

Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63120 Entry Year 2020 Acreage: 2,884

County Missaukee

Management Area: Manistee River Valley

Revision Date: 2018-06-14

Stand Examiner: Blair Tweedale

Legal Description:

T24N,R8W,Sec.3,10,11,14,15

Identified Planning Goals:

Vegetation management in the Manistee River Valley Management Area will provide timber products; maintain or enhance wildlife habitat; protect areas of unique character including the Manistee River and its tributaries, a designated natural river; threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management for this 10-year planning period includes continuing aspen management to maintain early successional habitat for hunting and other wildlife-related recreational opportunities; increasing regeneration of oak; focusing on balancing the red pine age class structure through final harvests and re-planting; and on improving red pine quality through partial harvests. Expected trends within this 10-year planning period are increased recreational pressure, especially on the established trails and along the Manistee River and its tributaries; an increased wildland/urban interface and a need to restore barrens communities through prescribed fire; and invasive plant control.

Soil and topography:

Mainly Rubicon sand with Tawas mucky peat and Roscommon mucky sand in the low areas.

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

This compartment is a continuous state land, except 1 private 40 acre parcel. The North, East and West boundaries of the compartment are state land, with private property bordering the South.

Unique Natural Features:

Wood turtle documented along the Manistee River to the nw. Potential for ebony boghaunter and secretive locust in bogs. Potential for wood turtle, Blanding's turtle, and eastern Massasauga along drainages. Potential for eagle, osprey, and great blue heron rookeries.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

None at this time.

Watershed and Fisheries Considerations:

Ham Creek and several small tributaries to Ham Creek flow through Compartment 120. All are Designated Trout Streams, and Ham Creek is also under Natural Rivers jurisdiction in the Upper Manistee River Natural Rivers plan. A Fisheries Division survey in 2003 showed Ham Creek in Compartment 120 (at the Lanning Road crossing) supports a population of naturally reproducing brook trout. However, further downstream (in Section 4), Ham Creek has been severely degraded by beaver damming. In the 2003 survey, no trout were found at the Section 4 site, despite the fact that trout have been found there in the past. The excessive beaver damming of the stream have led to degraded habitat and elevated water temperatures that make the stream not conducive to the survival of salmonids. If lower Ham Creek is ever going to recover to the point where it can again support trout, the riparian zone of Ham Creek must be managed for species other than young successional aspen. Instead, the riparian zone of Ham Creek should be managed for coniferous species. For the proposed aspen clearcutting in Stand 52, please maintain at least a 300' buffer from Ham Creek to discourage aspen regeneration in that area adjacent to the stream. Hopefully this will discourage further beaver colonization and over time the downstream reaches of Ham Creek can recover.

Wildlife Habitat Considerations:

Featured wildlife species in this Management Area are diverse reflecting the wide range of habitat types present. Featured Species of wildlife include american bittern, american woodcock, beaver, black bear, eastern massasuga rattlesnake, golden-winged warbler, mallard, pileated woodpecker, ruffed grouse, snowshoe hare, white-tailed deer, and wood duck. Most of these species benefit from young forest and open types while some require some old trees for foraging and nest/den sites. Maintaining the opening types and balancing harvests with a diverse assortment of age classes in the

timber types will meet the goals for these species.

Mineral Resource and Development Concerns and/or Restrictions

Sections 3, 9-11, & 14-15, T24N-R8W, Missaukee County

An active sand/ gravel pit is located two miles to the northwest. There appears to be some limited sand potential in the southern portion of the compartment. The abandoned Springfield gas field is located just to the north and west of the compartment, but there is no active production nearby. There are some active oil & gas leases nearby. Marathon holds these leases, and they have recently been divesting their interests in the state. There is no known metallic mineral potential in this part of the state. The state does not own all of the mineral rights within sections 3 & 10. Private mineral rights owners must be allowed reasonable access to the land should they choose to explore and/or develop the minerals.

Vehicle Access:

A forest road access plan is detailed on the compartment map. Identified are state and county roads as well as forest roads and trails under the jurisdiction of the DNR.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Miss-Kal Snowmobile Trail 6, North Missaukee ORV Trail and ORV Route.

Fire Protection:

Some areas of this compartment has the fuels cover that would have the potential of fast moving, larger fires. There is recreational opportunities also urban interface that increase the chance of human caused fire starts. Most of the compartment would have good vehicle access for fire equipment movement. BET 6-4-2018

Additional Compartment Information:

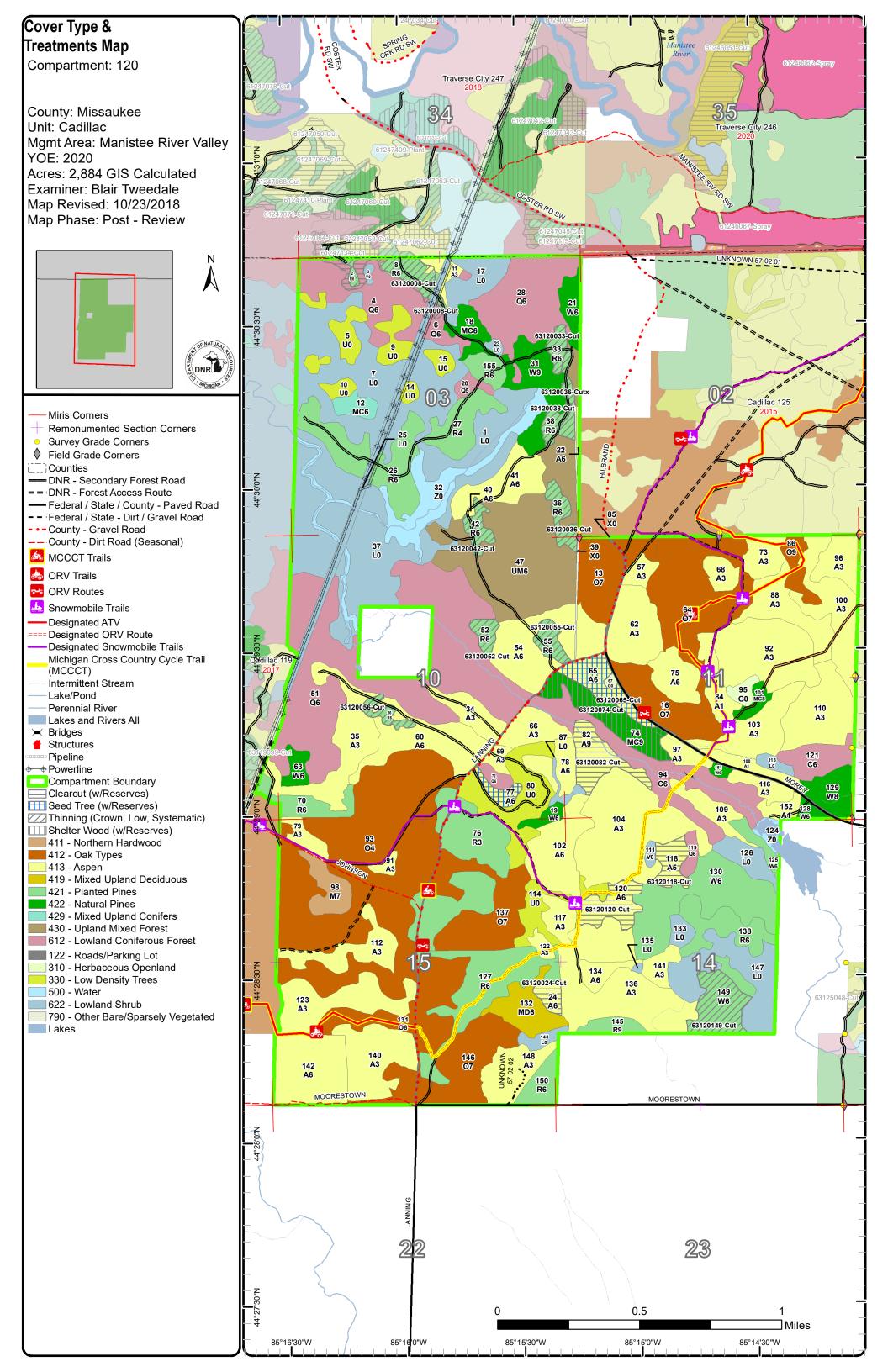
None at this time.

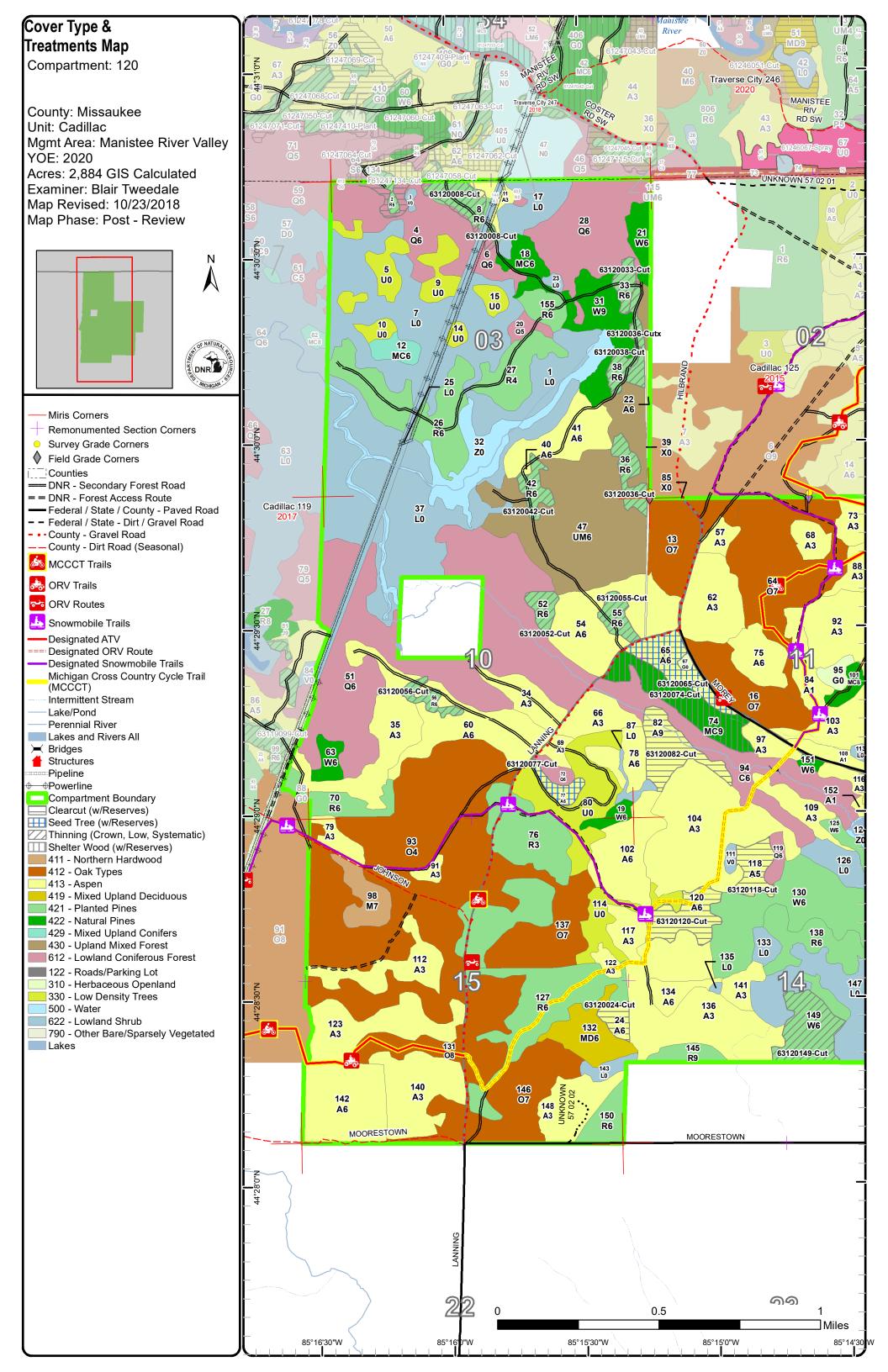
The following reports from the Inventory are attached:

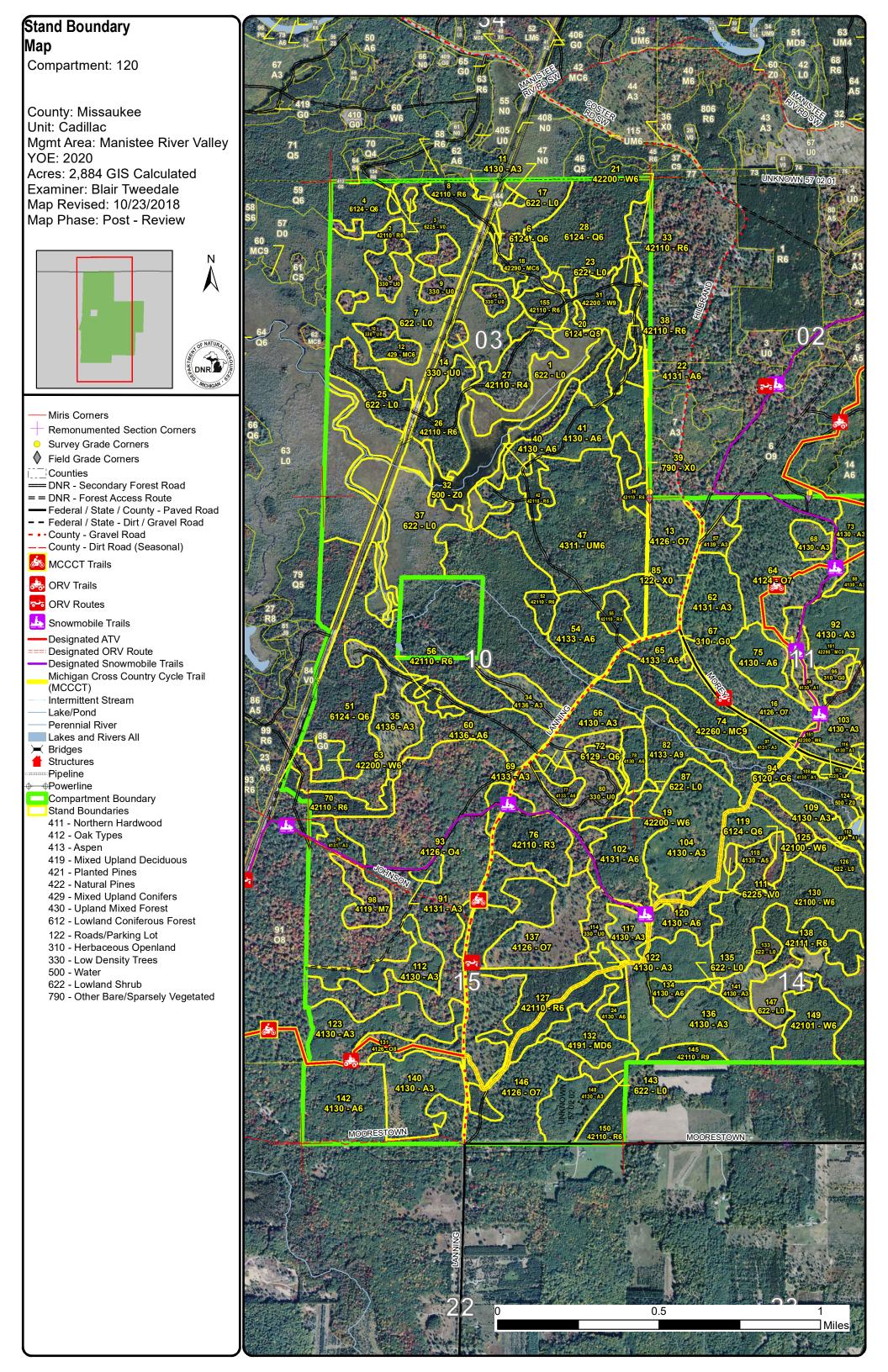
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

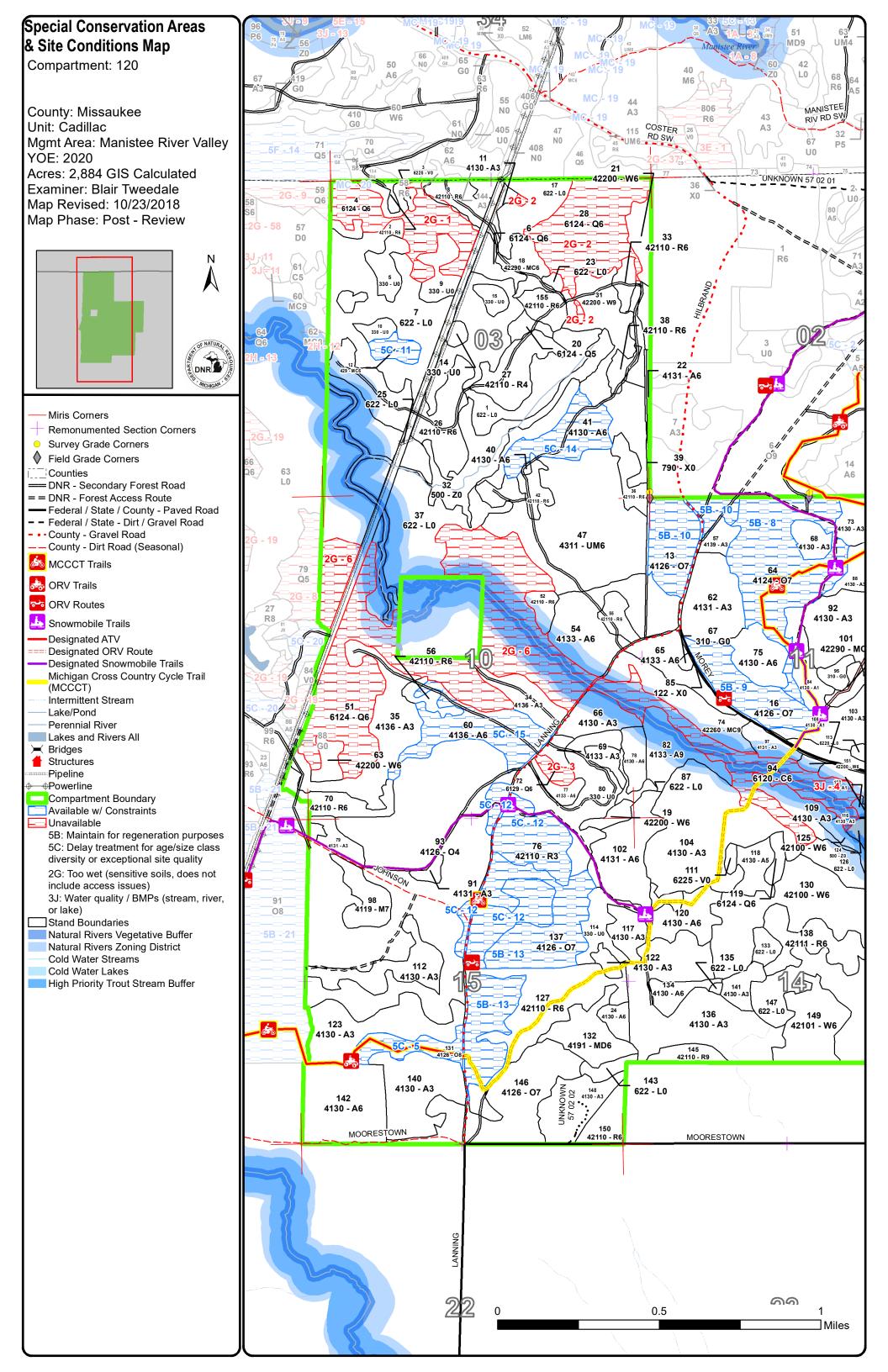
The following information is displayed, where pertinent, on the attached compartment maps:

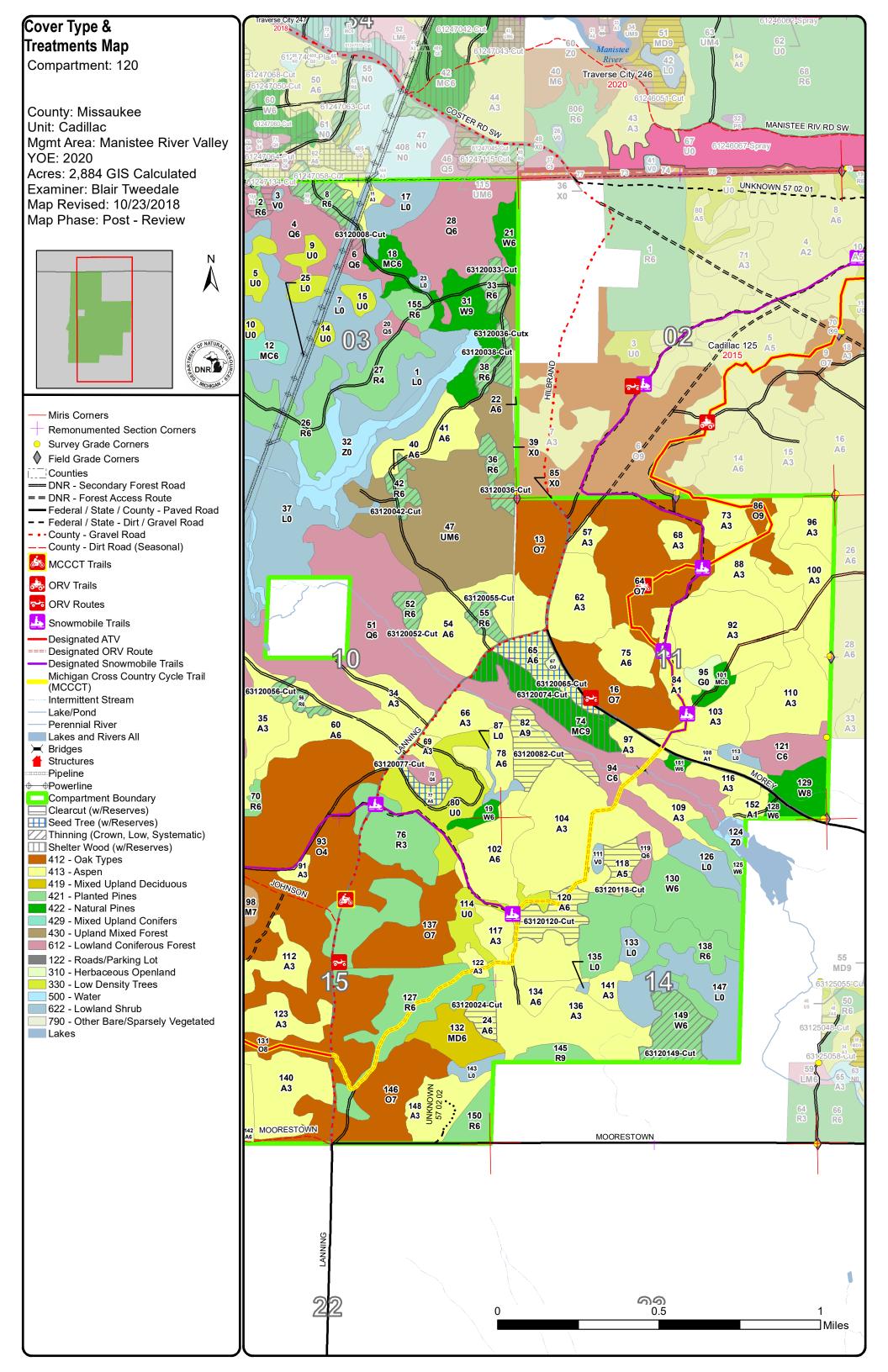
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

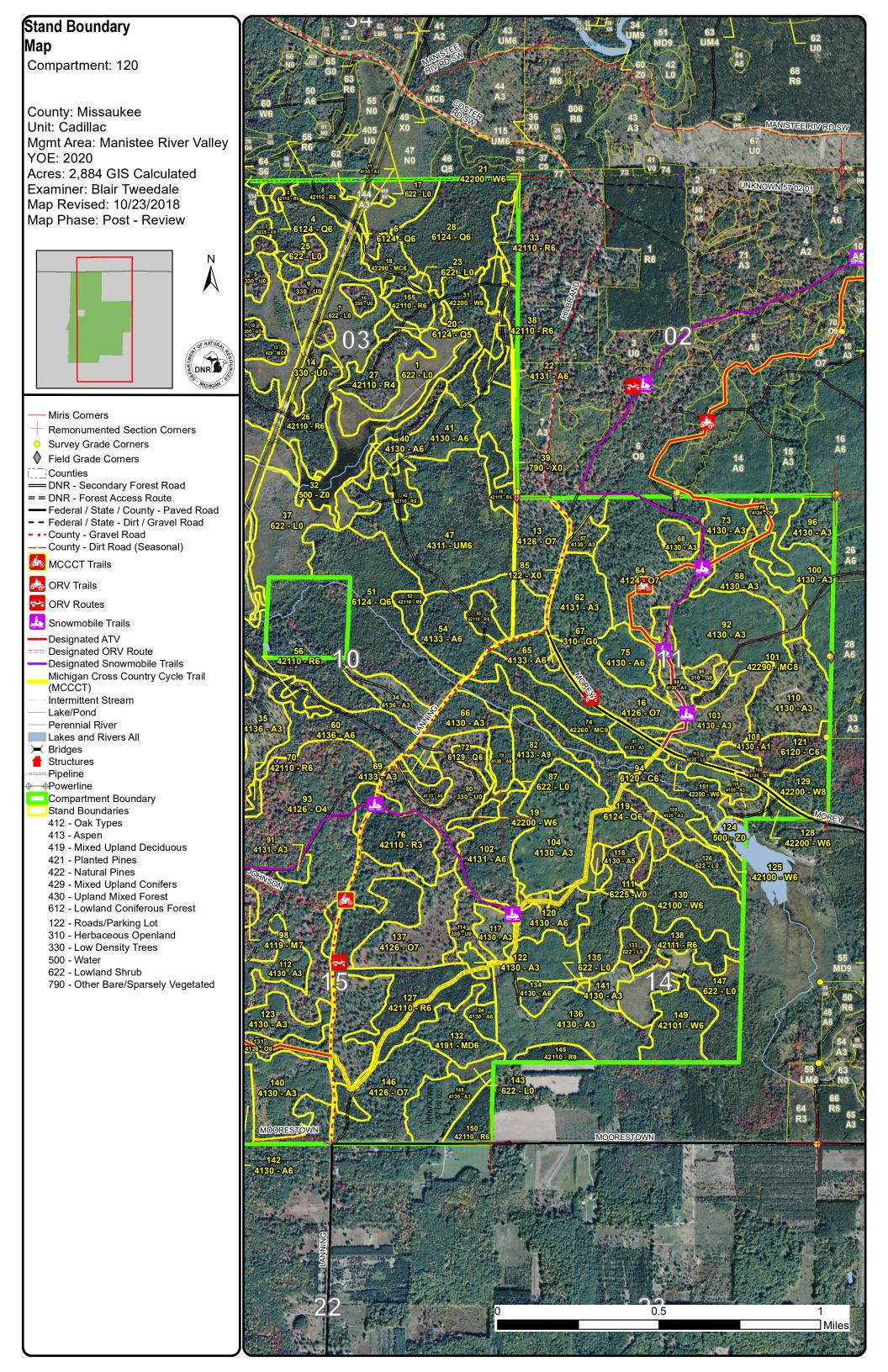


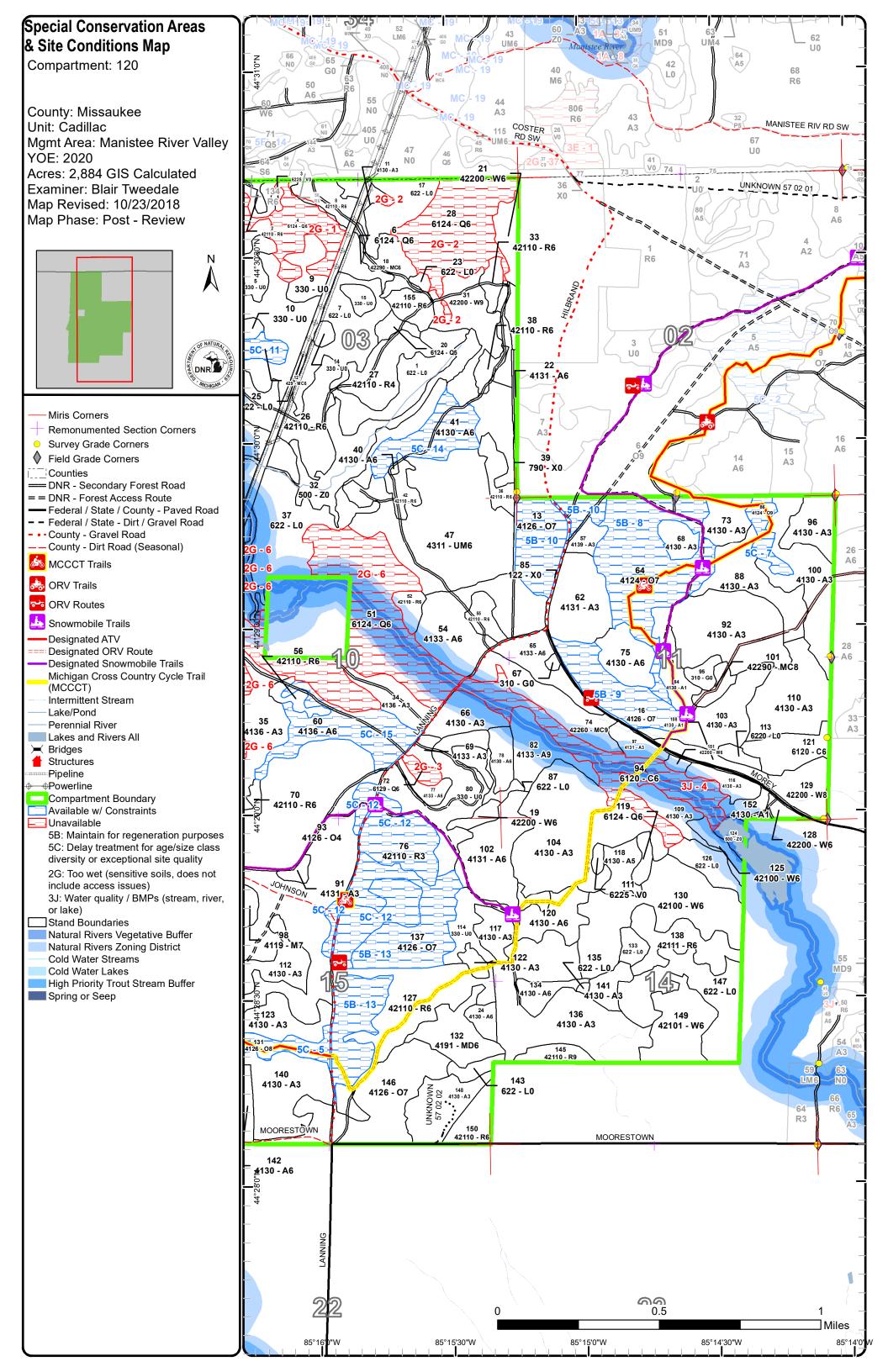












Compartment 120 Year of Entry 2020

Blair Tweedale : Examiner

Cadillac Mgt. Unit



POLEYN

Age Class

	Hoc	Kode C	3 / 2	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	S. S	3 / 6	\$ 20°	3/8	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	8 8	8 8	700	, 2°, 2°, 2°, 2°, 2°, 2°, 2°, 2°, 2°, 2°		\$ 15°	THE A	Br Jue	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Aspen	0	136	200	300	77	114	101	0	0	0	0	0	0	0	0	0	0	0	928
Bare/Sparsely Vegetated	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	16	0	49	0	0	0	65
Herbaceous Openland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Low-Density Trees	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87
Lowland Conifers	0	0	0	0	0	0	0	170	107	0	0	0	0	8	0	0	0	0	285
Lowland Shrub	340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	340
Mixed Upland Deciduous	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	20
Natural Mixed Pines	0	0	0	0	0	0	0	25	5	11	0	0	0	0	0	0	0	0	41
Northern Hardwood	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	14
Oak	0	0	0	193	0	0	0	0	0	61	0	71	96	0	0	0	0	49	468
Red Pine	0	0	0	0	58	15	45	152	22	0	0	0	0	0	0	0	0	0	291
Upland Conifers	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	0	0	110	0	0	0	0	0	0	0	0	0	0	0	0	110
Urban	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Water	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
White Pine	0	0	0	0	0	0	89	53	0	14	0	0	0	0	0	0	0	0	156
Total	501	136	200	493	135	259	235	400	134	107	0	71	112	8	49	0	0	49	2885



Report 2 – Treatment Summary

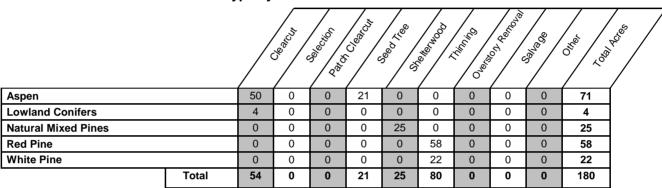
Cadillac Mgt. Unit Year of Entry: 2020

Acres of Harvest

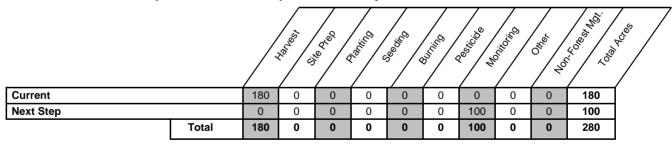
Compartment 120
Total Compartment Acres: 2,884

Commercial Harvest - 180 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



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Report 3 -- Treatments

Compartment: 120

Year of Entry: 2020

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
2	63120002-Cut	2.0	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Field Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> never been thinned... take two rows leave two rows, access is a bit tricky and this should make it so we don't need to come back for 20ish years.

cut with comp to north in kalkaska Specs:

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2017

63120004-Cut 4.4 6124 - Lowland Poletimber 75 51-80 Harvest Clearcut 612 - Lowland Even-Aged Field Boundary Spruce-Fir Well Coniferous Forest

Habitat Cut: No Site Condition:

<u>Prescription</u> cut all trees over 3" dbh to encourage younger growth in the swamp type, bulk of this is on the transition ground and should be very maneagable. no seed trees needed due to narrow nature of the cut and the seed trees along the edge. treat with com to north in kalkaska. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable mixed lowland conifer and mixed lowland deciduous.

Regen:

Other Comment:

Proposed Start Date: 10/1 /2017

63120008-Cut 42110 - Planted 11.8 Poletimber 141-Harvest Systematic 4211 - Planted Even-Aged Field Boundary Red Pine Well 170 Thinning Red Pine

Habitat Cut: No Site Condition:

Prescription thin with stand to the north in compartment 247 out of the kalkaska field office. best access is from the north.

Specs:

Next Step Treatments:

Acceptable thinning

Regen:

Other Comment:

Proposed Start Date: 10/1 /2017

24 63120024-Cut 5.2 4130 - Aspen Poletimber 111-Harvest Clearcut 4139 - Aspen, Even-Aged Approved Mixed Well Proposal 140 Deciduous

Habitat Cut: No Site Condition:

Prescription final harvest. Leave large pine.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen and mixed deciduous

Regen: **Other** Comment:

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

S t		Ca	adillac Mgt. Unit		Re	port 3	Treatme	nts	-	tment: 120 Entry: 2020	DNR DNR
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
33	63120033-Cut	5.2	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
		ne to an a	Site Condition average residual BA	_							
	Step tments:										
Acce Reg	eptable N/A en:										
Othe Com	<u>er</u> iment:										
Prop	osed Start Date	<u>:</u> 10/1	/2019								
36	63120036-Cut	8.8	42110 - Planted Red Pine	Poletimber Well	40	141- 170	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
		th wide sv	Site Condition wath with 32 ft of res	_	/een.						
	: Step tments:										
Acce Reg	eptable Mix of s en:	species									
Othe Com	e <u>r</u> iment:										
Prop	osed Start Date	<u>:</u> 10/1	/2019								
36	63120036- Cutx	6.1	42110 - Planted Red Pine	Poletimber Well	40	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
	-	leave a ı	Site Condition residual of 110 BA.	<u>:</u>							
	Step tments:										
Acce Reg	eptable en:										
	ment:										
	osed Start Date		/2019								
38	63120038-Cut	4.8	42110 - Planted Red Pine	Poletimber Well	· 61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
		ne to a av	Site Condition rerage residual BA	_							
	Step tments:										
Reg											
Othe Com	er iment:										

10/1 /2019

Proposed Start Date:

S t		Ca	ndillac Mgt. Unit		Re	port 3	Treatme	nts	-	tment: 120 Entry: 2020	DNR DNR
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
42	63120042-Cut	6.9	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
	oitat Cut: No scription Thin to cs:	approx. 1	Site Condition: 10 BA.	<u>.</u>							
	t Step atments:										
Acc Reg	eptable en:										
Othe Com	<u>er</u> nment:										
Prop	osed Start Date	10/1	/2019								
52	63120052-Cut	5.5	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
	oitat Cut: No scription Thin to cs:	approx.11	Site Condition: 10 BA	Į.							·
	t Step atments:										
Acc Reg	eptable en:										
Othe Com	<u>er</u> nment:										
Prop	osed Start Date	10/1	/2019								
55	63120055-Cut	7.0	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
	oitat Cut: No scription Thin to cs:	approx. 1	Site Condition: 10 BA								
	t Step atments:										
Acc Reg	eptable en:										
	nment:										
	osed Start Date		/2019								
56	63120056-Cut	5.2	42110 - Planted Red Pine	Poletimber Well	61	141- 170	Harvest	Low Thinning	4211 - Planted Red Pine	Even-Aged	Approved Proposal
		ne to an a	Site Condition: verage residual BA	=							
	t Step atments:										
Acc Reg	eptable N/A en:										
Othe Com	er nment:										

10/1 /2019

Proposed Start Date:

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

82 63120082-Cut 18.8 4133 - Aspen, Sawtimber 51 111-Harvest Clearcut with 4319 - Mixed Two-Aged Approved Mixed Pine Well 140 Retention **Upland Forest** Proposal

Habitat Cut: No Site Condition:

<u>Prescription</u> Harvest aspen and maple. Leave large pine and patches of oak where applicable.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, maple, oak, white pine and red pine.

Regen:

Other grouse spec

Comment:

Proposed Start Date: 10/1 /2019

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 120 s Year of Entry: 2020 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type Approval** Age n Method Objective Name CoverType Density Age Range Type Structure **Status** d Even-Aged Approved 118 63120118-Cut 9.9 4130 - Aspen Poletimber 50 Clearcut 4133 - Aspen, Unspec Harvest Medium ified Mixed Pine Proposal **Habitat Cut:** No **Site Condition:** Prescription Final harvest. Leave all white pine and white oak. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable mixed pine and mixed deciduous. Regen: Other Very poor quality aspen. Help stand to convert to a pine, mixed deciduous stand. grouse spec Comment: **Proposed Start Date:** 10/1 /2019 4130 - Aspen Unspec 120 63120120-Cut 16.1 Poletimber 50 Harvest Clearcut with 4131 - Aspen, Even-Aged Approved Well ified Retention Oak Proposal **Habitat Cut: No Site Condition:** Prescription Final harvest. Leave a group of oak with some aspen mixed in. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step **Treatments:** Acceptable aspen oak and some pine. Regen: Other Grouse spec and ORV trail. Comment: **Proposed Start Date:** 10/1 /2019 149 63120149-Cut 42101 - Planted Poletimber 56 Systematic Approved

141-

Harvest

4319 - Mixed

Upland Forest

. Thinning

Two-Aged

Proposal

Habitat Cut: No

Deciduous **Site Condition:**

White Pine, Mixed

Prescription remove 50% of the volume (take 2 leave 2).

Well

Specs:

Next Step

Treatments:

Acceptable white pine and mixed deciduous.

21.6

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed: 184.8

Compartment: 120

Cadillac Mgt. Unit

Blair Tweedale : Examiner Year of Entry: 2020

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	ditions
Acres	Available	With Condition	Not Available		5B	5C	2G	3J
927	867	60	0	Aspen		60		
3	3	0	0	Bare/Sparsely Vegetated				
3	3	0	0	Bog				
65	16	0	49	Cedar				49
6	6	0	0	Herbaceous Openland				
87	87	0	0	Low-Density Trees				
285	21	0	264	Lowland Conifers			264	
340	340	0	0	Lowland Shrub				
20	20	0	0	Mixed Upland Deciduous				
40	40	0	0	Natural Mixed Pines				
14	14	0	0	Northern Hardwood				
469	242	227	0	Oak	204	23		
291	233	58	0	Red Pine		58	0	
7	0	7	0	Upland Conifers		7		
110	110	0	0	Upland Mixed Forest				
15	15	0	0	Urban				
47	47	0	0	Water				
156	156	0	0	White Pine				
2,884	2,219	351	314	Total Forested Acres	204	147	264	49
	77%	12%	11%	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.

1 U	Unavailable	2G: Too wet (sensitive	20			· · · · · · · · · · · · · · · · · · ·	
		soils, does not include access issues)	38	Unspecified	Unspecified	Unspecified	Unspecified
Comr	ments:						

Report 4 – Site Conditions

Cadillac Mgt. Unit

Blair Tweedale : Examiner

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	53	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	49	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	170	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Cadillac Mgt. Unit

Blair Tweedale : Examiner

omments:						
mments.						
Available	5B: Maintain for regeneration purposes	71	Unspecified	Unspecified	Unspecified	Unspecified
omments:						
Available	5B: Maintain for regeneration purposes	28	Unspecified	Unspecified	Unspecified	Unspecified
omments:						
Available	5B: Maintain for regeneration purposes	32	Unspecified	Unspecified	Unspecified	Unspecified
omments:						
Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
omments:						
Available	5C: Delay treatment for age/size class diversity or exceptional site quality	58	Unspecified	Unspecified	Unspecified	Unspecified
omments:						
	Available Available Available Available Available Available Available	regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality	regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality	regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality	regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality	regeneration purposes Available 5B: Maintain for regeneration purposes Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5B: Maintain for regeneration purposes Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality Available 5C: Delay treatment for age/size class diversity or exceptional site quality

Report 4 – Site Conditions

Cadillac Mgt. Unit

Blair Tweedale : Examiner

13	Available	5B: Maintain for regeneration purposes	73	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	35	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

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				

Cadillac Mgt. Unit Compartment: 120
Year of Entry 2020





* 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	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond 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	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 effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spapproved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table locat folder.	S Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts

S t	Cadillac	: Mgt. Unit		Report 7	- Forested	Stands Compartment: 120 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	42110 - Planted Red Pine	Poletimber Well	2.0	61	141-170	Marked with stands in Kalkaska Co.
4	6124 - Lowland Spruce- Fir	Poletimber Well	43.0	75	51-80	Alot of blowdown.
6	6124 - Lowland Spruce- Fir	Poletimber Well	6.8	75	51-80	
8	42110 - Planted Red Pine	Poletimber Well	11.0	61	141-170	
11	4130 - Aspen	Sapling Well	4.9	14	Unspecified	
12	429 - Mixed Upland Conifers	Poletimber Well	6.6	82	111-140	Mixed pine, spruce, fir and deciduous island surrounded by tag alder.
13	4126 - White, Black, N. Pin Oak	Sawtimber Poor	32.1	87	1-50	
16	4126 - White, Black, N. Pin Oak	Sawtimber Poor	28.4	87	1-50	
18	42290 - Natural Mixed Pine	Poletimber Well	10.6	82	51-80	Mix of red and white pine
19	42200 - Natural White Pine	Poletimber Well	4.4	85	81-110	upland and lowland area dominated by white pine. Has lowland brush inclusions.
20	6124 - Lowland Spruce- Fir	Poletimber Medium	4.2	75	51-80	Wet.
21	42200 - Natural White Pine	Poletimber Well	9.5	85	51-80	Stand cut with sale #63-008-10-01 Island Hopper
22	4131 - Aspen, Oak	Poletimber Well	2.1	40	81-110	mixed stand
24	4130 - Aspen	Poletimber Well	5.2	42	111-140	
26	42110 - Planted Red Pine	Poletimber Well	42.4	62	81-110	Red pine stand.
27	42110 - Planted Red Pine	Poletimber Poor	20.5	68	111-140	Red pine dominated stand with mixed lowland on edges.
28	6124 - Lowland Spruce- Fir	Poletimber Well	52.8	75	51-80	
31	42200 - Natural White Pine	Sawtimber Well	26.5	65	81-110	Variable diameter white pine with some other mixed species scattered throughout. Thinned approximately 2011. Southern area of stand is red pine over aspen regen.

S t	Cadillad		Report 7	- Forested	Stands Compartment: 120 Year of Entry: 2020	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	42110 - Planted Red Pine	Poletimber Well	5.2	61	141-170	
34	4136 - Aspen, Mixed Conifer	Sapling Well	13.6	3	Immature	Stand was cut in 2014. All oak, cherry, pine pine, and white pine 10 dbh and less was left.
35	4136 - Aspen, Mixed Conifer	Sapling Well	38.5	3	Immature	Cut in 2014. All red pine, cherry and oak was left.
36	42110 - Planted Red Pine	Poletimber Well	14.9	40	141-170	Planted red pine with mix of aspen and white pine. Dominate cover type species varies throughout. Scattered sawlog sized red pine throughout stand.
38	42110 - Planted Red Pine	Poletimber Well	4.8	61	141-170	
40	4130 - Aspen	Poletimber Well	0.6	40	Unspecified	30-35 year old aspen.
41	4130 - Aspen	Poletimber Well	24.5	47	Unspecified	Mix of quaking and bigtooth aspen. Some clones of bigtooth have large diameters.
42	42110 - Planted Red Pine	Poletimber Well	6.9	61	141-170	Planted pine.
47	4311 - Pine, Aspen Mix	Poletimber Well	109.9	40	81-110	Planted red pine with mix of aspen and white pine. Dominate cover type species varies throughout. Scattered sawlog sized red pine throughout stand.
51	6124 - Lowland Spruce- Fir	Poletimber Well	170.1	68	141-170	Lowland conifer swamp.
52	42110 - Planted Red Pine	Poletimber Well	5.5	61	141-170	Nice red pine.
54	4133 - Aspen, Mixed Pine	Poletimber Well	42.9	46	Unspecified	Aspen/pine mix. Low lying wet area in the west area.
55	42110 - Planted Red Pine	Poletimber Well	7.0	61	141-170	Planted red pine stand
56	42110 - Planted Red Pine	Poletimber Well	5.2	61	141-170	BA averages 170, with areas higher and lower.
57	4139 - Aspen, Mixed Deciduous	Sapling Well	5.7	14		Old cut. BTA and red maple saplings with some scattered red pine and white pine in overstory.l
60	4136 - Aspen, Mixed Conifer	Poletimber Well	35.0	52	Unspecified	Low quality quaking aspen.
62	4131 - Aspen, Oak	Sapling Well	27.7	15	1-50	

S t	Cadillad		Report 7	- Forested \$	Stands Compartment: 120 Year of Entry: 2020	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
63	42200 - Natural White Pine	Poletimber Well	6.3	65	141-170	
64	4124 - Red with White Oak	Sawtimber Poor	71.4	106	1-50	
65	4133 - Aspen, Mixed Pine	Poletimber Well	15.5	50	Unspecified	Mixed upland deciduous.
66	4130 - Aspen	Sapling Well	14.3	26		
68	4130 - Aspen	Sapling Well	7.6	40		
69	4133 - Aspen, Mixed Pine	Sapling Well	3.9	3	Immature	Final Harvested in summer 2014. Oak and red pine were left.
70	42110 - Planted Red Pine	Poletimber Well	13.9	61	141-170	1/3 row thinned with adjacent stand in compartment 119. Third row thinned in 2009.
72	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	4.0	123	81-110	lowland conifer swamp.
73	4130 - Aspen	Sapling Well	12.3	26		
74	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	24.7	65	111-140	Mix of natural red and white pine, aspen and red maple.
75	4130 - Aspen	Poletimber Well	15.8	38		
76	42110 - Planted Red Pine	Sapling Well	57.7	38	171-200	Planted red pine. overtopping hardwoods were removed.
77	4133 - Aspen, Mixed Pine	Poletimber Well	5.3	50	Unspecified	Low quality quaking aspen
78	4130 - Aspen	Poletimber Well	13.2	38		Quaking aspen with a white pine understory.
79	4131 - Aspen, Oak	Sapling Well	7.4	14	Unspecified	Final harvested in 2004. Some scattered sawlog sized oak remains.
82	4133 - Aspen, Mixed Pine	Sawtimber Well	18.8	51	111-140	Mix of wp,rp,rm,bta, pb,bc and white oak. Very diverse stand.
84	4130 - Aspen	Sapling Poor	14.0	7		Final harvested in 2011 as part of "New office aspen". All oak and pine was left.
86	4124 - Red with White Oak	Sawtimber Well	9.8	111	51-80	Mix of red and white oak. North Missaukee ORV trail passes thru stand.

S t	Cadillad	c Mgt. Unit		Report 7	- Forested	Stands Compartment: 120 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
88	4130 - Aspen	Sapling Well	24.8	11	Immature	
91	4131 - Aspen, Oak	Sapling Well	3.1	14	Unspecified	Aspen final harvested in 2004. Did not cut oak. Stand is adjacent to snowmobile trail.
92	4130 - Aspen	Sapling Well	47.4	26		
93	4126 - White, Black, N. Pin Oak	Poletimber Poor	192.8	29	1-50	Stand was harvested in 2014, all young oak as well as scattered green ringed oak was left. (All oak less than 6 inches dbh was left) Advanced oak is enough to make it forested. Was a chipping operation. Snowmobile trail goes though stand.
94	6120 - Lowland Cedar	Poletimber Well	49.4	132	111-140	Conifer swamp along Ham Creek.
96	4130 - Aspen	Sapling Well	14.6	22	1-50	
97	4131 - Aspen, Oak	Sapling Well	6.9	14		ORV Route / Snowmobile trail runs through stand.
98	4119 - Mixed Northern Hardwoods	Sawtimber Poor	13.6	87	1-50	Low density trees with white oak making a presence in the understory
100	4130 - Aspen	Sapling Well	32.9	26		
101	42290 - Natural Mixed Pine	Sawtimber Medium	5.1	77	81-110	
102	4131 - Aspen, Oak	Poletimber Well	30.6	40	Unspecified	
103	4130 - Aspen	Sapling Well	25.5	11	Immature	Harvested in 2005. Part of the Morey East Aspen sale.
104	4130 - Aspen	Sapling Well	70.3	14		Snowmobile stand passes thru stand.
108	4130 - Aspen	Sapling Poor	7.8	7	Unspecified	
109	4130 - Aspen	Sapling Well	11.8	14		
110	4130 - Aspen	Sapling Well	34.6	7	Immature	
112	4130 - Aspen	Sapling Well	21.3	25		MERGE WITH STAND 123
116	4130 - Aspen	Sapling Well	8.0	14		

S t	Cadillac Mgt. Unit			Report 7	– Forested	Stands Compartment: 120 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
117	4130 - Aspen	Sapling Well	9.5	3	Immature	
118	4130 - Aspen	Poletimber Medium	9.9	50	Unspecified	Low quality quaking aspen. Hypox. canker present.
119	6124 - Lowland Spruce- Fir	Poletimber Well	4.2	120	81-110	Lowland conifer swamp with tag alder understory. Low and wet.
120	4130 - Aspen	Poletimber Well	16.1	50	Unspecified	Low quality Q. Aspen.
121	6120 - Lowland Cedar	Poletimber Well	16.1	118	111-140	
122	4130 - Aspen	Sapling Well	3.5	14	Unspecified	North Missaukee ORV Trail passes thru stand.
123	4130 - Aspen	Sapling Well	34.3	25	Unspecified	
125	42100 - Planted White Pine	Poletimber Well	6.0	56	111-140	
127	42110 - Planted Red Pine	Poletimber Well	45.1	57	141-170	Red pine density varies between 120-190. Fire scares along ORV trail that runs through stand.
128	42200 - Natural White Pine	Poletimber Well	3.2	68	111-140	Natural mixed stand of white and red pine. Stand is two aged. Older white pine is 98. Younger white pine is 58.
129	42200 - Natural White Pine	Sawtimber Medium	15.1	65	1-50	
130	42100 - Planted White Pine	Poletimber Well	56.6	56	141-170	Small diameters. Some log size white pine.
131	4126 - White, Black, N. Pin Oak	Sawtimber Medium	13.3	110	51-80	Narrow stand. ORV trail passes thru middle of stand. Leave stand as corridor for ORV trail.
132	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	19.7	45	81-110	Mixed stand.
134	4130 - Aspen	Poletimber Well	7.7	38		Nice aspen, maple, oak, pine mix.
136	4130 - Aspen	Sapling Well	68.0	26	Unspecified	Nice A3
137	4126 - White, Black, N. Pin Oak	Sawtimber Poor	72.5	110	1-50	100 year old white oak. Moderate to heavy oak regen throughout stand. Stand cut in Dec 2011, scattered oak left.
138	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	21.8	75	111-140	Red pine stand with under planted white pine.

S t	Cadillac Mgt. Unit			Report 7	– Forested S	Stands Compartment: 120 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
140	4130 - Aspen	Sapling Well	33.5	25		Nice A3.
141	4130 - Aspen	Sapling Well	7.4	3	Immature	Stand was final harvested in spring of 2014.
142	4130 - Aspen	Poletimber Well	40.7	37		Flat ground. Some scattered white pine and red pine in overstory (8-10") stuff. South end of stand is a bit more mature, with a more even mix in the overstory.
145	42110 - Planted Red Pine	Sawtimber Well	7.3	63	141-170	
146	4126 - White, Black, N. Pin Oak	Sawtimber Poor	49.1	98	1-50	North side of road was harvested in Dec. 2011, seedtrees left. South side of road has a greater canopy closure, could be harvested, but SMALL area.
148	4130 - Aspen	Sapling Well	21.7	26		Aspen.
149	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	26.2	56	141-170	Some wet pockets. Low lying area in the SE.
150	42110 - Planted Red Pine	Poletimber Well	11.1	63	111-140	
151	42200 - Natural White Pine	Poletimber Well	1.8	65	111-140	
152	4130 - Aspen	Sapling Poor	5.8	7	Unspecified	Final harvested in 2011 as part of "New office aspen". Pine under 6inch was left along with the oak.
155	42110 - Planted Red Pine	Poletimber Well	8.5	62	111-140	

Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
1	622 - Lowland Shrub	25.7	No	
3	6225 - Bog	1.2	No	
5	330 - Low-Density Trees	9.0	No	
7	622 - Lowland Shrub	91.8	No	
9	330 - Low-Density Trees	10.2	No	
10	330 - Low-Density Trees	8.8	No	
14	330 - Low-Density Trees	2.6	No	
15	330 - Low-Density Trees	4.4	No	
17	622 - Lowland Shrub	18.1	No	
23	622 - Lowland Shrub	1.6	No	
25	622 - Lowland Shrub	23.8	No	Power line and pipeline ROW
32	500 - Water	41.9	No	
37	622 - Lowland Shrub	110.4	No	
39	790 - Other Bare/Sparsely Vegetate	3.4	No	power line right of way
67	310 - Herbaceous Openland	1.1	No	
80	330 - Low-Density Trees	35.5	No	
85	122 - Road/Parking Lot	15.1	No	
87	622 - Lowland Shrub	3.1	No	

Cadillac Mgt. Unit

Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
95	310 - Herbaceous Openland	4.5	No	
111	6225 - Bog	1.9	No	
113	6220 - Alder/willow	3.6	No	
114	330 - Low-Density Trees	16.3	No	
124	500 - Water	5.0	No	
126	622 - Lowland Shrub	11.6	No	
133	622 - Lowland Shrub	4.9	No	
135	622 - Lowland Shrub	0.7	No	
143	622 - Lowland Shrub	4.7	No	
147	622 - Lowland Shrub	40.0	No	