

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12059 Entry Year 2020 Acreage: 2,147

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2018-08-16

Stand Examiner: Deb Goupell

Legal Description:

T43N R29W Sec 36 T42N R29W Sec 1 T43N R28W Sec 31,32 T42N R28W Sec 5-7

Identified Planning Goals:

Maintain age class diversity of aspen, improve quality of hardwood stands, manage for wildlife and fisheries habitats around the Gene's Pond as well as for general recreation.

Soil and topography:

Uplands are primarily sandy loams with rolling hills, lowlands with mucks, and rocky outcrops.

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

Predominantly State owned and surrounded except on the east/southeast which is private. Some private parcels within the compartment.

Unique Natural Features:

Gene's Pond, East Branch of the Sturgeon River.

Archeological, Historical, and Cultural Features:

None

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

This compartment contains Gene's Pond, a portion of the East Branch of the Sturgeon River and Mud Lake (drains eventually into Pickerel Lake). The upper stretch of the EB of the Sturgeon above Gene's Pond is a designated Type 1 trout stream, however the portion that flows out of Gene's Pond and through this compartment is not. Therefore, a 100' buffer plus 5' per 1% increase in slope for all waterbodies is recommended.

Wildlife Habitat Considerations:

This Compartment contains both DWC and Wildlife Purchased lands. This compartment fall within the Ralph Ground Moraine MA with featured species including American woodcock, black bear, northern goshawk, ruffed grouse and deer. The focus of this compartment is riparian habitat, primarily mature forest condition in and around the impoundment that provides structure and refuge for cavity/nesting and perching for waterfowl, eagles, osprey, loons, black-backed woodpeckers and herons. Providing conifer thermal cover in the lowlands and conifer as a component in the uplands to access forage is critical for wintering deer.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are not located in the area, and sand & gravel potential within the compartment appears to be limited due to shallow bedrock. There may be some bedrock non-metallic mineral potential from the Randville Dolomite within the compartment. There is no history of metallic mineral mining in this area, but there has been past leasing activity and considerable iron ore exploration in the area. Metallic mineral potential beneath the compartment is considered low at this time. There is no economic oil and gas production in the UP. The state does not own all of the mineral rights within the compartment. Private mineral rights owners must be allowed reasonable access to the land should they choose to explore and/or develop the minerals.

Vehicle Access:

The Leeman Road and Dixon Road are paved county roads, Gene's Pond Road is a gravel road that accesses the Pond, campground and boat landing; other two-tracks also access the majority of the compartment.

Survey Needs:

Some corners will likely be needed.

Recreational Facilities and Opportunities:

Camping, fishing, boating, hunting, birding, trapping.

Fire Protection:

Felch protection area.

Additional Compartment Information:

Compartment was previously designated as a State Game Wildlife Management Area, which has since been agreed to decommission from this title as Wildlife no longer maintains this as a state game area.

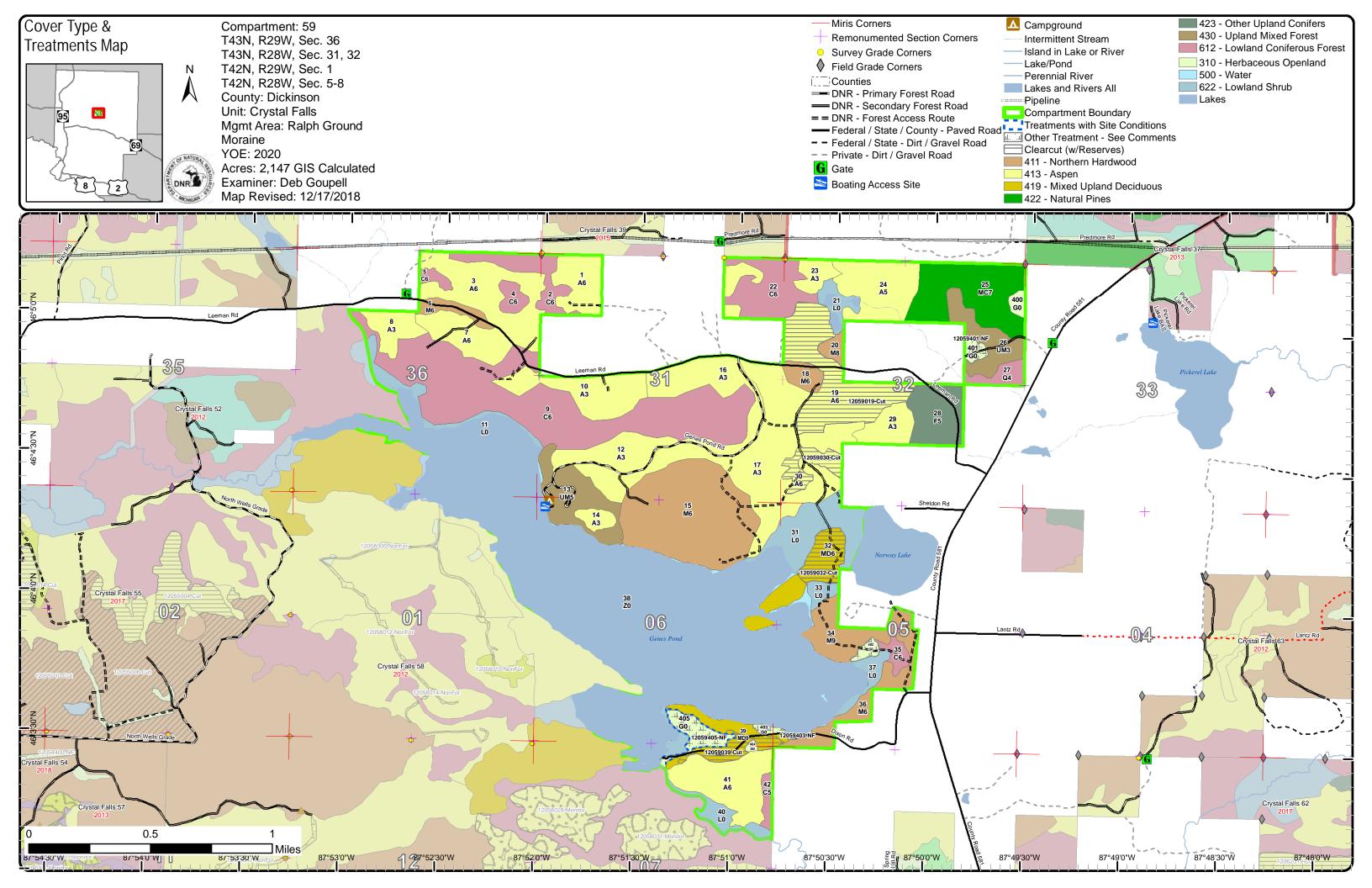
The following reports from the Inventory are attached:

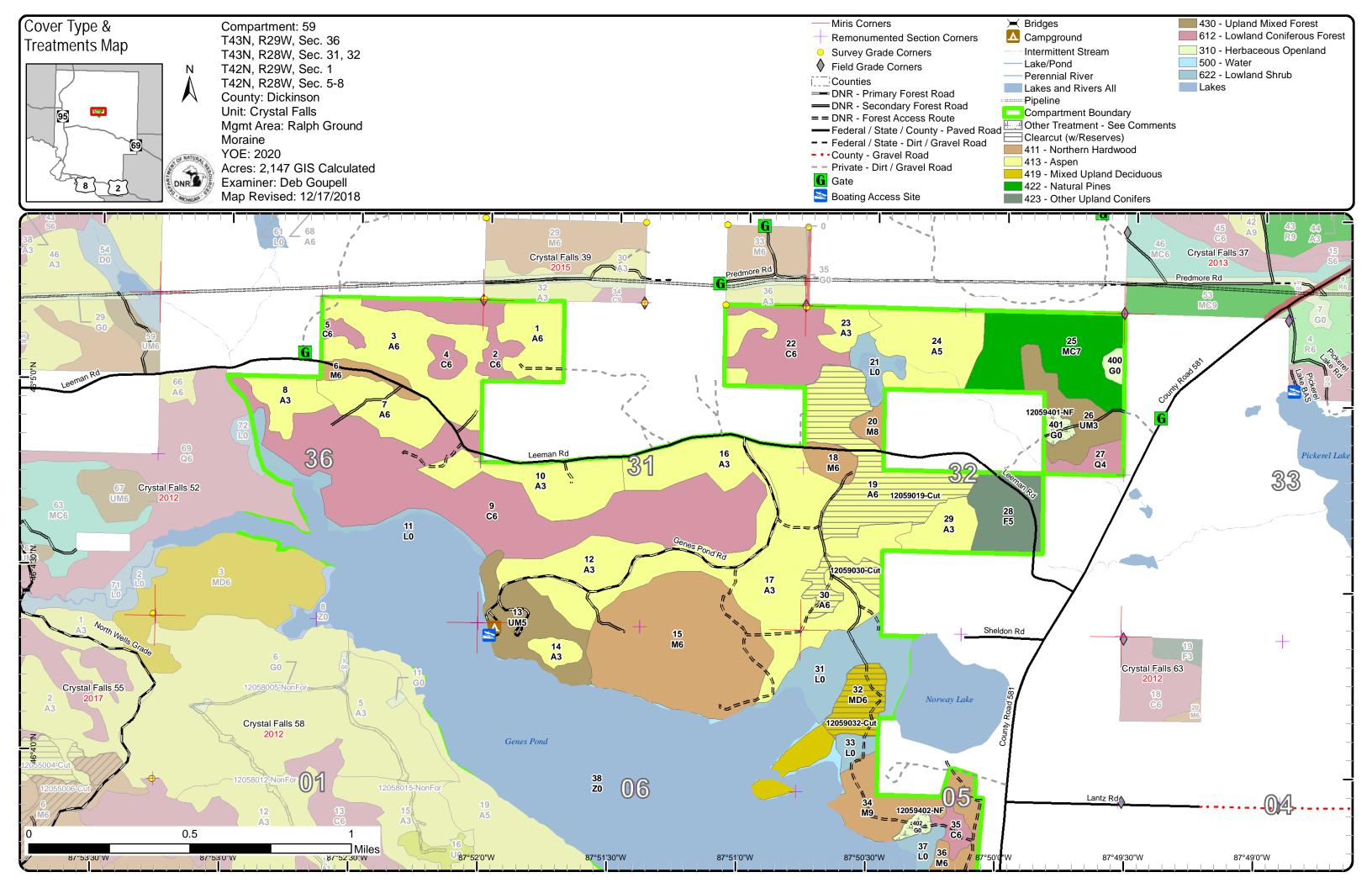
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

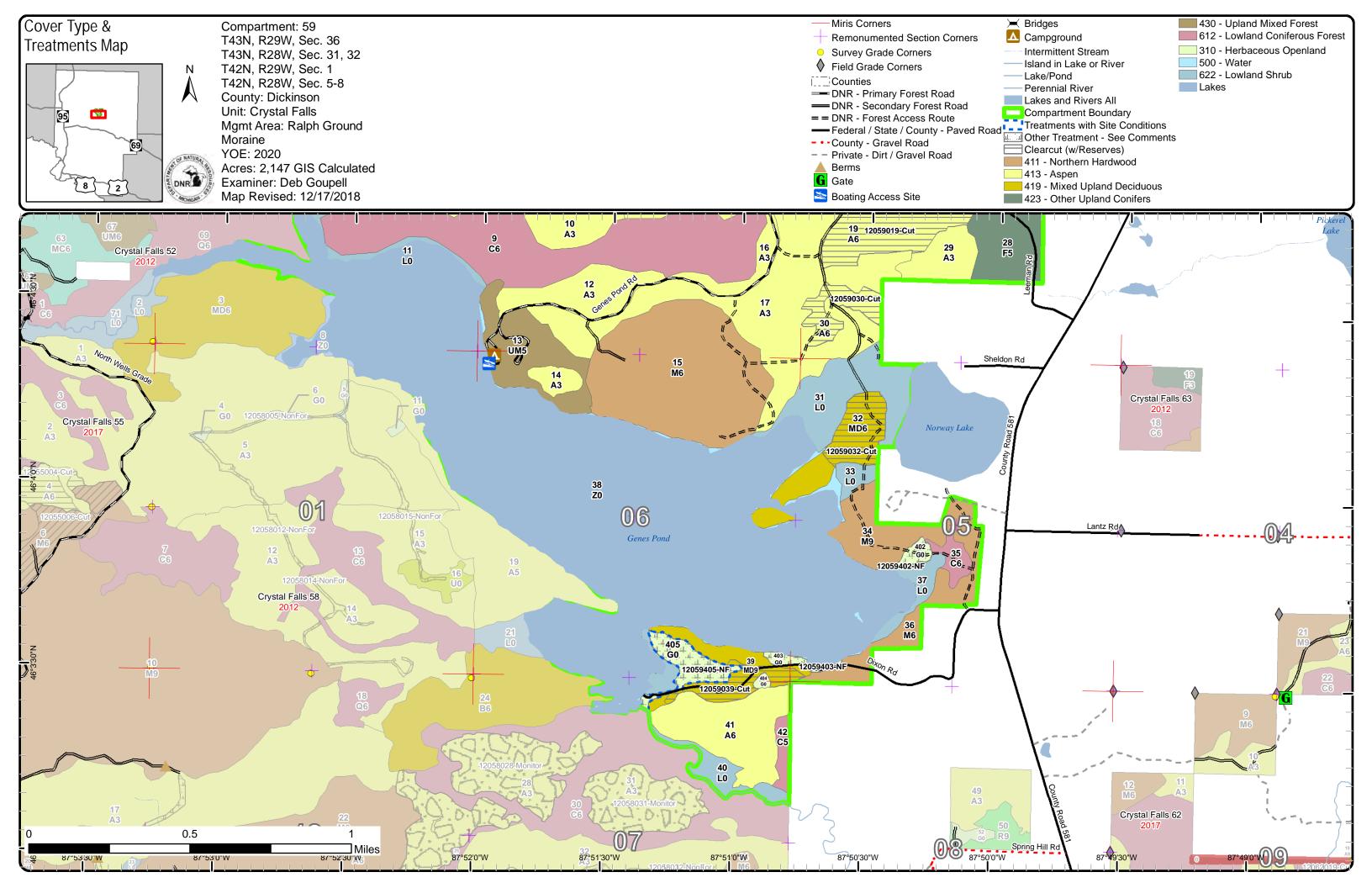
The following information is displayed, where pertinent, on the attached compartment maps:

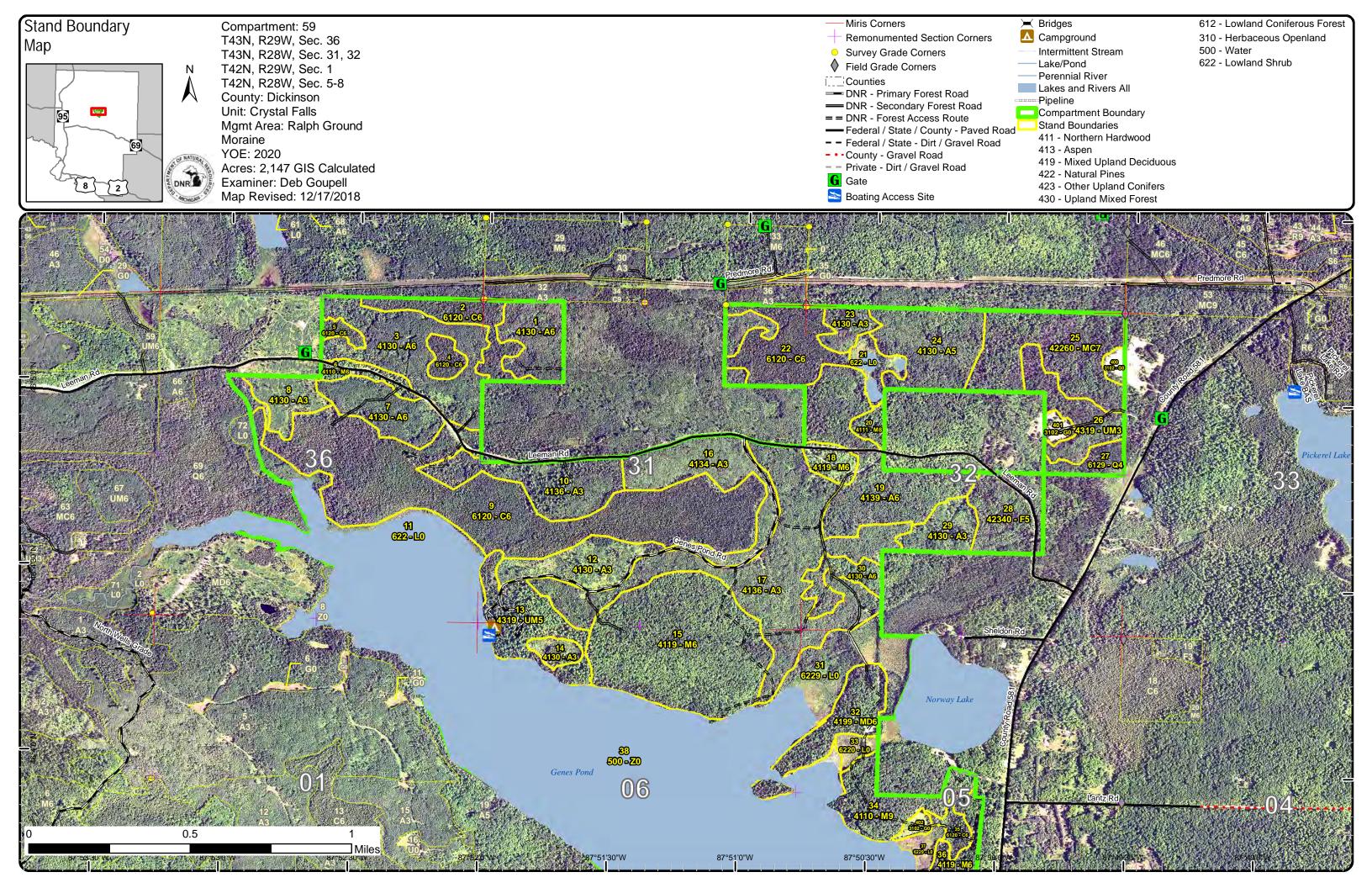
Base feature information, stand boundaries, cover types, and numbers Proposed treatments

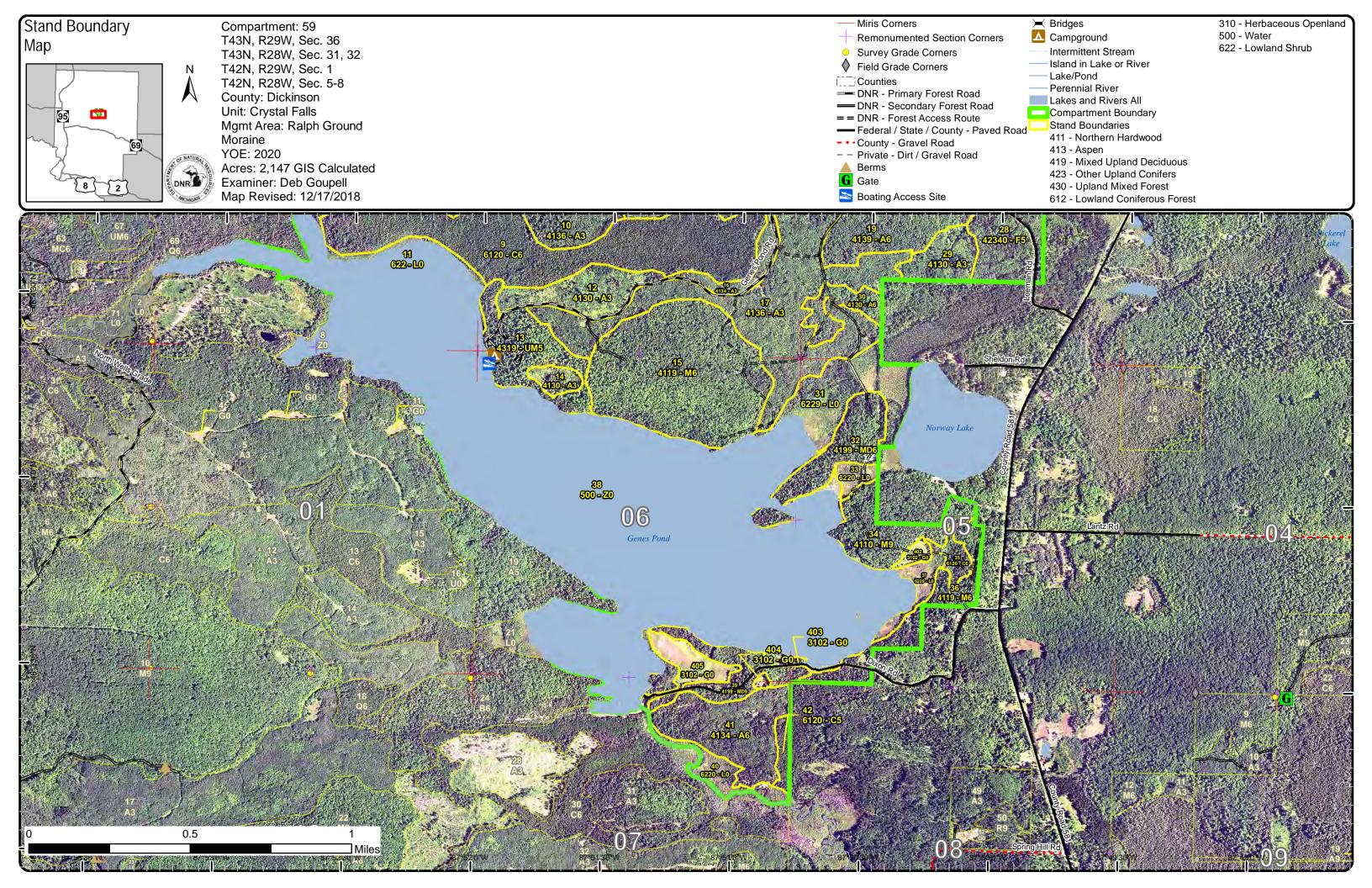
Proposed treatments
Site condition boundaries
Details on the road access system

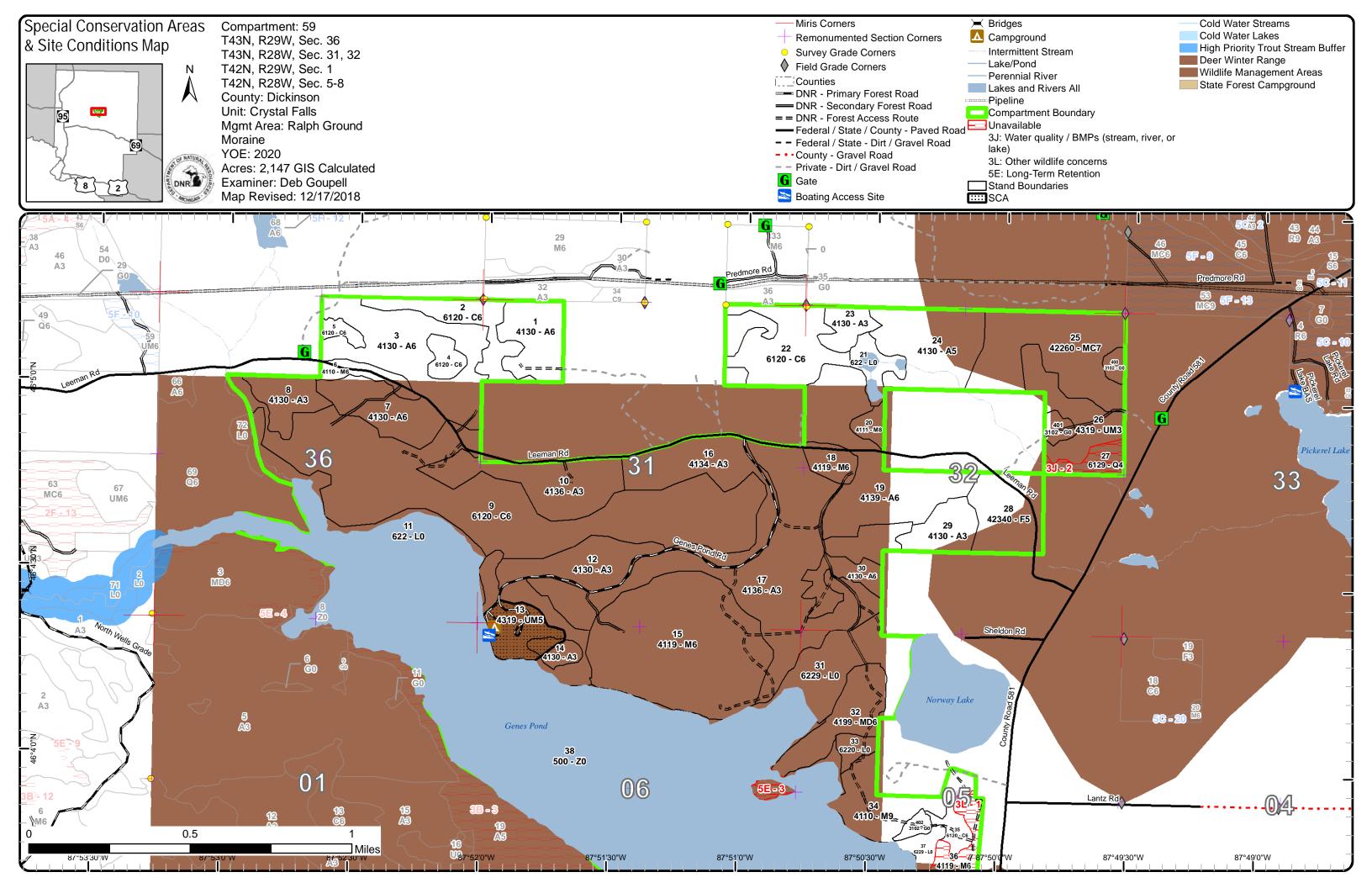


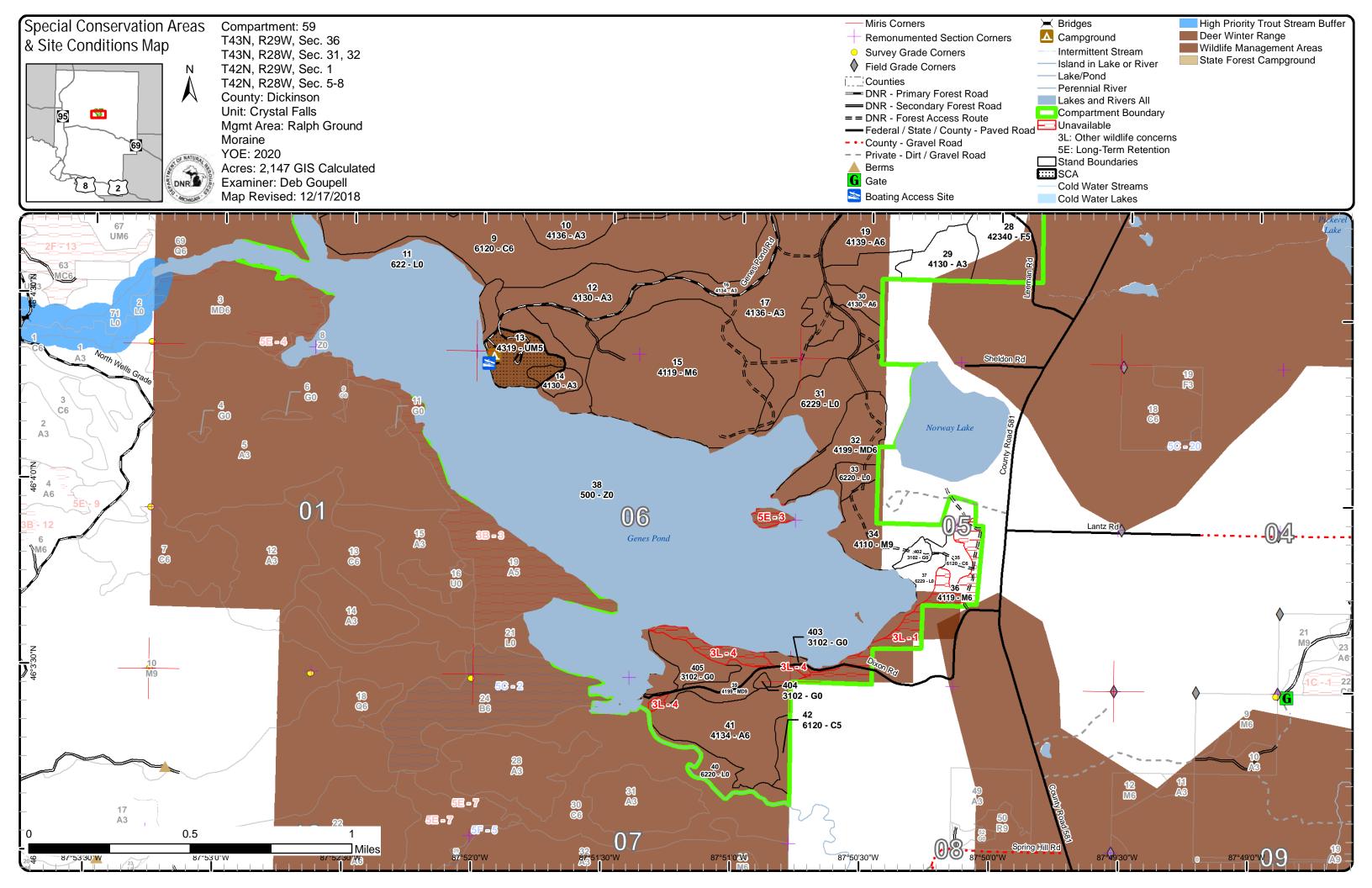












Compartment 59

Year of Entry 2020

Crystal Falls Mgt. Unit

Deb Goupell : Examiner



Age Class

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Aspen	0	56	47	221	171	47	88	0	0	0	0	0	0	0	0	0	0	0	630
Cedar	0	0	0	0	0	0	0	6	0	48	232	0	0	0	0	0	0	0	286
Herbaceous Openland	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Lowland Conifers	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	11
Lowland Shrub	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	26	34	0	0	0	0	0	0	0	60
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	65	0	0	0	0	0	0	0	65
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	197	213
Upland Mixed Forest	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	41	69
Upland Spruce/Fir	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Water	607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	607
Total	779	56	47	249	206	47	88	6	0	85	347	0	0	0	0	0	0	238	2147



Report 2 – Treatment Summary

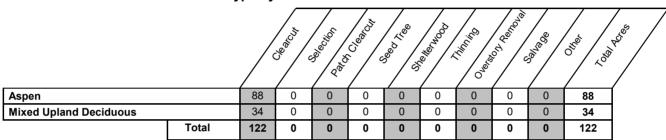
Crystal Falls Mgt. Unit Year of Entry: 2020

Acres of Harvest

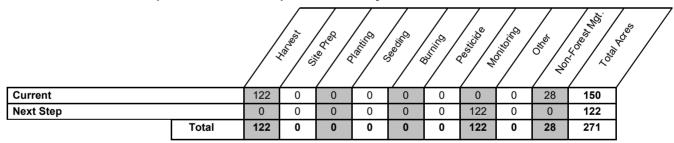
Compartment 59
Total Compartment Acres: 2,147

Commercial Harvest - 122 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 Compartment: 59 s Year of Entry: 2020 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 12059019-Cut 4139 - Aspen, Clearcut with 413 - Aspen Draft Field 19 727 Poletimber 53 Unspec Harvest Even-Aged Mixed Deciduous Well ified Retention Boundary **Site Condition: Habitat Cut: No** Prescription Final Harvest 2" and up except pine, cedar, hemlock, oak. Leave live submerchantable conifer. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step **Treatments:** Acceptable maple, oak, mixed softwood Regen: Other Comment: **Proposed Start Date:** 10/1 /2019 12059030-Cut 152 4130 - Aspen Poletimber 53 81-110 Harvest Clearcut 413 - Aspen Even-Aged Draft Field Well Boundary **Habitat Cut: No** Site Condition: Prescription Final harvest all stems 2" and greater except cedar, pine, oak & hemlock if found. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable maple, oak, mixed softwood Regen: Other Comment: **Proposed Start Date:** 10/1 /2019 12059032-Cut 19.8 4199 - Other Mixed Poletimber 4199 - Other Draft Field 93 Clearcut with Even-Aged 111-Harvest **Upland Deciduous** 140 Retention Mixed Upland Boundary Deciduous **Habitat Cut: No** Site Condition: Prescription Final harvest 2" and greater except cedar, oak, pine, hemlock. WLD needs to verify old OFS. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable maple, mixed softwood, aspen Regen:

Other

Comment: **Proposed Start Date:** 10/1 /2019

12059039-Cut 14.1 4199 - Other Mixed Sawtimber 83 81-110 Harvest Clearcut with 4199 - Other Even-Aged Draft Field **Upland Deciduous** Well Retention Mixed Upland Boundary

Deciduous

Habitat Cut: No Site Condition:

Prescription Final Harvest using 4" DBH spec. Leave all Cedar, Hemlock, Pine, Oak if found. Retain some large diameter Yellow Birch for Wildlife trees. Buffer North edge 200 feet, and Western edge 300 feet. Exclude hardwood pocket. Buffers and exclusion reflected in treatment boundary. Specs:

Include planted Spruce strips on South side of St#405.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Mixed Deciduous, Mixed Conifers Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

s		Crystal	Falls Mgt. Unit		Re	eport 3	Treatmen	ts	-	ment: 59 Entry: 2020	OF NATURAL PROPERTY OF NAT
t a										,	MICHIGAN .
n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
401	12059401-NF	4.7	3102 - Grass	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	3102 - Grass		Draft Field Boundary
		g Mainten	Site Condition ance - Mechanical								
	Step tments:										
Acce Rege	eptable en:										
Othe Com	e <u>r</u> Iment:										
Prop	osed Start Date	<u>:</u> 10/1 /	/2019								
402	12059402-NF	3.7	3102 - Grass	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	3102 - Grass		Draft Field Boundary
		g Mainten	Site Condition ance-Mechanical of								
	Step tments:										
Acce Rege	e <u>ptable</u> en:										
Othe Com	<u>er</u> ment:										
Prop	osed Start Date	<u>:</u> 10/1 /	/2019								
403	12059403-NF	4.2	3102 - Grass	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	3102 - Grass		Draft Field Boundary
		g Mainten	Site Condition ance- Mechanical	_							
	Step tments:										
Acce Rege	eptable en:										
	ment:										
Prop	osed Start Date	<u>:</u> 10/1 /	/2019								
405	12059405-NF	15.1	3102 - Grass	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	3102 - Grass		Draft Field Boundary
		g Mainten	Site Condition ance -Mechanical	_	Conc						
	Step tments:										
Acce Rege	eptable en:										
Othe Com	er ment:										
Prop	osed Start Date	<u>:</u> 10/1 /	/2019								

149.5

Total Treatment Acreage Proposed: Crystal Falls Mgt. Unit

Deb Goupell: Examiner

Compartment: 59
Year of Entry: 2020

Availa	bility for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	ditions
Acres	Available	With Condition	Not Available		3J	3L	5E	
631	631	0	0	Aspen				
285	285	0	0	Cedar				
33	33	0	0	Herbaceous Openland				
11	0	0	11	Lowland Conifers	11			
139	139	0	0	Lowland Shrub				
60	44	0	16	Mixed Upland Deciduous		12	5	
65	65	0	0	Natural Mixed Pines				
213	183	0	30	Northern Hardwood		30		
69	69	0	0	Upland Mixed Forest				
34	34	0	0	Upland Spruce/Fir				
607	607	0	0	Water				
2,147	2,090		57	Total Forested Acres	11	41	5	
-	97%		3%	Relative Percent			-	<u>-</u>

*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	Unavailable	3L: Other wildlife concerns	30	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retained for WLD h	abitat corridor					
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 59 Year of Entry: 2020

4	Unavailable	3L: Other wildlife concerns	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retained for Wildlife	Corridor					

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Crystal Falls Mgt. Unit

Compartment: 059
Year of Entry: 2020



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
Gene's Pond Campground	Concentrated Recreation Area	State Forest Campground	SCA	21
Comments pathway, boat launch				

Crystal Falls Mgt. Unit





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

S	Crystal Falls	s Mgt. Unit		Report 7	′ – Forested	Stands Compartment: 59 Year of Entry: 2020
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Poletimber Well	27.5	30	Immature	Couple of red pine and white pine scattered throughout.
2	6120 - Lowland Cedar	Poletimber Well	25.1	92	Unspecified	There is a bed/bank running through this stand north/south. Most of the birch and balsam in south lobe and along edges.
3	4130 - Aspen	Poletimber Well	63.5	30	Immature	stand origin 1988. Edges of stand near swamp are wetter but not quite "lowland"
4	6120 - Lowland Cedar	Poletimber Well	7.8	92	Unspecified	There is a bed/bank running through this stand north/south. Most of the birch and balsam in south lobe and along edges.
5	6120 - Lowland Cedar	Poletimber Well	4.5	92	Unspecified	There is a bed/bank running through this stand north/south. Most of the birch and balsam in south lobe and along edges.
6	4110 - Sugar Maple Association	Poletimber Well	9.8	92	81-110	Thinned in 2000, Anchor Hardwood.
7	4130 - Aspen	Poletimber Well	30.4	37	Unspecified	Stand Year Origin was 1981. Diameters smaller on south end near swamp edge.
8	4130 - Aspen	Sapling Well	18.1	6	Immature	Harvested 2012 with "Eugene's Beans" sale #12-069-10-01.
9	6120 - Lowland Cedar	Poletimber Well	194.3	97	Unspecified	Cedar diameters range between 6-12". Other species are scattered throughout; stand is dominantly cedar
10	4136 - Aspen, Mixed Conifer	Sapling Well	44.2	26	Immature	white pine saplings are primarily along road. Cut in 1992. More pine regen and conifer in far west lobe.
12	4130 - Aspen	Sapling Well	31.1	9	Immature	Cut in 2009 as 'Levis Pool' # 12-001-09-01. Residual cedar has thinning tops, likely sunscald
13	4319 - Mixed Upland Forest	Poletimber Medium	40.6	85	51-80	GENE'S POND CAMPGROUND IS LOCATED IN THIS STAND. Thinned 2009 for safety and aesthetics.
14	4130 - Aspen	Sapling Well	7.1	9	Immature	Only this portion was clearcut; there is a pocket of cedar in the center.
15	4119 - Mixed Northern Hardwoods	Poletimber Well	123.1	96	51-80	Cut in 2009 as 'Levi's Pool' # 12-001-09-01. Trace hemlock and red oak. Ash saplings on upper hill in center. White pine mostly on south. Center, far east has a swale of aspen with maple saplings that is slightly wet.
16	4134 - Aspen, Spruce/Fir	Sapling Well	47.2	14	Immature	Cut in 2004 Leeman & Gene's TS. SBW affecting WS/BF especially roadside, which is barely merchantable.
17	4136 - Aspen, Mixed Conifer	Sapling Well	137.1	25	Immature	Gene's Pond Campground TS cut 1993. Aspen diameters range from 2-6". Conifer heaviest along roads. Saw 1 jack pine, couple red oak.

s t	Crystal Falls	s Mgt. Unit		Report 7	- Forested	Stands Compartment: 59 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4119 - Mixed Northern Hardwoods	Poletimber Well	10.2	93	81-110	County Road Commission to rerout Leeman road thru this stand 2008. Most of white birch is dead. Oak seems to be best looking tree on site. Not great quality.
19	4139 - Aspen, Mixed Deciduous	Poletimber Well	72.7	53	Unspecified	
20	4111 - S.Maple, Hard Mast Association	Sawtimber Medium	6.1	94	51-80	Harvested 2012
22	6120 - Lowland Cedar	Poletimber Well	40.6	82	Unspecified	
23	4130 - Aspen	Sapling Well	21.4	24	Immature	Harvested 1994
24	4130 - Aspen	Poletimber Medium	47.2	42	Unspecified	Many supercanopy conifers found throughout. Scattered pockets of older Aspen. Wet areas present
25	42260 - Natural Pine, Mixed Deciduous	Sawtimber Poor	65.2	92	1-50	Many canopy gaps filling in with Spruce/Fir. Thick understory of pole-sized conifers. Severe budworm damage on understory.
26	4319 - Mixed Upland Forest	Sapling Well	28.1	26	Immature	Harvested 1992. Many super canopy Pines
27	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	10.7	82	Unspecified	Stream within stand
28	42340 - Upland Spruce/Fir	Poletimber Medium	34.5	38	Unspecified	Supercanopy Pines throughout. Thick conifer understory being severly damaged by budworm. Not a fully stocked stand. Wetter to the South, younger to the North.
29	4130 - Aspen	Sapling Well	18.6	22	Immature	
30	4130 - Aspen	Poletimber Well	15.2	53	81-110	
32	4199 - Other Mixed Upland Deciduous	Poletimber Well	34.0	93	111-140	OPIC - FMD: NOT SCHEDULED FOR CUTTING DUE TO T&E species.(1998) Aspen and birch nearly gone. Much red maple. Check for possible T&E species.See locked comments(2008). 2017: Trees are not of thinning quality. Should be cut unless T & E is verified.
34	4110 - Sugar Maple Association	Sawtimber Well	33.9	96	81-110	Harvested 2012 with "Spring Hill Select" sale #12-080-10-01.
35	6120 - Lowland Cedar	Poletimber Well	7.1	82	81-110	Stand is wet.
36	4119 - Mixed Northern Hardwoods	Poletimber Well	29.6	85	81-110	Very diverse stand with rock and gullies. North finger heavier to balsam/spruce. Yellow birch not holding up well. Many defects in all maple. Conifer found more on grade downslope (northerly). Not exactly a candidate for maintaining all aged hardwood. Some wetter areas in south.

S t a n d	Crystal Falls	Mgt. Unit		Report 7	– Forested S	Stands Compartment: 59 Year of Entry: 2020
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	4199 - Other Mixed Upland Deciduous	Sawtimber Well	26.0	83	81-110	Mix of upland and lowland. Trees in declining health.
41	4134 - Aspen, Spruce/Fir	Poletimber Well	49.6	30	Immature	Many low areas. Stand starting to reach pole-size. Rocks and steep terrain in parts. A couple small older pockets of Spruce/Fir present.
42	6120 - Lowland Cedar	Poletimber Medium	6.1	68	Unspecified	

Compartment: 59 Year of Entry: 2020



Stand	Cover Type	Acres	Managed Site	General Comments:
11	622 - Lowland Shrub	44.5	No	OPIC - FMD: OI Stand Year Origin was
21	622 - Lowland Shrub	11.9	No	
31	6229 - Mixed lowland shrub	46.7	No	OPIC - FMD: OI Stand Year Origin was
33	6220 - Alder/willow	6.1	No	OPIC - FMD: OI Stand Year Origin was
37	6229 - Mixed lowland shrub	10.0	No	OPIC - FMD: OI Stand Year Origin was
38	500 - Water	606.6	No	Gene's Pond
40	6220 - Alder/willow	19.8	No	Scattered trees within riparian buffer
400	3102 - Grass	4.0	No	PICKEREL LAKE GRAVEL PIT.
401	3102 - Grass	4.7	No	OPIC - FMD: OI Stand Year Origin was
402	3102 - Grass	3.7	Yes	OPIC - FMD: OI Stand Year Origin was
403	3102 - Grass	4.2	No	OPIC - FMD: OI Stand Year Origin was
404	3102 - Grass	1.2	No	
405	3102 - Grass	15.1	No	Stand includes a couple rows of planted Spruce on South edge and the road