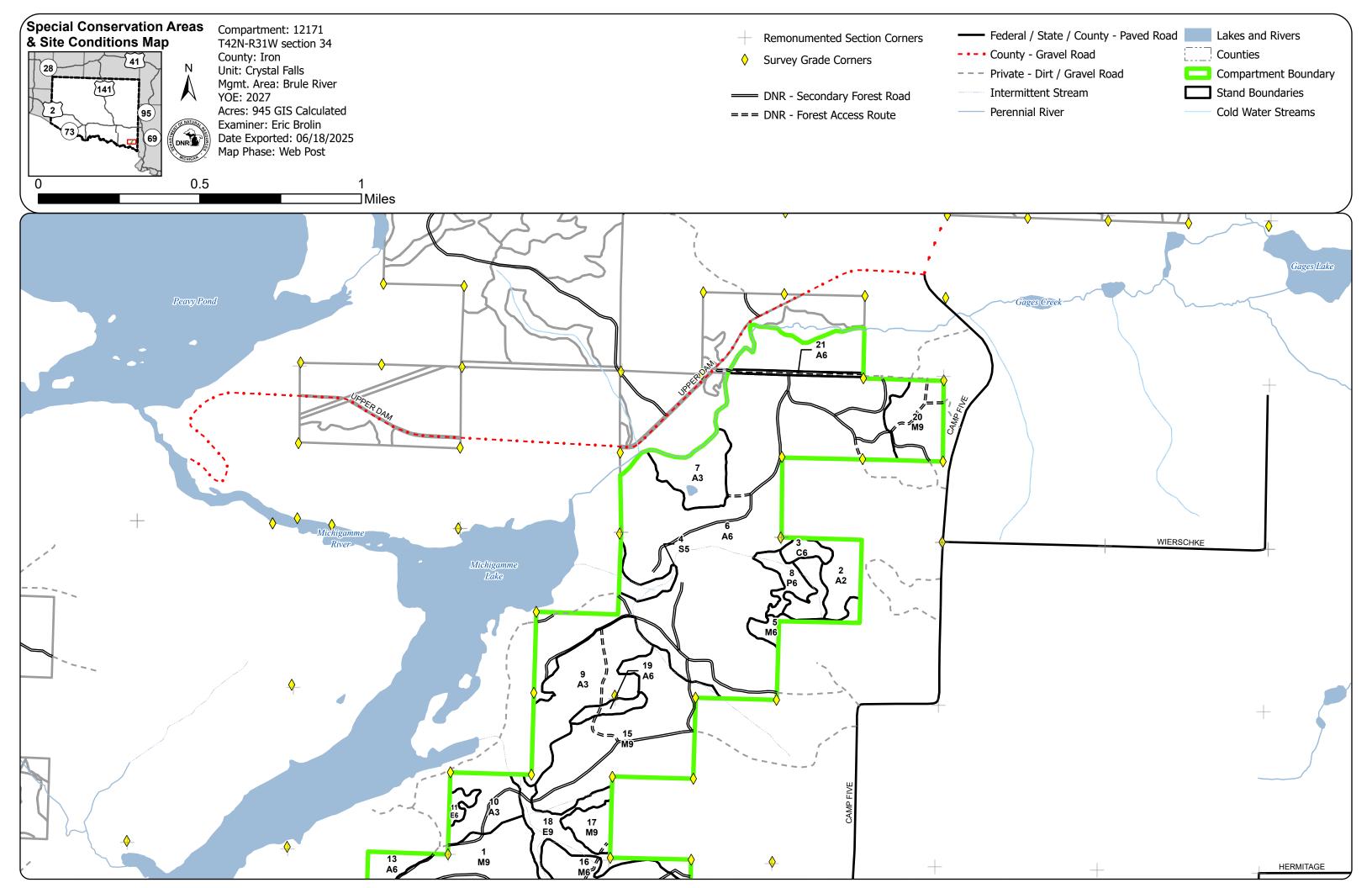


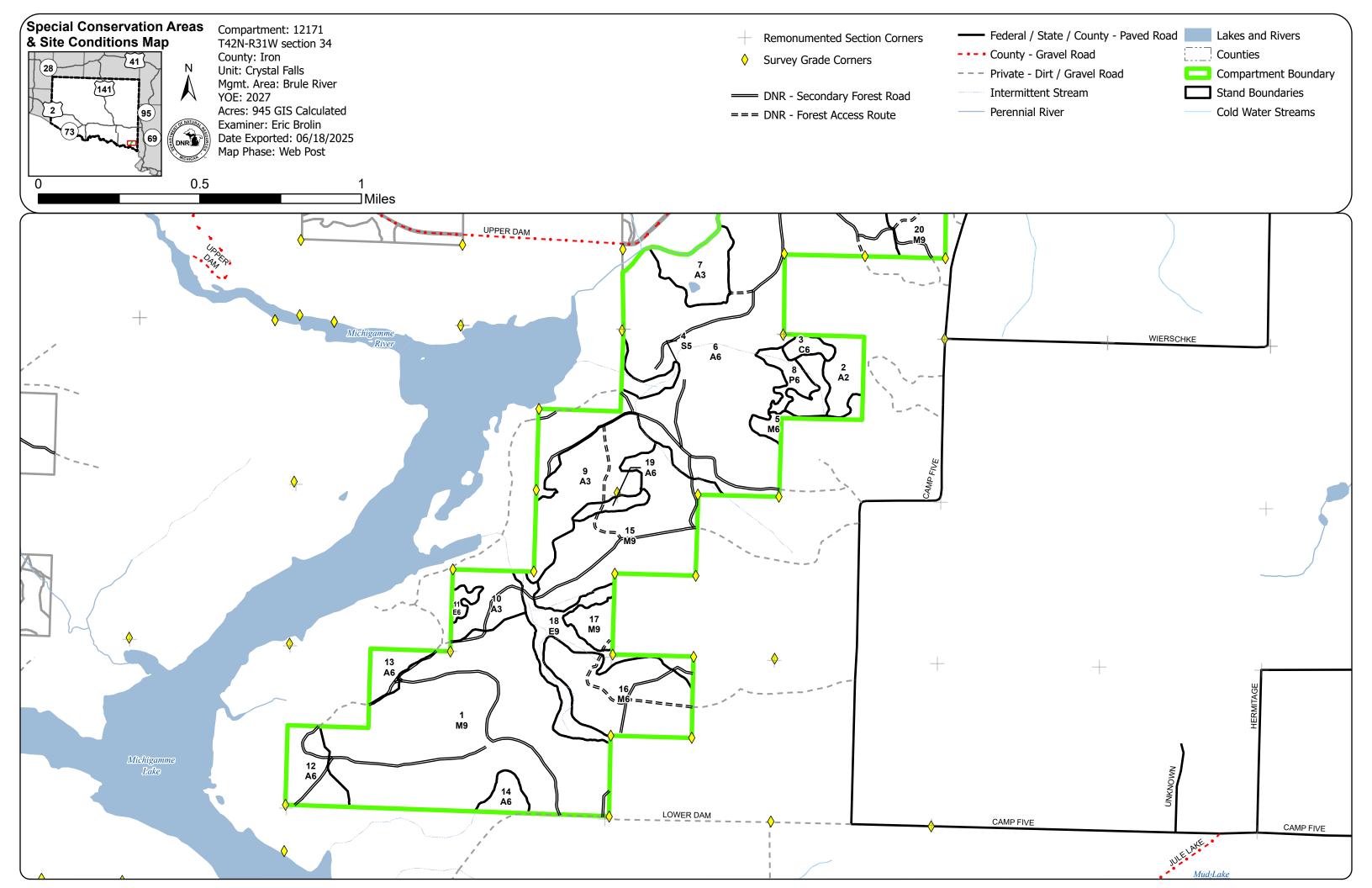












Report 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Eric Brolin: Examiner

Compartment 171 Year of Entry 2027



Age Class

	20	KO C	3 5	20 42 42 - 42	P	3 \$	60 (3)	3	S R	R S	\$ \$ \$	s ja	⁷ a ⁷	(D) .58	1.55 (S)	673 yr	No. St.		AND LOO	/
Aspen	0	50	60	0	333	42	0	0	0	0	0	0	0	0	0	0	0	0	485	
Cedar	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	
Lowland Aspen/Balsam Poplar	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	35	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	403	0	0	0	0	0	0	0	403	
Total	0	50	60	0	342	42	0	0	0	0	450	0	0	0	0	0	0	0	944	

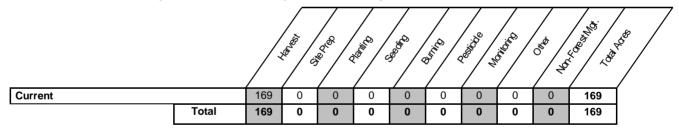


· MICHIGAN S	Crystal Falls Mgt. Unit		Compartment 171	
CHIGH	Year of Entry: 2027	Acres of Harvest	Total Compartment Acres: 945	
		Commercial Harvest - 169		
		Harvests with Site Condition - 0		
		Next Step Harvest - 0		
		Habitat Cut - 0		

Cover Type by Harvest Method

			Constraint, Constr	Contraction of the second	100000	eellee Berlee Berlee	icono,	inini, O	in the second	Series Series	State Log	A. A
Aspen		106	0	0	0	0	0	0	0	0	106	
Northern Hardwood		0	59	0	0	4	0	0	0	0	63	
	Total	106	59	0	0	4	0	0	0	0	169	

Proposed and Next Step Treatments by Method



	C	ystarrans	Mgt. Unit		керог	13	Freatments		Compartmen Year of Entry		DNR
••	eatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Hab Cu
osed 1	reatmen	<u>ts:</u>									
-	2171016- Selection	58.9 47	110 - Sugar Maple Association	6	95	81-110	Harvest	Selection	411 - Northern Hardwood	Current	N
<u>Prescript</u> Specs:									ncourage hardwood es diversity while ma		. Remov
<u>Next Ste</u> r Treatmer											
<u>Acceptat</u> Regen:	ole_ Any co	mbination of	f the current overst	ory specie:	S.						
<u>Other</u> Commen	<u>.t:</u>										
Site Con	dition:										
Proposed	d Start Date	10/01/202	26								
14 12 [.]	171014-CC	5.9 41	139 - Aspen, Mixed Deciduous	6	44	81-110	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Planting Record	N
Prescript Specs:	ion Harves	t all mercha	antable trees to pro	mote aspe	n regene	eration and	d diversity. Leave	all conifer, oak, a	and yellow birch if p	resent.	
Next Ster Treatmer	_										
Acceptat Regen:	ole_ Any co	mbination of	f the current overs	ory species	S.						
<u>Other</u> Commen		on will inclu	de the S/SW area	where the	ground b	ecomes t	oo saturated for o	operability.			
Site Con	dition:										
	d Start Date	: 10/01/202	26								
12 12 ⁻	171012-CC	22.7	4130 - Aspen	6	44	111- 140	Harvest	Clearcut	413 - Aspen	Planting Record	N
Prescript		t all mercha	intable trees to pro						e large diameter, fo	rked crown a	
Specs:		mix of spec	cies. Leave all coni	fer and oal	c if prese		all hardwood spe	ecies uniess mark	ked with orange pair	nt.	spen, an
		mix of spec		fer and oal	c if prese		aii narawood spe	ecies uniess mark	ked with orange pair	nt.	spen, an
<u>Specs:</u> <u>Next Step</u> Treatmer	nts:	·			·		ali narawood spe	ecies uniess mark	ked with orange pair	nt.	spen, an
<u>Specs:</u> <u>Next Ster</u> <u>Treatmer</u> Acceptat	n <u>ts:</u> ble_ Any co South	mbination o	cies. Leave all coni	ory species	s. hardwoo	od mixed i	n with a dense ur	nderstory of large	saplings. Use extra		
<u>Specs:</u> <u>Next Step</u> Treatmer <u>Acceptak</u> <u>Regen:</u> <u>Other</u>	n <u>ts:</u> ble Any co South <u>tt:</u> to area	mbination o	cies. Leave all coni f the current oversi and contains a fair	ory species	s. hardwoo	od mixed i	n with a dense ur	nderstory of large	saplings. Use extra		
Specs: Next Step Treatmer Acceptat Regen: Other Commen Site Cond	n <u>ts:</u> ble Any co South <u>tt:</u> to area	mbination o I/3 of the sta s with dense	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling	ory species	s. hardwoo	od mixed i	n with a dense ur	nderstory of large	saplings. Use extra		
Specs: Next Step Treatmer Acceptat Regen: Other Commer Site Com Proposed	n <u>ts:</u> ble Any co South <u>t:</u> to area <u>dition:</u>	mbination o I/3 of the sta s with dense	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling	ory species	s. hardwoo	od mixed i	n with a dense ur	nderstory of large	saplings. Use extra		roid dam
Specs: Next Step Treatmer Acceptat Regen: Other Commer Site Cond Proposed 6 1	h <u>ts:</u> South South t: to area dition: d Start Date 2171006- CCxx ion Harves	mbination of I/3 of the sta s with dense 10/01/202 14.3 t all mercha	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling 26 4130 - Aspen	amount of gs. Some h	s. hardwood ardwood 37 en regen	od mixed i d may be i 81-110 eration ar	n with a dense ur marked to cut dur Harvest nd species diversi	nderstory of large ring sale prep for Clearcut ty. Retention sho	saplings. Use extra operability. 413 - Aspen uld include large dia	caution to av Planting Record	roid dam
Specs: Next Step Treatmer Acceptat Regen: Other Commer Site Cond Proposec 6 1 Prescript	nts: South South t: to area dition: d Start Date 2171006- CCxx aspen, D	mbination of I/3 of the sta s with dense 10/01/202 14.3 t all mercha	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling 26 4130 - Aspen antable aspen to pr	amount of gs. Some h	s. hardwood ardwood 37 en regen	od mixed i d may be i 81-110 eration ar	n with a dense ur marked to cut dur Harvest nd species diversi	nderstory of large ring sale prep for Clearcut ty. Retention sho	saplings. Use extra operability. 413 - Aspen uld include large dia	caution to av Planting Record	roid dam
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Specs: Next Step Treatmer Acceptat Regen: Other Commen Site Conv Proposed 6 1 Prescript Specs: Next Step Treatmer	h <u>ts:</u> <u>ole</u> Any co South <u>t:</u> to area <u>dition:</u> <u>d Start Date</u> <u>2171006-</u> <u>CCxx</u> <u>ion</u> Harves aspen, <u>on</u> <u>ts:</u> <u>ole</u> Any co Buffer	mbination of 1/3 of the sta s with dense 10/01/20 14.3 t all mercha and a divers mbination of the trout stre	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling 26 4130 - Aspen antable aspen to pr se mix of species. f the current oversi	amount of gs. Some h 6 omote aspe Leave all c cory species h 300'. Exc	s. hardwood ardwood 37 en regen onifer ar s.	od mixed i d may be i 81-110 eration ar nd hardwo	n with a dense ur marked to cut dur Harvest nd species diversi od trees unless n	nderstory of large ring sale prep for Clearcut ity. Retention sho eeded for operat	saplings. Use extra operability. 413 - Aspen uld include large dia	Planting Record	roid dam N
Specs: Next Step Treatmer Acceptat Regen: Other Commer Site Com Proposec 6 1 Prescript Specs: Next Step Treatmer Acceptat Regen: Other	hts: ble Any co South t: to area dition: d Start Date 2171006- CCxx aspen, ble Any co Buffer t: 20, to a	mbination of 1/3 of the sta s with dense 10/01/20 14.3 t all mercha and a divers mbination of the trout stre	cies. Leave all coni f the current oversi and contains a fair e hardwood sapling 26 4130 - Aspen antable aspen to pr se mix of species. f the current oversi eam along the nort	amount of gs. Some h 6 omote aspe Leave all c cory species h 300'. Exc	s. hardwood ardwood 37 en regen onifer ar s.	od mixed i d may be i 81-110 eration ar nd hardwo	n with a dense ur marked to cut dur Harvest nd species diversi od trees unless n	nderstory of large ring sale prep for Clearcut ity. Retention sho eeded for operat	saplings. Use extra operability. 413 - Aspen uld include large dia bility.	Planting Record	roid dam

Report 3 -- Treatments

Compartment: 171



									Year of Entr	y: 2027	
t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
6	12171006-CC	x 22.9	4130 - Aspen	6	37	81-110	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Spec</u> Next	<u>step</u>		antable aspen to pr rse mix of species.							ameter, forkec	d crown
		ombination o	of the current overs	tory species	6.						
<u>Othe</u> Com	er Buffe Iment: E/NE		l drainage along the nd 20, to avoid stre					m retention for the	stand. Best acces	ss will be from	the far
	Condition: osed Start Dat	<u>e:</u> 10/01/20	026								
6	12171006-C	3 9.7	4130 - Aspen	6	37	81-110	Harvest	Clearcut	413 - Aspen	Planting Record	No
	dreat										
<u>Trea</u> <u>Acce</u> <u>Reg</u> e	en:	combination of	of the current overs			Tuelude le			4k	<i>i:-f.</i> . 1 <i>t.</i>	
Trea Acce Rege Othe	<u>Step</u> tments: eptable Any c	combination of	of the current overs s area is from the S			Exclude lo	wland drainages	with a 100' buffer,	these will also sa	tisfy long term	retention
Trea Acce Rege Othe Com Site	<u>Step</u> tments: eptable Any c en: er Best	combination o	s area is from the S			Exclude ld	wland drainages	with a 100' buffer,	these will also sa	tisfy long term	retention
Trea Acce Rege Othe Com Site	<u>Step</u> tments: eptable Any c en: Best ment: Condition:	combination of access to this <u>e: 10/01/20</u>	s area is from the S	SE through p		Exclude lo 111- 140	wland drainages	with a 100' buffer,	these will also sa 4199 - Other Mixed Upland Deciduous	tisfy long term Cutting Record	
Trea Acce Rege Othe Com Site Prop 5	Step tments: eptable Any c en: Best ment: Condition: osed Start Dat 12171005- Shelterwood cription Harve	combination of access to this <u>e:</u> 10/01/20 4.4 4 d est to a 2" sp ny, wind firm	s area is from the S 026 I110 - Sugar Maple	E through p	private. I 95 ation. Le	111- 140 ave all co	Harvest	Shelterwood combination with le	4199 - Other Mixed Upland Deciduous eave species, gree	Cutting Record en mark a dive	No erse mix o
Trea Acce Reg Othe Com Site Prop 5 Pres Spec Next	Step tments: eptable Any o en: Best ment: Condition: osed Start Dat 12171005- Shelterwood cription Harve Ss: healt	combination of access to this <u>e:</u> 10/01/20 4.4 4 d est to a 2" sp ny, wind firm	s area is from the S 026 1110 - Sugar Maple Association wec to promote mixe	E through p	private. I 95 ation. Le	111- 140 ave all co	Harvest	Shelterwood combination with le	4199 - Other Mixed Upland Deciduous eave species, gree	Cutting Record en mark a dive	No erse mix o
Trea Accee Regu Othe Com Site Prop 5 Pres Spec Next Trea Accee	Step tments: eptable Any of en: Best ment: Condition: cosed Start Dat 12171005- Shelterwood cription Harvo cription Harvo step tments: eptable Any of	combination of access to this <u>e:</u> 10/01/20 4.4 4 d est to a 2" sp ny, wind firm er.	s area is from the S 026 1110 - Sugar Maple Association wec to promote mixe	E through r 6 ed regenera maintainin	95 95 g a resid	111- 140 ave all co	Harvest	Shelterwood combination with le	4199 - Other Mixed Upland Deciduous eave species, gree	Cutting Record en mark a dive	Nc erse mix o
Trea Acce Reg Othe Com Site Prop 5 Pres Spec Next Trea Acce Reg Othe	Step tments: aptable Any of an: Best ment: Best Condition: cosed Start Dar 12171005- Shelterwood cription Harve cription Harve step tments: aptable Any of an: Best aptable Any of an: Best aptable Any of aptable Any of a	eombination of access to this <u>e:</u> 10/01/20 4.4 4 4 est to a 2" sp ny, wind firm er. combination of shelterwood i	s area is from the S 026 H110 - Sugar Maple Association ec to promote mixe trees to leave while	E through (6 ed regenera e maintainin tory species re shade in	95 ation. Le g a resid	111- 140 ave all co dual cover	Harvest nifer and oak. In of 40 - 50 BA av	Shelterwood combination with le verage across the s	4199 - Other Mixed Upland Deciduous eave species, gree stand. Also, leave cherry). Due to siz	Cutting Record en mark a dive any aspen tree	No erse mix of es 18" or
Trea Acce Regu Othe Com Site Prop 5 5 Press Spec Next Trea Acce Regu Othe Com	Step tments: aptable Any of an: Best ment: Best Condition: cosed Start Dar 12171005- Shelterwood cription Harve cription Harve step tments: aptable Any of an: Best aptable Any of an: Best aptable Any of aptable Any of a	eombination of access to this <u>e:</u> 10/01/20 4.4 4 4 est to a 2" sp ny, wind firm er. combination of shelterwood i	s area is from the S 026 1110 - Sugar Maple Association ec to promote mixe trees to leave while of the current overs is to encourage mo	E through (6 ed regenera e maintainin tory species re shade in	95 ation. Le g a resid	111- 140 ave all co dual cover	Harvest nifer and oak. In of 40 - 50 BA av	Shelterwood combination with le verage across the s	4199 - Other Mixed Upland Deciduous eave species, gree stand. Also, leave cherry). Due to siz	Cutting Record en mark a dive any aspen tree	No erse mix o es 18" or

Total Treatment Acreage Proposed: 168.8

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Eric Brolin: Examiner

Compartment: 171 Year of Entry: 2027



Availability for Management

	Total	Acres	Acres Avail	Acres	De	ominar	nt Site	e Conc	litions
	Acres	Available	With Condition	Not Available		5C	2G	3J	
	374	127	182	66	Aspen	182	2	63	
ſ	5	0	0	5	Cedar		5		
	9	0	0	9	Lowland Aspen/Balsam Poplar		9		
	35	0	0	35	Lowland Deciduous		35		
	7	0	0	7	Lowland Spruce/Fir		7		
	399	396	3	0	Northern Hardwood	3			
	830	522	185	122	Total Forested Acres	185	59	63	
_		63%	22%	15%	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.

Sit No	e Dominant Site . Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5B: Maintain for regeneration purposes	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Narrow, young strip	along the south edge of the	road. Ho	ld and merge with adjacent	harvest north of the road	for future management.	
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Webs of flowing wat	ter across the entire area with	h mucky	soil which does not freeze	up with constant flowing s	eeps.	
3	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	28	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments: Web of lowland drai	nage areas. Mucky soil with	flowing v	vater, both seasonal and se	eep/spring drainage. 100'	buffer for all adjacent asp	en types.

	-	Falls Mgt. Unit Brolin: Examiner		Report 4 – Site Condit	ions	Compartment: 171 Year of Entry: 2027	DIR MATURE
4	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	36	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: 300' trout stream bu	uffer for all adjacent aspen type	es alor	ng the south edge of Gages Cre	eek.		
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: A few trees along the	ne edge may be managed with	adjace	ent stand in the future. Otherwi	se, too wet with mucky	black ash soils.	
6	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	6	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments: 100' buffer for drain	age area. Long term retention					
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	32	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Lowland flat web wi	th seasonal water flow. This lo	ow flat	should be avoided from any fut	ure operations to avoid	resource damage and BMP is	sues.
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments: Area becomes too	wet for operations. Can be use	d as lo	ong term retention for Stand 14.			
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
	Comments:	a. Wet ground and dense to c	edar a	cross most of the stand			

vailable a	2G: Too wet (sensitive soils, does not include access issues) /land conifer flat. Sparse stock 5C: Delay treatment for age/size class diversity or exceptional site quality	7 king of 3	5A: Not able to obtain desirable regeneration black spruce and tamarack, Unspecified	Unspecified declining, with an under	Unspecified story of alder and mixed saplin	Unspecified gs.
t, flooded low railable a	5C: Delay treatment for age/size class diversity or	Ū	•	declining, with an under	story of alder and mixed saplin	gs.
a	age/size class diversity or	3	Unspecified			
	exceptional site quality		Unspecified	Unspecified	Unspecified	Unspecified
nts: atch of hardwo	oods will be managed in the f	uture w	vith adjacent stand due to sm	nall size and access.		
vailable a	5C: Delay treatment for age/size class diversity or exceptional site quality	82	Unspecified	Unspecified	Unspecified	Unspecified
nts: in YOE 2047	, extended aspen rotation, to	break a	age class on large even age	d aspen stand.		
vailable a	5C: Delay treatment for age/size class diversity or exceptional site quality	101	Unspecified	Unspecified	Unspecified	Unspecified
nt nt	lable s: YOE 2047 lable a s:	Iable 5C: Delay treatment for age/size class diversity or exceptional site quality s: YOE 2047, extended aspen rotation, to Iable 5C: Delay treatment for age/size class diversity or exceptional site quality s: Size class diversity or exceptional site quality s: Size class diversity or exceptional site quality	Iable 5C: Delay treatment for age/size class diversity or exceptional site quality 82 s: YOE 2047, extended aspen rotation, to break a ge/size class diversity or age/size class diversity or exceptional site quality 101 s: SC: Delay treatment for age/size class diversity or exceptional site quality 101	Iable 5C: Delay treatment for age/size class diversity or exceptional site quality 82 Unspecified s: YOE 2047, extended aspen rotation, to break age class on large even age Iable 5C: Delay treatment for age/size class diversity or exceptional site quality	age/size class diversity or exceptional site quality s: YOE 2047, extended aspen rotation, to break age class on large even aged aspen stand. lable 5C: Delay treatment for age/size class diversity or exceptional site quality s:	Iable 5C: Delay treatment for age/size class diversity or exceptional site quality 82 Unspecified Unspecified Unspecified s: YOE 2047, extended aspen rotation, to break age class on large even aged aspen stand. Unspecified Unspecified Unspecified lable 5C: Delay treatment for age/size class diversity or exceptional site quality 101 Unspecified Unspecified Unspecified s: S

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

Report 7 – Stands

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Stand	Level 4 Co	over Type		Size De	ensity	Acres	Stand Age B	A Range	Managed S	ite	General Comments
1	4110 - Sugar M	laple Asso	ciation	Sawtimb	er Well	216.6	95	81-110	N/A	۱.	Thinned in 2018. Good quality hardwood stand. Abundant regen across
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	the area with some sugar maple, ironwood, and a heavy mix of ash. SW area has denser canopy with much less regen in the understory.
	Yellow Birch	5		10		Ire	onwood	Low	Variable	Variable	
	Sugar Maple	80		14	95	Sug	jar Maple	Low	Variable	Variable	
	Red Maple	3		12	95	As	sh (spp.)	Medium	Variable	Variable	
	Hemlock	2		22							
	Basswood	10		14	95						
2	4130	- Aspen		Sapling	g Well	16.1	15 l	mmature	N/A	N N	Aspen sapling stand. Heavy to bigtooth on any elevation rises. Large
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	area in the center did not regenerate and is growing in with cherry and conifer saplings. Accessed from the east trough company land.
	Black Cherry	10	Log	2		Ire	onwood	Low	5 - 10 feet	5 - 10 feet	conirer sapilings. Accessed from the east trough company land.
	Red Maple	10	Log	1							-
	Bigtooth Aspen	50	Log	3	15						
	White Spruce	5	Log	1							
	Quaking Aspen	20	Log	3	15						
	Balsam Fir	5	Log	1							
3	6120 - Lov	vland Ceda	ar	Poletimb	er Well	5.3	95	111-140	N/A	۱.	Dense cedar patch transitioning to aspen/black spruce along the edges.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Balsam Fir	5	Sapling	7		Ta	ag Alder	Low	5 - 10 feet	5 - 10 feet	
	Black Spruce	15	Seedling	8	95	Blac	ck Spruce	Low	Variable	Variable	
No	orthern White Cedar	70		8	95						_
	Quaking Aspen	5		10	95						
	Paper Birch	5	Seedling	8							
4	6122 - Bl	ack Spruce	e P	oletimbe	r Medium	n 6.7	95	51-80	N/A	۱.	Sparsely stocked lowland conifer area. Flooded with open patches and
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	alder.
	Tamarack	10		10	95	Ta	ag Alder	Medium	5 - 10 feet	5 - 10 feet	
	Black Spruce	85	Sapling	7	95	Blac	ck Spruce	Low	Variable	Variable	
No	orthern White Cedar	5	Seedling	8	95						
5	4110 - Sugar M	laple Asso	ciation	Poletimb	er Well	7.3	95	111-140	N/A	۱.	Hardwood stand with dense stocking. W/E areas can not be connected
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	due to different access points and terrain.
	Basswood	30		16	95	Ire	onwood	Low	10 - 20 feet	10 - 20 feet	
	Red Oak	5		20							
	Yellow Birch	5		13							
	Fellow BITCH	U									
	Sugar Maple	55		11	95						

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Stan	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
6	4130	- Aspen		Sapling	Well	323.8	37	81-110	N//	A	Very large area of aspen at the same age. Multiple drainageways and
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	road/trail systems across the entire stand. Aspen has good site index quality in most areas with larger than average diameters. Very little
	Quaking Aspen	68	Seedling	7	37	Re	d Maple	Low	Variable	Variable	conifer component consists of mainly upland black spruce / white spruce
	Balsam Fir	1	Sapling	5		Whit	e Spruce	Low	Variable	Variable	mix, sapling to small pole size trees. Management over the next few
	White Pine	2		22		Blac	k Spruce	Low	Variable	Variable	YOE's should focus on creating more age class diversity across the area and conifer/diversity retention.
	Red Oak	1		8							
	White Spruce	4		7							
	Black Spruce	3	Sapling	6							
	Red Maple	2	Sapling	6							
	Paper Birch	2	Sapling	7							
	Bigtooth Aspen	17		8							
7	4130	- Aspen		Sapling	Well	22.6	10	Immature	N//	A	Aspen saplings with some scattered white pine. Small lowland conifer
	Canopy Species	% Cover	Size Class	DBH	Age						patch excluded form recent harvest located in the SW area.
	Quaking Aspen	72	Log	2	10						
	Red Oak	1		10							
	Black Spruce	3	Sapling	6							
	White Pine	2		22							
	Red Maple	5	Log	2							
	Paper Birch	5	Log	2							
	Bigtooth Aspen	10	Log	2	10						
	Balsam Fir	2	Log	2							
8	6112 - Lov	wland Aspe	n	Sapling	Well	9.4	37	1-50	N//	A	Drainage holding flat from surrounding terrain. Multiple webs of flowing runoff and groundwater seeps. Water drainage areas do not freeze with
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	constant flow and contain very mucky material.
	Quaking Aspen	64	Seedling	7	37		Alder	Medium	5 - 10 feet	5 - 10 feet	
	Red Oak	1		8		Whit	e Spruce	Low	Variable	Variable	
	White Spruce	5		7		Blac	k Spruce	Low	Variable	Variable	
	Black Spruce	10	Sapling	6		Re	d Maple	Low	Variable	Variable	-
	Red Maple	5	Sapling	6		Cat	tail spp.	Low	Not Applicable	Not Applicable	
	Bigtooth Aspen	10		8							-
	Balsam Fir	5	Sapling	5							
9	4130	- Aspen		Sapling	Well	50.1	7		N//	A	Mix of aspen saplings with some red maple. Some area are patchy but should grow in well with more time. Pockets of saturated ground within
	Canopy Species	% Cover	Size Class	DBH	Age						hold alder and/or cattails.Cut in 2018.
	Quaking Aspen	85	Log	1	7						
	Red Maple	15	Log	1							

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Ctond				Size Density		Acres Stand Age BA Range M		Monorod Sito		General Comments		
Stand	d Level 4 Cover Type				Size Density		Acres Stand Age B		Managed Site		General Comments	
10	4130 - Aspen			Sapling		21.0	16	1-50	N/A	A	Very dense, nearly pure aspen stand with black ash seedlings present i \neg a lot of the understory. Heavier ground may be poorly drained and soft	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	during non-frozen periods.	
	Quaking Aspen	90	Log	3	16	Sug	gar Maple	Low	Variable	Variable		
	Red Maple	5	Log	2		Ire	onwood	Low	Variable	Variable		
	Red Oak	1		18		BI	ack Ash	Medium	Variable	Variable		
	White Spruce	3	Log	3								
	Hemlock	1		22								
11	6115 - Lo	wland Ash	F	Poletimber Well		3.7 96 81-110 Sub-Canopy Species Density		N/A		Flooded lowland flat. Mainly black ash with some conifer and aspen		
	Canopy Species	% Cover	Size Class	B DBH Age				Density	Avg. Height	Size	mixed in along the edges.	
	White Pine	5		22		Та	ag Alder	Low	5 - 10 feet	5 - 10 feet		
	Black Ash	70		8	96	As	sh (spp.)	High	Variable	Variable		
	Black Spruce	5	Seedling	7				I			<u>_</u>	
No	orthern White Cedar	5		8								
	Quaking Aspen	10		9								
	Red Maple	5		8								
12	4130 -	4130 - Aspen		Poletimber Well		22.7 44 111		111-140	111-140 N/A		Nice quality aspen stand. Sugar maple saplings can dominate the	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	understory in areas, mainly in the south 1/3. More of a hardwood component mixed in the south 1/3 of the stand ranging from large	
	White Spruce	3	Sapling	6		Sug	gar Maple	Medium	Variable	Variable	sapling to small pole sized maple.	
	Balsam Fir	1	Sapling	6		Ire	onwood	Low	Variable	Variable		
	Sugar Maple	5	Sapling	5		Whi	te Spruce	Low	Variable	Variable		
	Paper Birch	3	Seedling	7								
	Bigtooth Aspen	10		10								
	Yellow Birch	1	Seedling	7								
	Quaking Aspen	77		8	44							
13	4130 -	Aspen	F	Poletimb	er Well	11.2	44	111-140	N/A	A	Good quality aspen. Some lower swales within could contain softer $_{\rm I}$ ground with some black ash mixed in which may need to be excluded	
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	from future management for operability.	
	Yellow Birch	1	Sapling	5		Sug	gar Maple	Medium	Variable	Variable		
	Quaking Aspen	85		8	44	BI	ack Ash	Low	Variable	Variable		
	Sugar Maple	5	Sapling	5		Ba	Ilsam Fir	Low	Variable	Variable		
	Red Maple	3	Sapling	6								
	Paper Birch	2	Seedling	7								
	White Spruce	3	Sapling	5								
No	orthern White Cedar	1		10								

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Stand	Level 4 Cover Type			Size Density		Acres	Stand Age BA Range		Managed Site		General Comments		
14	4139 - Aspen, Mixed Deciduous		Poletimber Well		8.3	44	81-110	N/A		Mainly nice aspen poles in the south half. North half has mixed			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height Variable	Size	deciduous trees with some aspen speckled in. The S/SW area becomes too low and saturated for management and is heavy to black ash with		
	Red Maple	14		8	95	Sug	ar Maple	Low		Variable	some lowland conifers mixed in.		
	Bigtooth Aspen	5		9		Quak	ing Aspen	Low	Variable	Variable			
	Basswood	5		10		As	h (spp.)	High	Variable	Variable	-		
	White Ash	5		10		Ba	lsam Fir	Low	Variable	Variable			
	Black Ash	20		8	95						-		
	White Spruce	4		12									
	Hemlock	1		15									
	Yellow Birch	10		12	95								
	Quaking Aspen	36		8	44								
15	4110 - Sugar Maple Association			Sawtimb	er Well	85.1	95	81-110	N/A	ł	Hardwood log stand thinned recently. Rolling terrain in areas. Thinned in 2018.		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	112010.		
	Yellow Birch	5		10	95	Irc	onwood	Medium	Variable	Variable			
	Basswood	20		14	95	Whi	e Spruce	Trace	Variable	Variable			
	Hemlock	3		18									
	Sugar Maple	65		12	95								
	Red Maple	5		10	95								
	Paper Birch	2		11									
16	4110 - Sugar I	Maple Assoc	ciation	Poletimb	er Well	58.9	95	81-110	N/A	Ą	Moderate quality hardwood stand. A lot of large diameter trees and		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	suppressed poles. Understory is dense with saplings, mostly ash, but maple mixed in and more abundant in some areas. Small aspen patches		
	Yellow Birch	3		12	95	Sug	ar Maple	Medium	Variable	Variable	along the north edge may be managed. 140 140 130 Average of 135		
	Hemlock	10		20		Irc	onwood	Medium	Variable	Variable	BA.		
	Basswood	12		12	95	As	h (spp.)	High	Variable	Variable			
	White Ash	7		15				1		1	-		
	Sugar Maple	68		12	95								
17	4110 - Sugar Maple Association Sawtimber W			er Well	10.5	95	81-110	N/A	ł	Harwood log stand. Access would be from the NW or SE, both cross $_{\rm I}$ narrow lowland drainages.Thinned in 2018.			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	harrow lowland drainages. Thinned in 2018.		
	Basswood	15		13	95	Irc	onwood	Medium	10 - 20 feet	10 - 20 feet			
	Yellow Birch	3		11		Whit	e Spruce	Low	5 - 10 feet	5 - 10 feet			
	Sugar Maple	80		11	95	Re	d Maple	Low	Variable	Variable			
1	Hemlock	2		16			therwood	Low	5 - 10 feet	5 - 10 feet	1		

Crystal	Falls	Mat.	Unit
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Stand	Level 4 C	evel 4 Cover Type Size Density Acres Stand Age BA Range Managed Site		Site	General Comments							
18	6119 - Mixed Lowland Deciduous Forest		Sawtimber Well		31.7	95	111-140	N/A	4	Diverse mix of species and sizes within a lowland/upland web. Low		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	drainage that receives any runoff from surrounding upland stands. Seasonal flow of water north. Large rocks make up most of the lowland	
	White Spruce	5		8	95	Та	ag Alder	Low	5 - 10 feet	5 - 10 feet	bed, especially north as seasonal flow increases.	
No	orthern White Cedar	2		12	95						-	
	Hemlock	12		16	95							
	Yellow Birch	10		12								
	Quaking Aspen	5		8								
	Basswood	5		12	95							
	Black Ash	31		8	95							
	Sugar Maple	5		8								
	Red Maple	25		12	95							
19	4130 - Aspen			Sapling Well		5.4	36	51-80	N/A	٩	Small patch of good quality, mixed aspen poles.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	5	Sapling	5	36	Hazeln	ut (American)	Low	5 - 10 feet	5 - 10 feet		
	Bigtooth Aspen	15	Seedling	7		Ire	onwood	Low	10 - 20 feet	10 - 20 feet		
	Quaking Aspen	80	Seedling	7	36				I		-	
20	4119 - Mixed Northern Hardwoods		dwoods	Sawtimbe	er Well	24.8	90	81-110	N/A	4	Hardwood stand with a heavier component of yellow birch and scattered	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	large diameter oak. Stand was thinned in 2007 and 2022. Access from the SE corner. Vernal areas need to be exclude from future operations	
	Sugar Maple	73		11	90	Sug	gar Maple	Low	Variable	Variable	in the SE/central/NW areas.	
	Red Maple	5		10		Ba	Ilsam Fir	Low	Variable	Variable		
	Paper Birch	3		12		Ire	onwood	Low	Variable	Variable		
	Yellow Birch	12		12							-	
	Red Oak	6		20								
	Hemlock	1		10								
21	4130	- Aspen		Sapling	Well	3.4	37	81-110	N/A	4	Very large area of aspen at the same age. Multiple drainageways and	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	road/trail systems across the entire stand. Aspen has good site index quality in most areas with larger than average diameters. Very little	
	Quaking Aspen	68	Seedling	7	37	Re	ed Maple	Low	Variable	Variable	conifer component consists of mainly upland black spruce / white spruce	
	Balsam Fir	1	Sapling	5		Whi	te Spruce	Low	Variable	Variable	mix, sapling to small pole size trees. Management over the next few	
	Red Oak	1		8		Blac	ck Spruce	Low	Variable	Variable	YOE's should focus on creating more age class diversity across the area and conifer/diversity retention.	
	White Spruce	4		7				1	1	ł		
	Black Spruce	3	Sapling	6								
			-	00								
	White Pine	2		22								
	White Pine Red Maple	2	Sapling	6								
			Sapling Sapling									