

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12018 Entry Year 2023 Acreage: 2,099

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2021-08-16

Stand Examiner: Legal Description:

> T44N-R27W Sections 7 & 18-19, T44N-R28W Sections 10-14 & 23-25

Identified Planning Goals:

Manage for best tree species based on Kotar habitat recommendations. Maintain a sustainable, healthy forest with diversity. Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue to sustainably balance the aspen age class acres. Protect the riparian areas and transition zones during management activity.

Soil and topography:

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

Predominantly State owned and surrounded by State. Used heavily by hunters, trappers, some fishing, camping and general UTV recreation.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

None

Special Management Designations or Considerations:

West Branch of the Escanaba and Schwartz Creek are high quality trout streams to be buffered 300 feet

Watershed and Fisheries Considerations:

This compartment contains the West Branch of the Escanaba River and borders Schwartz Creek. Additionally, this compartment contains a stream that serves as tributary to the West Branch of the Escanaba River. All of these waterbodies are designated Type 1 trout streams less than 50' width and have predicted mean July temperatures that range from 60.6 to 64.4 °F (cold streams). 300' buffers are recommended for these 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:

All species of wildlife need to be considered and a full range of habitat conditions should be provided. Conditions from early-successional to old growth must be provided to meet these needs. Riparian and transition zones were set aside in prior years of entry to provide some of these habitat requirements. Openings will be maintained as logistics permit.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial oil & gas production in this part of the state. The State-owned Aimone Road Pit is one mile to the southwest and is currently leased to the County Road Commission. There may be some limited potential for sand & gravel within the compartment on the upland drumlins. There has been no known metallic mineral exploration in the area, and there is no known potential beneath the compartment. No current mineral leasing activity exists in the area. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Simpson Road and various two-track dirt roads provide access.

Survey Needs:

None needed for current treatments

Recreational Facilities and Opportunities:

Hunting, fishing, camping, trapping, UTV riding.

Fire Protection:

Felch protection area.

Site Condition Details

Additional Compartment Information:

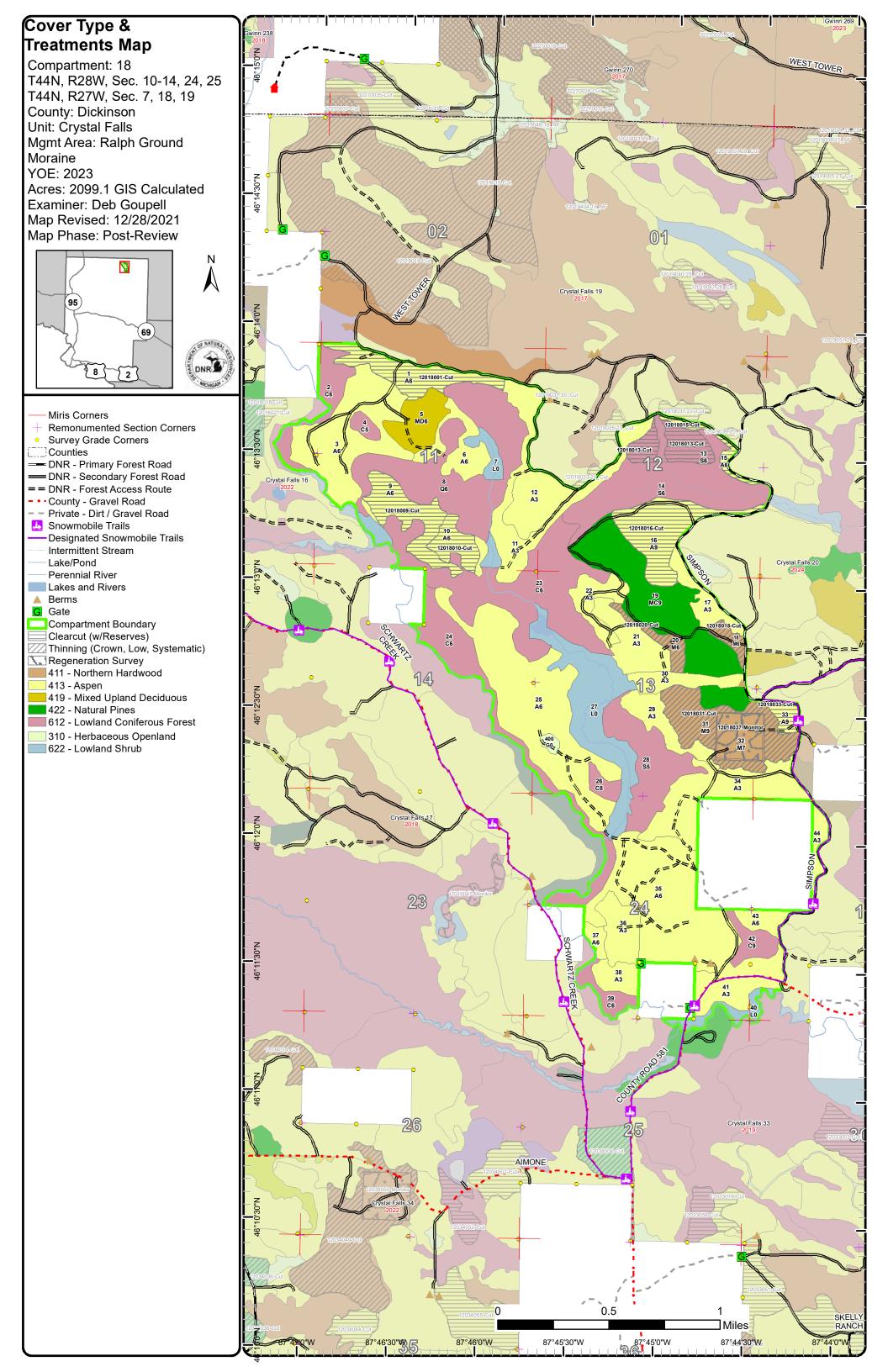
The following reports from the Inventory are attached:

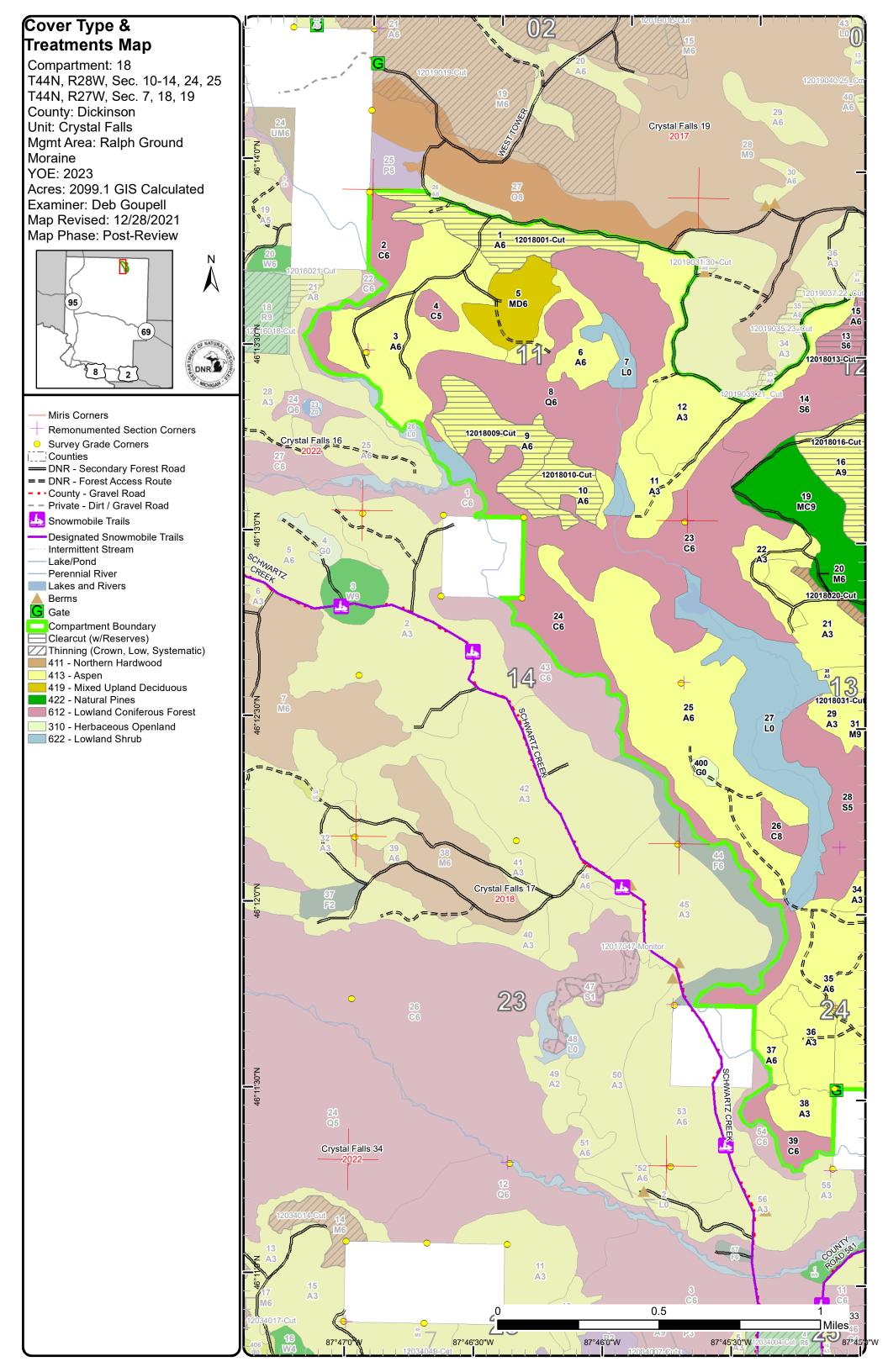
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas

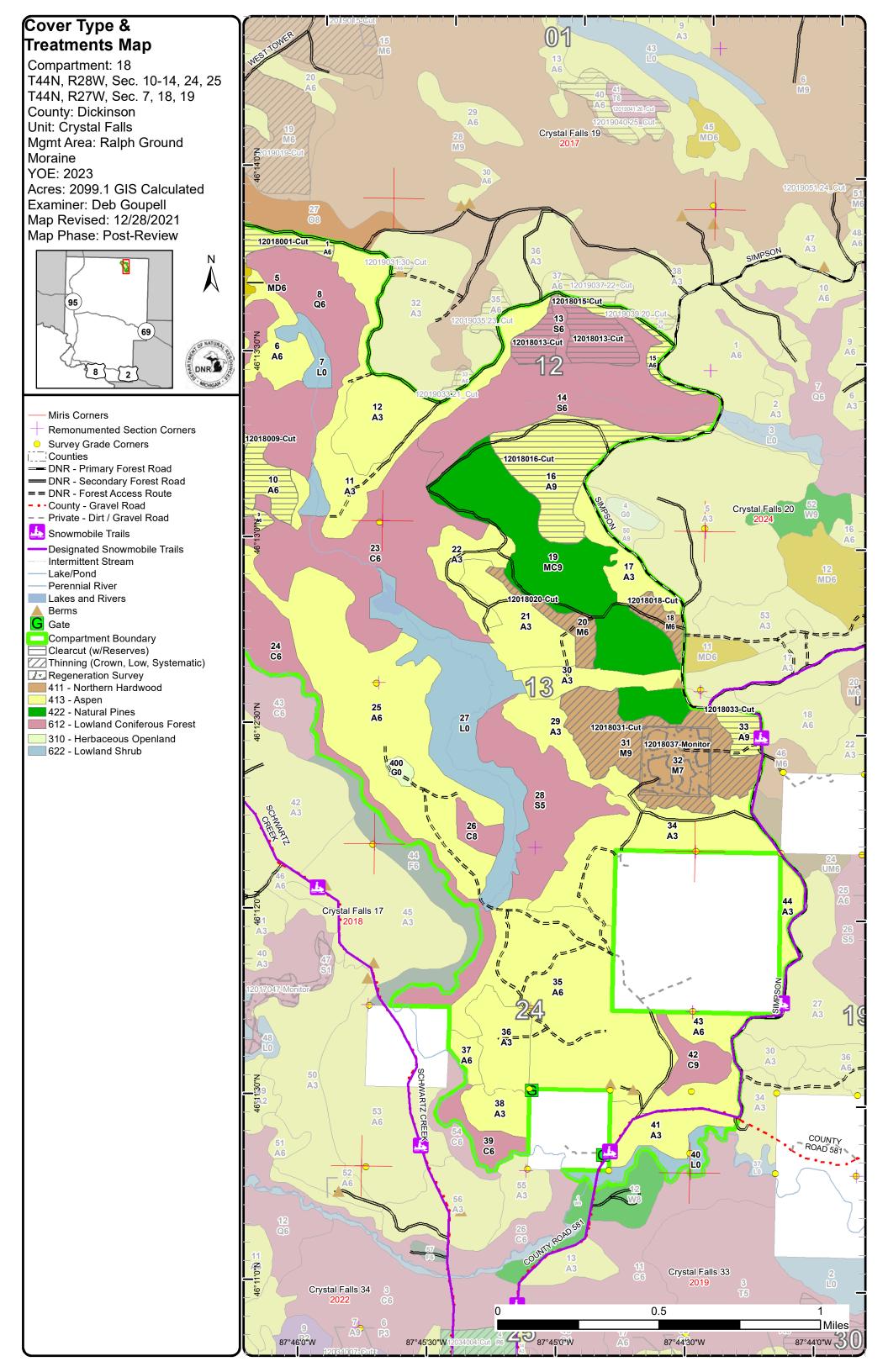
The following information is displayed, where pertinent, on the attached compartment maps:

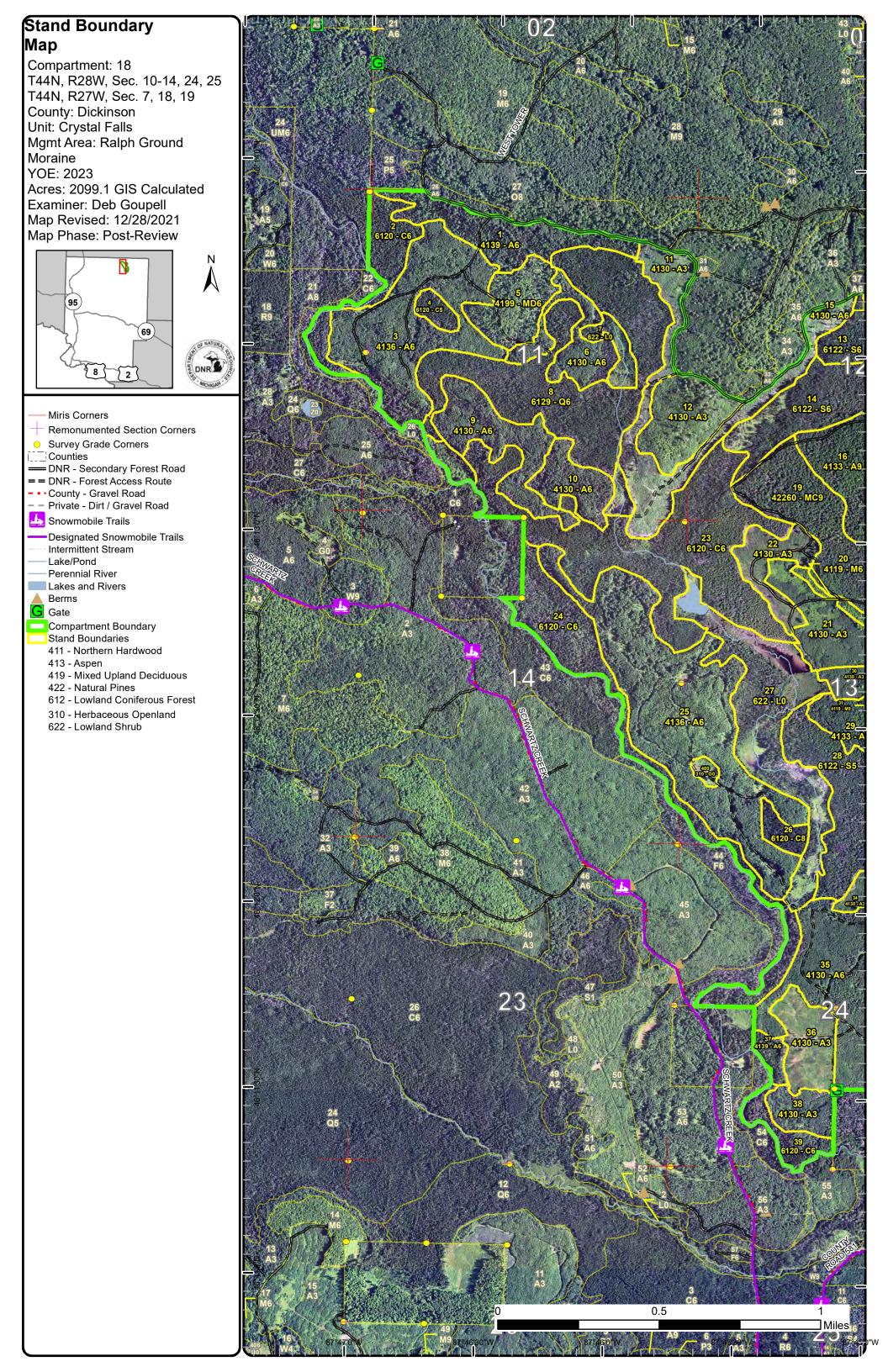
Base feature information, stand boundaries, cover types, and numbers Proposed treatments Site condition boundaries

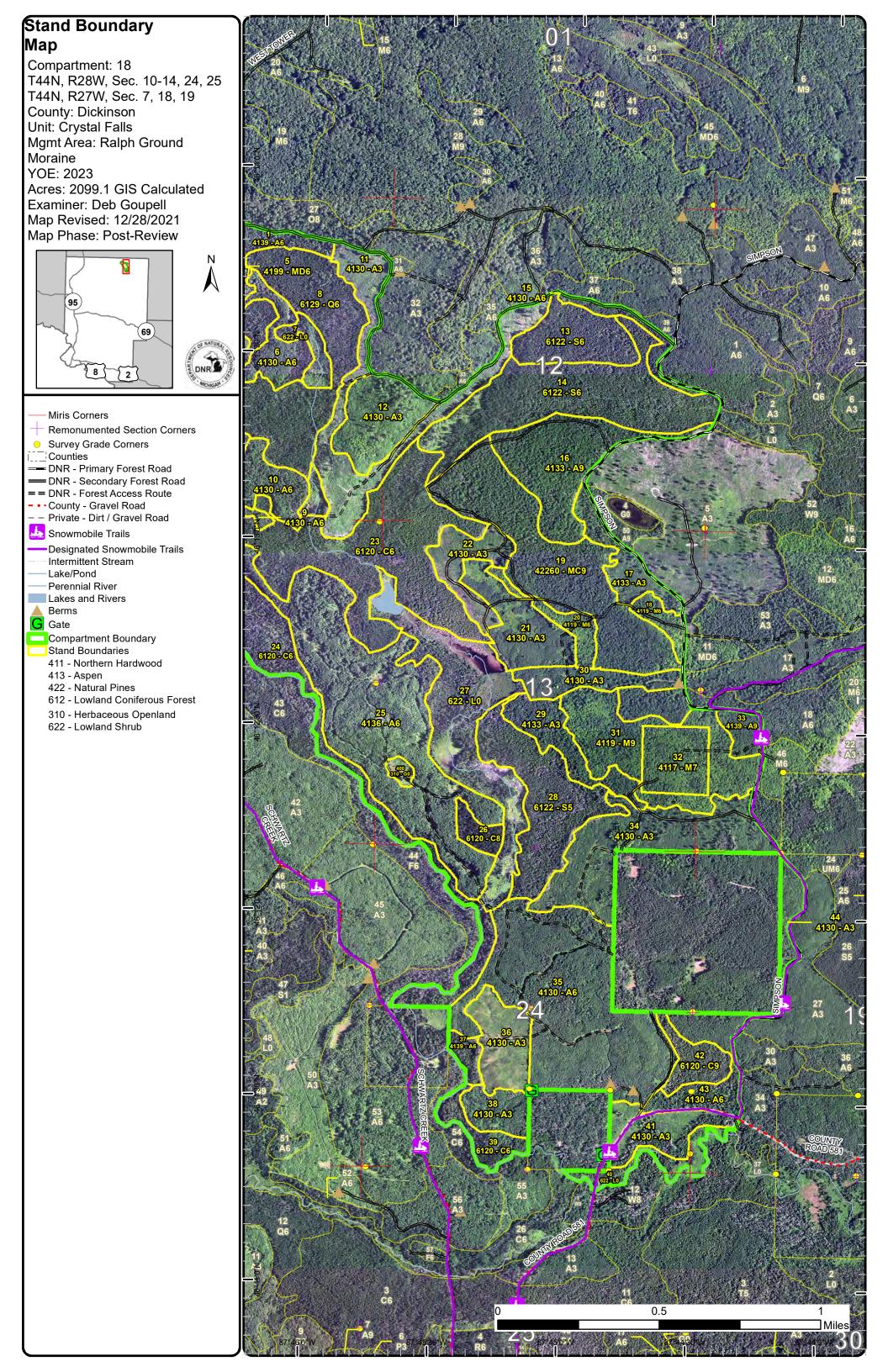
Details on the road access system

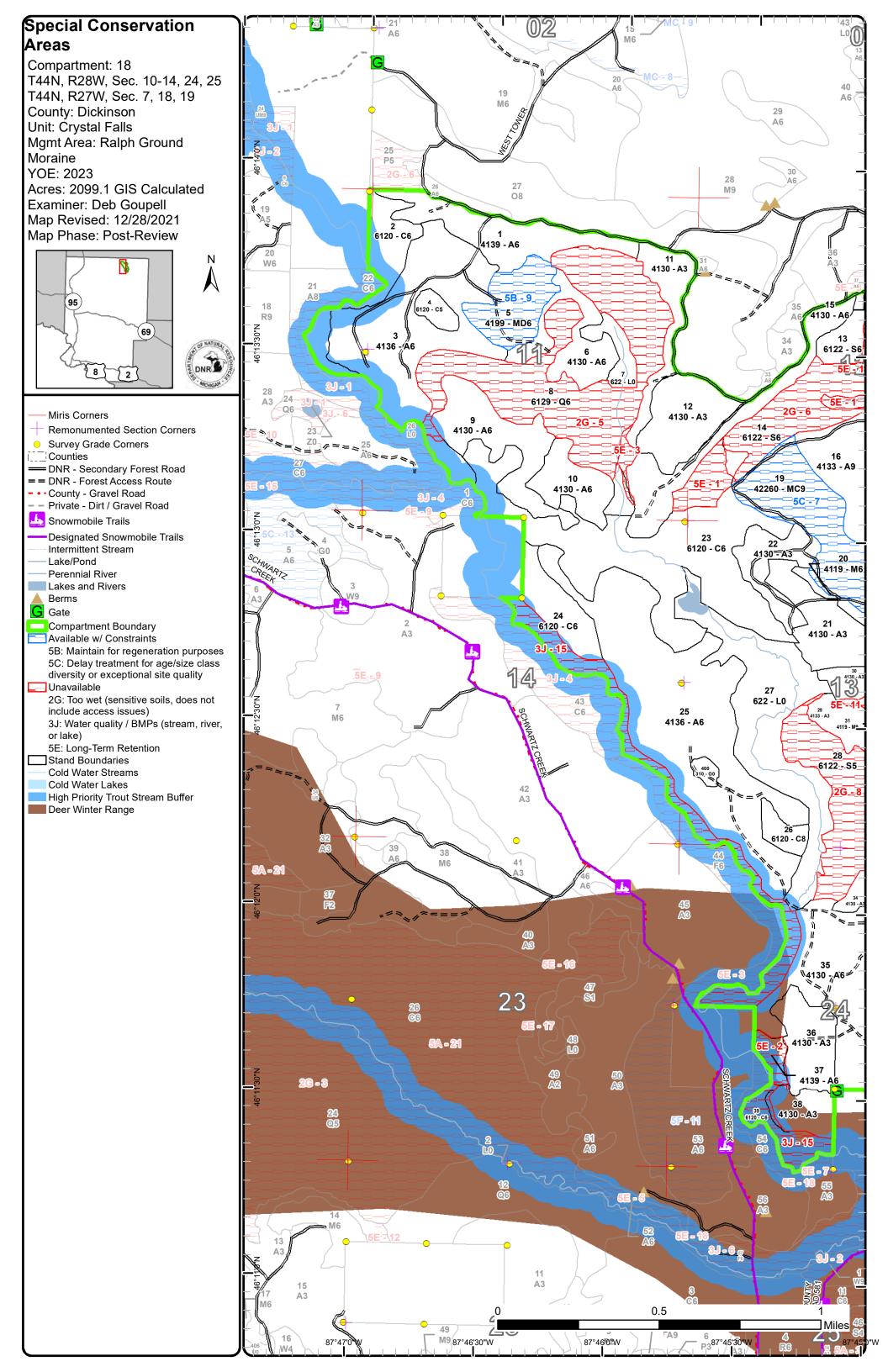


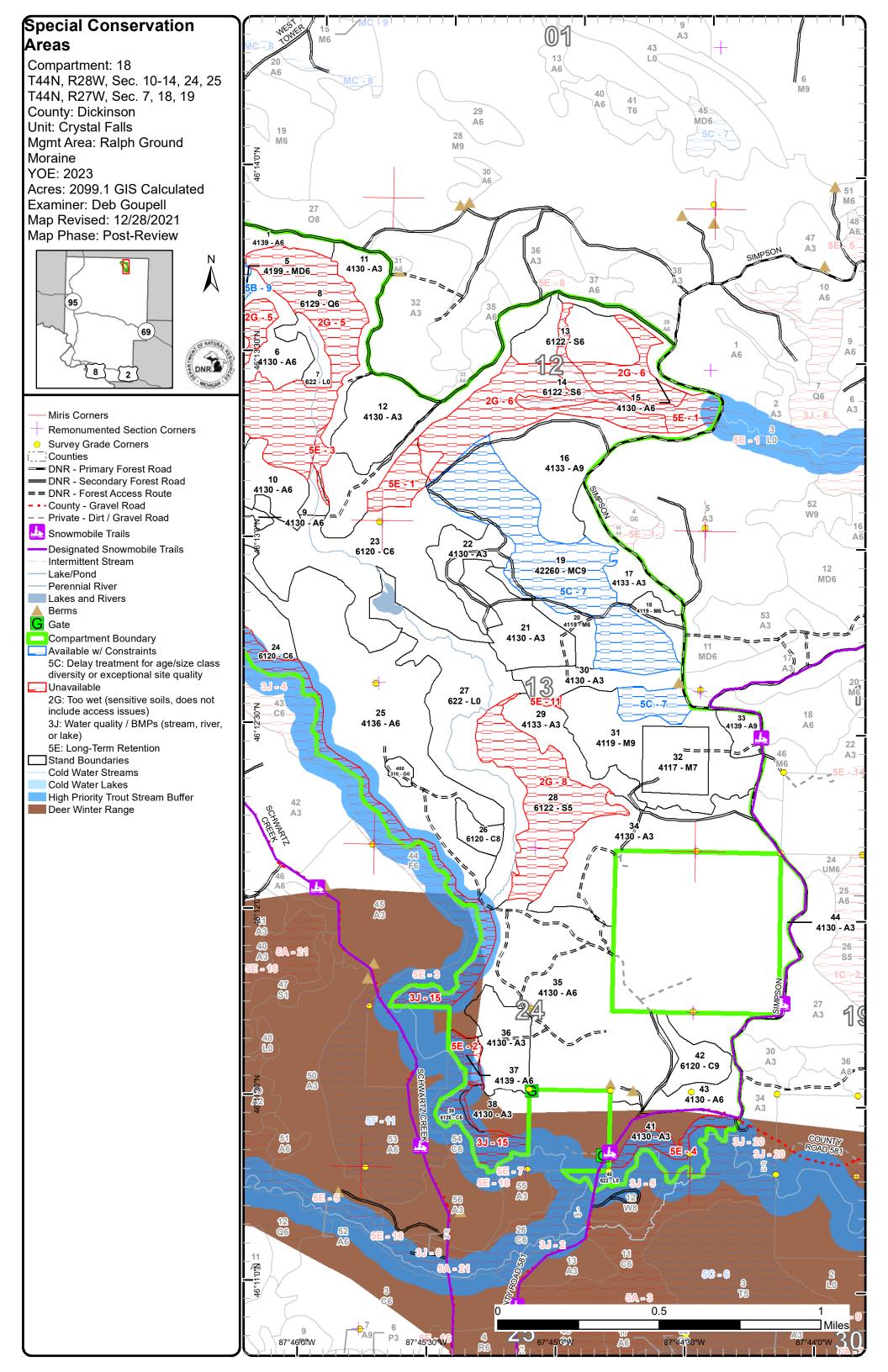












Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment 18

Year of Entry 2023



Age Class

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	/ 😽			<u>/ </u>		<u>/ </u>						/ 🛚	/ ~	<u>/ ~ </u>				/ 3		
Aspen	0	290	95	169	293	119	105	0	7	0	0	0	0	0	0	0	0	0	1076	l
Cedar	0	0	0	0	0	0	0	0	0	254	26	15	0	0	0	0	0	0	295	1
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	l
Lowland Conifers	0	0	0	0	0	0	0	0	0	133	0	0	0	0	0	0	0	0	133	1
Lowland Shrub	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	
Lowland Spruce/Fir	0	0	0	0	0	0	36	0	0	166	0	0	0	0	0	0	0	0	202	
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	32	
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	119	0	0	0	0	0	0	0	119	
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	110	0	0	0	0	0	0	0	110	1
Total	133	290	95	169	293	119	141	0	7	585	255	15	0	0	0	0	0	0	2100	



Report 2 – Treatment Summary

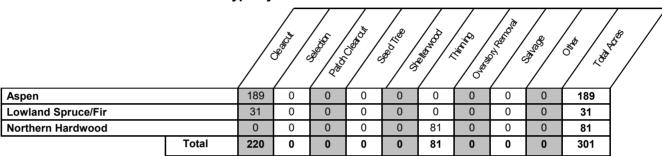
Crystal Falls Mgt. Unit Year of Entry: 2023

Acres of Harvest

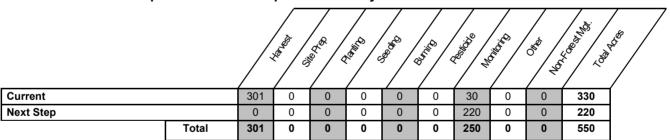
Compartment 18
Total Compartment Acres: 2,099

Commercial Harvest - 301 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Crystal Falls Mgt. Unit

Report 3 -- Treatments

BA

Compartment: 18 Year of Entry: 2023

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Treatment Name

Acres

Stand CoverType

Size Density Stand Age

Treatment Range Type

Treatment Method

Cover Type Objective

Age Structure Habitat Cut

Approved Treatments:

12018001-Cut 44.7 4139 - Aspen, Poletimber 40 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Mixed Deciduous Well ified Retention

Prescription Final harvest 2" dbh and greater except for oak, pine, cedar. Leave some component of cherry (submerch acceptable) and white birch.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, mixed conifer, mixed hardwood

Regen:

<u>Other</u> Comment:

Site Condition

Proposed Start Date: 10/1 /2022

12018009-Cut Poletimber Clearcut with 43.4 4130 - Aspen 45 Unspec Harvest 413 - Aspen Even-Aged No Well ified Retention

Prescription Final harvest 2" and greater except oak, white & red pine, cedar. Leave some component of Cherry)submerch is acceptable) & birch for

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, mixed conifer, mixed hardwood

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

12018010-Cut 20.2 4130 - Aspen Poletimber 54 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Well Retention ified

Prescription Final harvest 2" and greater except oak, red & white pine, cedar. Leave some component of white birch and cherry (submerchantable cherry

is acceptable). Treatment boundary reflects 300' buffer to stream which will serve as retention. Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, mixed softwood, mixed hardwood

Regen: **Other** Comment: Site Condition

Proposed Start Date: 10/1 /2022

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а **Treatment** Stand Stand BA **Treatment Treatment** Cover Type Acres Size Age Habitat n Name CoverType Density Age Range Type Method Objective Structure Cut d 13 12018013-Cut 30.8 6122 - Black Spruce Poletimber Unspec Harvest Clearcut with 6122 - Black Even-Aged No Well ified Retention Spruce Prescription Final harvest all stems within treatment area (buffer/exclusion will be the retention area within the stream) except cedar. Leave some Specs: component of cherry (submerch is acceptable) and maple. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable tamarack, spruce, balm of gilead Regen: **Other** Comment: Site Condition Proposed Start Date: 10/1 /2022 4130 - Aspen 54 413 - Aspen Even-Aged 12018015-Cut 10.7 Poletimber Unspec Harvest Clearcut with Nο Well ified Retention Prescription Final harvest 2" dbh and greater except cedar, red pine, white pine, oak. Recommend cutting with adjacent stand 1 in comp 20. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen, mixed conifer, mixed hardwood Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024 12018016-Cut 60.2 4133 - Aspen, Sawtimber 54 Unspec Harvest Clearcut with 413 - Aspen Two-Aged No Mixed Pine Well ified Retention Prescription Final harvest all stems 2" and greater except red pine, white pine, oak, cedar. Hemlock will be retained if found. Leave some component of cherry (submerch is acceptable) and white birch (maybe leave all 8" and less or green tree when cruising or spec 1/acre). Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable mixed pine, aspen, mixed hardwood, mixed softwood Regen: **Other** Comment: Site Condition Proposed Start Date: 10/1 /2022 Poletimber 90 81-110 12018018-Cut 9.4 4119 - Mixed Harvest Crown Thinning 411 - Northern Even-Aged No Northern Hardwoods Well Hardwood Prescription Thin to 70 BA to remove defect while maintaining BA. Retain all pine, cedar, hemlock and oak if found. Specs: Next Step Treatments: **Acceptable** Regen: Other Stand is not quuite at target BA but as we are thinning stand to south, we won't be thinning for another 20 years. Makes sense to improve stand while we're here. Comment: Site Condition

Proposed Start Date: 10/1 /2022

Size

Density

Stand

CoverType

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Treatment

Name

Acres

Report 3 -- Treatments Compartment: 18
Year of Entry: 2023

Treatment

Method

Cover Type

Objective



Cut

Age

Structure

20 12018020-Cut 12.7 4119 - Mixed Poletimber 90 81-110 Harvest Crown Thinning 411 - Northern Even-Aged No Northern Hardwoods Well Hardwood

Treatment

Type

BA

Range

Prescription Thin stand to 60-70 BA removing as much defect while maintaining BA. Retain all pine, cedar, hemlock and oak, if found.

Stand

Age

Specs:

Next Step
Treatments:

Acceptable Regen:

Other BA average is 106 but since we are thinning stand to south, we won't be in here for another 20 years. Enough defect to warrant a light thin

Comment: for stand improvement.

Site Condition

Proposed Start Date: 10/1 /2022

31 12018031-Cut 58.5 4119 - Mixed Sawtimber 90 81-110 Harvest Crown Thinning 411 - Northern Even-Aged No Northern Hardwoods Well Hardwood

Prescription Thin to 70 BA. Focus removal around oaks to promote scarification and recruitment of oak saplings. Retain all pine and remove only oak in

Specs: poor health/condition.

Next Step Treatments:

Acceptable mixed hardwood, mixed pine

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

33 12018033-Cut 10.0 4139 - Aspen, Sawtimber 58 Unspec Harvest Clearcut 413 - Aspen Even-Aged No Mixed Deciduous Well ified

<u>Prescription</u> Final harvest all trees 2" and greater, except pine. Encourage bare ground harvest for greatest scarification.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, mixed softwood, mixed hardwood

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

12018037-4117 - Mixed N. Sawtimber 1-50 Monitoring Natural Regen 411 - Northern 32 29.5 95 Uneven-No Hardwood - Pine Poor (Intermediate) Hardwood Aged

Prescription this is a MWR sale seed tree. Regeneration will be performed by MWR staff.

Specs:

Next Step Treatments:

Acceptable maple

Regen:

Other Percent to Treat = 100%

Comment:

Site Condition

Proposed Start Date: 4 /21/2020

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 18 Year of Entry: 2023 Cover Type Objective Age Structure **Treatment** Acres Stand Size Stand ВА Treatment Treatment Habitat Name CoverType Density Age Method Range Type Cut

Total Treatment Acreage Proposed: 330.1

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Compartment: 18

Crystal Falls Mgt. Unit

Deb Goupell : Examiner Year of Entry: 2023

Availa	ability for	Managemer	nt							
Total	Acres	Acres Avail	Acres	[Domina	nt Site	Cond	dition	S	
Acres	Available	With Condition	Not Available		5B	5C	2G	3J	5A	5E
1076	1052	0	24	Aspen				1		23
295	220	0	75	Cedar				60		14
4	4	0	0	Herbaceous Openland						
133	0	0	133	Lowland Conifers			133			0
129	128	0	1	Lowland Shrub					0	1
201	32	0	169	Lowland Spruce/Fir			141			28
31	0	31	0	Mixed Upland Deciduous	31					
119	0	119	0	Natural Mixed Pines		119				
111	111	0	0	Northern Hardwood						
2,099	1,547	151	401	Total Forested Acres	31	119	274	61	0	66
	74%	7%	19%	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.

	Dominant Site ond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	5E: Long-Term Retention	41	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Co	omments:						
2	Unavailable	5E: Long-Term Retention	7	3J: Water quality / BMPs (stream, river, or lake)	2F: Too steep	Unspecified	Unspecified
Co	omments:						
3	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Deb Goupell: Examiner

4	Unavailable	5E: Long-Term Retention	12	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	133	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	76	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	119	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	66	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Available	5B: Maintain for regeneration purposes	32	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 18
Year of Entry: 2023

11	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified		
С	omments:								
15	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	62	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified		
С	omments:								

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Mgt. Unit

Compartment: #Type! Year of Entry:



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

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Crystal Falls Mgt. Unit Compartment: 18
Year of Entry 2023



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions stocked trout populations and those of other coldwater fish spectonditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	ies to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions and those of other coldwater fish specyear to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wild and Waterfowl Production Areas, deer wintering complexes in lo openings and savannas. Habitat areas are distinct from critical hendangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened o covered by species recovery plans that are developed in cooper	wland conifer communities, grassland nabitat designated for recovery of piping plover areas) in that they are more r endangered species, and are not
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well



Stand	Level 4 Co	over Type	Si	ze De	nsity	Acres	Stand Age E	A Range	Managed S	Site	General Comments
1	4139 - Aspen, I	Mixed Deci	duous Po	letimb	er Well	44.7	40 U	nspecified	N/A		Most of merchantable WS/BF are dead from SBW. Cut to clean up stand.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	10	Pole	9		Ва	lsam Fir	Low	Variable	Sapling	
	Red Oak	5	Log/Pole	10		Whit	te Spruce	Low	5 - 10 feet	Sapling	
	Paper Birch	15	Pole	8							
C	Quaking Aspen	55	Pole	9	40						
	Balsam Fir	3	Pole	7							
١	White Spruce	2	Pole	7							
	Sugar Maple	5	Pole	8							
	White Pine	5	Log/Pole	16							
2	6120 - Lov	vland Ceda	ır Po	letimb	er Well	30.4	88 U	nspecified	N/A		Good looking cedar in north. South has more of the balm of gilead and
(Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	other species.
	Paper Birch	3	Pole	7		Ва	lsam Fir	Low	5 - 10 feet	Sapling	
	Balsam Fir	2	Pole/Sapling	5		Whit	te Spruce	Low	5 - 10 feet	Sapling	
ŀ	Black Spruce	5	Pole	8		Та	ıg Alder	Low	5 - 10 feet	Tall Shrub	
North	hern White Cedar	80	Log/Pole	10	88						
Е	Balsam Poplar	10	Log/Pole	12							
3	4136 - Aspen	, Mixed Co	nifer Po	letimb	er Well	99.6	33	mmature	N/A		Paavo TS cut 1988. Red & white pine seeding in along roads and openings. SBW has had a devastating effect on the merchantable
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	spruce/fir.
Q	Quaking Aspen	75	Pole/Sapling	6	33	Quak	ing Aspen	Low	5 - 10 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6		Ba	lsam Fir	Medium	5 - 10 feet	Sapling	
\	White Spruce	4	Sapling	4							
	White Pine					Whit	te Spruce	Low	5 - 10 feet	Sapling	
		3	Pole/Sap/Log	8		Wh	nite Pine	Low	5 - 10 feet 5 - 10 feet	Sapling Sapling	
	Red Pine	3 8	Pole/Sap/Log Pole/Log/Sap	8		Wh	<u> </u>				
4	Red Pine		Pole/Log/Sap	9	Mediun	Wh Re	nite Pine ed Pine	Low	5 - 10 feet	Sapling	Poorly stocked. Very wet with some ponded water.
	Red Pine	8 vland Ceda	Pole/Log/Sap	9 timber	Mediun	Wh Re n 7.0	nite Pine ed Pine	Low	5 - 10 feet 5 - 10 feet	Sapling	Poorly stocked. Very wet with some ponded water.
-	Red Pine 6120 - Lov	8 vland Ceda	Pole/Log/Sap ar Pole	9 timber		Wh Re n 7.0 Sub-Car	nite Pine ed Pine 88 U	Low Low	5 - 10 feet 5 - 10 feet N/A	Sapling Sapling	Poorly stocked. Very wet with some ponded water.
. (Red Pine 6120 - Lov Canopy Species	8 vland Ceda % Cover	Pole/Log/Sap Ir Pole Size Class	9 timber		n 7.0 Sub-Car	nite Pine ed Pine 88 U nopy Species	Low Low Inspecified Density	5 - 10 feet 5 - 10 feet N/A Avg. Height	Sapling Sapling Size	Poorly stocked. Very wet with some ponded water.
	Red Pine 6120 - Lov Canopy Species Tamarack	vland Ceda Cover	Pole/Log/Sap Ir Pole Size Class Pole	9 timber DBH		n 7.0 Sub-Car Ba Blace	anite Pine ed Pine 88 U nopy Species Isam Fir	Low Low nspecified Density Low	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Sapling Size Sapling	Poorly stocked. Very wet with some ponded water.
C	Red Pine 6120 - Lov Canopy Species Tamarack Black Spruce	8 vland Ceda **Cover** 15	Pole/Log/Sap The Pole Size Class Pole Pole Log/Pole	9 timber 7 7 10	Age	n 7.0 Sub-Car Ba Blace	alte Pine 88 Unopy Species Isam Fir k Spruce	Low Low Inspecified Density Low Low	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet	Sapling Sapling Size Sapling Sapling	Swamp V TS cut all aspen and birch in 12/2014. 90% merchantable BF
North	Red Pine 6120 - Lov Canopy Species Tamarack Black Spruce hern White Cedar	vland Ceda Cover 15 15 70 d Upland D	Pole/Log/Sap The Pole Size Class Pole Pole Log/Pole	9 timber DBH 7 7 10	Age 88	When 7.0 Sub-Car Bar Blace Tar 31.5	88 Unopy Species Isam Firek Spruce g Alder	Low Low Inspecified Density Low Low Low	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet 5 - 10 feet	Sapling Sapling Size Sapling Sapling	
North	Red Pine 6120 - Low Canopy Species Tamarack Black Spruce hern White Cedar 4199 - Other Mixed	vland Ceda Cover 15 15 70 d Upland D	Pole/Log/Sap Pole Size Class Pole Pole Log/Pole eciduous Po	9 timber DBH 7 7 10	Age 88 er Well	When 7.0 Sub-Cal Bal Blac Ta 31.5 Sub-Cal	88 Unopy Species Isam Fir Isk Spruce Ig Alder	Low Inspecified Density Low Low Low 81-110	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet 5 - 10 feet N/A	Sapling Sapling Size Sapling Sapling Tall Shrub	Swamp V TS cut all aspen and birch in 12/2014. 90% merchantable BF
North	Red Pine 6120 - Lov Canopy Species Tamarack Black Spruce hern White Cedar 4199 - Other Mixed Canopy Species	8 vland Ceda % Cover 15 15 70 d Upland D % Cover	Pole/Log/Sap Ir Pole Size Class Pole Pole Log/Pole eciduous Po Size Class	9 timber DBH 7 7 10 letimb	Age 88 er Well	Nh Re n 7.0 Sub-Car Ba Blac Ta 31.5 Sub-Car Ba	nopy Species 88 Unopy Species Isam Fir k Spruce g Alder 88 nopy Species	Low Low Density Low Low Low Density	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet 5 - 10 feet N/A Avg. Height	Sapling Sapling Size Sapling Sapling Sapling Sapling Tall Shrub	Swamp V TS cut all aspen and birch in 12/2014. 90% merchantable BF
North	Red Pine 6120 - Lov Canopy Species Tamarack Black Spruce hern White Cedar 4199 - Other Mixed Canopy Species Sugar Maple	8	Pole/Log/Sap The Pole Size Class Pole Pole Log/Pole Pole Pole Pole Pole Pole Pole Pole	9 timber DBH 7 7 10 letimb DBH 9	88 er Well	Nhite No. 10 No.	88 Unopy Species Isam Fir Red Spruce Red Alder Red Spruce Red Spru	Low Low Inspecified Density Low Low Low B1-110 Density Low	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Sapling Size Sapling Sapling Tall Shrub Size Sapling	Swamp V TS cut all aspen and birch in 12/2014. 90% merchantable BF
North	Red Pine 6120 - Lov Canopy Species Tamarack Black Spruce hern White Cedar 4199 - Other Mixed Canopy Species Sugar Maple Red Maple	8 vland Ceda % Cover	Pole/Log/Sap Ir Pole Size Class Pole Log/Pole eciduous Po Size Class Pole/Log Pole/Log	9 timber DBH 7 7 10 letimb DBH 9 8	88 er Well	Nhite No. 10 No.	88 Unopy Species Isam Fir 88 88 88 88 88 88 88 88 88 88 88 88 88	Low Low Inspecified Density Low Low Low 81-110 Density Low Low Low	5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet < 5 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet	Sapling Sapling Size Sapling Sapling Tall Shrub Size Sapling Sapling Sapling Sapling	Swamp V TS cut all aspen and birch in 12/2014. 90% merchantable BF

Crystal Falls Mgt. Unit



Stan	d Level 4 C	over Type		Size D	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
6	4130	- Aspen		Poletim	oer Well	29.1	40	Unspecified	N/A		Far east 4 acres completely dead from SBW except for a handful of BS.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Nice stand of aspen.
	Quaking Aspen	95	Pole	8	40	Ва	alsam Fir	Medium	10 - 20 feet	Sapling	
	White Pine	1	Log/Pole	14		Whi	ite Spruce	Low	5 - 10 feet	Sapling	
	Red Pine	4	Pole	9							-
7	622 - Lov	vland Shrub)	Nonst	ocked	22.4		Unspecified	No		
8	6129 - Mixed Conif	erous Lowla	and Forest	Poletim	per Well	132.9	88	Unspecified	N/A		Some tamarack pockets are getting hit with ELB.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Paper Birch	10	Pole	8		Ва	alsam Fir	Medium	5 - 10 feet	Sapling	
	Balsam Fir	5	Pole	8		Blad	ck Spruce	Low	< 5 feet	Sapling	
	Black Spruce	25	Pole	8		Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
N	orthern White Cedar	45	Pole/Log	8	88						
	Tamarack	15	Pole	8							
9	4130	- Aspen		Poletim	er Well	44.8	45	Unspecified	N/A		Flat Rock TS 1976. Extreme amount of mortality in BF/WS 1-5" dbh
	Canopy Species	% Cover	Size Class	DBI	H Age						
	Quaking Aspen	98	Pole	7	45						
	White Spruce	1	Pole	7							
	White Pine	1	Log/Pole	16							
10	4130	- Aspen		Poletim	er Well	23.8	54	Unspecified	N/A		Almost no merchantable conifer alive, much debris on ground.
	Canopy Species	% Cover	Size Class	DBI	H Age						
	Quaking Aspen	80	Log/Pole	10	54						
	Paper Birch	10	Log/Pole	12							
	White Pine	1	Log/Pole	16							
	Red Maple	9	Pole	9							
11	4130	- Aspen		Saplin	g Well	68.8	6	Immature	N/A		Trace residual white pine and oak log sized trees. Swamp V cut Dec
	Canopy Species	% Cover	Size Class	DBI	H Age						2014. Quite a few red oak saplings coming in along the main road.
	Red Maple	10	Sapling	1							
	Quaking Aspen	85	Sapling	1	6						
	White Pine	2	Log	16							
	Red Oak	3	Log	12							



Stand	d Level 4 Co	Level 4 Cover Type Size Density Acres Stand Age BA Range Managed Site		Site	General Comments						
12	4130	- Aspen		Sapling	Well	37.5	16	Immature	N/A		Twin Peaks TS 2005. Some oak saplings coming in with aspen.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	5	Sapling	1		Re	d Maple	Medium	< 5 feet	Sapling	
	Red Oak	10	Log	14		R	ed Oak	Low	< 5 feet	Sapling	
	Quaking Aspen	55	Sapling	2	16	Ва	lsam Fir	Low	< 5 feet	Sapling	
	Bigtooth Aspen	30	Sapling	2		Hazelnı	ıt (American)	Low	< 5 feet	Tall Shrub	
13	6122 - Bl	ack Spruce	e Po	oletimb	er Well	35.6	57 l	Jnspecified	N/A		BS has tops breaking off. ELB (eastern larch beetle) not far away. Buffer
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	is drawn in site condition.
	Black Spruce	50	Pole/Sapling	6	57	Ва	lsam Fir	Low	Variable	Sapling	
No	orthern White Cedar	15	Log/Pole	12		Ta	g Alder	Low	< 5 feet	Tall Shrub	
	Tamarack	35	Pole	9				-			
14	6122 - Bl	ack Spruce	e P	oletimb	er Well	100.0	88 l	Jnspecified	N/A		Swamp V TS set up in 2013, only about 7 acres were actually cut. Dwarf
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	mistle toe was fairly aggressive further east of stand. Headwaters of Little Brook are within this stand.
	Black Spruce	70	Pole	8	88	Blac	k Spruce	Low	10 - 20 feet	Sapling	blook are within this stand.
No	orthern White Cedar	10	Pole	9		Wil	low spp.	Low	5 - 10 feet	Tall Shrub	
	Tamarack	20	Pole	8							
15	4130	- Aspen	P	oletimb	er Well	10.7	54 l	Jnspecified	N/A		Prescribe now but harvest with adjacent Comp 20.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Quaking Aspen	80	Log/Pole	10	54						
	Paper Birch	10	Log/Pole	10							
	Red Maple	5	Pole	9							
	White Pine	5	Log/Pole	16							
16	4133 - Aspe	n, Mixed P	ine S	awtimb	er Well	60.2	54 l	Jnspecified	N/A		Much of the merchantable spruce/fir are dead from SBW and
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	approximately 40% of submerchantable BF is dead also.
	Red Maple	15	Pole	9		Ва	lsam Fir	Medium	10 - 20 feet	Sapling	
	Paper Birch	15	Log/Pole	10		Whit	te Spruce	Low	5 - 10 feet	Sapling	
	Quaking Aspen	40	Log/Pole	12	54	Hazelnu	ıt (American)	Low	< 5 feet	Tall Shrub	
	White Pine	15	Log/Pole	12				'		,	
	Red Pine	5	Log	14							



Canopy Species Cover Size Class DBH Age Red Maple 5 Sapling 1 9 Balsam Fir Sapling 1 9 Balsam Fir 5 Sapling 1 9 Balsam Fir Sapling 1 9 Balsam Fir Sapling 1 9 Sub-Canopy Species Sapling Sapling Sapling 1 9 Sub-Canopy Species Sapling Sa	Stan	d Level 4 C	evel 4 Cover Type Size Density		Acres Stand Age BA Range			Managed	Site	General Comments		
Canopy Species Cano	17	4133 - Aspe	en, Mixed F	Pine	Saplino	g Well	22.0	9	Immature	N/A		
Balsam Fir 5 Sapling 1 9 White Spruce Low 5 - 10 feet Sapling Balsam Fir 5 Sapling 1 White Spruce 2 Sapling 1 White Prine 20 Log/V.log 16 Red Prine 5 Log 14 Bigtooth Aspen 23 Sapling 1		Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	poles, with logs
Belsam Fir 5 Sapling 1 White Spruce 2 Sapling 1 White Private 2 Log/Rug 16 Biglooth Aspen 2 Sapling 1 Sub-Canopy Species		Red Maple	5	Sapling	1		Ва	ılsam Fir	Medium	10 - 20 feet	Sapling	
White Spruce 2 Sapling 1 White Pine 20 Log/RVLog 16 Red Pine 5 Log 14 Biglooth Aspen 23 Sapling 1		Quaking Aspen	40	Sapling	1	9	Whi	te Spruce	Low	5 - 10 feet	Sapling	
White Pine 20		Balsam Fir	5	Sapling	1		Hazelnı	ut (American)	Low	< 5 feet	Tall Shrub	
Red Prine 5 Log 14		White Spruce	2	Sapling	1				,		,	
Bigtooth Aspen 23 Sapling 1 4119 - Mixed Northern Hardwoods Poletimber Well 9.4 90 81-110 N/A Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Sugar Maple 50 Pole/Log 9 90 Hazelnut (American) Low 5 - 10 feet Sapling Red Maple 20 Pole 9 Hazelnut (American) Low 4-5 feet Tall Shrub Balsam Fir 5 Pole 6 Balsam Fir 5 Pole 6 19 42260 - Natural Pine, Mixed Deciduous Sawlimber Well 119.3 90 111-140 N/A Canopy Species % Cover Size Class DBH Age Red Maple 10 Pole 9 Balsam Fir Low 4-5 feet Tall Shrub White Pine 50 Log/Pole/XLog 12 90 Red Pine 10 Log Age 11 1		White Pine	20	Log/XLog	16							
18		Red Pine	5	Log	14							
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Balsam Fir Medium Variable Sapling Medium V		Bigtooth Aspen	23	Sapling	1							
Sugar Maple 50 Pole 70 Pole P	18	4119 - Mixed No	orthern Har	dwoods P	oletimb	er Well	9.4	90	81-110	N/A		Could use a light thin. Top of hill on southwest is big tooth aspen to go
Red Maple 20 Pole 9 Hazelnut (American) Low < 5 feet Tall Shrub Ironwood Medium Variable Sapling White Pine 15 Log/Pole 1 1 1		Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	with adjacent stand.
Quaking Aspen		Sugar Maple	50	Pole/Log	9	90	Ва	ılsam Fir	Medium	5 - 10 feet	Sapling	
White Pine 15		Red Maple	20	Pole	9		Hazelnı	ut (American)	Low	< 5 feet	Tall Shrub	
Balsam Fir 5 Pole 6		Quaking Aspen	10	Log/Pole	11		Ire	onwood	Medium	Variable	Sapling	
19 42260 - Natural Pine, Mixed Deciduous Sawtimber Well 119.3 90 111-140 N/A		White Pine	15	Log/XLog	16	,				1		
Canopy Species % Cover Size Class		Balsam Fir	5	Pole	6							
Paper Birch 20 Log/Pole 10 Hazelnut (American) Low < 5 feet Tall Shrub						l Age						ground from SBW or heavy snow & ice. White pine dbh ranges from 6-20"; WB ranges from 6-16", RM ranges from 6-12". Overall BAs range
White Pine 50 Log/Pole/XLog 12 90 Red Pine 10 Log 14 Quaking Aspen 10 Log/Pole 11 20 4119 - Mixed Northern Hardwoods Poletimber Well 12.7 90 81-110 N/A Canopy Species % Cover Size Class DBH Age Sugar Maple 50 Pole/Log 9 90 Red Maple 15 Log/Pole 10 Balsam Fir Low 5 - 10 feet Sapling Balsam Fir 5 Sapling Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling Size Pensity Avg. Height Size Ironwood Medium Variable Sapling Sapling National Medium Variable Sapling Balsam Fir Low 5 - 10 feet Sapling Size Paper Birch 15 Log/Pole 10 Sapling Sa		Red Maple	10		9		Ва	ılsam Fir	Low	10 - 20 feet	Sapling	
Red Pine 10 Log 14		Paper Birch	20	Log/Pole	10		Hazelnı	ut (American)	Low	< 5 feet	Tall Shrub	
Quaking Aspen 10 Log/Pole 11 20 4119 - Mixed Northern Hardwoods Poletimber Well 12.7 90 81-110 N/A Canopy Species % Cover Size Class DBH Age Sugar Maple 50 Pole/Log 9 90 Red Maple 15 Log/Pole 10 Balsam Fir Low 5 - 10 feet Sapling White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 21 4130 - Aspen Sapling Well 35.9 16 Immature N/A Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Balsam Fir Low 5 - 10 feet Sapling Size N/A Simpson Birch cut 2005.		White Pine	50	Log/Pole/XLog	,	90						
20 4119 - Mixed Northern Hardwoods Poletimber Well 12.7 90 81-110 N/A Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Sugar Maple 50 Pole/Log 9 90 Ironwood Medium Variable Sapling Red Maple 15 Log/Pole 10 Balsam Fir Low 5 - 10 feet Sapling Quaking Aspen 5 Log/Pole 10 White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Balsam Fir Low 5 - 10 feet Sapling Balsam Fir Size N/A Simpson Birch cut 2005.		Red Pine	10	Log	14							
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Sugar Maple 50 Pole/Log 9 90 Ironwood Medium Variable Sapling Paper Birch 15 Log/Pole 10 Balsam Fir Low 5 - 10 feet Sapling Quaking Aspen 5 Log/Pole 10 4130 - Aspen Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Low 5 - 10 feet Sapling Balsam Fir Low 5 - 10 feet Sapling Size Sapling Size Red Maple Low 5 - 10 feet Sapling Size Sap		Quaking Aspen	10	Log/Pole	11							
Canopy Species % Cover Size Class DBH Age Sugar Maple 50 Pole/Log 9 90 Red Maple 15 Log/Pole 10 White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Balsam Fir Low 5 - 10 feet Sapling Sub-Canopy Species Density Avg. Height Size Ironwood Medium Variable Sapling Balsam Fir Low 5 - 10 feet Sapling N/A Simpson Birch cut 2005. Simpson Birch cut 2005.	20	4119 - Mixed No	orthern Har	dwoods P	oletimb	er Well	12.7	90	81-110	N/A		total BA 106. Not a high quality stand, has a lot of defect. WB is breaking
Sugar Maple 50 Pole/Log 9 90 Ironwood Medium Variable Sapling Red Maple 15 Log/Pole 10 Paper Birch 15 Log/Pole 10 White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 21 4130 - Aspen Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Canopy Species	% Cover	Size Class	DBH		Sub-Ca	nopy Species	Density	Avg. Height		
Paper Birch 15 Log/Pole 10 White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Low 5 - 10 feet Sapling Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Sugar Maple	50	Pole/Log	9	90	Ire	onwood	Medium	Variable	Sapling	rea process
White Pine 15 XLog/Log 18 Quaking Aspen 5 Log/Pole 10 21 4130 - Aspen Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Low 5 - 10 feet Sapling Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Red Maple	15	Log/Pole	10		Ва	ılsam Fir	Low	5 - 10 feet	Sapling	
Quaking Aspen 5 Log/Pole 10 21 4130 - Aspen Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Low 5 - 10 feet Sapling Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Paper Birch	15	Log/Pole	10							
21 4130 - Aspen Sapling Well 35.9 16 Immature N/A Simpson Birch cut 2005. Canopy Species		White Pine	15	XLog/Log	18							
Canopy Species % Cover Size Class DBH Age Quaking Aspen 80 Sapling 2 16 Red Maple Low 5 - 10 feet Sapling Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Quaking Aspen	5	Log/Pole	10							
Quaking Aspen80Sapling216Red MapleLow5 - 10 feetSaplingBalsam Fir5Sapling1Balsam FirLow5 - 10 feetSapling	21	4130	- Aspen		Sapling	g Well	35.9	16	Immature	N/A		Simpson Birch cut 2005.
Quaking Aspen80Sapling216Red MapleLow5 - 10 feetSaplingBalsam Fir5Sapling1Balsam FirLow5 - 10 feetSapling		Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
Balsam Fir 5 Sapling 1 Balsam Fir Low 5 - 10 feet Sapling		Quaking Aspen	80	Sapling			Re	ed Maple	Low	5 - 10 feet	Sapling	
		Balsam Fir	5	Sapling	1		Ва	ılsam Fir	Low	5 - 10 feet		
										0 101001		



Stanc	d Level 4 Co	over Type		Size Density	Acres	Stand Age	BA Range	Managed S	Site	General Comments
22	4130	- Aspen		Sapling Well	25.2	7	Immature	N/A		Swamp V TS cut 9/2014.
	Canopy Species	% Cover	Size Class	DBH Age						
	Quaking Aspen	80	Sapling	1 7						
	Red Maple	15	Sapling	1						
	White Pine	5	XLog/Log	18						
23	6120 - Lov	wland Ceda	ar P	oletimber Well	146.4	88	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Paper Birch	10	Pole	8	Ва	lsam Fir	Low	5 - 10 feet	Sapling	
	Tamarack	10	Pole	8	Blad	ck Spruce	Low	< 5 feet	Sapling	
	Black Spruce	25	Pole	8	Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
No	orthern White Cedar	55	Pole/Log	8 88						•
24	6120 - Lov	wland Ceda	ar P	oletimber Well	69.9	88	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Paper Birch	10	Pole	8	Ва	lsam Fir	Medium	5 - 10 feet	Sapling	
	Balsam Fir	10	Pole	8	Blad	ck Spruce	Low	< 5 feet	Sapling	
	Black Spruce	25	Pole	8	Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
No	orthern White Cedar	55	Pole/Log	8 88						
25	4136 - Aspen	, Mixed Co	onifer P	oletimber Well	163.5	35	Immature	N/A		Blazed Trail TS cut 1986. SBW impacting BF/WS but not too much mortality yet. Some WP, cherry, BS in openings. JP in far north tip. RP
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	ridge in far north finger. More conifer in overstory in north half of stand.
	Quaking Aspen	65	Pole	7 35	Ва	Isam Fir	Medium	Variable	Sapling	
	Balsam Fir	7	Pole/Sapling	5	Whi	te Spruce	Low	Variable	Sapling	
	White Spruce	8	Pole/Sapling	5						
	Red Pine	5	Log	16						
	Bigtooth Aspen	10	Pole	7						
	White Pine	5	Log	16						
26	6120 - Lov	wland Ceda	ar Sa	wtimber Medium	າ 9.1	94	Unspecified	N/A		BS on north is dying (did not note dwarf mistletoe). WC is more central the stand.
	Canopy Species	% Cover	Size Class	DBH Age						uic stairu.
No	orthern White Cedar	65	Log/Pole	10 94						
	Black Spruce	35	Pole	7						
27	622 - Low	land Shrul	0	Nonstocked	91.3		Unspecified	No		



Stand	tand Level 4 Cover Type			Size Der	sity	Acres	Stand Age	BA Range	Managed Site		General Comments
28	6122 - BI	ack Spruce	e Po	oletimber	Medium	65.6	87	Unspecified	N/A		Cedar more along edges of stand. BS in center is breaking up as it is
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	very wet.
	White Spruce	5	Pole	8		Ва	lsam Fir	Low	5 - 10 feet	Sapling	
	Black Spruce	60	Pole	5	87	Blad	ck Spruce	Low	< 5 feet	Sapling	
No	orthern White Cedar	30	Pole	8		Ta	ag Alder	Low	< 5 feet	Tall Shrub	
	Tamarack	5	Pole	8							
29	4133 - Aspe	4133 - Aspen, Mixed Pine			Sapling Well		3	Immature	N/A		581 SBW Timber Sale (12-029), cut 10/2018
	Canopy Species	% Cover	Size Class	DBH	Age						
	Quaking Aspen	80	Sapling	1	3						
	White Pine	20	Log/XLog	16	101						
30	4130	- Aspen		Sapling	Well	21.7	19	Unspecified	N/A		Tornado damaged area, 2000.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	6	Pole	8		Qual	king Aspen	Low	< 5 feet	Sapling	
	Red Maple	12	Sapling	2		Ва	lsam Fir	Low	< 5 feet	Sapling	
	Paper Birch	5	Sapling	1		WI	nite Pine	Low	< 5 feet	Sapling	
	Quaking Aspen	61	Sapling/Pole	9 4	19						-
	Balsam Fir	10	Sapling	1							
	White Pine	6	Log	16							
31	1 4119 - Mixed Northern Hardwoods Sa		Sawtimbe	r Well	61.0	90	81-110	N/A		Balsam Hardwood thinned 2004. Stand was split on 1/14/2020 to be	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	separate from MWR job within stand
	Sugar Maple	50	Log/Pole	11	90	Ва	Isam Fir	Medium	Variable	Sapling	
	Red Maple	15	Log/Pole	11		WI	nite Pine	Low	< 5 feet	Sapling	
	White Pine	15	XLog/Log	18						•	•
	Red Oak	15	XLog/Log	18							
	Paper Birch	5	Log/Pole	10							
32	4117 - Mixed N	. Hardwood	- Pine	Sawtimbe	r Poor	27.4	95	1-50	N/A		Toe Jam MWR TSexperiment. 10-20 BA. Full raspberry understory
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	65	Log/Pole	12	95	Qual	king Aspen	Medium	5 - 10 feet	Sapling	
	White Pine	20	Log/XLog	16		Sug	gar Maple	Medium	< 5 feet	Sapling	
	Paper Birch	10	Log	14		WI	nite Pine	Medium	5 - 10 feet	Sapling	
	Red Maple	5	Log	10	_						<u>.</u>



Stand	Level 4 Cover Type			Size Density		Acres	Stand Age BA Range		Managed Site		General Comments
33	4139 - Aspen, Mixed Deciduous			Sawtimber Well		ell 10.0	58	Unspecified	N/A		Ready for harvest
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	15	Pole/Log	9		Re	ed Maple	Low	5 - 10 feet	Sapling	
	Sugar Maple	15	Log/Pole	10		Su	gar Maple	Medium	10 - 20 feet	Sapling	
	Quaking Aspen	55	Log/Pole	10	58	Hazeln	ut (American)	Low	< 5 feet	Tall Shrub	
	White Spruce	5	Pole/Log	9							
	White Pine	3	Log	16							
	Balsam Fir	7	Pole	6							
34	4130) - Aspen		Sapling Well		76.5 9 Immature		N/A		This stand is the Dog Leg TS cut 2012(additional acres POW 2010);	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Several lower pockets left for retention. Pocket of h ardwood left near private. Some pockets of bent over aspen from ice and heavy snow
	Quaking Aspen	88	Sapling	1	9	Blackbe	rry/Raspberry	Low	< 5 feet	Tall Shrub	winter 2019-20.
	Red Maple	2	Sapling	1							-
	White Pine	10	XLog/Log	16							
35	35 4130 - Aspen Poletimber Well				151.7	24	Immature	N/A		Fosterling TS cut 1987. aspen on far south is 2-4" dbh.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	70	Pole/Sapling	9 6	24	Hazeln	ut (American)	Full	< 5 feet	Tall Shrub	
	Balsam Fir	5	Pole/Sapling	g 7							
	White Spruce	5	Pole	7							
	Bigtooth Aspen	10	Pole/Sapling	9 6							
	Balsam Poplar	10	Sapling/Pole	9 4							
36	4130	- Aspen		Sapling		29.2	7	Immature	N/A		Bear Annex TS cut 2014
	Canopy Species	% Cover			Age						
	Quaking Aspen	80	Sapling	1	7						
	Bigtooth Aspen	20	Sapling	1							
37	4139 - Aspen,	Mixed Deci	duous	Poletimb		7.1	73	51-80	N/A		This was left for retention for cut to east due to steep hill and trout stream buffer.
	Canopy Species	% Cover	Size Class	DBH	Age						build.
	Quaking Aspen	45	Log/Pole	12	73						
	Red Maple	25	Log/Pole	10							
	Red Pine	5	Log/Pole	14							
	Paper Birch	15	Log/Pole	10							
	White Spruce	5	Log/Pole	12							
	Sugar Maple	5	Log/Pole	10							



Stand	d Level 4 Co	over Type									General Comments
38	4130	- Aspen		Sapling	y Well	16.8	24	Immature	N/A		Fosterling TS cut 1987; had more conifer than adjacent stand 35 (same
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	sale) which has died out from SBW.
	Quaking Aspen	80	Sapling	3	24	Ва	alsam Fir	Low	5 - 10 feet	Sapling	
	Balsam Poplar	10	Sapling	3							-
	Tamarack	3	Sapling	3							
	White Spruce	7	Pole	6							
39	39 6120 - Lowland Cedar		Poletimber Well		15.4 105		Unspecified	N/A		stream buffer	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	Paper Birch	6	Pole	8		Ва	alsam Fir	Medium	10 - 20 feet	Sapling	
	Quaking Aspen	9	Pole	8		Bla	ck Spruce	Low	10 - 20 feet	Sapling	
	Black Spruce	20	Pole	8		Ta	ag Alder	Low	< 5 feet	Tall Shrub	
No	orthern White Cedar	50	Pole	9	105						•
	Tamarack	15	Pole	9							
40	622 - Low	vland Shrub)	Nonsto	ocked	15.3		Unspecified	No		
		vland Shrub - Aspen)	Nonsto Sapling		15.3 27.9	7	Unspecified	No N/A		Bear Annex TS cut 2014. South has retention 300' from river.
41		- Aspen	Size Class	Sapling			7				Bear Annex TS cut 2014. South has retention 300' from river.
41	4130	- Aspen		Sapling	j Well		7				Bear Annex TS cut 2014. South has retention 300' from river.
41	4130 Canopy Species	- Aspen % Cover	Size Class	Sapling) Well		7				Bear Annex TS cut 2014. South has retention 300' from river.
41	4130 Canopy Species Quaking Aspen orthern White Cedar	- Aspen % Cover	Size Class Sapling Log/Pole	Sapling DBH	y Well Age 7		7 95				Black spruce is small diameter. 95% submerch. BF/WS dead in
41	4130 Canopy Species Quaking Aspen orthern White Cedar	- Aspen % Cover 98 2 wland Ceda	Size Class Sapling Log/Pole	Sapling DBH 1 10 Sawtimb	y Well Age 7	27.9		Immature	N/A	Size	
41	4130 Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov	- Aspen % Cover 98 2 wland Ceda	Size Class Sapling Log/Pole	Sapling DBH 1 10 Sawtimb	y Well Age 7 er Well	27.9 16.8 Sub-Ca	95	Immature	N/A	Size Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in
41	4130 Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species	- Aspen % Cover 98 2 wland Ceda % Cover	Size Class Sapling Log/Pole ar Size Class	Sapling DBH 1 10 Sawtimb	y Well Age 7 er Well	27.9 16.8 Sub-Ca	95 nnopy Speci	Immature Unspecified unspecified Unspecified	N/A N/A Avg. Height		Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand.
41	4130 Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash	- Aspen % Cover 98 2 wland Ceda % Cover 5	Size Class Sapling Log/Pole ar S Size Class Pole	Sapling DBH	y Well Age 7 er Well	27.9 16.8 Sub-Ca	95 anopy Speci alsam Fir	Immature Unspecified s Density Low	N/A N/A Avg. Height 10 - 20 feet	Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand.
41 No 42	Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar	- Aspen	Size Class Sapling Log/Pole ar S Size Class Pole Pole	Sapling DBH 1 10 Sawtimb DBH 8 8	y Well Age 7 er Well	27.9 16.8 Sub-Ca	95 anopy Speci alsam Fir	Immature Unspecified s Density Low	N/A N/A Avg. Height 10 - 20 feet	Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand.
41 No 42	Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar Black Spruce orthern White Cedar	- Aspen % Cover 98 2 wland Ceda % Cover 5 10 10	Size Class Sapling Log/Pole ar S Size Class Pole Pole Pole Log/Pole	Sapling DBH	y Well Age 7 er Well Age 95	27.9 16.8 Sub-Ca	95 anopy Speci alsam Fir	Immature Unspecified s Density Low	N/A N/A Avg. Height 10 - 20 feet	Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand. Pryal TS cut 1988. South half of stand much heavier to BF/WS with
41 No 42	Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar Black Spruce orthern White Cedar	- Aspen % Cover 98 2 wland Ceda % Cover 5 10 10 75	Size Class Sapling Log/Pole ar S Size Class Pole Pole Log/Pole	Sapling DBH 1 10 Sawtimb DBH 8 8 5 10	y Well Age 7 er Well Age 95	27.9 16.8 Sub-Ca Ba Ta	95 Inopy Speci alsam Fir ag Alder	Unspecified Bensity Low Low Immature	N/A N/A Avg. Height 10 - 20 feet 5 - 10 feet	Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand. Pryal TS cut 1988. South half of stand much heavier to BF/WS with
No	4130 Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar Black Spruce orthern White Cedar	- Aspen % Cover 98 2 wland Ceda % Cover 5 10 10 75 - Aspen	Size Class Sapling Log/Pole ar S Size Class Pole Pole Log/Pole	Sapling DBH 1 10 Sawtimb DBH 8 8 5 10 Poletimb DBH	er Well 95 er Well	27.9 16.8 Sub-Ca Ba Ta 29.6 Sub-Ca	95 anopy Speci alsam Fir ag Alder	Unspecified Bensity Low Low Immature	N/A N/A Avg. Height 10 - 20 feet 5 - 10 feet	Sapling Tall Shrub	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand. Pryal TS cut 1988. South half of stand much heavier to BF/WS with aspen dbhs smaller (4-6"). North half on knob, heavier to pure aspen wi
No	4130 Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar Black Spruce orthern White Cedar 4130 Canopy Species	- Aspen % Cover 98 2 wland Ceda % Cover 5 10 10 75 - Aspen % Cover	Size Class Sapling Log/Pole ar S Size Class Pole Pole Log/Pole F Size Class	Sapling DBH 1 10 Sawtimb BBH 8 8 5 10 Poletimb DBH	er Well Age 7 1 Age 95 2 4 4 4 3 4 4 4 5 6 5 7 6 7 7 7 8 7 9 7 9 7 1 Age 7 1 Age	27.9 16.8 Sub-Ca Ba Ta 29.6 Sub-Ca	95 anopy Speci alsam Fir ag Alder 33 anopy Speci	Unspecified es Density Low Low Immature es Density Medium	N/A Avg. Height 10 - 20 feet 5 - 10 feet N/A Avg. Height	Sapling Tall Shrub	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand. Pryal TS cut 1988. South half of stand much heavier to BF/WS with aspen dbhs smaller (4-6"). North half on knob, heavier to pure aspen widbhs 5-9".
No	Canopy Species Quaking Aspen orthern White Cedar 6120 - Lov Canopy Species Black Ash Balsam Poplar Black Spruce orthern White Cedar 4130 Canopy Species Quaking Aspen	- Aspen % Cover 98 2 wland Ceda % Cover 5 10 10 75 - Aspen % Cover 80	Size Class Sapling Log/Pole Size Class Pole Pole Pole Log/Pole Fixe Class Pole/Sapling	Sapling DBH 1 10	er Well Age 7 1 Age 95 2 4 4 4 3 4 4 4 5 6 5 7 6 7 7 7 8 7 9 7 9 7 1 Age 7 1 Age	27.9 16.8 Sub-Ca Ba Ta 29.6 Sub-Ca	95 Inopy Specialsam Fir ag Alder 33 Inopy Specialsam Fir	Unspecified es Density Low Low Immature es Density Medium	N/A Avg. Height 10 - 20 feet 5 - 10 feet N/A Avg. Height 10 - 20 feet	Sapling Tall Shrub Size Sapling	Black spruce is small diameter. 95% submerch. BF/WS dead in understory. Intermittent sheet flow through this stand. Pryal TS cut 1988. South half of stand much heavier to BF/WS with aspen dbhs smaller (4-6"). North half on knob, heavier to pure aspen wi dbhs 5-9".

Crystal Falls Mgt. Unit

Report 7 - Stands



					Stand Age BA Range			General Comments
4130 - Aspen			Well	13.3	9	Immature	N/A	Part of Dog Leg TS, cut 2012. Far north tip was left for retention
% Cover	Size Class	DBH	Age					
5	Sapling	1						
75	Sapling	1	9					
5	Pole/Sapling	5						
15	Sapling	1						
	% Cover 5 75 5 15	% Cover Size Class 5 Sapling 75 Sapling 5 Pole/Sapling 15 Sapling	% Cover Size Class DBH 5 Sapling 1 75 Sapling 1 5 Pole/Sapling 5 15 Sapling 1	% Cover Size Class DBH Age 5 Sapling 1 75 Sapling 1 9 5 Pole/Sapling 5 15 15 Sapling 1 1	% Cover Size Class DBH Age 5 Sapling 1 75 Sapling 1 9 5 Pole/Sapling 5 15 15 Sapling 1 1	% Cover Size Class DBH Age 5 Sapling 1 75 Sapling 1 9 5 Pole/Sapling 5 1 15 Sapling 1 1	% Cover Size Class DBH Age 5 Sapling 1 75 Sapling 1 9 5 Pole/Sapling 5 15 Sapling 1	% Cover Size Class DBH Age 5 Sapling 1 75 Sapling 1 9 5 Pole/Sapling 5