

# **Compartment Review Presentation**

**Cadillac Forest Management Unit** 

Compartment 63122 Entry Year 2019 Acreage: 2,062

County Missaukee

Management Area: Manistee River Valley

Revision Date: 2017-06-12 Stand Examiner: Steve Eisele

**Legal Description:** 

T24N, R7W, Sections 1, 2, 11, 12

#### **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:

Rubicon sand and Montcalm-Graycalm complex. Rolling terrain.

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

Located in the northeastern part of Missaukee County, this compartment is bounded by Kalkaska County to the north, Vandermullen Road to the west and Johnson Road to the south. Approximately 3 miles of the North Missaukee Cycle trail passes through the north part of the compartment. A small portion of the Miss.-Kal. Snowmobile Trail runs through the north part of the compartment. Most of the compartment is of state ownership with a few scattered private inholdings Most of the private ownership is seasonal with land use mainly for hunting.

#### **Unique Natural Features:**

Red-shouldered hawk has been located in compartment; also to the ne. Eastern Massasagua to the e. 3 wood turtle records to the ne.

#### **Archeological, Historical, and Cultural Features:**

Numerous old RR grades located throughout the compartment. No concerns.

#### **Special Management Designations or Considerations:**

#### **Watershed and Fisheries Considerations:**

#### Wildlife Habitat Considerations:

Featured wildlife species include deer, bear, and ruffed grouse. Management objectives are to retain a variety of cover types and age class diversity as well as maintain and/or enhance habitat including work on openings and edges to preserve wildlife viewing and hunting opportunities. (A. Herban 6/07/17)

#### Mineral Resource and Development Concerns and/or Restrictions

There is currently no known metallic mineral potential in this part of the state. An active sand/gravel pit is located in Section 13, less than one mile to the south, and sand and gravel potential appears to be good within the compartment. The compartment includes part of the Cannon Creek Field, which has one remaining producing oil well. A Collingwood gas well (temporarily abandoned) is located to the west of the compartment. It was most recently operated by Marathon and it is anticipated that the well will not go back into production. The east half of the compartment is currently leased by Marathon for oil and gas exploration but no drilling is anticipated, and Marathon is in the process of releasing all of their state leases.

#### **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. Also indicated are forest roads and trails under the jurisdiction of the DNR that are proposed for abandonment. These roads were determined to be in excess of the access needs in the area, are a threat to the resources, or are a concern environmentally.

# **Survey Needs:**

Nothing is needed at this time, but may be needed following treatment development.

#### **Recreational Facilities and Opportunities:**

There are a variety of motorized recreational trails located within this compartment. The North Missuakee Route, which is also snowmobile trail #6 is located in the Northwest corner of this compartment. The North Missuakee ORV trail and Michigan Cross Country Cycle Trail (MCCCT) run thru the middle of this compartment. Policy and Procedure 32.22-01 (Best Management Practices for Forest and Wildlife Management Adjacent to Recreational Trails).should be considered if forest treatments impact these motorized recreational trails.

#### **Fire Protection:**

The Initial Attack for this area is from the Manton Field Office. There is some urban interface within the unit. Access would be fairly good in this compartment for equipment, however there is not a lot of natural barriers.

#### **Additional Compartment Information:**

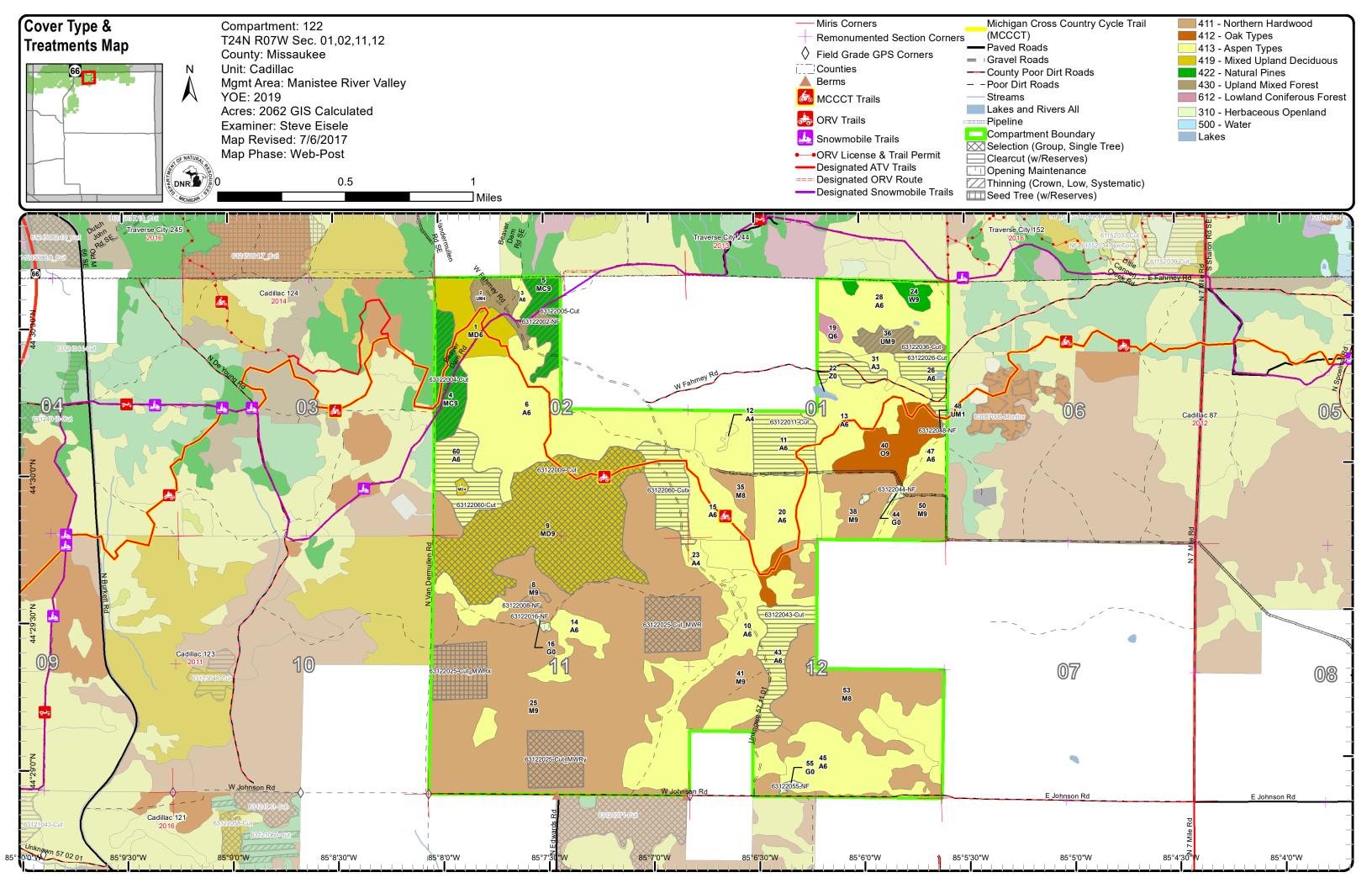
Erosion is occurring on the pipeline road in section 1 from ORV's and vehicle traffic.

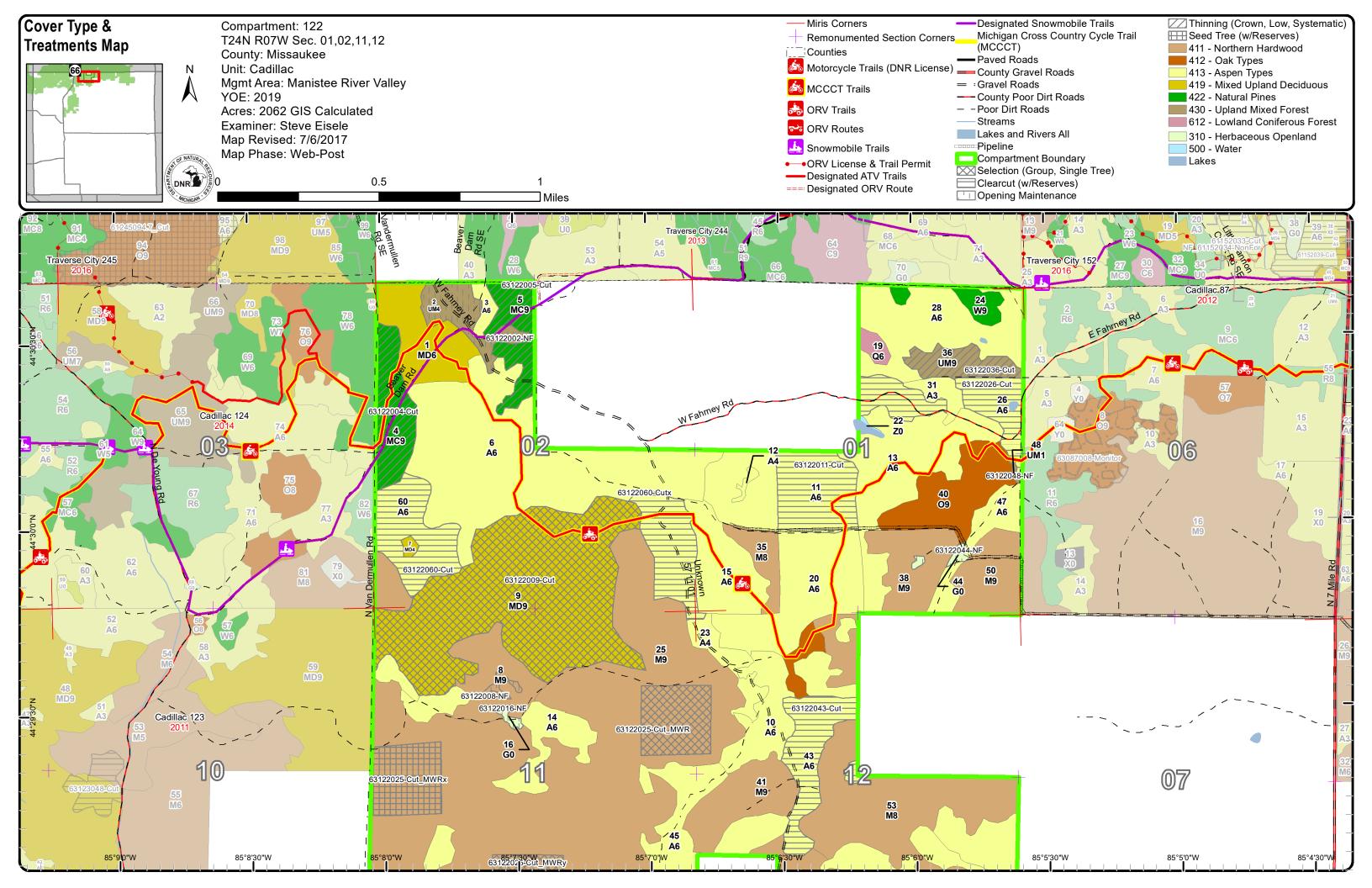
#### The following reports from the Inventory are attached:

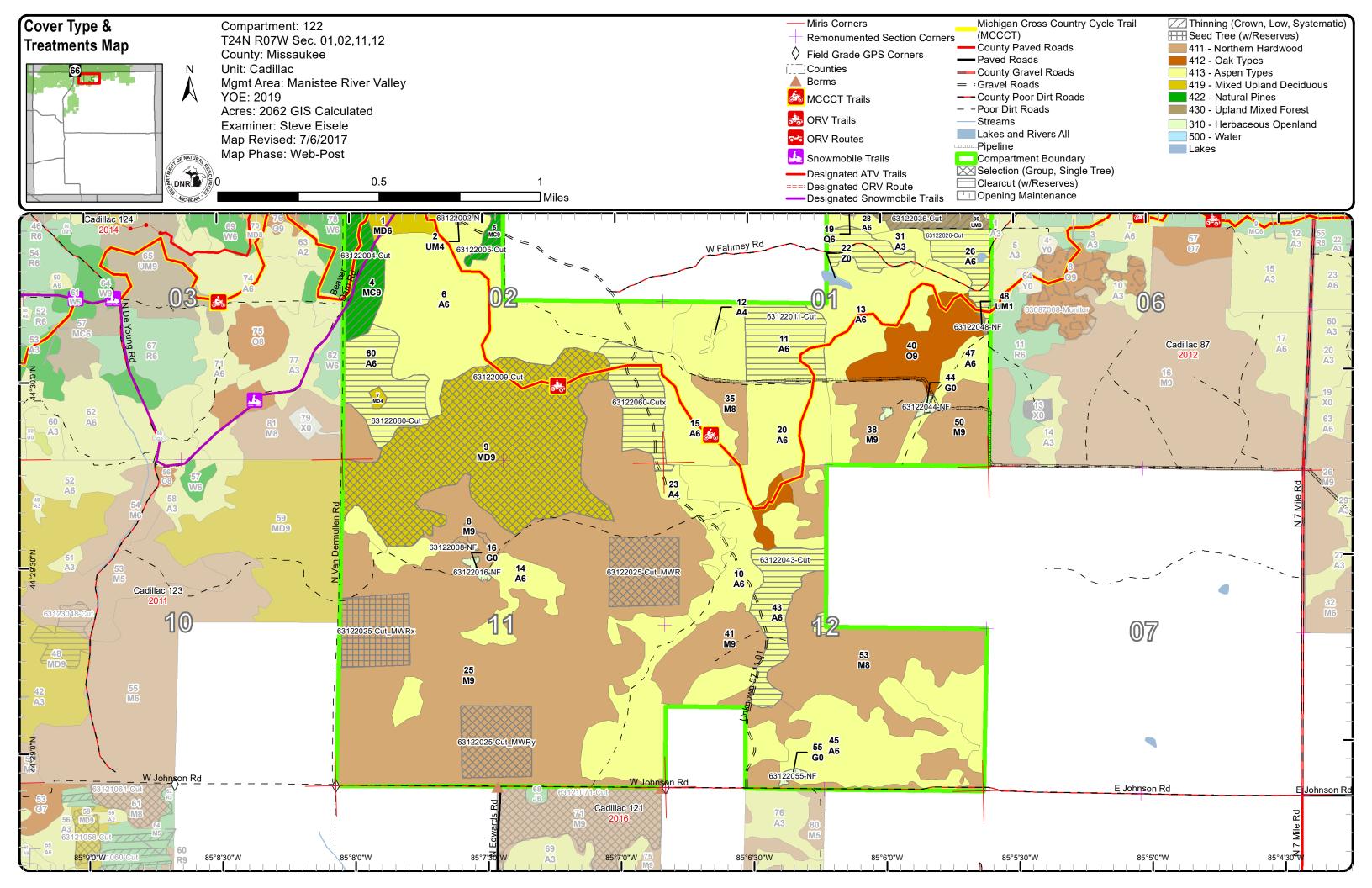
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

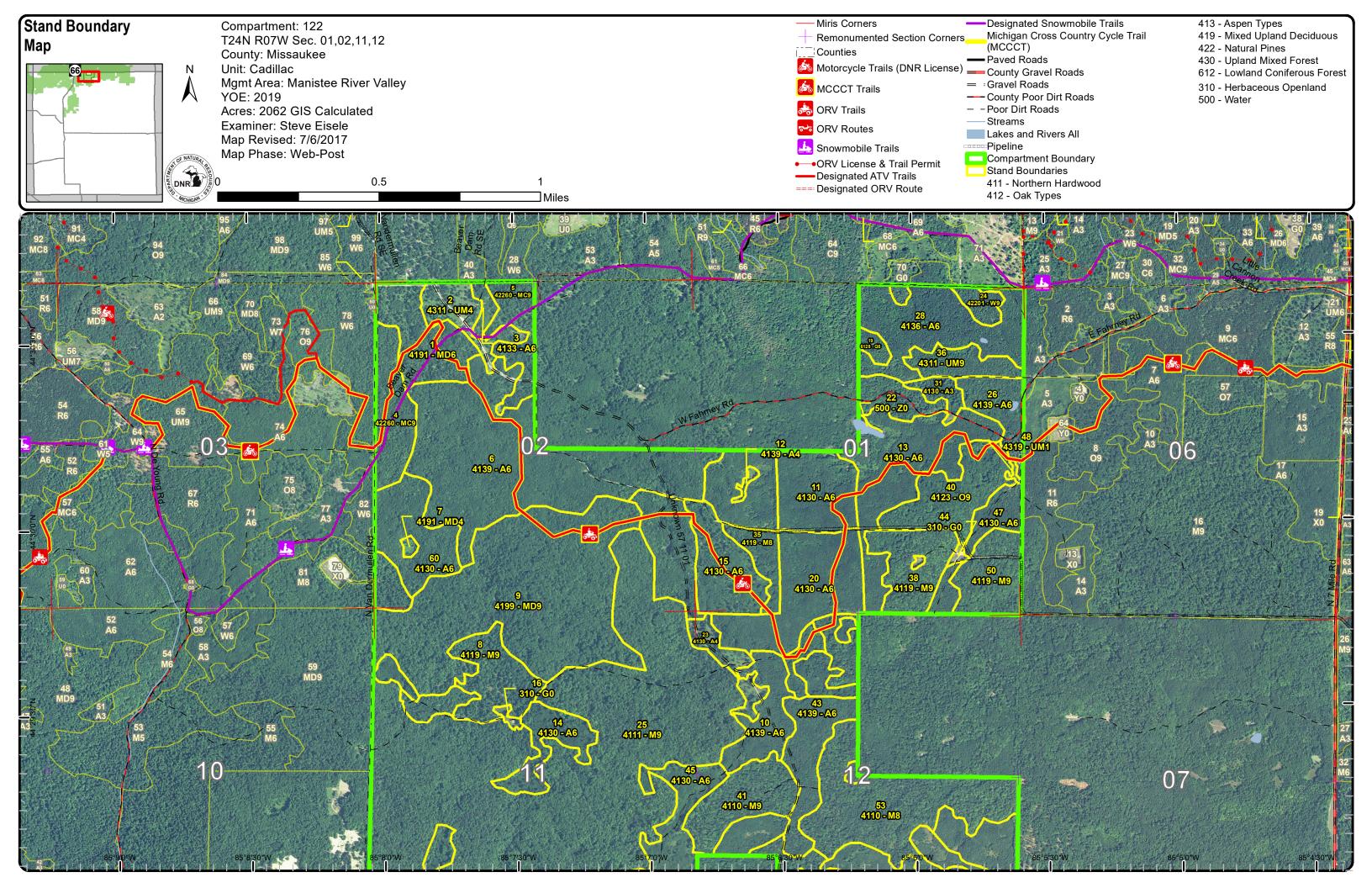
The following information is displayed, where pertinent, on the attached compartment maps:

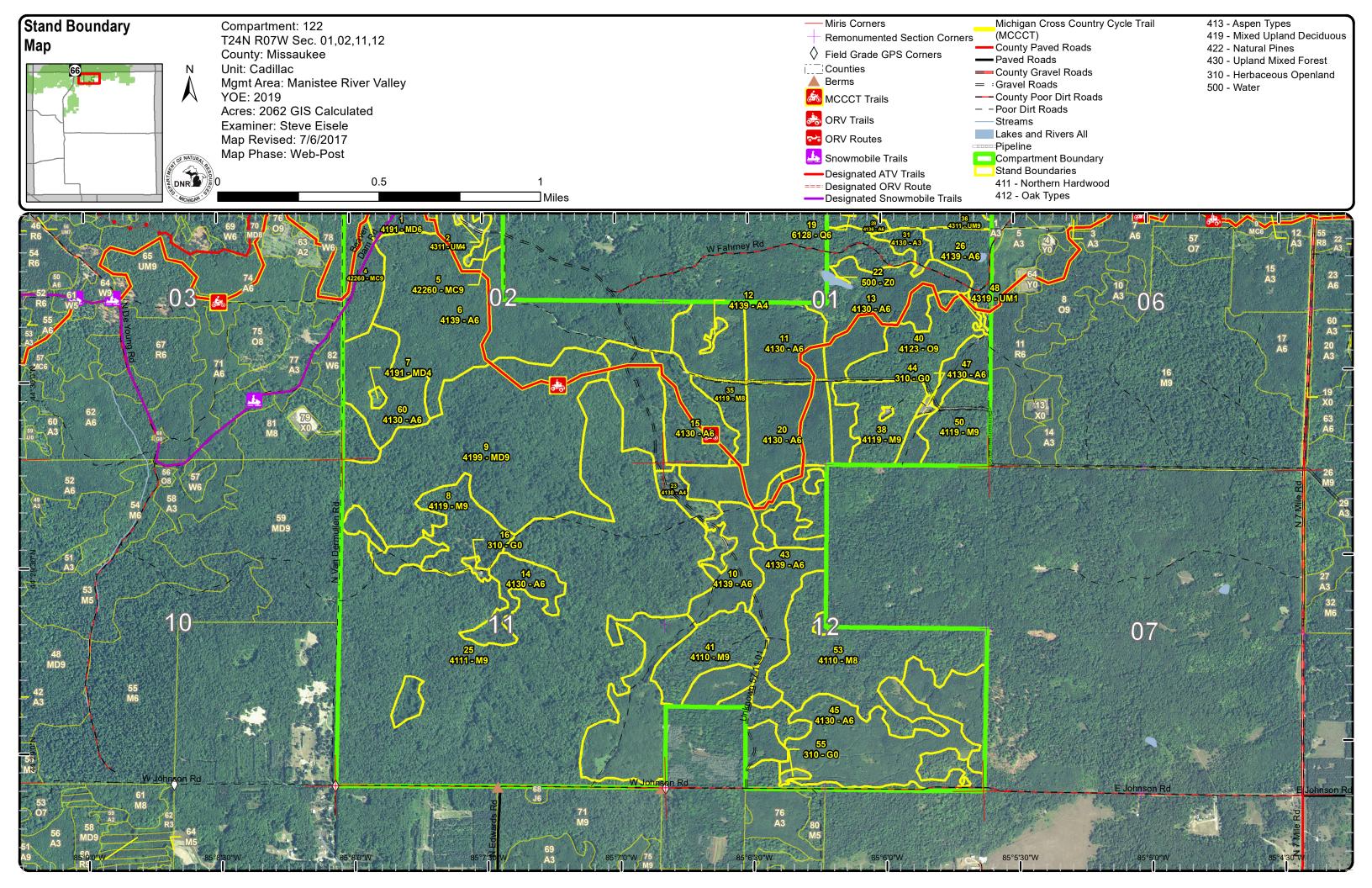
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

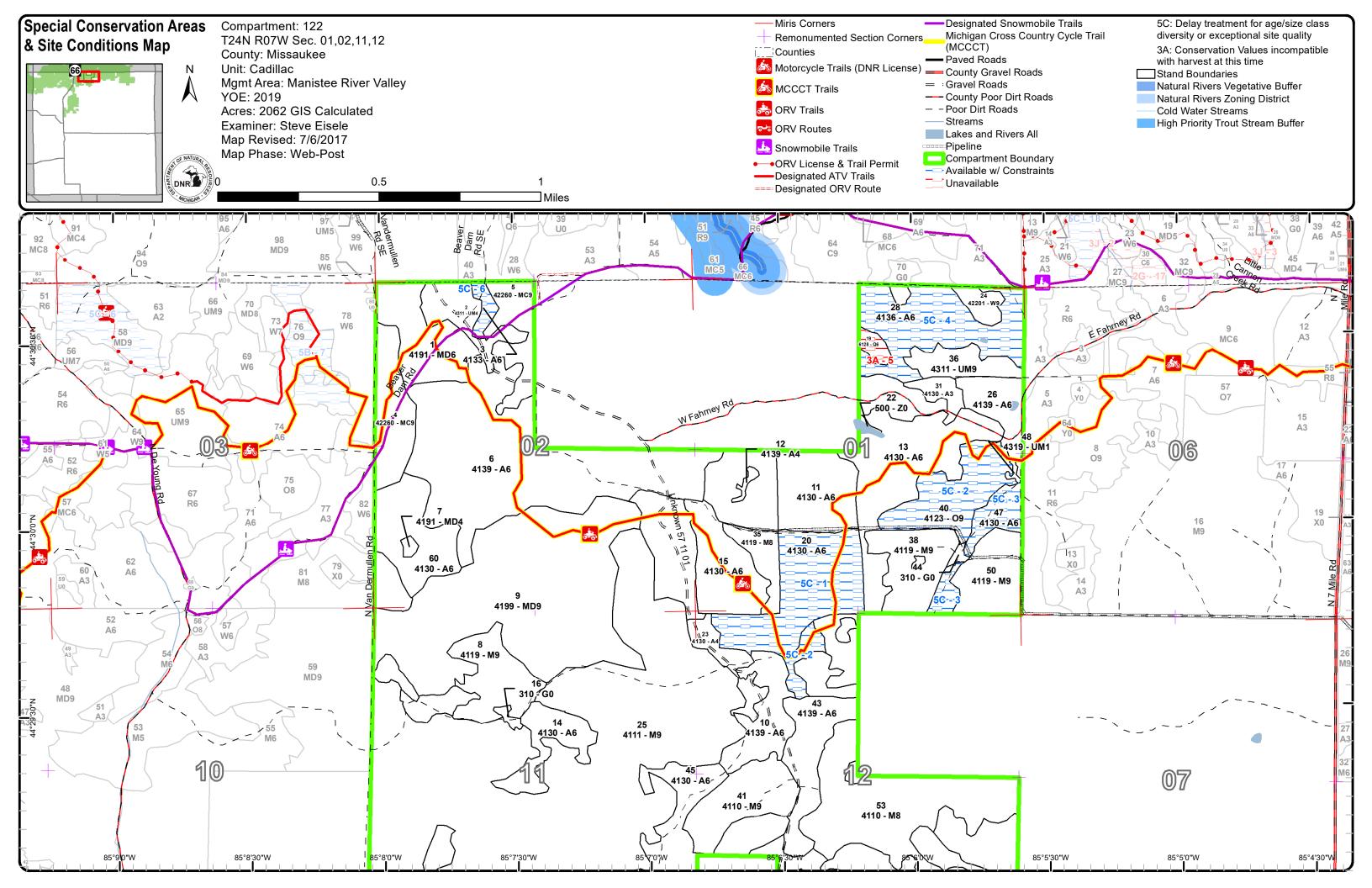


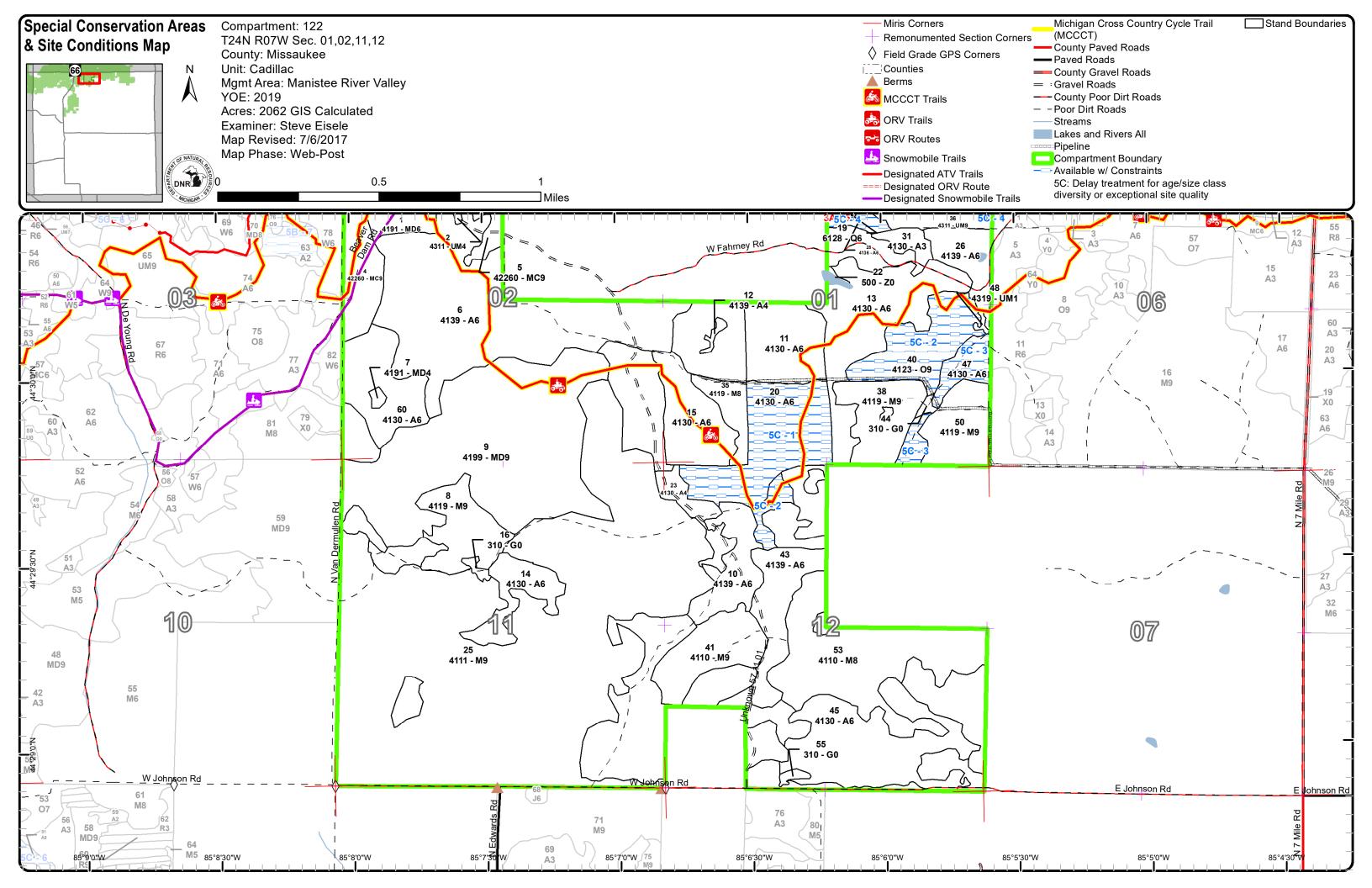












# Report 1 – Total Acres by Cover Type and Age Class

Cadillac Mgt. Unit

Steve Eisele: Examiner

Compartment 122 Year of Entry 2019



#### Age Class

	<b>₹</b> 05	Kog /		\$ \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		3 / 4		, % /&	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80,00	\$ /0,	70,	81, /82,	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N. S.	Or July	No. No.
Aspen	0	0	224	195	0	163	291	0	36	0	0	0	0	0	0	0	0	0	909
Herbaceous Openland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Mixed Upland Deciduous	0	0	0	0	0	39	0	0	0	0	0	189	0	0	0	0	0	0	228
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	55
Northern Hardwood	0	0	0	0	0	0	0	0	0	42	722	0	0	0	0	0	0	0	764
Oak	0	0	0	0	0	0	0	0	0	0	48	0	0	0	0	0	0	0	48
Upland Mixed Forest	0	0	1	0	0	20	0	0	0	17	0	0	0	0	0	0	0	0	38
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Total	7	0	225	195	0	222	291	0	36	129	770	189	0	0	0	0	0	0	2064



# Report 2 - Treatment Summary

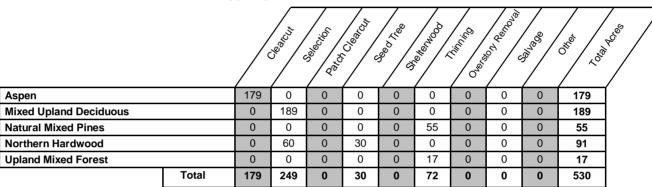
# Cadillac Mgt. Unit Year of Entry: 2019

#### **Acres of Harvest**

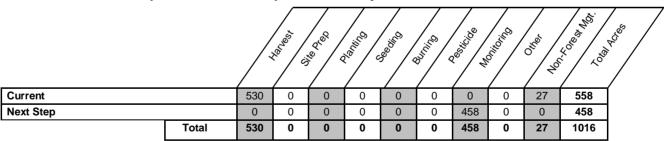
Compartment 122
Total Compartment Acres: 2,062

Commercial Harvest - 530 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

## **Cover Type by Harvest Method**



## **Proposed and Next Step Treatments by Method**



Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 122 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Method Objective Status Name Density Age Range Structure d CoverType Type 63122002-NF 2 20.4 4311 - Pine, Aspen Poletimber 45 Unspec NonForestMgt **Brush Cutting** 212 - Non-tilled Proposal Herbaceous Mix Poor ified Agriculture **Habitat Cut: No Site Condition:** Prescription Maintain in an open state. Brushing and cutting a few trees should accomplish this goal. In addition, native grasses and forbs as well as mast bearing shrubs and trees may be planted. Treatment of invasive species as needed. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 63122004-Cut 31.0 42260 - Natural Sawtimber 80 111-Harvest Crown Thinning 42260 - Natural Even-Aged Proposal Pine, Mixed Well 140 Pine, Mixed Deciduous Deciduous **Habitat Cut: No Site Condition:** Prescription Remove aspen and maple, thin pine down to 70-80 ba Specs: Next Step Treatments: Acceptable Mixed pine, deciduous Regen: Other Comment: 10/01/2018 **Proposed Start Date:** 63122005-Cut 23.8 42260 - Natural Sawtimber 85 81-110 Crown Thinning 42201 - Natural Proposal Harvest Two-Aged Pine, Mixed White Pine, Deciduous Mixed Deciduous **Habitat Cut: No Site Condition:** Prescription Thin out larger pine, leave oak. let understory release Specs: Next Step Treatments: Acceptable Mix of pine and deciduous Regen: Other Comment: Proposed Start Date: 10/01/2018

63122008-NF 2.0 4119 - Mixed Sawtimber 87 81-110 NonForestMgt **Brush Cutting** 310 -Proposal Northern Hardwoods Well Herbaceous Openland

**Habitat Cut: No Site Condition:** 

Prescription Remove a few trees to open this up a little and maintain in an open state. Brushing and cutting a few trees should accomplish this goal. In addition, native grasses and forbs may be planted. Treatment of invasive species as needed. Specs:

Next Step Treatments:

Acceptable Regen:

Other Comment:

**Proposed Start Date:** 05/30/2017

Treatments:

Acceptable

Regen:

Other

Comment:

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

63122025-25 29.6 4111 - S.Maple, Sawtimber 95 81-110 411 - Northern Field Boundary Harvest **Group Selection** Uneven-Cut MWR Hard Mast Well Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

Prescription Large group selection and patch cuts. Harvest openings will range from 0.25 -1.0 acre in size and comprise 30% of the stand.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

**Treatments:** 

Mixed hardwood <u>Acceptable</u>

Regen: Other

leaving tree tops (<8") to act as physical barriers to deer herbivory of tree regeneration

Comment:

**Proposed Start Date:** 10/01/2016

Regen:

Other Some wet area in east part of stand

Comment:

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

17.1 4311 - Pine, Aspen Sawtimber 63122036-Cut 80 81-110 4220 - Natural Proposal Harvest Crown Thinning Even-Aged

White Pine

Well Mix

**Site Condition:** 

Prescription Cut aspen and maple. Cut only pine over 10 inch dbh Leave oak and wet edges

Specs:

Next Step Treatments:

**Habitat Cut: No** 

Acceptable Pine and mixed deciduous

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 122 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Density Method Objective Status Name Age Structure d CoverType Range Type 63122043-Cut 43 34.7 4139 - Aspen, Mixed Poletimber 55 Unspec Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Mixed Deciduous Deciduous Well ified Retention **Habitat Cut: No Site Condition:** Prescription clear cut, leave oak and sugar maple Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen mixed deciduous Regen: Other Comment: Proposed Start Date: 10/01/2018 63122044-NF 310 -310 - Herbaceous Nonstocked Unspec NonForestMat **Brush Cutting** Proposal Openland ified Herbaceous Openland **Habitat Cut: No Site Condition:** Prescription Maintain in an open state. Brushing and cutting a few trees should accomplish this goal. In addition, native grasses and forbs as well as mast bearing shrubs and trees may be planted. Treatment of invasive species as needed. Specs: Next Step **Treatments:** Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2018 63122048-NF 0.9 4319 - Mixed Sapling 15 Immatu NonForestMgt **Brush Cutting** 310 -Proposal **Upland Forest** Poor re Herbaceous Openland **Habitat Cut: No Site Condition:** Prescription Maintain in an open state. Brushing and cutting a few trees should accomplish this goal. In addition, native grasses and forbs as well as mast bearing shrubs and trees may be planted. Treatment of invasive species as needed. Specs: Next Step Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

55 63122055-NF 1.8 310 - Herbaceous Nonstocked Unspec NonForestMgt Brush Cutting 310 - Proposal

Prescription Maintain in open state. Brushing, tree cutting, as well as annual or rotational tillage and planting of forage species. May convert to perennial mix or

Openland

plant mast producing shrubs or trees. Treatment of invasive species as needed.

ried Herbaceous

Openland

Site Condition:

Next Step

Specs:

**Habitat Cut: No** 

Treatments:

Acceptable P

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 122 s Year of Entry: 2019 а **Cover Type Treatment** Acres Stand Size Stand BA **Treatment Treatment** Age **Approval** n Name Method Objective Structure Status CoverType **Density** Range Type d Age 63122060-Cut 38.3 4130 - Aspen Poletimber 55 Unspec Clearcut with 4139 - Aspen, Proposal 60 Harvest Even-Aged Well ified Retention Mixed Deciduous **Habitat Cut: No Site Condition:** Prescription Clear cut, mark some oak to leave for mast. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step **Treatments:** Acceptable Aspen mixed deciduous Regen: Other Stand boundaries are approximate Comment: Proposed Start Date: 10/01/2018 Even-Aged 63122060-31.9 4130 - Aspen Poletimber Unspec Harvest Clearcut with 4139 - Aspen. Proposal Mixed Deciduous Well ified Retention Cutx **Habitat Cut: No Site Condition:** Prescription Clear cut, mark some oak to leave for mast Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen mixed deciduous

Regen:

Other Comment:

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

**Total Treatment Acreage Proposed:** 

559.4

# Report 4 - Site Conditions

Cadillac Mgt. Unit

Steve Eisele: Examiner

Compartment: 122 Year of Entry: 2019

Availa	ability for	Managemer	nt				
Total	Acres	Acres Avail	Acres		Domina	nt Site	<b>Conditions</b>
Acres	Available	With Condition	Not Available		5C	ЗА	
909	761	149	0	Aspen	149		
6	6	0	0	Herbaceous Openland			
5	0	0	5	Lowland Conifers		5	
228	228	0	0	Mixed Upland Deciduous			
55	55	0	0	Natural Mixed Pines			
764	764	0	0	Northern Hardwood			
48	0	48	0	Oak	48		
38	38	0	0	Upland Mixed Forest			
1	1	0	0	Water			
10	10	0	0	White Pine			
2,062	1,862	196	5	Total Forested Acres	196	5	
	90%	10%	0%	Relative Percent			<del>-</del>

\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

	Dominant Site ond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	63	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	48	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
7/06/204	7 1:47:04 PM - Page	1 of 2					POLE

# **Report 4 – Site Conditions**

Compartment: 122

Cadillac Mgt. Unit

Steve Eisele : Examiner Year of Entry: 2019

3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Treat next yoe						
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	62	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3A: Conservation Values incompatible with harvest at this time	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
	This is a unique sr	mall stand for this area that also	has a hig	her water table.			
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

07/06/2017 1:47:04 PM - Page 2 of 2

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: 122
Year of Entry 2019





\* 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	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosyster influences the aquatic ecosystem and vice-versa. Because of streams and open water wetlands, riparian areas harbor a hocommunities are ecologically and socially significant in their as aesthetics, habitat, bank stability, timber production, and	of the unique conditions adjacent to lakes, igh diversity of plants and wildlife. Riparian effects on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived fro approved distance from the river centerlines. The Natural R most Natural Rivers. The Vegetative Buffer ranges from 25 and Vegetative Buffers for each Natural River see the table folder.	tivers Zoning District is a 400 foot buffer for to 100 feet. To view specific Zoning Districts

S t	Cadillac Mgt. Unit			Report 7	– Forested S	Stands Compartment: 122 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	37.3	45	Unspecified	Just entering pole size.
2	4311 - Pine, Aspen Mix	Poletimber Poor	20.4	45	Unspecified	Open patchy with pipeline running through it
3	4133 - Aspen, Mixed Pine	Poletimber Well	5.2	50	Unspecified	Low quality aspen with white pine moving in Treat next time
4	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	31.0	80	111-140	
5	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	23.8	85	81-110	
6	4139 - Aspen, Mixed Deciduous	Poletimber Well	162.8	45	Unspecified	Aspen with some scattered white pine. ORV trail passes thru stand.
7	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	1.6	45	51-80	Open and patchy but filling in
8	4119 - Mixed Northern Hardwoods	Sawtimber Well	41.6	87	81-110	Nice sugar maple regen in some portions of stand but the usual high amount of ironwood and beech understory
9	4199 - Other Mixed Upland Deciduous	Sawtimber Well	188.8	105	81-110	A lot of very large oak, some declining
10	4139 - Aspen, Mixed Deciduous	Poletimber Well	80.8	28	Immature	All these areas cut in 1989 left scattered large oak
11	4130 - Aspen	Poletimber Well	37.7	50	Unspecified	
12	4139 - Aspen, Mixed Deciduous	Poletimber Poor	1.7	25	Immature	Open area filling in with aspen and cherry
13	4130 - Aspen	Poletimber Well	98.2	26	Unspecified	
14	4130 - Aspen	Poletimber Well	37.4	16	Unspecified	
15	4130 - Aspen	Poletimber Well	47.0	15	Unspecified	Some scattered sawlog - pole sized oak left in overstory.
17	4119 - Mixed Northern Hardwoods	Sawtimber Well	0.0	87	81-110	Nice sugar maple regen in some portions of stand but the usual high amount of ironwood and beech understory
19	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	4.6	80	111-140	
20	4130 - Aspen	Poletimber Well	62.8	50	Unspecified	

S t	Cadillac	Cadillac Mgt. Unit		Report 7	- Forested	Stands Compartment: 122 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4130 - Aspen	Poletimber Poor	14.2	25	Immature	Old open area now filling in
24	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	9.6	80	81-110	Treat next yoe with surrounding aspen stand
25	4111 - S.Maple, Hard Mast Association	Sawtimber Well	476.0	95	81-110	Walters project in this stand. Look at treating remaining area of stand next yoe
26	4139 - Aspen, Mixed Deciduous	Poletimber Well	36.3	70	Unspecified	
28	4136 - Aspen, Mixed Conifer	Poletimber Well	61.6	50	Unspecified	Treat next year of entry Kalkaska has recently treated stand to the north on comp boundary
31	4130 - Aspen	Sapling Well	7.8	15	Unspecified	
35	4119 - Mixed Northern Hardwoods	Sawtimber Medium	25.7	95	81-110	Stand was thinned in 2012 as part of Squishy Squirrel. All aspen and ironwood were cut along with orange marked trees.
36	4311 - Pine, Aspen Mix	Sawtimber Well	17.1	80	81-110	Natural white pine with a mix of red maple, bigtoothed aspen.
38	4119 - Mixed Northern Hardwoods	Sawtimber Well	32.2	95	81-110	Pipeline on north edge of stand. Recently thinned. May want to clear cut next yoe and start over
40	4123 - Red Oak	Sawtimber Well	47.6	95	81-110	
41	4110 - Sugar Maple Association	Sawtimber Well	65.9	90	81-110	Treated with sale 63-019-09-01 ash is dead beech is scaled
43	4139 - Aspen, Mixed Deciduous	Poletimber Well	34.7	55	Unspecified	
45	4130 - Aspen	Poletimber Well	131.9	15	Immature	
47	4130 - Aspen	Poletimber Well	19.0	50	Unspecified	
48	4319 - Mixed Upland Forest	Sapling Poor	0.9	15	Immature	Was an opening last time, filling in now with wp and bc still open and scattered
50	4119 - Mixed Northern Hardwoods	Sawtimber Well	30.0	95	51-80	
53	4110 - Sugar Maple Association	Sawtimber Medium	92.2	95	51-80	Ash is dead, beech is scaled, look at clear cutting this stand and starting over next yoe once the aspen is more mature and some understory gets established. Leave oak.

S t	Cadill		Report 7	– Forested Stands	Compartment: 122 Year of Entry: 2019	DNR DNR	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	Michigan .
60	4130 - Aspen	Poletimber Well	70.2	55	Unspecified	Aspen with some scattered white pine.	

Cadillac Mgt. Unit

# Report 8 - Nonforested Stands

Compartment: 122 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
16	310 - Herbaceous Openland	1.8	No	was used for a landing and chip pile from previous sale, chip pile is gone.
22	500 - Water	1.1	No	Alder on edge
44	310 - Herbaceous Openland	2.2	No	
55	310 - Herbaceous Openland	1.8	No	G type starting to fill in. southern part used as landing from previous sales.