

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12186
Entry Year 2019
Acreage: 1,719
County Iron

Management Area: Michigamme Reservoir

Revision Date: 2017-08-17 Stand Examiner: Ed Rice

Legal Description:

T45N R31W sections 6, 7, 12, 17, 18, 19, 20

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue the hardwood stands on 20 year alternating cutting cycles, moving the stands toward regulation. Improve the aspen age class diversity. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Very fine sandy loams with cobble throughout much of the compartment. There is an area of sand outwash plain holding low quality, off site aspen. There is a minor component of Lupton mucks.

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

This compartment is for the most part contiguous in state ownership. There are minor recreational private properties adjacent. To the west of the compartment, most of the land holding is industrial forest.

Unique Natural Features:

None

Archeological, Historical, and Cultural Features:

None identfied

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

Fence River area, Nolenchec Creek (Type 1 trout feeder stream), Fence River is a cold transitional type 1 trout stream. A 300' buffer is recommended in riparian areas susceptible to aspen regeneration. For all other riparian areas, BMPs should be followed to maintain canopy cover and prevent erosion into waterbodies.

Wildlife Habitat Considerations:

Featured species include American woodcock, black bear, pileated woodpecker, northern goshawk, ruffed grouse, and white-tailed deer. The lowland river complex and numerous stands with a high component of hazel provide great bear habitat. The area includes state game fund lands.

Mineral Resource and Development Concerns and/or Restrictions

There is one sand/gravel pit in the area. Some of the bedrock formations may have value as dimension stone. There has been no metallic mineral production within five miles of the compartment. There does not appear to be any iron ore potential in the compartment. Other metallic minerals have been documented in the vicinity but not in concentrations of economic significance. There has been metallic mineral leasing in this area in the past. There is no economic oil and gas production in the UP.

Vehicle Access:

Fair to good. There are road systems throughout the compartment. However some roads are 4 wd only or restricted to winter use.

Survey Needs:

N 1/16 sec 13, 18 NE 2/26 sec 19

Recreational Facilities and Opportunities:

Snowmobile trail present

Fire Protection:

Much of this compartment does not lend itself to supporting fire due to the n hardwood fuels. Section 20 does have a large stand of dense spruce/fir on a drier site that could carry fire given the correct conditions. Access would not be an issue.

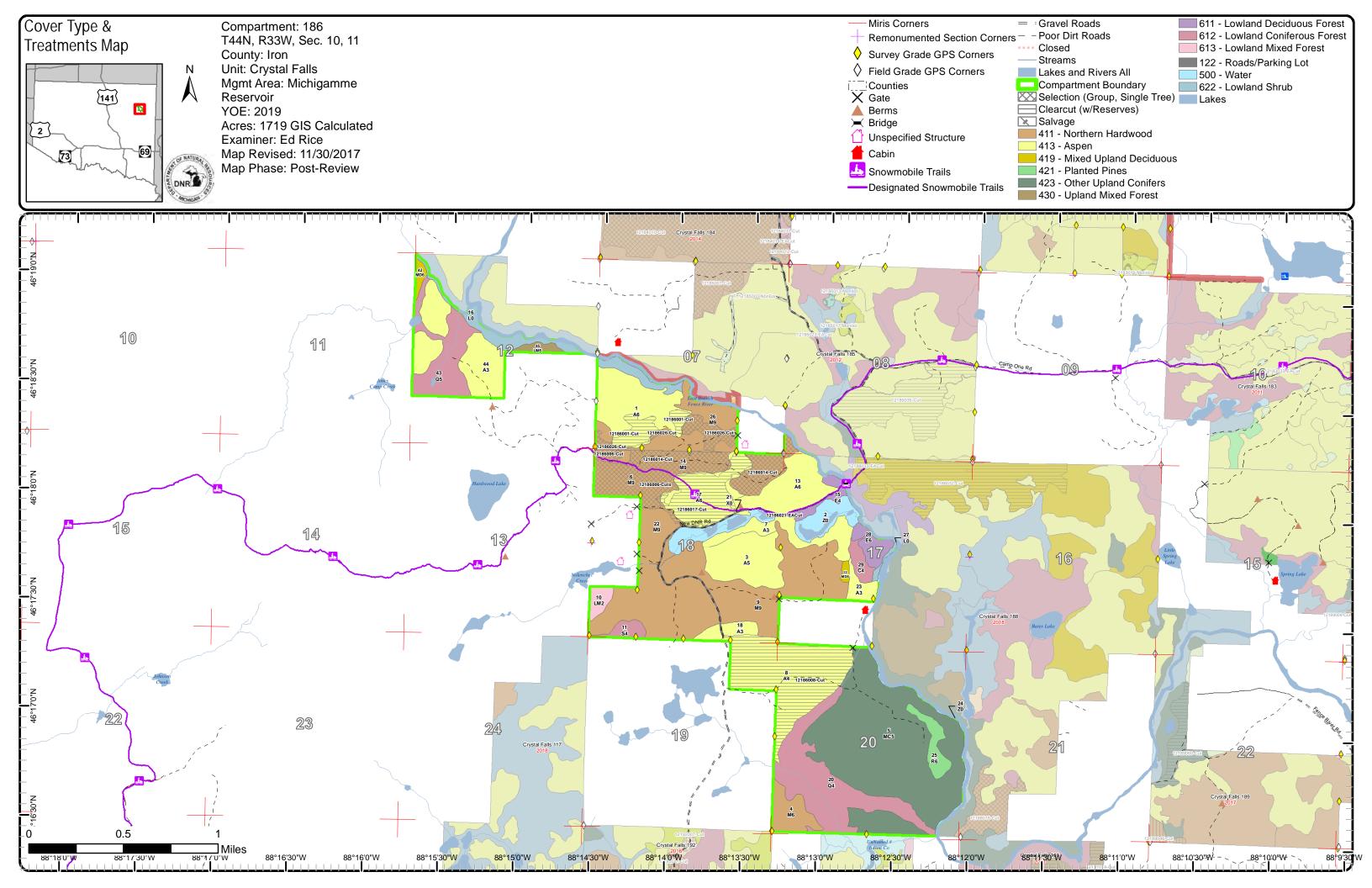
Additional Compartment Information:

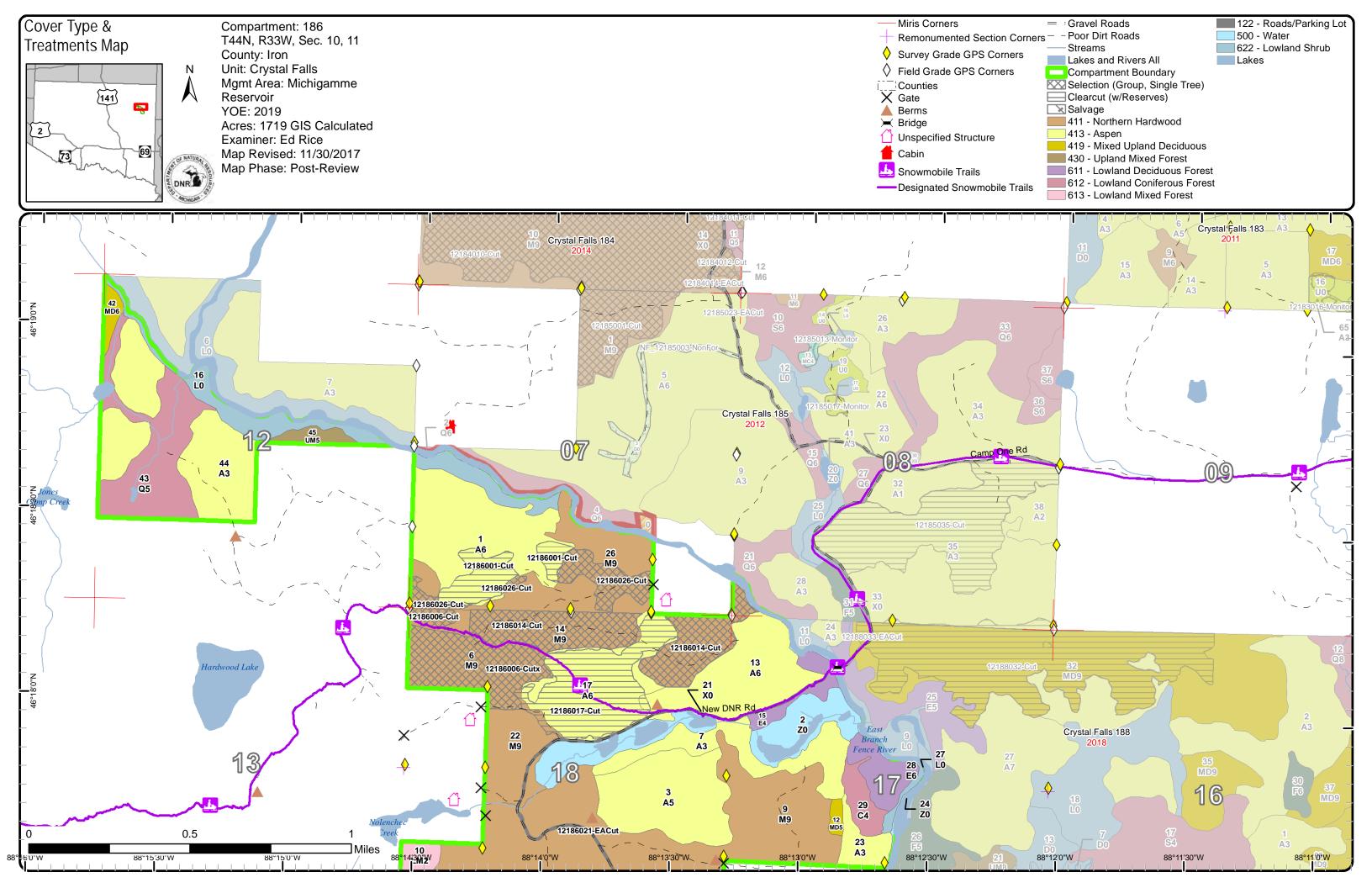
The following reports from the Inventory are attached:

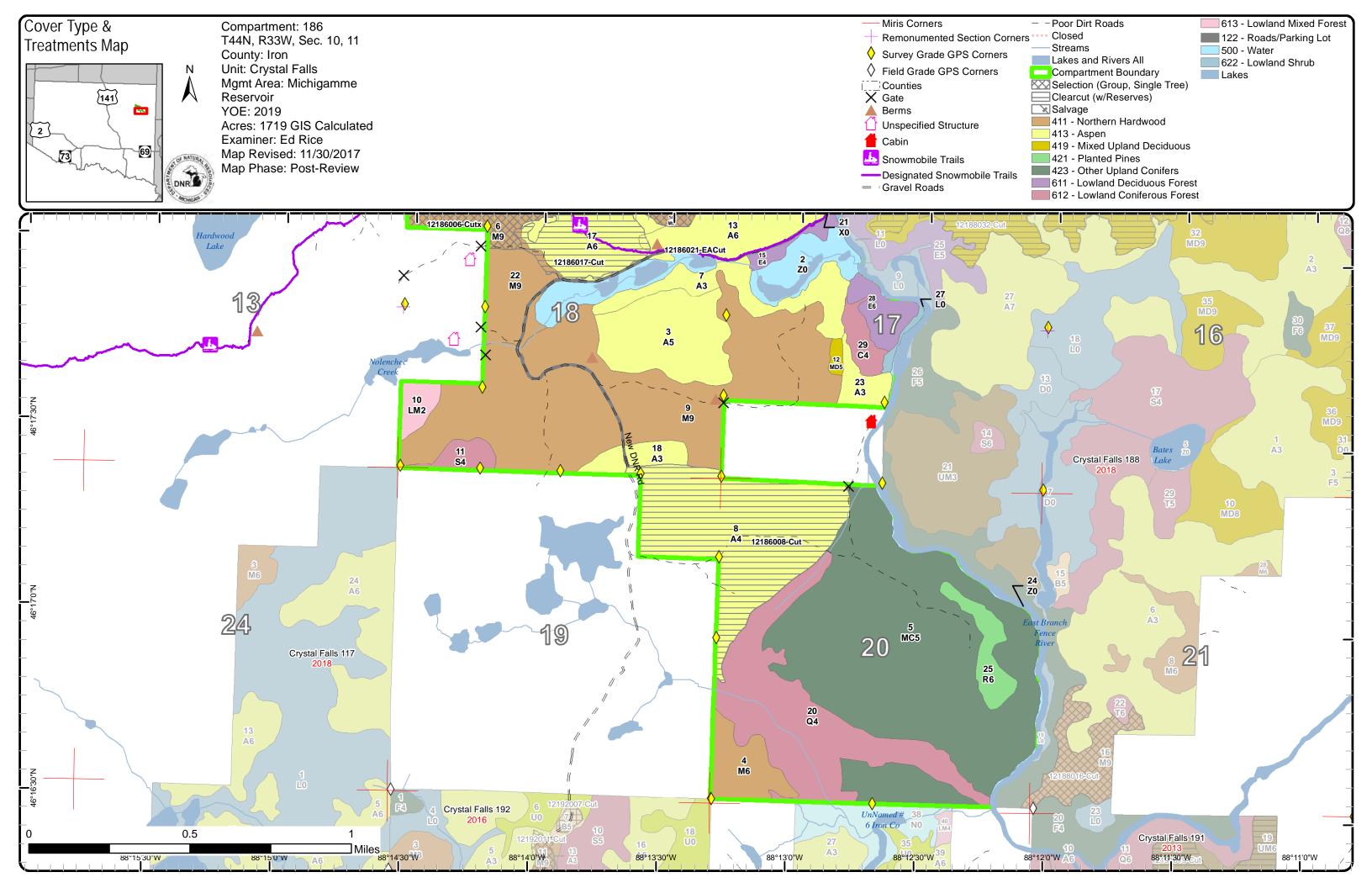
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

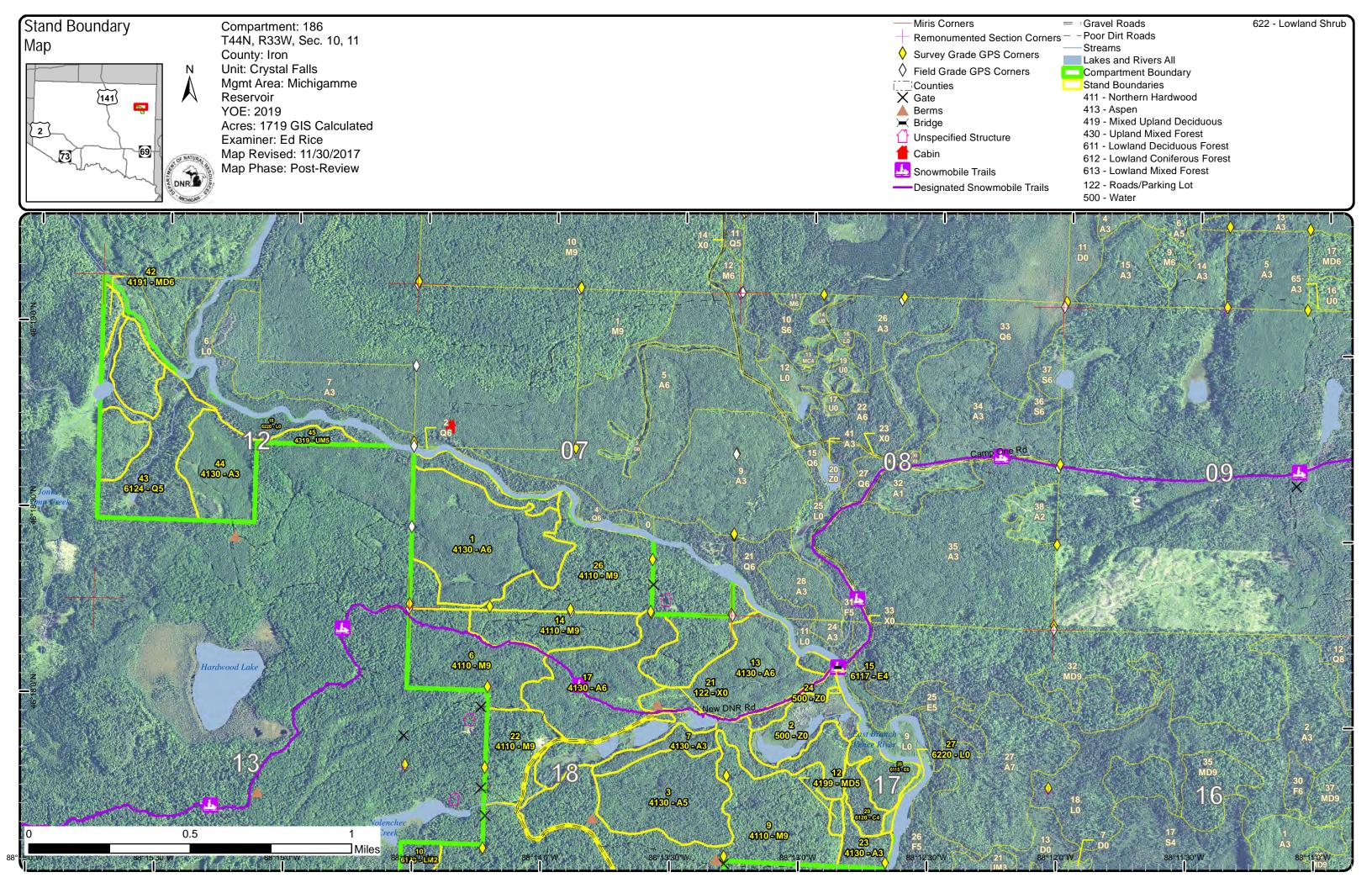
The following information is displayed, where pertinent, on the attached compartment maps:

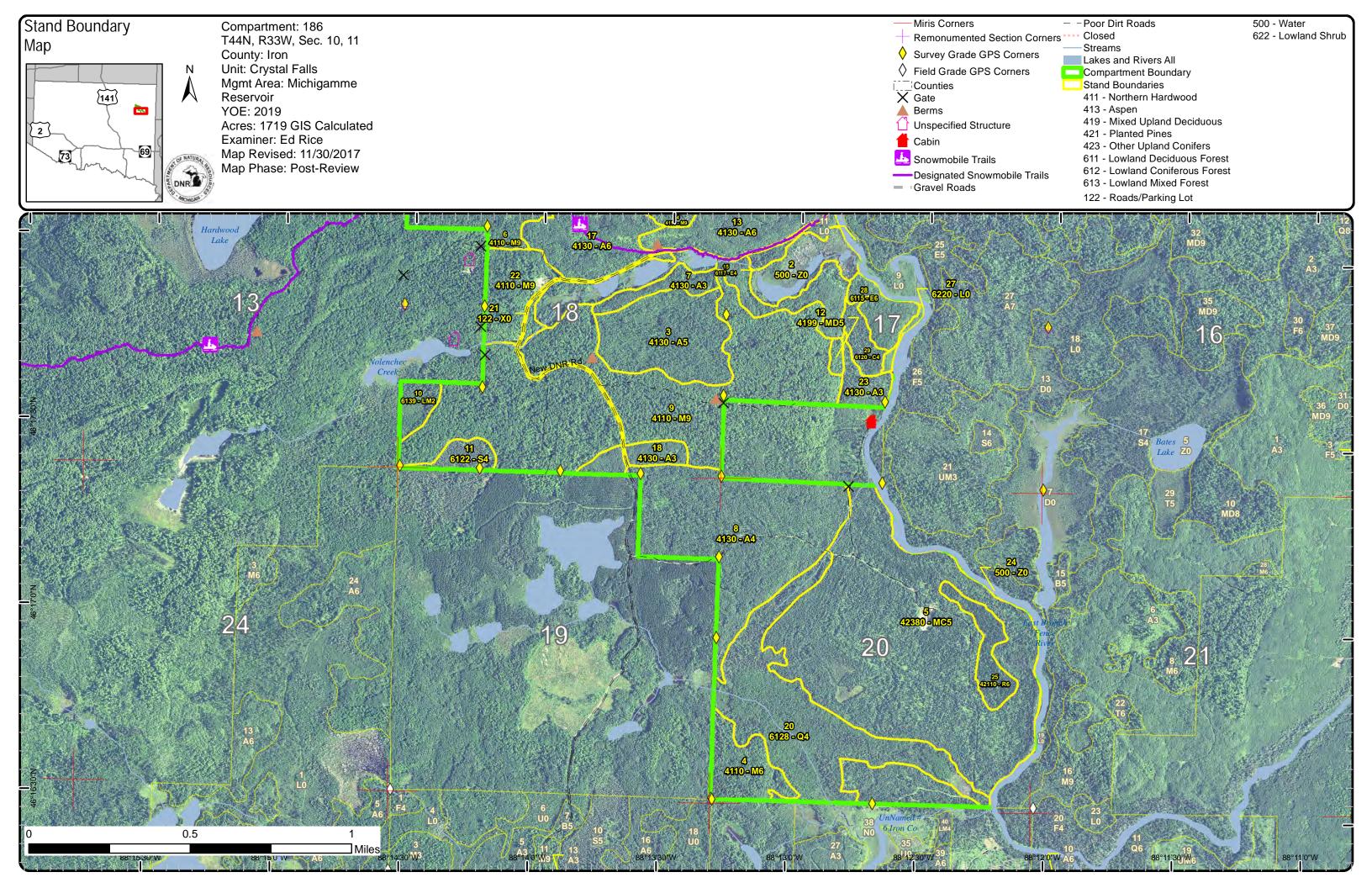
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

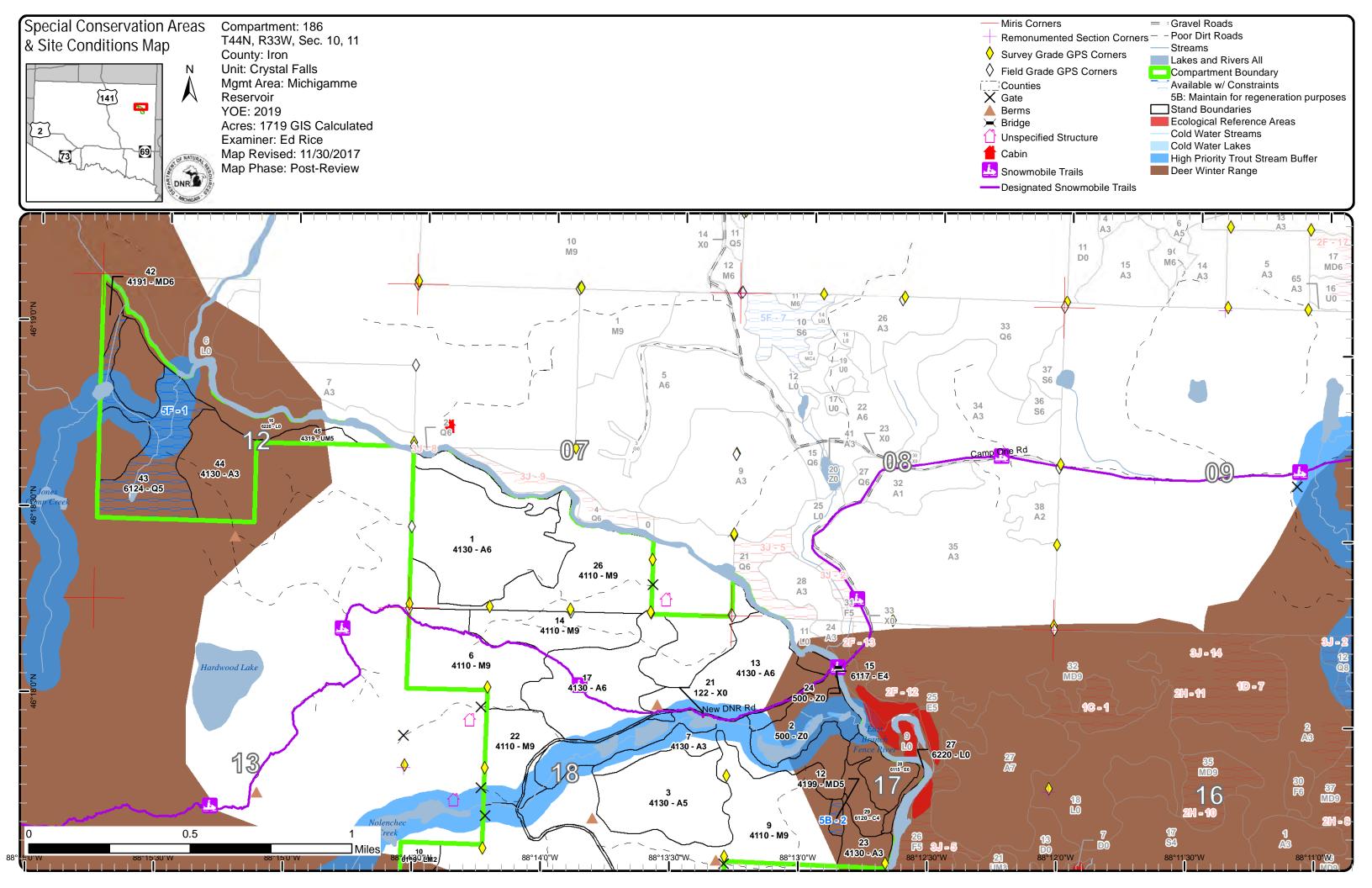


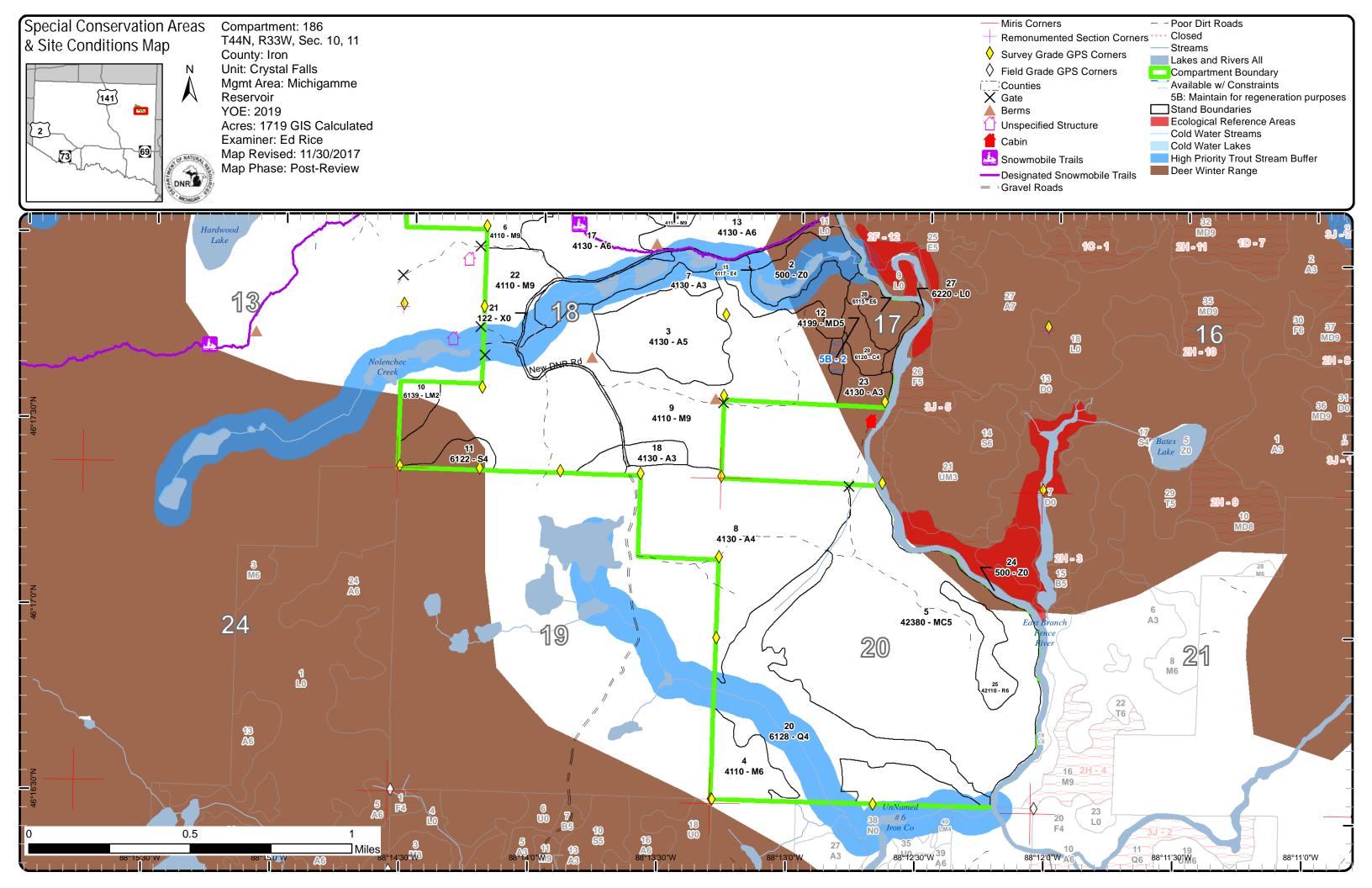












Report 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 186 Year of Entry 2019



Age Class

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Aspen	0	78	27	180	134	127	0	0	0	0	0	0	0	0	0	0	0	0	546
Cedar	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11
Lowland Conifers	0	0	0	0	0	0	172	0	0	0	0	0	0	0	0	0	0	0	171
Lowland Deciduous	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Mixed Forest	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Shrub	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
Lowland Spruce/Fir	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	11
Mixed Upland Deciduous	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8
Northern Hardwood	0	0	0	0	0	0	0	28	102	0	0	0	0	0	0	0	0	363	493
Red Pine	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Upland Conifers	0	0	0	0	293	0	0	0	0	0	0	0	0	0	0	0	0	0	293
Upland Mixed Forest	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Urban	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Water	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
Total	124	78	27	180	445	172	180	39	102	0	0	11	0	0	0	0	0	363	1719



Report 2 – Treatment Summary

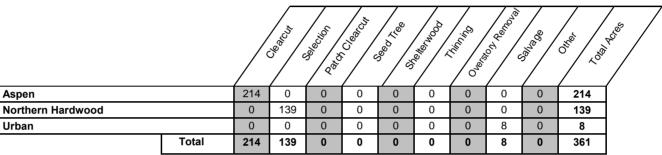
Crystal Falls Mgt. Unit Year of Entry: 2019

Acres of Harvest

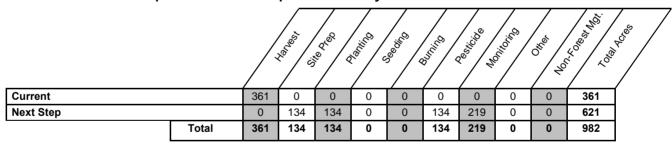
Compartment 186
Total Compartment Acres: 1,719

Commercial Harvest - 361 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Compartment: 186

Year of Entry: 2019

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Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 12186001-Cut 20.6 Clearcut with 413 - Aspen Even-Aged Field Boundary 4130 - Aspen Poletimber 29 Immatu Harvest

Site Condition: Habitat Cut: No

Prescription Cut aspen, maple, 1 stick and larger in identified storm damage area.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, maple

Regen: Other

cut out of YOE due to heavy wind throw in patches throughout stand from April 2017 storm

Well

Comment:

Proposed Start Date: 05/15/2017

12186006-Cut 4.4 4110 - Sugar Maple Sawtimber 73 111-Harvest **Group Selection** 411 - Northern Uneven-Field Boundary Association Well 140 Hardwood

Aged

Retention

Habitat Cut: No Site Condition:

Prescription thin to 70 BA. utilize quality sawtimber/veneer. promote max 20"dbh, remove high risk trees. Maintain current species composition. Do not cut

any oak or hemlock Specs:

*out of YOE salvage cut due to April windstorm: cut only wind thrown or snapped off trees in identified storm damage area.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable n hardwood

Regen: Other Comment:

Proposed Start Date: 05/15/2017

12186006-46.6 4110 - Sugar Maple Sawtimber 411 - Northern 111-Harvest Single Tree Uneven-Approved Cutx Association Well 140 Selection Hardwood Aged Proposal

Habitat Cut: No Site Condition:

Prescription thin to 70 BA. utilize quality sawtimber/veneer. promote max 20"dbh, remove high risk trees. Maintain current species composition. Do not cut

any oak or hemlock. exclude/buffer and vernal areas found Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable n hardwoods

Regen: Other Comment:

Proposed Start Date: 10/01/2018

12186008-Cut 134.1 4130 - Aspen Poletimber 32 Immatu Harvest Clearcut with 4211 - Planted Even-Aged Approved Red Pine Poor Retention Proposal re

Prescription cut aspen, spruce, balsam fir and cherry 2" dbh and larger. Do not cut w pine, r pine. leave a component of healthy cherry where available - 1

per cruise point. reserve/buffer any low or vernal area. Specs:

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

Site Condition:

Treatments:

Habitat Cut: No

Acceptable r pine, small pockets of aspen

Regen:

for planting operations, stay on top of flat - do not drop over the slope along eastern edge of the stand. leave unplanted aspen corridor between Other

industrial pine plantation to the west and this state pine planting, also leave several small aspen patches scattered throughout planting area. Comment:

10/01/2018 **Proposed Start Date:**

Compartment: 186 Year of Entry: 2019

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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
14	12186014-Cut	65.5 4	110 - Sugar Maple Association	Sawtimber Well	72	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Approved Proposal	

Habitat Cut: No Site Condition:

Prescription thin to 70 BA. capture quality sawtimber/veneer value. remove high risk. Do not cut any hemlock, oak or associated w pine. maintain current Specs:

species composition. exclude/buffer any vernal areas found

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable n hardwood

Regen: Other Comment:

Proposed Start Date: 10/01/2018

17 12186017-Cut 59.1 4130 - Aspen Poletimber 44 Unspec Harvest Clearcut with 4319 - Mixed Even-Aged Field Boundary Well ified Retention **Upland Forest**

Habitat Cut: No Site Condition:

Prescription cut aspen, maple, w birch 1 stick tall and larger. leave a component of h maple poles and w birch. protect advanced h maple regen as much as

possible. Do not cut oak or w pine. Maintain 100 foot BMP buffers to water courses Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, n hardwoods

Regen:

cut out of YOE due to April 2017 storm Other

Comment:

Proposed Start Date: 05/15/2017

12186021-122 -21 7.6 122 - Road/Parking Nonstocked Completed -Unspec Harvest Salvage ified Road/Parking Pending Edits **EACut** Lot Lot

Habitat Cut: No Site Condition:

Prescription utilize windthrown timber from April 2017 wind damage. Open road to be passable.

Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

26 12186026-Cut 22.7 4110 - Sugar Maple Sawtimber 73 81-110 Harvest **Group Selection** 411 - Northern Uneven-Field Boundary Well Association Hardwood Aged

Habitat Cut: No Site Condition: Prescription in identified storm damage area: cut wind thrown and snapped trees. cut no hemlock

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable n hardwoods

Regen:

Other cut out of YOE due to April 2017storm

Comment:

Proposed Start Date: 05/15/2017

Total Treatment Acreage Proposed:

360.6

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 186
Year of Entry: 2019

Availability for Management Total Acres Acres Avail Acres **Dominant Site Conditions** Available With Condition Not Available 5B 5F Acres Aspen Cedar **Lowland Conifers Lowland Deciduous** Lowland Mixed Forest Lowland Shrub Lowland Spruce/Fir **Mixed Upland Deciduous** Northern Hardwood **Red Pine Upland Conifers Upland Mixed Forest** Urban Water 1,719 1,658 **Total Forested Acres** 96% 4% 0% 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.

specified Unspecified
specified Unspecified

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: 186 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.

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 specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	ies to persist from year to year. Suitable 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 cond stocked trout populations and those of other coldwater fish specified year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildle 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 or covered by species recovery plans that are developed in cooperations.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more rendangered 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
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of identified as Element Occurrences (EOs) by the Michigan Natura context of their natural community classification system. Elemen (Excellent) or B (Good) and a Global (G) or State (S) element (rathreatened (2), or rare (3) serve as an initial base of ERAs. They the State. The system is comprised of individual or associations managed for restoration and maintenance of natural ecological psubmit recommendations for lands as ERAs using the DNR Con	al Features Inventory (MNFI) within the toccurrences with viability ranks of A arity) ranking of endangered (1), may be located upon any ownership in of natural community types that are processes and values. The public may

s t	Crystal Falls	Mgt. Unit		Report 7	- Forested	Stands Compartment: 186 Year of Entry: 2019				
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:				
1	4130 - Aspen	Poletimber Well	87.7	29	Immature	H maple sapling regeneration in E end adjacent to hardwood stand. 2017 pockets of windthrow in S and E of stand.				
3	4130 - Aspen	Poletimber Medium	61.5	45	Unspecified	dense M3 (h maple) understory. scattered b cherry. stand is naturally converting to n hardwoods				
4	4110 - Sugar Maple Association	Poletimber Well	27.6	67	81-110	stand edges transition to fir and lowland conifer. Areas towards the center of the stand hold 14 - 16" dbh h maple that is fair to good quality. one shallow ravine runs N through the stand with an associated wet drainage. very NW end of stand has a small A3 inclusion from old windthrow.				
5	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Medium	293.1	33	Immature	extremely dense upland b spruce with fir. Aspen is very low quality - off site. upland tamarack in pockets where higher water table is present. vernal pond/bog with leatherleaf inclusion in mid SW of stand. stand was planted to r pine in past - not a r pine site - water table is too high and area lies in a frost pocket. scattered semi open areas				
6	4110 - Sugar Maple Association	Sawtimber Well	55.6	73	111-140	very steep, rolling ridges throughout. well formed h maple. very little advanced maple regeneration overall. areas prevalent to larger diameter h maple.				
						N end of stand received heavy wind damage in April				
7	4130 - Aspen	Sapling Well	36.9	26	Immature					
8	4130 - Aspen	Poletimber Poor	134.1	32	Immature	extremely dense hazel brush. Aspen is in very rough shape - falling apart at 30 yrs old - well offsite. S end has slightly better stocking to aspen. very scattered w birch				
9	4110 - Sugar Maple Association	Sawtimber Well	241.3	72	81-110	three size classes. scattered h maple 24" dbh. very interspersed spruce component. scattered vernal ponds				
10	6139 - Mixed Lowland Forest	Sapling Medium	10.5	40	Unspecified	dense b ash swamp. as stand progresses towards center it has less stocking. edges has high ground transition with w birch and fir				
11	6122 - Black Spruce	Poletimber Poor	10.6	60	Unspecified	extremely wet -standing water, leatherleaf. low quality site				
12	4199 - Other Mixed Upland Deciduous	Poletimber Medium	2.8	54	Unspecified	Aspen has and is falling out of stand. ridge top stand. stand is very small, isolated acreage - let stand naturally convert to n hardwoods. good h maple advanced sapling regeneration.				
13	4130 - Aspen	Poletimber Well	55.8	27	Immature	stand is just moving into poletimber size class with 1 - 3 stick trees. steep hills/ridges				
14	4110 - Sugar Maple Association	Sawtimber Well	66.1	72	111-140	W end of stand has slightly smaller diameters 8 - 10". very scattered w birch. steep hills				

s t	Crystal Falls	s Mgt. Unit		Report 7	' – Forested	Stands Compartment: 186 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Poor	10.3	45	Unspecified	very wet - standing water in areas. small creek runs through stand
17	4130 - Aspen	Poletimber Well	64.8	44	Unspecified	good h maple advanced sapling regeneration under aspen. scattered, small inclusions of n hardwood poletimber in E end of stand
						areas of heavy wind throw from April 2017 storm
18	4130 - Aspen	Sapling Well	14.3	17	Immature	
20	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Poor	113.0	51	Unspecified	extremely wet - inclusions higher stocked to b ash. creek though stand
22	4110 - Sugar Maple Association	Sawtimber Well	32.5	73	81-110	stand thinned last cutting cycle. elderberry very dense in areas
23	4130 - Aspen	Sapling Well	12.3	12	Immature	Aspen sapling regeneration for 2005 windstorm. scattered over story w spruce and w birch
25	42110 - Planted Red Pine	Poletimber Well	18.3	32	81-110	lower quality form. many crooks, low forks.
26	4110 - Sugar Maple Association	Sawtimber Well	69.4	73	81-110	stand thinned last cutting cycle. H maple 18 - 22" scattered throughout with fair - good form. areas of heavy windthrow from April 2017 storm in N and W ends.
28	6115 - Lowland Ash	Poletimber Well	16.7	40	Unspecified	extremely wet - standing water. B ash 2 - 10" dbh with large cedar
29	6120 - Lowland Cedar	Poletimber Poor	11.1	101	Unspecified	very wet - standing water
42	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	5.3	57	51-80	isolated stand adjacent to Fence River
43	6124 - Lowland Spruce- Fir	Poletimber Medium	58.5	55	Unspecified	rocky feeder creek to Fence River runs through stand. edges of stand are upland with log sized w spruce - acting as buffer to feeder creek. small pond in south end and open bog complex in far W end of stand.
44	4130 - Aspen	Sapling Well	77.5	9	Immature	cut in 2007 under a windthrow salvage harvest. W areas of stand have poor access
45	4319 - Mixed Upland Forest	Poletimber Medium	6.9	43	Unspecified	w birch and aspen have mainly fallen out of stand. fairly dense fir understory with some hazel. much of stand lies within 300 feet of Fence River. stand mainly on a hillside sloping down to lowlands.

Compartment: 186 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
2	500 - Water	51.9	No	tag alder/beaver meadow/ dead snags. Nolenchec Creek
16	6220 - Alder/willow	40.4	No	lowlands adjacent to Fence River tag alder with scattered lowland conifers
21	122 - Road/Parking Lot	8.0	No	New DNR Rd
24	500 - Water	21.3	No	Fence River
27	6220 - Alder/willow	2.8	No	tag alder adjacent to Fence River