

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12033
Entry Year 2019
Acreage: 3,193
County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2017-08-13

Stand Examiner: Andrew Church

Legal Description:

T43N R28W Sec 1 T43N R27W Sec 5, 6 T44N R28W Sec 25 T44N R27W Sec 29-32

Identified Planning Goals:

This compartment has significant lowland swamp conifer types on the north and south boundary, in which we will simply maintain the species diversity. The compartment is otherwise predominated by various aged aspen. Diversity will be maintained in hardwood stands. Protect all bodies of water, especially the West Branch of the Escanaba and North Branch of the Ford Rivers.

Soil and topography:

The majority of the upland is dominated by Pemene fine sandy loams, which is described as a nearly level to gently rolling, well drained soil. Other minor upland soils include Escanaba loam fine sand and Zimmerman fine sand. Lowland types are primarily Cathro mucks or Kinross mucky fine sand.

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

State-owned land and some private ownership, used by loggers, hunters, fishermen, campers, trappers, general recreationists. State land surrounds most of the compartment boundary.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

A portion of this compartment was part of the Skelly Ranch in the early 1900s. One archaeological site, 20DK58, is located within this compartment in stand 23. As there are no treatments currently proposed here, we have no concerns.

Special Management Designations or Considerations:

Portions of compartments are deer wintering complex.

Watershed and Fisheries Considerations:

Protect water quality for all bodies of water, particularly the West Branch of the Escanaba River and the North Branch of the Ford River. Promote long lived conifer species along these streams and use adequate buffer protection.

Wildlife Habitat Considerations:

This compartment contains both deer winter complex (historically the Ford River Deeryard) and wildlife purchased land. The featured species identified for the Ralph Ground Moraine include: deer, bear, grouse, woodcock and northern goshawk. The management of the conifer component for winter cover and along movement corridors and transition zones is important to maintain a viable DWC. Conifer in the upland stands such as aspen and hardwood is important for deer to access forage and to maximize habitat quality for species such as grouse and snowshoe hare. Opening in this compartment provide spring break out areas for wintering deer.

Mineral Resource and Development Concerns and/or Restrictions

There has been some sand and gravel production in the area, and there appears to be some potential within the compartment on the uplands. There has been no metallic mineral mining within ten miles of the compartment. There has been recent metallic mineral leasing within the compartment and there could be some potential. There is no economic oil and gas production in the UP.

Vehicle Access:

County Road 581 serves as primary access along west and north of the compartment; majority of upland within the compartment is accessible by Skelly Ranch Road, which is a network of poor dirt roads.

Survey Needs:

Recreational Facilities and Opportunities:

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

Fire Protection:

Felch protection area. Access to most upland stands is fair, access to swamp types would be difficult.

Additional Compartment Information:

The following reports from the Inventory are attached:

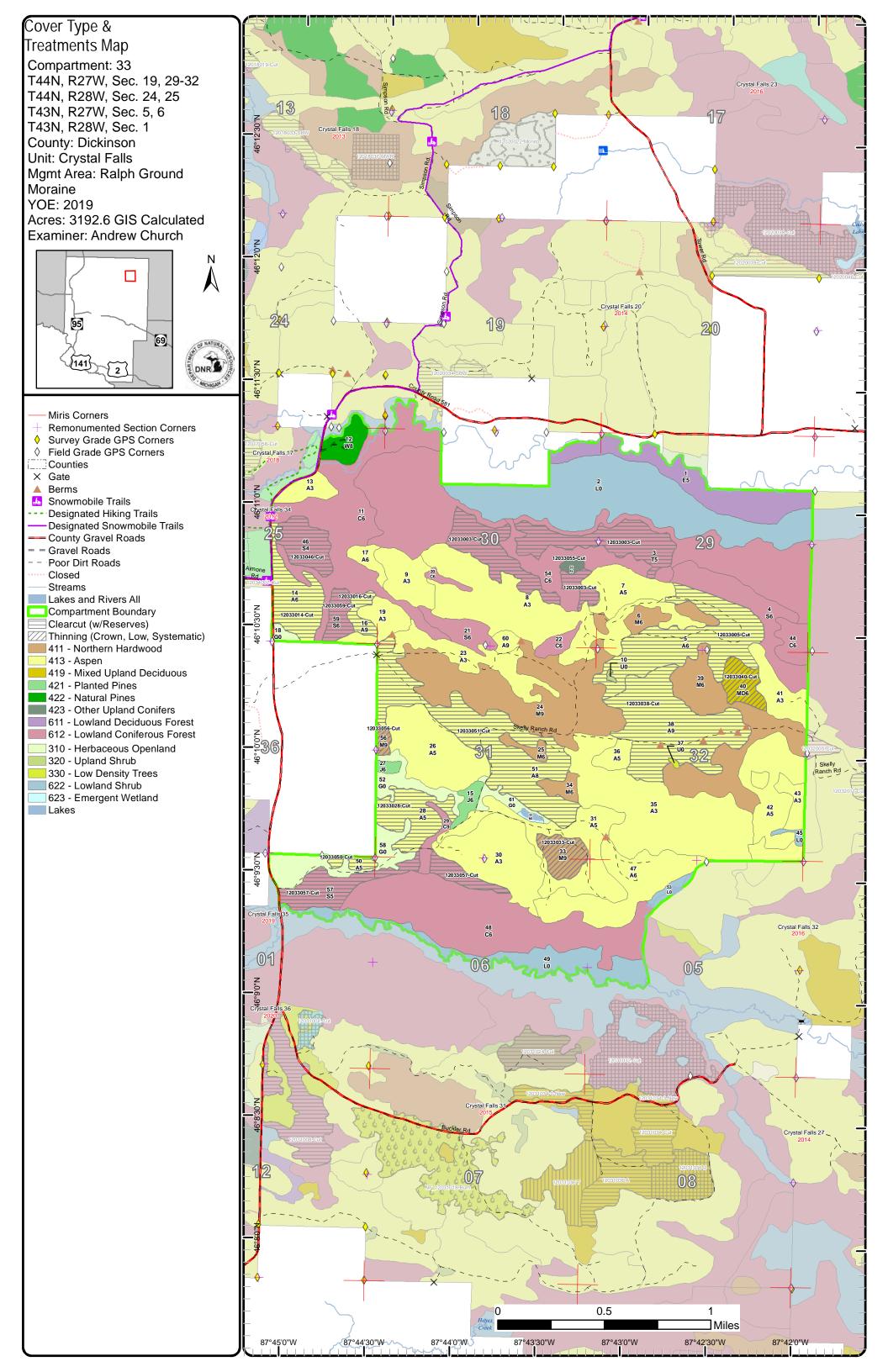
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

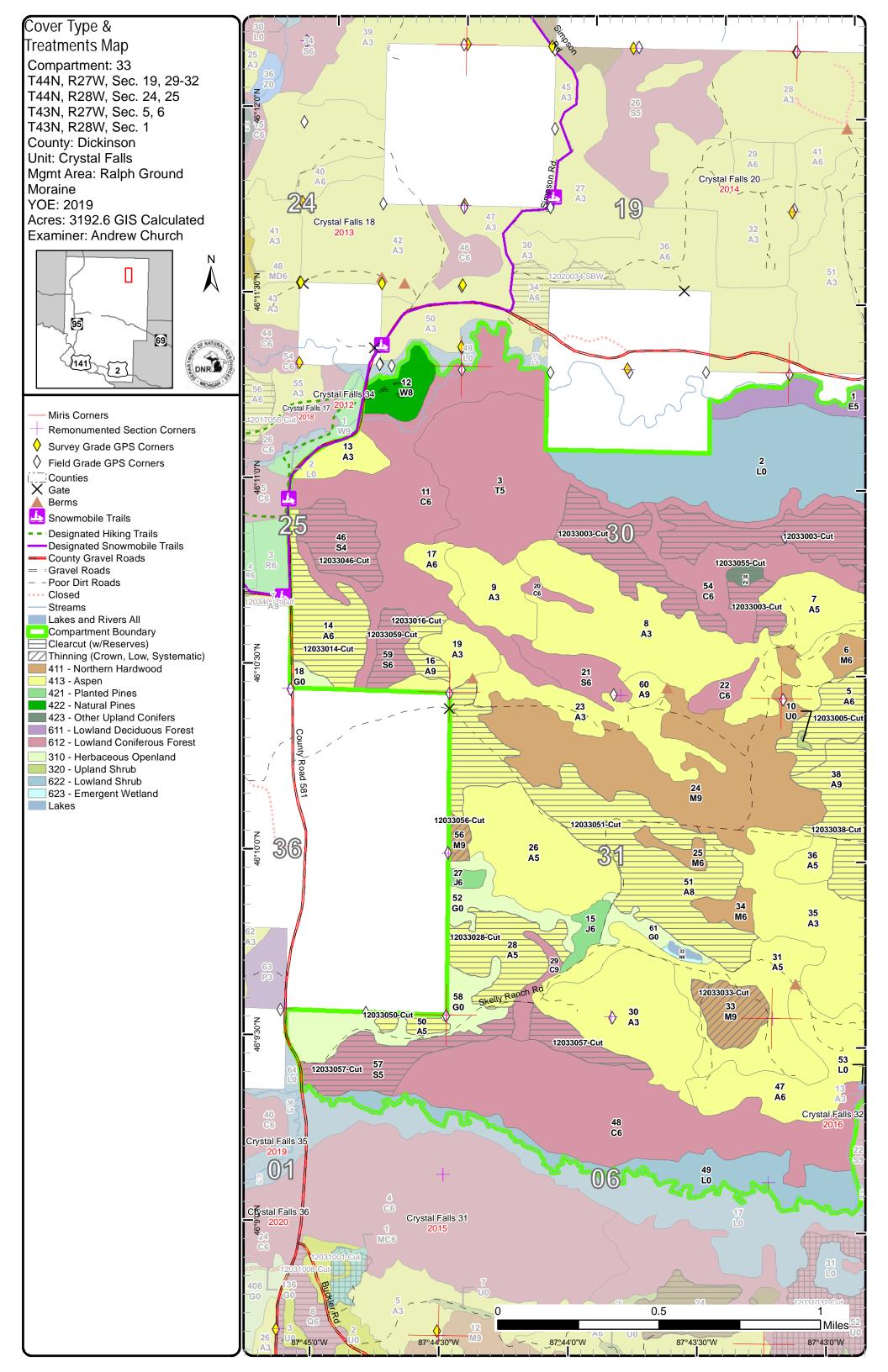
The following information is displayed, where pertinent, on the attached compartment maps:

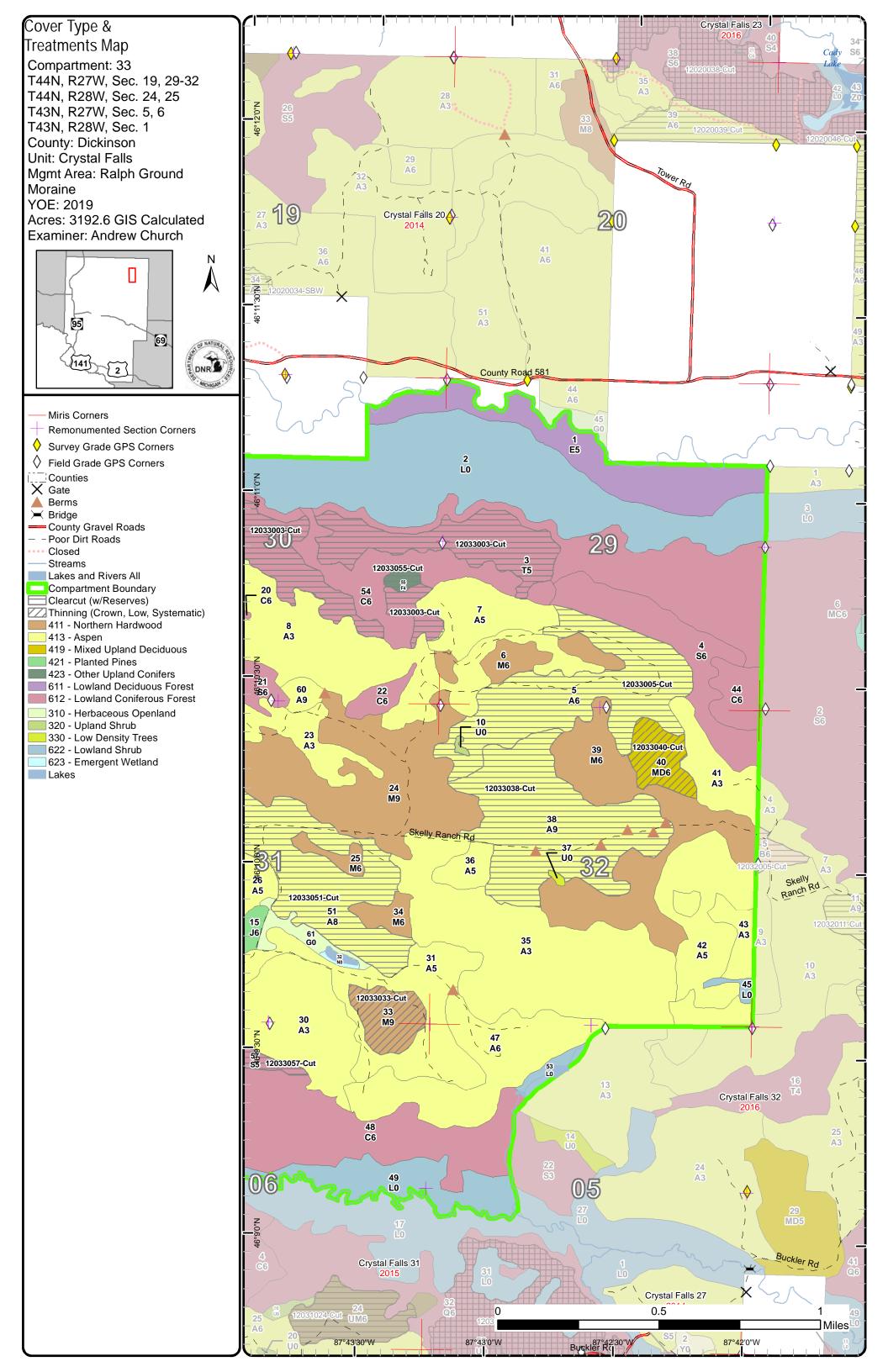
Base feature information, stand boundaries, cover types, and numbers

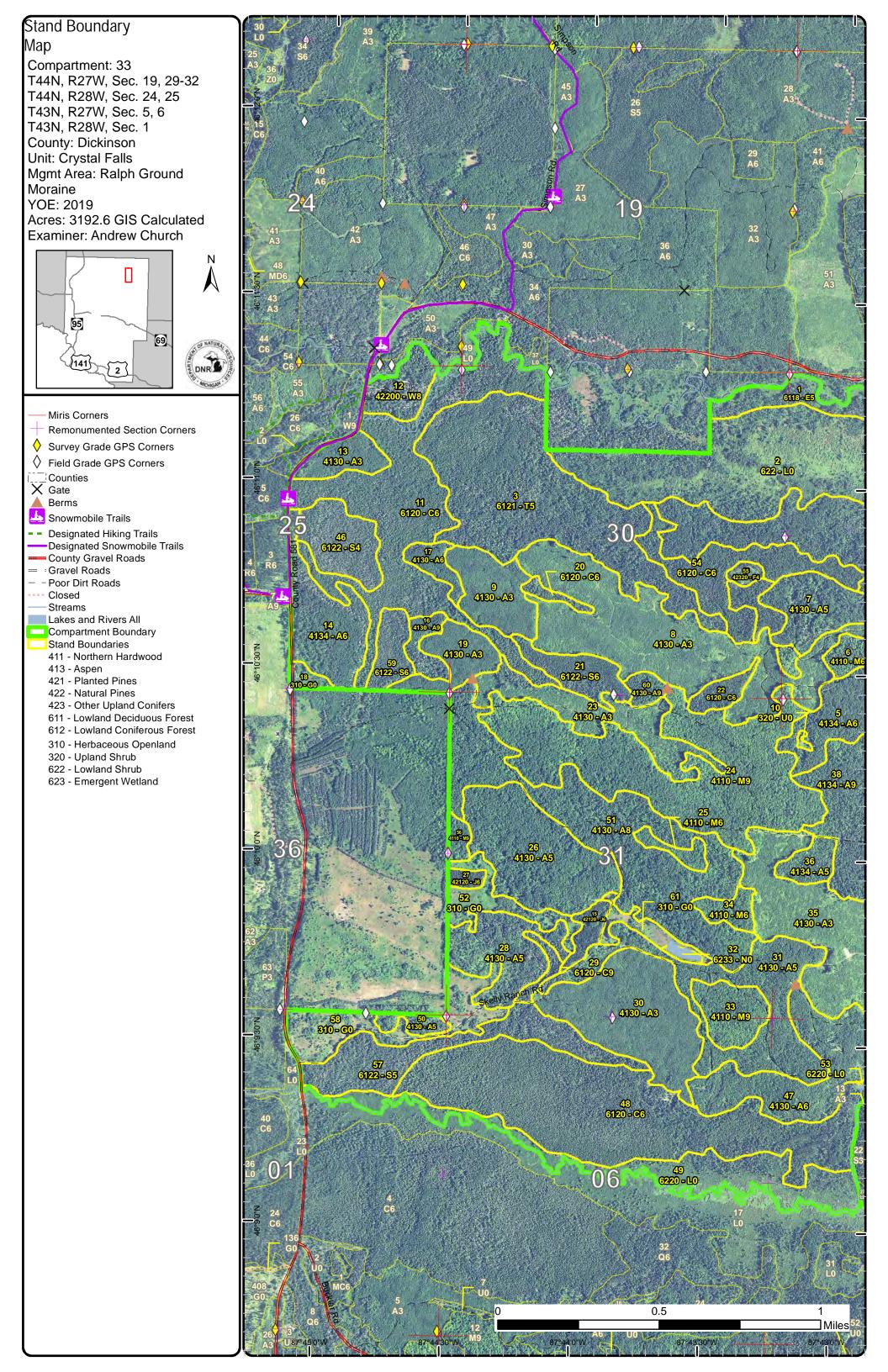
Proposed treatments
Site condition boundaries

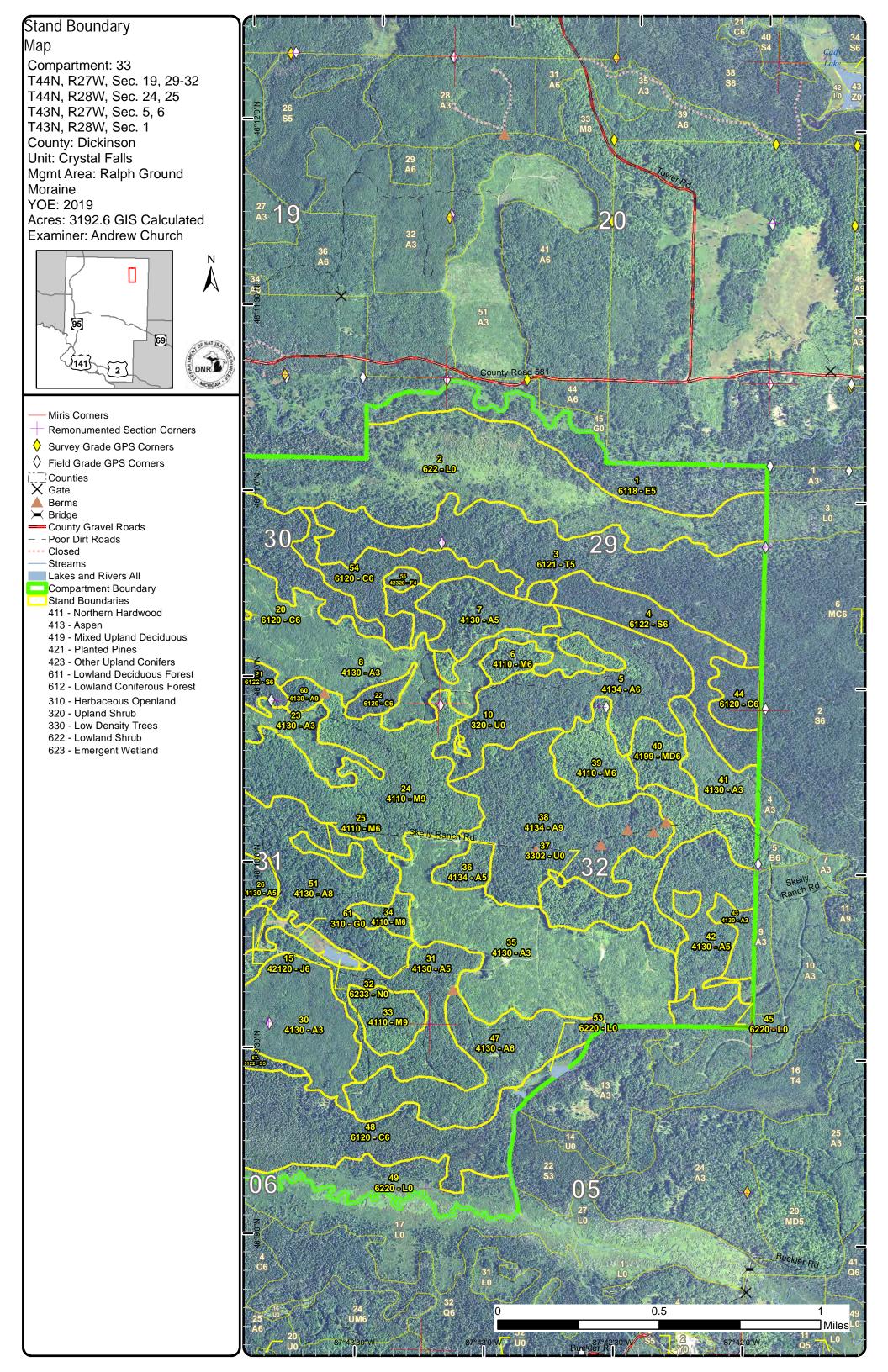
Details on the road access system

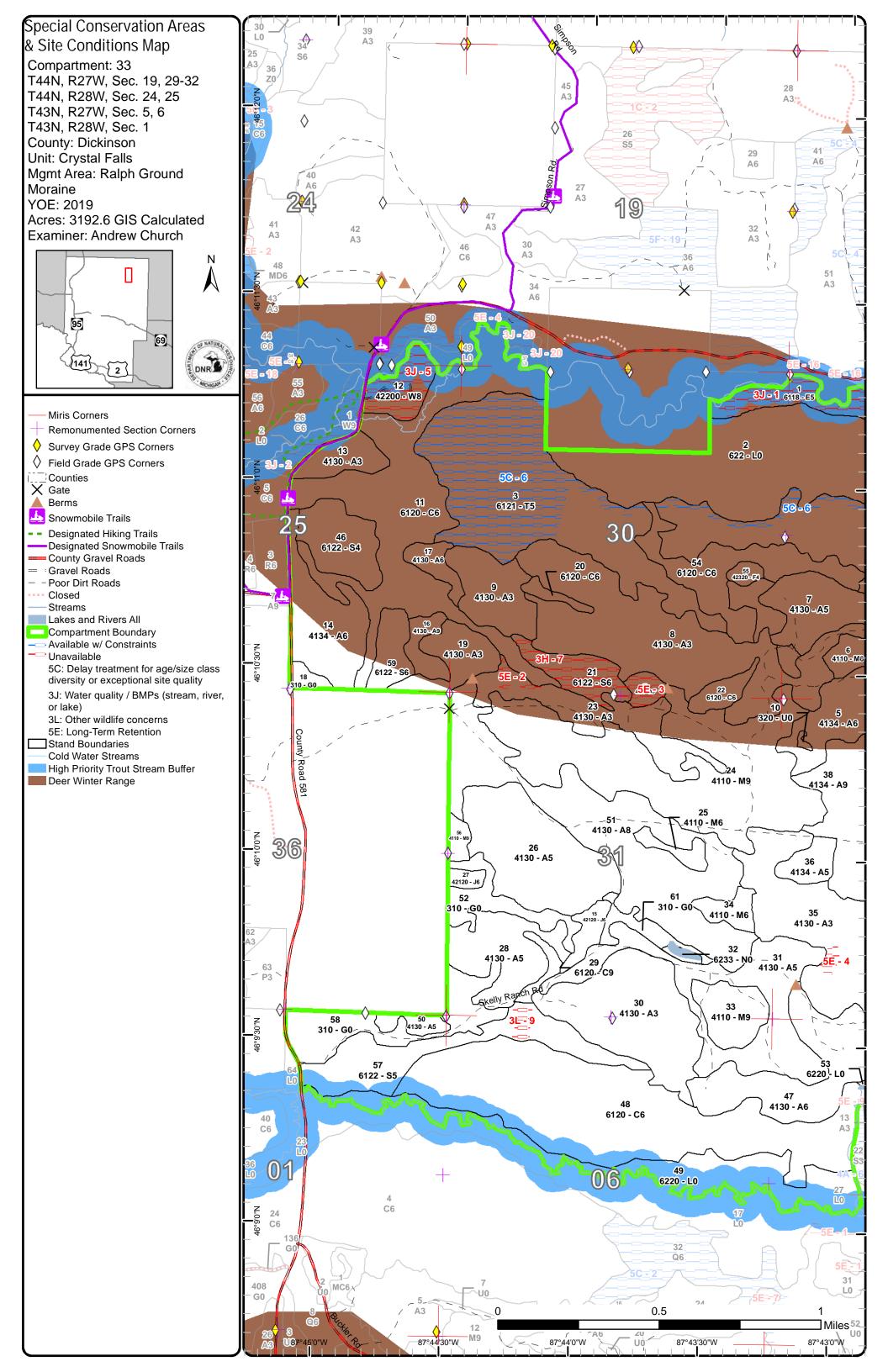


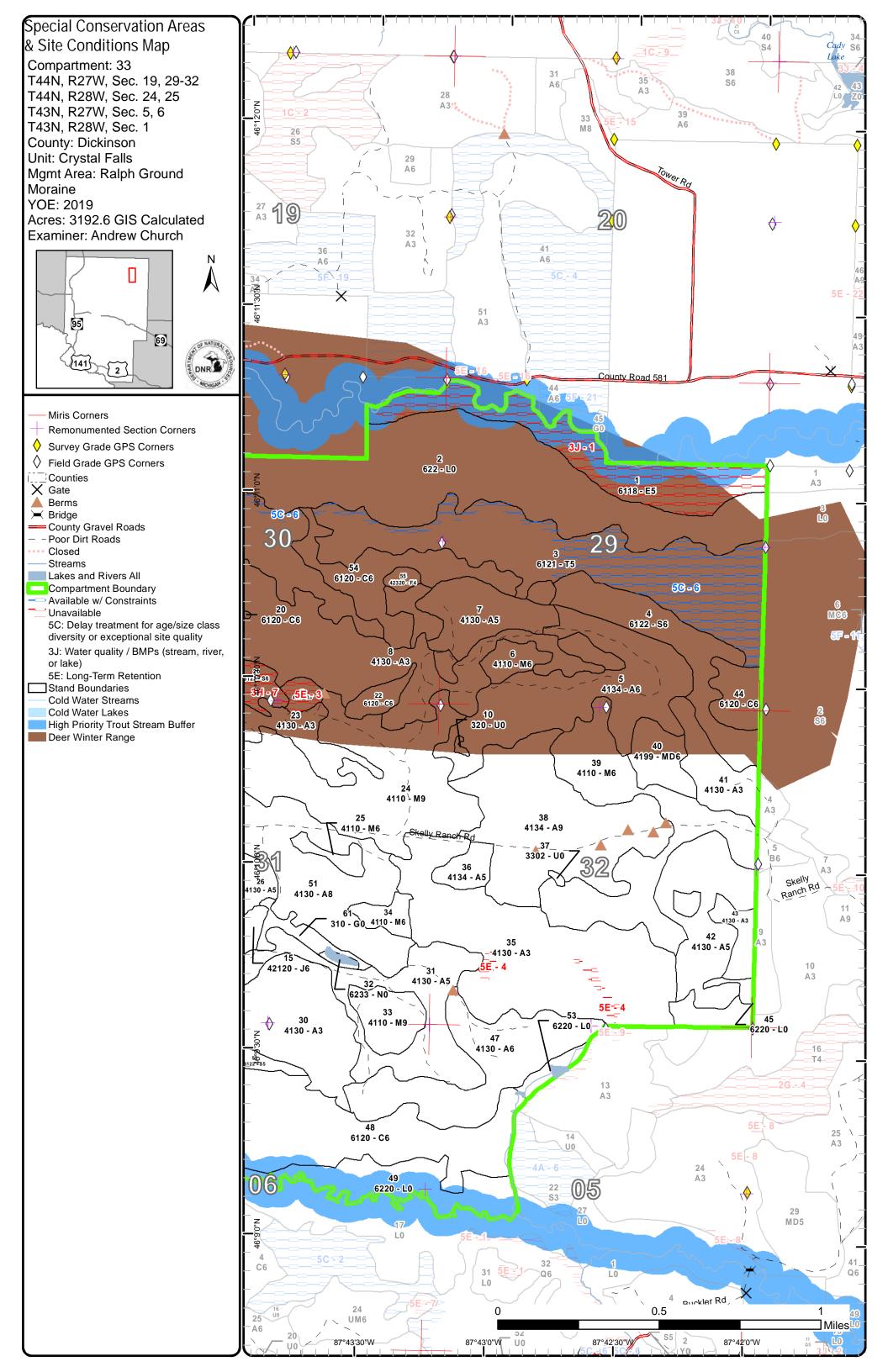












Crystal Falls Mgt. Unit

Andrew Church: Examiner

Compartment 33 Year of Entry 2019



Age Class

	[₹] 00	A STATE OF THE PARTY OF THE PAR	\$ / <u>s</u>	\$ / &		3 / 15	No. 10	, % %	5 / N	,	8 8	\$ /s	0,00,00,00,00,00,00,00,00,00,00,00,00,0	, 2 / ₂ /	,	,	N. P. S.	g* Jres	N. S.
Aspen	0	356	139	157	88	71	0	326	0	0	0	0	0	0	0	0	0	273	1410
Cedar	0	0	0	0	0	0	0	0	0	0	18	56	0	0	0	0	0	354	428
Herbaceous Openland	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79
Jack Pine	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	79
Lowland Shrub	285	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	285
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	57	16	22	0	89	0	0	0	0	0	184
Marsh	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	21
Northern Hardwood	0	0	0	0	0	0	0	0	0	304	6	0	0	0	0	0	0	23	333
Tamarack	0	0	0	0	0	0	0	0	0	332	0	0	0	0	0	0	0	0	332
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Upland Spruce/Fir	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21
Total	369	356	139	157	101	71	0	326	61	673	46	56	89	0	0	0	0	750	3193



Report 2 – Treatment Summary

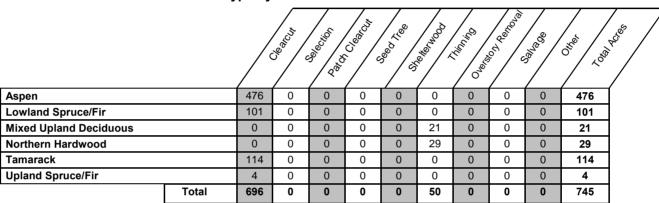
Crystal Falls Mgt. Unit Year of Entry: 2019

Acres of Harvest

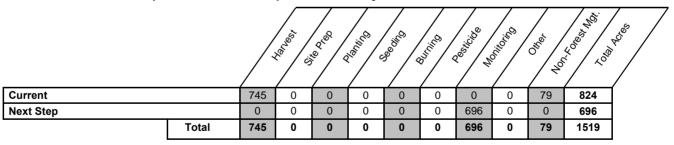
Compartment 33
Total Compartment Acres: 3,193

Commercial Harvest - 745 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method





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
3	12033003-Cut	114.2	6121 - Tamarack	Poletimber Medium	82	Unspec ified	Harvest	Clearcut with Retention	6121 - Tamarack	Even-Aged	Approved Proposal

Habitat Cut: No Site Condition:

<u>Prescription</u> Final Harvest using 2" spec. Leave Cedar and Pine if found. Frozen ground only. Roundwood operations required for retention of seed source. <u>Specs:</u>

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Tamarack, Spruce, Aspen, Mixed Deciduous, Mixed Conifers

Regen:

S

Other Harvest half of stand to increase age class distribution. Wildlife corridor created on North side of stand per WLD request.

Comment:

Proposed Start Date: 10/01/2018

4134 - Aspen, 12033005-Cut 107.3 Poletimber 43 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Approved Spruce/Fir Well Retention Proposal ified

Habitat Cut: No Site Condition:

Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. In addition, leave all submerchantable conifers.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Fir, Mixed Conifers, Mixed Deciduous

Regen:

Other This stand is recommended for harvest due to SBW concerns.

Comment:

Proposed Start Date: 10/01/2018

12033014-Cut 46.1 4134 - Aspen, Poletimber 64 Clearcut with Unspec Harvest 413 - Aspen Even-Aged Approved Spruce/Fir Well Retention Proposal ified

Habitat Cut: No Site Condition:

<u>Prescription</u> Final Harvest using 2" spec. Leave Cedar and Pine if found.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Fir, Pine, Mixed Conifers, Mixed Deciduous

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

1612033016-Cut10.54130 - AspenSawtimber62UnspecHarvestClearcut with413 - AspenEven-AgedApprovedWellifiedRetentionProposal

Habitat Cut: No Site Condition:

Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Fir, Pine, Mixed Deciduous, Mixed Conifers

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 33 s Year of Entry: 2019 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 18 12033018-NF 4.8 310 - Herbaceous 0 Unspec NonForestMgt Other - Specify 3102 - Grass Nonstocked Proposal Openland ified **Habitat Cut:** No **Site Condition:** Prescription Wildlife will maintain this opening via mechanical or Rx burn. Specs: Next Step Treatments: Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 Poletimber 12033028-Cut 42.7 4130 - Aspen 62 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Approved Medium ified Retention Proposal **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step **Treatments:** Acceptable Aspen, Maple, Fir, Mixed Conifers, Mixed Deciduous Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12033033-Cut 23.1 4110 - Sugar Maple Sawtimber Approved 83 111-Crown Thinning 411 - Northern Even-Aged Harvest Association 140 Hardwood Proposal **Habitat Cut: No Site Condition:** Prescription Thin to 80 BA. Release pockets of advanced regen where possible Specs: Next Step **Treatments:** <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 4134 - Aspen, Approved 12033038-Cut 124.8 Sawtimber 62 Unspec Clearcut with 413 - Aspen Harvest Even-Aged Spruce/Fir Well ified Retention Proposal **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. In addition, leave all submerchantable conifers. Specs: Next Step Monitoring, Natural Regen (Re-Inventory)

11/30/2017 1:23:58 PM - Page 2 of 5

Acceptable Aspen, Maple, Spruce, Fir, Mixed Conifers, Mixed Deciduous

10/01/2018

Treatments:

Proposed Start Date:

Regen:
Other
Comment:

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 33 s Year of Entry: 2019 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 40 12033040-Cut 21.0 4199 - Other Mixed Poletimber Low Thinning 411 - Northern Approved 83 111-Harvest Even-Aged **Upland Deciduous** Well 140 Hardwood Proposal **Habitat Cut: No Site Condition:** Prescription Thin to 80 BA. Release pockets of advanced Sugar Maple. Cut all Aspen. Leave all Pine and Cedar if found. Specs: Next Step **Treatments:** Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12033046-Cut 31.2 6122 - Black Spruce Poletimber 115 Unspec Harvest Clearcut 6122 - Black Even-Aged Approved Proposal Poor Spruce **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Frozen ground only. Roundwood operations required for retention of seed source. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Spruce, Fir, Tamarack, Aspen, Mixed Conifers, Mixed Deciduous Regen: Other No retention of Black Spruce due to forest health concerns. If regen check fails, plant or seed to Spruce or Pine. Comment: **Proposed Start Date:** 10/01/2018 12033050-Cut 7.2 4130 - Aspen Poletimber 62 Clearcut with Unspec Harvest 413 - Aspen Even-Aged Approved Medium Retention Proposal ified **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Aspen, Maple, Fir, Mixed Conifers, Mixed Deciduous

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

12033051-Cut 137.8 65 Unspec Clearcut with 4130 - Aspen Sawtimber Harvest 413 - Aspen Even-Aged Approved Medium ified Retention Proposal

Habitat Cut: No Site Condition:

Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. In addition, leave submerchantable conifers.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Aspen, Maple, Spruce, Fir, Mixed Conifers, Mixed Deciduous

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 33 s Year of Entry: 2019 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 52 12033052-NF 21.4 310 - Herbaceous Unspec NonForestMgt Other - Specify 3102 - Grass Nonstocked Proposal Openland ified **Habitat Cut: No Site Condition:** Prescription Wildlife will maintain this opening via mechanical or Rx burn. Specs: Next Step Treatments: Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 71 12033055-Cut 4.0 42320 - Upland Poletimber Unspec Harvest Clearcut with 4199 - Other Even-Aged Approved ified Retention Mixed Upland Proposal Spruce Poor Deciduous **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable Aspen, Maple, Fir, Spruce, Pine Regen: **Other** Comment: **Proposed Start Date:** 10/01/2018 12033056-Cut 5.5 4110 - Sugar Maple Sawtimber 99 81-110 Harvest Crown Thinning 4110 - Sugar Uneven-Approved Association Well Maple Aged Proposal Association **Habitat Cut: No Site Condition:** Prescription Thin to 70 BA Specs: Next Step **Treatments:** Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12033057-Cut 54.0 6122 - Black Spruce Poletimber 114 Unspec Harvest Clearcut with 6122 - Black Even-Aged Approved Medium ified Retention Spruce Proposal **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Frozen ground only. Roundwood operations required for retention of seed source. 100 foot buffer on streams. Specs: Next Step Monitoring, Natural Regen (Re-Inventory)

Acceptable Spruce, Tamarack, Fir, Aspen, Mixed Conifers, Mixed Deciduous

10/01/2018

Treatment boundary adjusted to include corridor per WLD request.

Treatments:

Proposed Start Date:

Regen:

Other Comment:

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 33 s Year of Entry: 2019 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type Approval** Age n Objective Name CoverType Density Age Range Type Method Structure **Status** d 58 12033058-NF 42.3 310 - Herbaceous Nonstocked 0 Unspec NonForestMgt Other - Specify 3102 - Grass Proposal Openland ified **Habitat Cut: No Site Condition:** Prescription Wildlife will maintain this opening via mechanical or Rx burn. Specs: Next Step Treatments: Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12033059-Cut 15.8 6122 - Black Spruce Poletimber 89 Unspec Harvest Clearcut 6122 - Black Even-Aged Approved Well ified Spruce Proposal **Habitat Cut: No Site Condition:** Prescription Final Harvest using 2" spec. Leave Cedar and Pine if found. Frozen ground only. Roundwood operations required for retention of seed source. No retention of Spruce due to health concerns. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Spruce, Tamarack, Fir, Aspen, Mixed Conifers, Mixed Deciduous Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12033061-NF 10.1 310 - Herbaceous Nonstocked Unspec NonForestMgt 0 Other - Specify 3102 - Grass Proposal Openland ified **Site Condition:**

Habitat Cut: No

Prescription Wildlife will maintain this opening via mechanical or Rx burn.

Specs:

Next Step **Treatments:**

<u>Acceptable</u> Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed:

823.8

Crystal Falls Mgt. Unit

Andrew Church : Examiner

Compartment: 33 Year of Entry: 2019

Availa	ability for	Managemer	nt							
Total	Acres	Acres Avail	Acres		Domina	nt Site	Con	dition	S	
Acres	Available	With Condition	Not Available		4A	5C	ЗН	3J	3L	5E
1410	1392	0	18	Aspen				0		18
428	428	0	0	Cedar		0				
79	79	0	0	Herbaceous Openland						
13	13	0	0	Jack Pine						
1	1	0	0	Low-Density Trees						
79	1	0	78	Lowland Deciduous				78		
285	284	1	0	Lowland Shrub	0	1				
184	158	0	26	Lowland Spruce/Fir			21		4	
2	2	0	0	Marsh						
21	21	0	0	Mixed Upland Deciduous						
333	333	0	0	Northern Hardwood						
332	115	217	0	Tamarack		217				
1	1	0	0	Upland Shrub						
4	4	0	0	Upland Spruce/Fir						
21	0	0	21	White Pine				21		
3,193	2,833	218	142	Total Forested Acres	0	218	21	99	4	18
	89%	7%	4%	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 Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
Unavailable	3J: Water quality / BMPs (stream, river, or lake)	78	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
	· Wildlife corridor					
Unavailable	5E: Long-Term Retention	4	3I: Historical / archeological (add locked comments)	Unspecified	Unspecified	Unspecified
Comments:						
	Cond Availability Unavailable Comments: SCA designation for	Cond Availability Dominant Site Condition Unavailable 3J: Water quality / BMPs (stream, river, or lake) Comments: SCA designation for Wildlife corridor Unavailable 5E: Long-Term Retention	Cond Availability Dominant Site Condition Acres Unavailable 3J: Water quality / BMPs (stream, river, or lake) Comments: SCA designation for Wildlife corridor Unavailable 5E: Long-Term Retention 4	Cond Availability Dominant Site Condition Acres Other Site Condition Unavailable 3J: Water quality / BMPs (stream, river, or lake) Comments: SCA designation for Wildlife corridor Unavailable 5E: Long-Term Retention 4 3I: Historical / archeological (add locked comments)	Cond Availability Dominant Site Condition Acres Other Site Condition Other Site Condition Unavailable 3J: Water quality / BMPs (stream, river, or lake) 78 3A: Conservation Values incompatible with harvest at this time Unspecified Comments: SCA designation for Wildlife corridor 4 3I: Historical / archeological (add locked comments) Unspecified	Cond Availability Dominant Site Condition Acres Other Site Condition Other Site Condition Other Site Condition Unavailable 3J: Water quality / BMPs (stream, river, or lake) 78 3A: Conservation Values incompatible with harvest at this time Unspecified Comments: SCA designation for Wildlife corridor Unavailable 5E: Long-Term Retention 4 3I: Historical / archeological (add locked comments) Unspecified Unspecified

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Andrew Church : Examiner

Compartment: 33 Year of Entry: 2019

3	Unavailable	5E: Long-Term Retention	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	5E: Long-Term Retention	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	21	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	218	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Delayed treatment	to break up age class of stand.					
7	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	22	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	3L: Other wildlife concerns	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Excluded per WLD	request					

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: 33
Year of Entry 2019



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.

Conservation Area	Туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen condi- 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.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildli and Waterfowl Production Areas, deer wintering complexes in low openings and savannas. Habitat areas are distinct from critical hat 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 cooperation.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more 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 d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, iversity of plants and wildlife. Riparian cts on water quality and quantity, as well

s t	Crystal Falls	s Mgt. Unit		Report 7	- Forested	Stands Compartment: 33 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6118 - Lowland Deciduous with Cedar	Poletimber Medium	79.3	88	Unspecified	
3	6121 - Tamarack	Poletimber Medium	332.1	82	Unspecified	Small pockets of younger Tamarack exist. More Spruce/Fir along upland edges. Eastern Dwarf Mistletoe is evident causing mortality and stunting the Spruce regeneration.
4	6122 - Black Spruce	Poletimber Well	57.2	75	Unspecified	
5	4134 - Aspen, Spruce/Fir	Poletimber Well	107.3	43	Unspecified	2-3 stick Spruce/Fir under Aspen canopy. Spruce and Fir being hit very hard by Spruce Budworm. Currently it is estimated that 1200 cords of Spruce and Fir in stand are still alive, but are not expected to be there next rotation due to mortality. Many pockets of older trees mixed throughout.
6	4110 - Sugar Maple Association	Poletimber Well	22.0	86	81-110	Thinned 2011
7	4130 - Aspen	Poletimber Medium	38.6	33	Unspecified	Northern edge of stand near Cedar includes a lowland strip of Red Maple saplings. Larger, older trees are present in stand. The natural openings within stand are slowly filling in with trees.
8	4130 - Aspen	Sapling Well	146.8	6	Immature	Harvested 2011
9	4130 - Aspen	Sapling Well	33.4	17	Immature	
11	6120 - Lowland Cedar	Poletimber Well	144.6	98	Unspecified	Many areas within stand have jack-strawed Cedar.
12	42200 - Natural White Pine	Sawtimber Medium	20.6	76	51-80	Campground is now closed. Stand is surrounded by rivers and streams. Spruce and Fir salvaged 2017.
13	4130 - Aspen	Sapling Well	16.7	27	Immature	10 Ton River t-sale closed 1990
14	4134 - Aspen, Spruce/Fir	Poletimber Well	46.1	64	Unspecified	Aspen, Spruce, and Fir in decline. Spruce Budworm damage evident. Larger diameter Aspen on ridge to the East.
15	42120 - Planted Jack Pine	Poletimber Well	9.2	34	111-140	Small Aspen clone in middle of stand.
16	4130 - Aspen	Sawtimber Well	10.5	62	Unspecified	Much Spruce Budworm damage. Aspen in decline and starting to fall apart.
17	4130 - Aspen	Poletimber Well	10.1	46	Unspecified	Aspen is healthy and growing well.
19	4130 - Aspen	Sapling Well	23.9	17	Immature	Skelly Ranch North t-sale closed 2000

S t	Crystal Falls Mgt. Unit			Report 7	' – Forested	Stands Compartment: 33 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	6120 - Lowland Cedar	Poletimber Well	4.6	101	Unspecified	Cedar thicker on west end.
21	6122 - Black Spruce	Poletimber Well	21.5	90	Unspecified	Trees are small diameter but have good form. Site quality is low.
22	6120 - Lowland Cedar	Poletimber Well	9.4	91	Unspecified	
23	4130 - Aspen	Sapling Well	45.5	6	Immature	
24	4110 - Sugar Maple Association	Sawtimber Well	163.0	88	81-110	Thinned 2003. Stocking levels around 100-110 BA. Higher quality stand.
25	4110 - Sugar Maple Association	Poletimber Well	7.0	84	81-110	Thinned 2003
26	4130 - Aspen	Poletimber Medium	77.7	41	Unspecified	Stocking densities and ages of trees vary throughout stand. This was once a grassy opening that is slowly filling in with trees. Pocket of Northern Hardwoods mixed in with the Aspen, particularly on E-W ridge in middle of stand.
27	42120 - Planted Jack Pine	Poletimber Well	4.0	34	Immature	
28	4130 - Aspen	Poletimber Medium	42.7	62	Unspecified	Aspen in decline. Narrow lowland drain in NW corner of stand. Many different ages of Aspen as trees are slowly filling in this once grassy opening. SBW damage present.
29	6120 - Lowland Cedar	Sawtimber Well	5.5	98	Unspecified	Most of Spruce/Fir is dead due to SBW. Water obviously moves through stand, but no stream detected.
30	4130 - Aspen	Sapling Well	81.3	16	Immature	Harvested 2001
31	4130 - Aspen	Poletimber Medium	76.3	39	Unspecified	Many large canopy gaps within stand. Sugar Maple growing well in understory, particularly in the canopy gaps.
33	4110 - Sugar Maple Association	Sawtimber Well	23.1	83	111-140	Thinned 2003. Many pockets of advanced Sugar Maple regeneration. The Ash and Basswood in stand is suppressing the sapling and pole sized Maple.
34	4110 - Sugar Maple Association	Poletimber Well	10.1	84	81-110	Thinned 2003
35	4130 - Aspen	Sapling Well	163.7	4	Immature	Scattered supercanopy conifers found throughout. BAM regenerating in lowland portions of stand.
36	4134 - Aspen, Spruce/Fir	Poletimber Medium	11.8	34	Immature	SW portion of stand is more fully stocked. 1-2 stick spruce/fir in understory.

s t	Crystal Falls	s Mgt. Unit		Report 7	- Forested	Stands Compartment: 33 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4134 - Aspen, Spruce/Fir	Sawtimber Well	124.8	62	Unspecified	2-3 stick Spruce/Fir in understory of large diameter Aspen stand. The Aspen, Birch, Spruce and Fir are in decline. Spruce Budworm damage evident. Northeastern boundary has less conifers, but more Ash and Basswood. Ash and Maple saplings near hardwood edges.
39	4110 - Sugar Maple Association	Poletimber Well	102.2	86	51-80	Thinned 2013. Some areas have low BA. Thick understory of Aspen in these areas.
40	4199 - Other Mixed Upland Deciduous	Poletimber Well	21.0	83	111-140	Maple/Birch/Aspen stand. Maple is regenerating well, but being suppressed by overstory. Aspen and Birch in decline.
41	4130 - Aspen	Sapling Well	29.0	25	Unspecified	Harvested 1992. Lowland areas are regenerating to Tamarack/Fir.
42	4130 - Aspen	Poletimber Medium	61.2	40	Unspecified	Aspen is poor quality. Pockets of older Aspen to the Northwest. Pure Fir area in Northern lobe of stand. Small wet drain to South.
43	4130 - Aspen	Sapling Well	28.5	25	Immature	Aspen is growing well.
44	6120 - Lowland Cedar	Poletimber Well	18.2	99	Unspecified	
46	6122 - Black Spruce	Poletimber Poor	31.2	115	Unspecified	Old Spruce, but very small diameter. Eastern Dwarf Mistletoe observed. Interior of stand holds lowest volume. This stand may never be fully stocked due to disease and poor site quality, but older photos show much more volume than what is present now.
47	4130 - Aspen	Poletimber Well	82.5	25	Immature	Starting to reach pole size.
48	6120 - Lowland Cedar	Poletimber Well	194.5	98	Unspecified	
50	4130 - Aspen	Poletimber Medium	7.2	62	Unspecified	Aspen in decline. Many different ages of Aspen as trees are slowly filling in this once grassy opening.
51	4130 - Aspen	Sawtimber Medium	137.8	65	Unspecified	Aspen is declining and starting to break up. Mixed hardwood saplings filling in canopy gaps mostly on the edges of the stand.
54	6120 - Lowland Cedar	Poletimber Well	51.4	108	Unspecified	
55	42320 - Upland Spruce	Poletimber Poor	4.0	71	Unspecified	This was a fully stocked Aspen/Spruce/Fir stand but due to natural succession and disease, many trees died. Eastern Dwarf Mistletoe and Spruce Budworm evident. Understory is fully stocked with Maple/Fir.
56	4110 - Sugar Maple Association	Sawtimber Well	5.5	99	81-110	Large diameter trees. Much defect.

S t a n d	Crystal Falls		Report /	- Forested :	Year of Entry: 2019	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	6122 - Black Spruce	Poletimber Medium	58.1	114	Unspecified	North edge of stand is transition zone ground where trees are younger and healthier. Majority of trees within stand are in very poor health. Much mortality observed. Eastern Dwarf Mistletoe is present. Canopy gaps are filling in with sapling sized Balsam Fir. Stocking levels decrease closer to N Branch of Ford river.
59	6122 - Black Spruce	Poletimber Well	15.8	89	Unspecified	Eastern Dwarf Mistletoe evident on edges of stand. Trees are growing well in center. Trace amounts of Swamp Hardwoods mixed throughout.
60	4130 - Aspen	Sawtimber Well	6.6	68	Unspecified	Retention for adjacent harvest.

Compartment: 33 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
2	622 - Lowland Shrub	208.1	No	SCA for wildlife corridor. Scattered trees found throughout.
10	320 - Upland Shrub	0.9	No	
18	310 - Herbaceous Openland	4.8	No	
32	6233 - Wet Meadow	2.5	No	
37	3302 - Low Density Conifer Trees	0.9	No	
45	6220 - Alder/willow	3.2	No	
49	6220 - Alder/willow	66.1	No	
52	310 - Herbaceous Openland	21.4	No	
53	6220 - Alder/willow	7.2	No	
58	310 - Herbaceous Openland	42.3	No	
61	310 - Herbaceous Openland	10.1	No	