

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12156 Entry Year 2019 Acreage: 1,117 County Iron

Management Area: Panola Plains

Revision Date: 2017-08-17

Stand Examiner: Scott Sebero

Legal Description:

T42N-R31W SECTION 6. T42N-R32W SECTIONS 1 & 2. T 43N-R32W SECTION 36

Identified Planning Goals:

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

Soil and topography:

Nearly level to rolling, excessively drained, sandy soils on outwash plains.

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

State lands mixed with company lands and private parcels. Lands used mainly for hunting and fishing.

Unique Natural Features:

Glidden Lake. Nearby Lake Mary, Michigamme River and Paint River.

Archeological, Historical, and Cultural Features:

Multiple compartments were determined to have no known archaeological sites within them; we have no concerns for these compartments: 10, 14, 30, 50, 70, 75, 93, 112, 116, 138, 142, 144, 156, 166, and 186.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

Glidden Lake and Little Mud Lake are within this compartment. 100 foot buffers for these waterbodies. For all other riparian areas, BMPs should be followed to maintain canopy cover and prevent erosion into waterbodies.

Wildlife Habitat Considerations:

This compartment contains part of a DWC (deer wintering complex) that provides shelter and forage for deer in south Iron County. Featured species in this Management Area (Panola Plains MA) include; eastern bluebird, bear, grouse, woodcock and Kirtland warbler. Moose, eagles, osprey, herons, loons, turkeys, sandhill cranes and wolves all have been documented in this compartment. Management for deer winter cover, including transition zones, movement corridors and conifer component throughout the forage stands is critical in this compartment. Aspen age and stand size diversity are important management goals for deer, bear, grouse, woodcock and goshawks. The mature mixed pine component provides both winter cover for deer, and provides ideal habitat for black bears especially as refuge trees for cub rearing. Oak in the compartment provides mast important for most of the featured species identified for this MA. Jack pine stands in the compartment provide potential habitat for Kirtland's warbler. This compartment also includes a series of intensely managed aspen stands of various age classes to provide grouse habitat. This area includes a hunter walking trail.

Mineral Resource and Development Concerns and/or Restrictions

The nearest gravel pits are located near Crystal Falls, but there may be some potential within the compartment. Abandoned iron mines are located one mile to the northwest. There may be potential for additional iron ore and other metallic minerals within the compartment. There has been metallic mineral leasing in this area in the past but there are no currently active leases. There is no economic oil and gas production in the UP.

Vehicle Access:

Access good on Lake Mary Road and connecting woods roads.

Survey Needs:

None.

Recreational Facilities and Opportunities:

Glidden Lake Campground and multi purpose recreational trails. Snowmobile trail runs through center of compartment.

Fire Protection:

Additional Compartment Information:

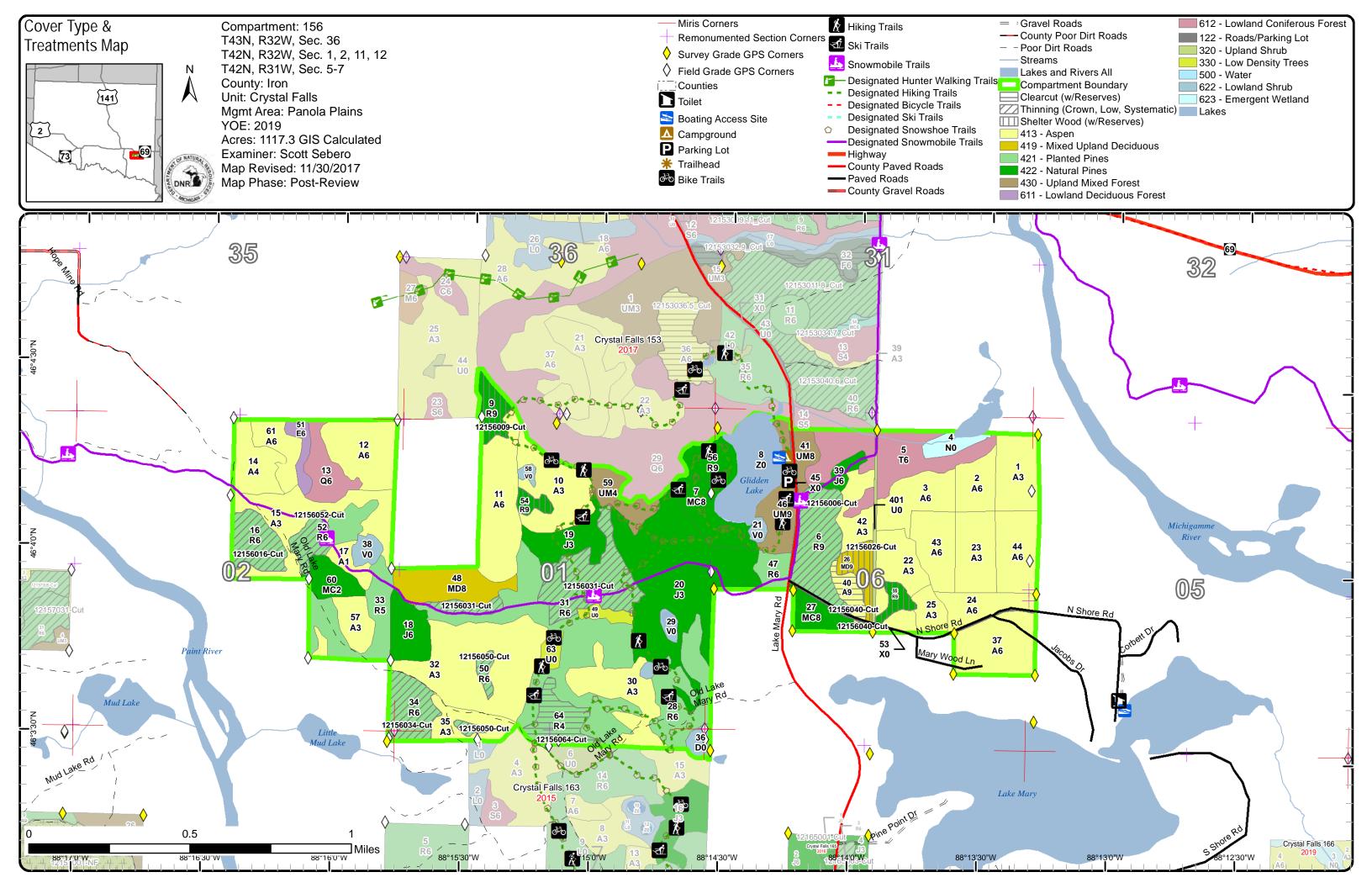
None.

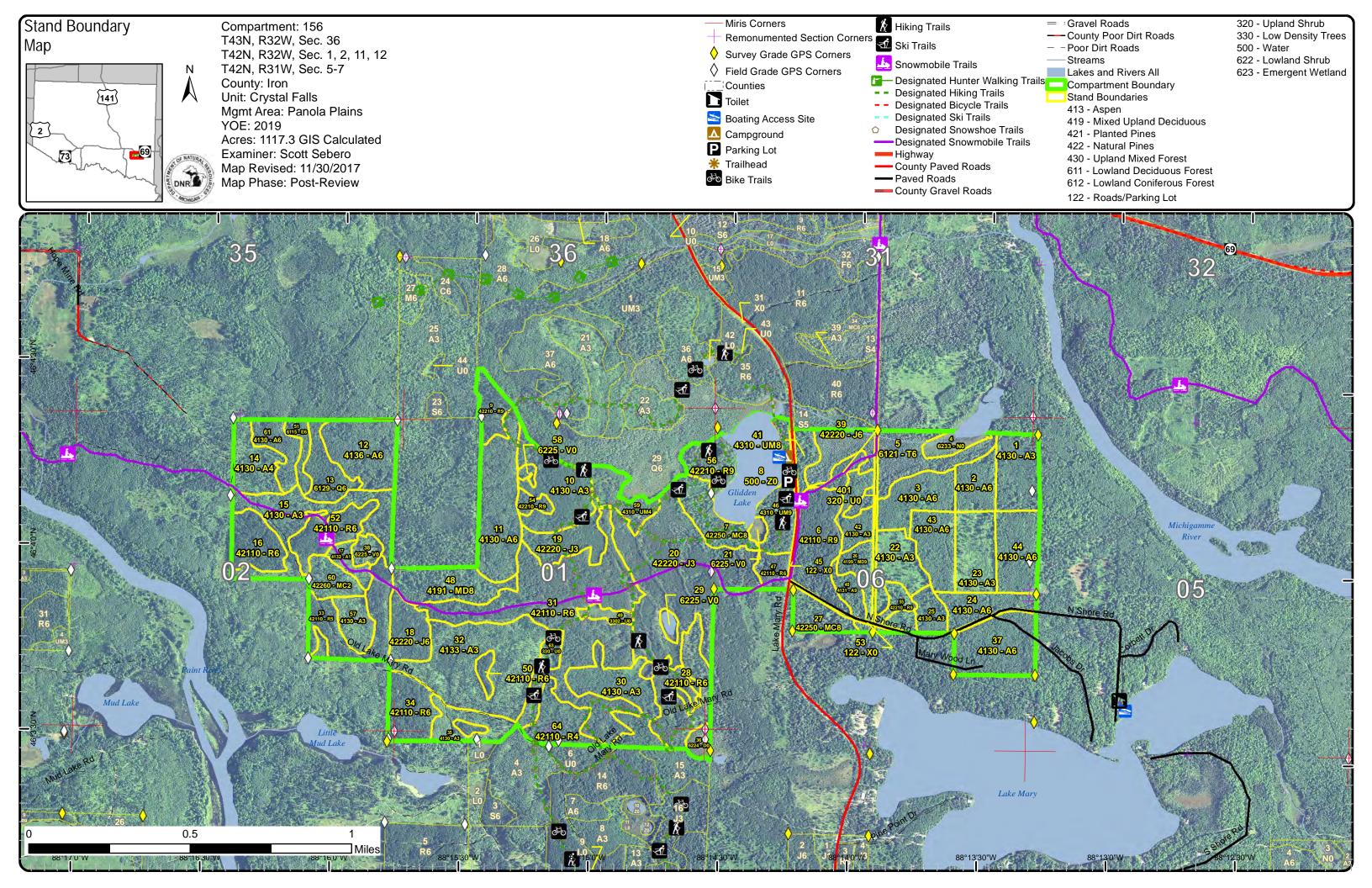
The following reports from the Inventory are attached:

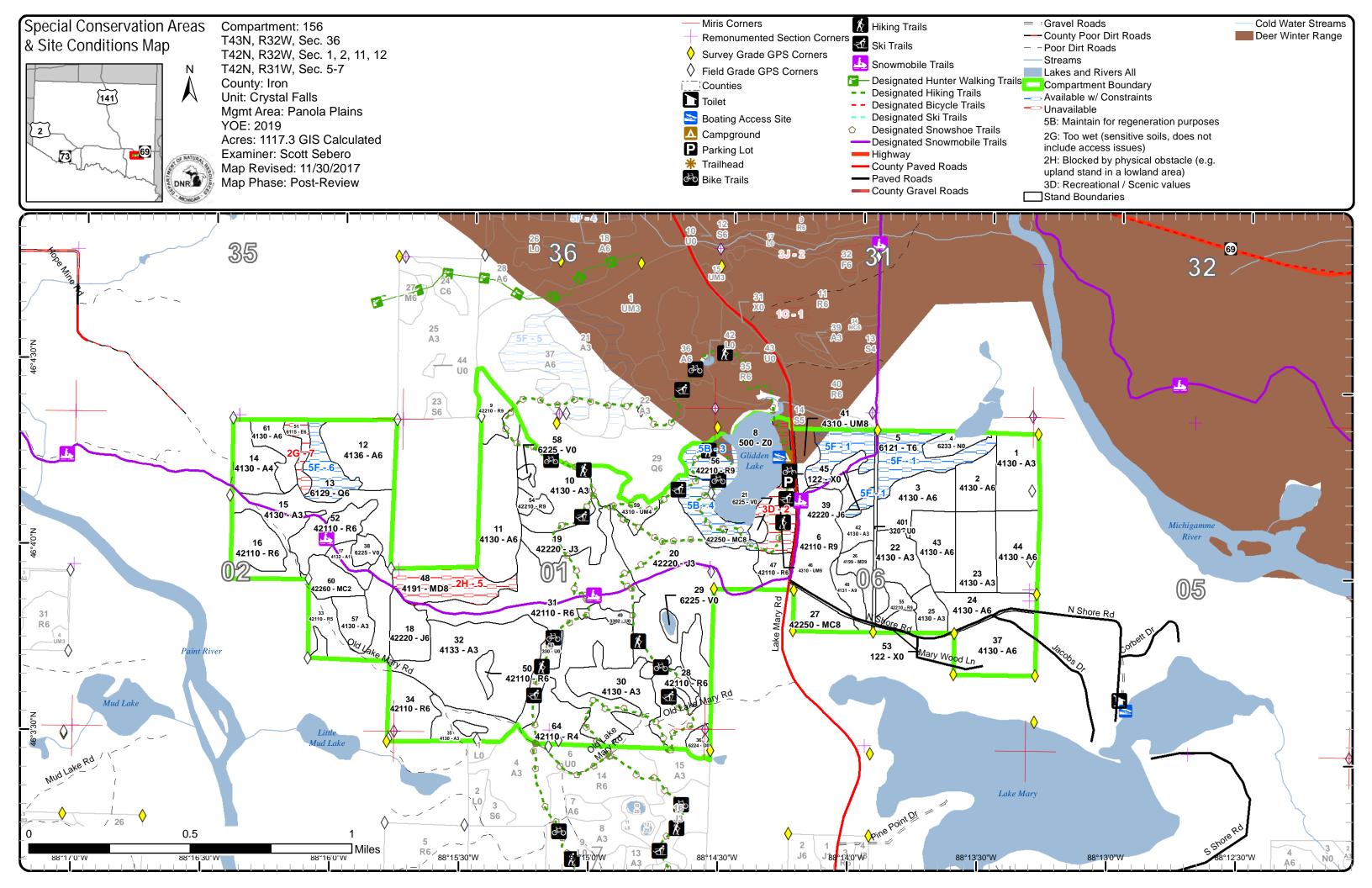
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Compartment 156 Year of Entry 2019

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Age Class

	¥or	A COST		\$ 20	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	S L	100 S	, § /%		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80,00	\$ / ₀ / ₀ /	70,	\$\ \rangle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$2, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	% / P	OR S	* Jue	A LOS
Aspen	0	47	53	193	172	0	0	0	0	0	7	0	0	0	0	0	0	0	472
Bog	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Jack Pine	0	0	16	5	98	0	0	0	0	0	0	0	0	0	0	0	0	0	119
Low-Density Trees	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14
Lowland Deciduous	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Marsh	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	30
Natural Mixed Pines	0	0	0	10	0	0	0	11	0	0	17	0	0	0	0	0	0	0	38
Red Pine	0	0	0	0	0	0	80	178	0	0	33	0	0	0	0	0	0	0	291
Tamarack	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	40
Treed Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Upland Mixed Forest	0	0	0	0	13	0	0	7	0	18	0	0	0	0	0	0	0	0	37
Upland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Water	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Total	71	47	69	208	283	0	80	196	0	64	101	0	0	0	0	0	0	0	1118



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit Year of Entry: 2019

Acres of Harvest

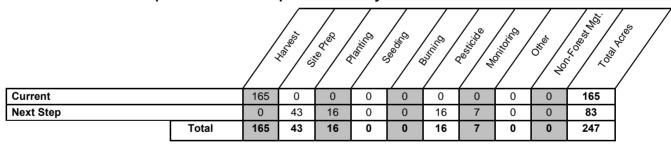
Compartment 156
Total Compartment Acres: 1,117

Commercial Harvest - 165 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Specs:

<u>Acceptable</u>

Proposed Start Date: 10/01/2018

8.7 4199 - Other Mixed 12156026-Cut Sawtimber 4221 - Natural 90 111-Harvest Two-Aged Shelterwood Approved 140 Red Pine Proposal

Upland Deciduous Well

Site Condition:

Prescription Mark trees to leave 50 BA of red pine, oak and paper birch with large healthy crowns. Trees will be marked in clumps to allow for scarification

Specs: around the clumps.

Next Step SitePrep, Scarification

Treatments:

Habitat Cut: No

Acceptable Mix of pine, oak and birch.

Regen:

Other Scarify after harvest.

Comment:

Proposed Start Date: 10/01/2018

Crystal Falls Mgt. Unit Report 3 -- Treatments Compartment: 156 s Year of Entry: 2019 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d 31 12156031-Cut 38.3 42110 - Planted Poletimber 61 Crown Thinning 4211 - Planted Even-Aged 111-Harvest Approved Red Pine Well 140 Red Pine Proposal **Habitat Cut: No Site Condition:** Prescription Mark red pine to 100 BA. No live oak will be cut. Specs: Next Step Treatments: Acceptable Regen: Other Summer cut to avoid snowmobile season. Protect trail. Comment: **Proposed Start Date:** 10/01/2018 Harvest 34 12156034-Cut 17.5 42110 - Planted Poletimber 61 141-Crown Thinning 4211 - Planted Even-Aged Approved Red Pine Well 170 Red Pine Proposal **Habitat Cut: No Site Condition:** Prescription Mark red pine to 100 BA. No white pine or oak will be cut. Specs: Next Step **Treatments:** Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 12156040-Cut 7.4 4131 - Aspen, Oak Sawtimber 90 81-110 Clearcut with 4131 - Aspen, Even-Aged Harvest Approved Retention Proposal Oak **Habitat Cut: No Site Condition:** Prescription Cut all aspen and mixed hardwood, except oak, that are 2" DBH or greater. Cut all spruce and balsam with one or more pulpwood stick. No red or white pine or oak will be cut. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step **Treatments:** Acceptable Mix of aspen, hardwood and softwood. Regen: Other Comment: **Proposed Start Date:** 10/01/2018 42110 - Planted 12156050-Cut 5.0 Poletimber 4211 - Planted 54 141-Crown Thinning Harvest Even-Aged Approved Red Pine Well 170 Red Pine Proposal **Habitat Cut: No Site Condition:**

Prescription Mark red pine to 100 BA. Cut all aspen, maple, balsam and spruce with one or more pulpwood stick. No white pine or oak will be cut.

Regen:

Other

Specs:
Next Step

Comment:

Proposed Start Date: 10/01/2018

s Year of Entry: 2019 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d 12156052-Cut 42110 - Planted Poletimber 61 Crown Thinning 4211 - Planted Even-Aged 52 8.9 111-Harvest Approved Red Pine Well 140 Red Pine Proposal

Habitat Cut: No Site Condition:

Prescription Mark red pine to 100 BA. No live oak will be cut.

Specs:

Next Step Treatments:

Acceptable Regen:

Summer cut to avoid snowmobile season.

Comment:

Other

Proposed Start Date: 10/01/2018

Sawtimber Harvest 12156054-Cut 3.8 42210 - Natural 90 111-Shelterwood 42210 - Natural Two-Aged Approved Red Pine Well 140 Red Pine Proposal

Habitat Cut: No Site Condition:

Prescription Mark red pine to retain 50 BA. Cut all other trees 2 " DBH or greater, except no white pine or oak will be cut.

Specs:

Next Step SitePrep. Scarification

Treatments:

Acceptable Red pine.

Regen:

Other Summer cut to avoid snowmobile season.

Comment:

Proposed Start Date: 10/01/2018

12156055-Cut 42210 - Natural 47 42210 - Natural Sawtimber 90 Two-Aged Approved 111-Harvest Shelterwood Red Pine Well 140 Red Pine Proposal

Habitat Cut: No Site Condition:

Prescription Mark red pine to leave 50 BA. Mark trees in clumps to allow for scarifying around the clumps.

Specs:

Next Step SitePrep, Scarification

Treatments:

Acceptable Red pine.

Regen:

Other Scarify after harvest.

Comment:

Proposed Start Date: 10/01/2018

12156064-Cut 42110 - Planted 4211 - Planted 16.1 Poletimber 61 51-80 Clearcut with Even-Aged Harvest Approved Retention Red Pine Proposal

Red Pine Poor

Habitat Cut: No Site Condition:

Prescription Cut all trees 2" DBH or larger, except no white pine or oak will be cut.

Specs:

Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant Next Step

Treatments:

Acceptable Red pine.

Regen:

Other Stand will be planted. Protect trail.

Comment:

Proposed Start Date: 10/01/2018

Total Treatment 164.6

Acreage Proposed:

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Compartment: 156
Year of Entry: 2019

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	dition	s
Acres	Available	With Condition	Not Available		5B	5F	2G	2H	3D
473	473	0	0	Aspen					
13	13	0	0	Bog					
119	119	0	0	Jack Pine					
8	8	0	0	Low-Density Trees					
14	0	14	0	Lowland Conifers		14			
6	0	0	6	Lowland Deciduous			6		
7	7	0	0	Marsh					
30	9	0	21	Mixed Upland Deciduous				21	
38	21	17	0	Natural Mixed Pines	17				
291	277	15	0	Red Pine	15				
40	0	40	0	Tamarack		40			
4	4	0	0	Treed Bog					
37	20	0	18	Upland Mixed Forest					18
4	4	0	0	Upland Shrub					
7	7	0	0	Urban					
28	28	0	0	Water					
1,117	987	85	45	Total Forested Acres	32	54	6	21	18
	88%	8%	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.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5F: Evaluated for Forest Health Considerations	40	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
2	Unavailable	3D: Recreational / Scenic values	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Glidden Lake Camp	ground.					

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Compartment: 156 Year of Entry: 2019

3	Available	5B: Maintain for regeneration purposes	15	Unspecified	Unspecified	Unspecified	Unspecified		
	Comments: Aspen removed las	st entry. May treat next entry.	Save for a	t least 10 years to shade	out undesirable aspen.				
4	Available	5B: Maintain for regeneration purposes	17	Unspecified	Unspecified	Unspecified	Unspecified		
	Comments: Aspen and mature jack pine removed last entry. Current stand was left as residual because of ski trail.								
5	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	21	Unspecified	Unspecified	Unspecified	Unspecified		
	Comments: Stand is on top a la	irge rock.							
6	Available	5F: Evaluated for Forest Health Considerations	14	Unspecified	Unspecified	Unspecified	Unspecified		
	Comments:								
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified		
	Comments:								

Mgt. Unit

Compartment: #Type! Year of Entry:

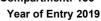


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* 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: 156





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	HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Habitat Area	An area that provide some specific need for the life cycle of and Waterfowl Production Areas, deer wintering complexed openings and savannas. Habitat areas are distinct from criendangered or threatened species (such as Kirtland's wark general in nature, are not primarily associated with threate covered by species recovery plans that are developed in or	s in lowland conifer communities, grassland tical habitat designated for recovery of oler or piping plover areas) in that they are more ned or endangered species, and are not

s t	Crystal Falls	Crystal Falls Mgt. Unit			- Forested	Stands Compartment: 156 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Sapling Well	20.4	17	Immature	
2	4130 - Aspen	Poletimber Well	13.2	39	51-80	
3	4130 - Aspen	Poletimber Well	19.9	26	1-50	
5	6121 - Tamarack	Poletimber Well	39.8	80	51-80	
6	42110 - Planted Red Pine	Sawtimber Well	28.3	62	141-170	
7	42250 - Pine, Oak	Sawtimber Medium	17.1	90	1-50	Aspen and jack pine cut in 2011.
9	42210 - Natural Red Pine	Sawtimber Well	9.8	90	111-140	
10	4130 - Aspen	Sapling Well	27.5	25	Immature	
11	4130 - Aspen	Poletimber Well	36.2	37	51-80	
12	4136 - Aspen, Mixed Conifer	Poletimber Well	26.4	37	51-80	
13	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	13.8	92	81-110	
14	4130 - Aspen	Poletimber Poor	16.2	37	1-50	Aspen breaking up. Most aspen trees dead and fallen over. Should convert to pine.
15	4130 - Aspen	Sapling Well	34.3	23	Immature	
16	42110 - Planted Red Pine	Poletimber Well	16.1	54	141-170	
17	4132 - Aspen, Jack Pine	Sapling Poor	5.9	5	Immature	
18	42220 - Natural Jack Pine	Poletimber Well	14.3	34	1-50	
19	42220 - Natural Jack Pine	Sapling Well	16.3	17	Immature	
20	42220 - Natural Jack Pine	Sapling Well	83.2	34	1-50	LAKE MARY FIRE OF 1983. Stand has some narrow strips of larger red pine and jack pine poles.

s t	Crystal Falls	Crystal Falls Mgt. Unit			- Forested	Stands	Compartment: 156 Year of Entry: 2019	OF NATURAL PRODURCE
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	MICHIGAN
22	4130 - Aspen	Sapling Well	21.2	6	Immature			
23	4130 - Aspen	Sapling Well	20.2	6	Immature			
24	4130 - Aspen	Poletimber Well	14.0	26	1-50			_
25	4130 - Aspen	Sapling Well	7.8	17	Immature			
26	4199 - Other Mixed Upland Deciduous	Sawtimber Well	8.7	90	111-140	Birch in poor condition.	Tops are very thin and man dead.	ny trees are
27	42250 - Pine, Oak	Sawtimber Medium	10.8	60	51-80	Aspen ar	nd jack pine cut in 2000.	
28	42110 - Planted Red Pine	Poletimber Well	28.0	54	81-110			
30	4130 - Aspen	Sapling Well	26.4	20	Immature			
31	42110 - Planted Red Pine	Poletimber Well	99.3	61	111-140			
32	4133 - Aspen, Mixed Pine	Sapling Well	58.9	27	Immature			
33	42110 - Planted Red Pine	Poletimber Medium	24.1	54	81-110			
34	42110 - Planted Red Pine	Poletimber Well	17.5	61	141-170			
35	4130 - Aspen	Sapling Well	12.8	16	Immature			
37	4130 - Aspen	Poletimber Well	28.4	39	51-80			
39	42220 - Natural Jack Pine	Poletimber Well	4.8	26	1-50			
40	4131 - Aspen, Oak	Sawtimber Well	7.4	90	81-110			
41	4310 - Pine, Oak Mix	Sawtimber Medium	6.5	60	51-80			
42	4130 - Aspen	Sapling Well	11.9	26	Immature			

s t	Crystal Falls	s Mgt. Unit		Report 7	- Forested	Stands Compartment: 156 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4130 - Aspen	Poletimber Well	18.3	39	51-80	
44	4130 - Aspen	Poletimber Well	21.4	39	51-80	
46	4310 - Pine, Oak Mix	Sawtimber Well	17.6	82	81-110	Glidden Lake Campground. Jack pine, aspen and hazard trees removed in 2011.
47	42110 - Planted Red Pine	Poletimber Well	7.0	54	81-110	
48	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	21.3	90	51-80	Most of stand is on a large rock.
50	42110 - Planted Red Pine	Poletimber Well	5.0	54	141-170	
51	6115 - Lowland Ash	Poletimber Well	5.8	80	51-80	
52	42110 - Planted Red Pine	Poletimber Well	16.8	61	111-140	
54	42210 - Natural Red Pine	Sawtimber Well	3.8	90	111-140	OPIC - FMD: OI Stand Year Origin was 1992
55	42210 - Natural Red Pine	Sawtimber Well	4.7	90	111-140	
56	42210 - Natural Red Pine	Sawtimber Well	14.5	90	111-140	Aspen and jack pine cut in 2011.
57	4130 - Aspen	Sapling Well	12.1	16	Immature	
59	4310 - Pine, Oak Mix	Poletimber Poor	13.1	35	1-50	
60	42260 - Natural Pine, Mixed Deciduous	Sapling Medium	10.4	23	1-50	
61	4130 - Aspen	Poletimber Well	11.6	37	51-80	
64	42110 - Planted Red Pine	Poletimber Poor	16.1	61	51-80	

Compartment: 156 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
4	6233 - Wet Meadow	6.7	No	Beaver pond at North end.
8	500 - Water	27.6	No	GLIDDEN LAKE
21	6225 - Bog	2.3	No	
29	6225 - Bog	4.1	No	OPIC - FMD: OI Stand Year Origin was
36	6224 - Treed Bog	4.1	No	OPIC - FMD: OI Stand Year Origin was
38	6225 - Bog	4.7	No	OPIC - FMD: OI Stand Year Origin was
45	122 - Road/Parking Lot	3.3	No	Lake Mary Road.
49	3302 - Low Density Conifer Trees	4.0		OPIC - FMD: Lake Mary Ski Trail and snowmobile trail run through stand. Widen ski trail to 12 feet. Summer cut. Retain 3% B.A
53	122 - Road/Parking Lot	3.4	No	North Shore Road.
58	6225 - Bog	1.6	No	OPIC - FMD: OI Stand Year Origin was 1992
63	330 - Low-Density Trees	4.3		OPIC - FMD: Lake Mary Ski Trail and snowmobile trail run through stand. Widen ski trail to 12 feet. Summer cut. Retain 3% B.A
401	320 - Upland Shrub	3.8	No	Power line.