



Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63011

Entry Year 2019

Acreage: 905

County Lake

Management Area: Lake County Outwash

Revision Date: 07/06/2017

Stand Examiner: Ryan Adamczyk

Legal Description:

T19N R12W Sections 10 and 15

Identified Planning Goals:

Vegetation management in the Lake County Outwash management area will provide forest products; maintain or enhance wildlife habitat; protect areas of unique threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management for this 10-year planning period will focus on harvesting older jack pine and balancing the age-class distribution of aspen. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation; maintaining soft and hard mast sources including oak; and preserving related recreational opportunity.

Soil and topography:

The soils of this compartment are predominately graycalm sands. This area is flat, having characteristics of glacial outwash.

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

State land to the west Private land adjoins the other 3 sides of the compartment.

Unique Natural Features:

Potential for great blue heron rookery, wood turtle, osprey, eagle, goshawk, red-shouldered hawk, massasauga, box turtle and Blanding's turtle. Potential for ebony boghaunter and secretive locust in bogs.

Archeological, Historical, and Cultural Features:

None

Special Management Designations or Considerations:

High recreation use including a campground, ORV trails, and snowmobile trails within the compartment merits consideration for utilizing visual management techniques.

Watershed and Fisheries Considerations:

The Little Manistee River flows through Compartment 11. It is a Designated Trout Stream. The Little Manistee River supports naturally reproducing populations of brook trout, brown trout, coho salmon, chinook salmon, and steelhead. The Little Manistee River is the sole source of steelhead eggs for Michigan steelhead, which are stocked in many rivers throughout Michigan and several other Great Lakes states. Timber treatments near the Little Manistee River should be designed with the health of the river in mind.

Wildlife Habitat Considerations:

Featured wildlife species include deer, bear, ruffed grouse, woodcock, turkey, and american martin. The Little Manistee River corridor is heavily utilized for deer wintering areas and as wildlife travel corridor especially by bear and deer. Management objective is to maintain diversity of cover types and age classes as well as maintain and or enhance habitat including work on openings and edges for wildlife species. Retain soft and hard mast sources where applicable to preserve wildlife hunting and viewing opportunities. (A. Herban 6/07/17)

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum in other areas of the State. A gravel pit is located in Section 23 and there may be potential. The nearest oil and gas production is the one well abandoned Luther Field located in Section 14. The Field produced over 28,000 BO from the Traverse Limestone. The compartment is not currently leased for oil and gas exploration.

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:

None

Recreational Facilities and Opportunities:

There are numerous recreational opportunities located within this compartment. The ORV friendly Carrieville State Forest Campground is along the eastern edge of the compartment. Designated ORV trails within this compartment include the Little Manistee Route, which is also designated snowmobile trail in the winter, and the Little Manistee single track motorcycle trail. Local PRD staff should work with local FRD staff to identify any hazard trees in the campground that could be included in any prescribed treatment. 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. (T.M.N. 12/1/16).

Fire Protection:

There are some pine areas, which could be of concern. There are urban interface areas, and recreational use within the compartment, which could lead to an increased fire potential. Access for equipment would be fairly good, with the exception of the Little Manistee River area & the tributaries. IA for fire response would be from the Baldwin Field office.

Additional Compartment Information:

None

The following reports from the Inventory are attached:

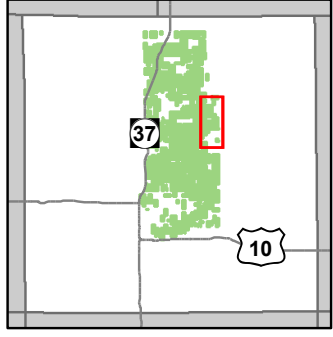
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

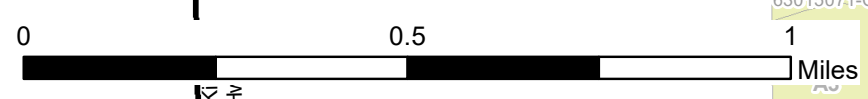
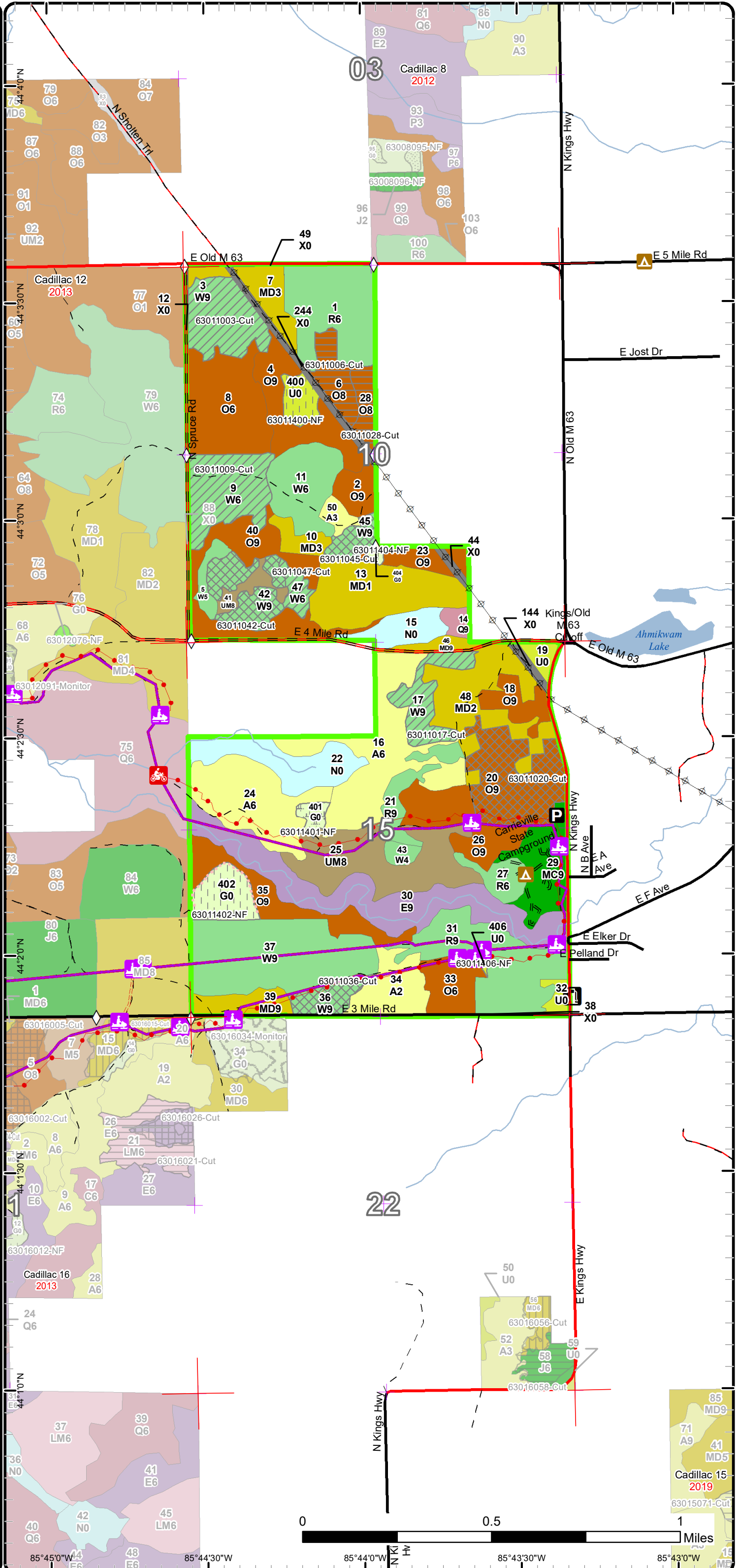
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 11
 T19N R12W Sec. 10, 15
 County: Lake
 Unit: Cadillac
 Mgmt Area: Lake County Outwash
 YOE: 2019
 Acres: 905 GIS Calculated
 Examiner: Ryan Adamczyk
 Map Revised: 7/14/2017
 Map Phase: Web-Post



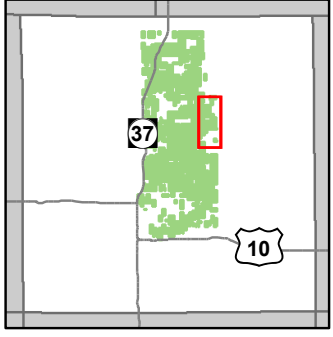
- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- Counties
- G Gas Station
- A Campground
- P Parking Lot
- Motorcycle Trails (DNR License)
- ORV Routes
- Snowmobile Trails
- ORV License & Trail Permit
- - - Designated ORV Route
- Designated Snowmobile Trails
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- - - Poor Dirt Roads
- - - Closed
- Streams
- Lakes and Rivers All
- Powerline
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Other Treatment - See Comments
- Opening Maintenance
- Thinning (Crown, Low, Systematic)
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 623 - Emergent Wetland
- Lakes



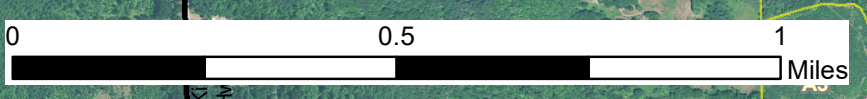
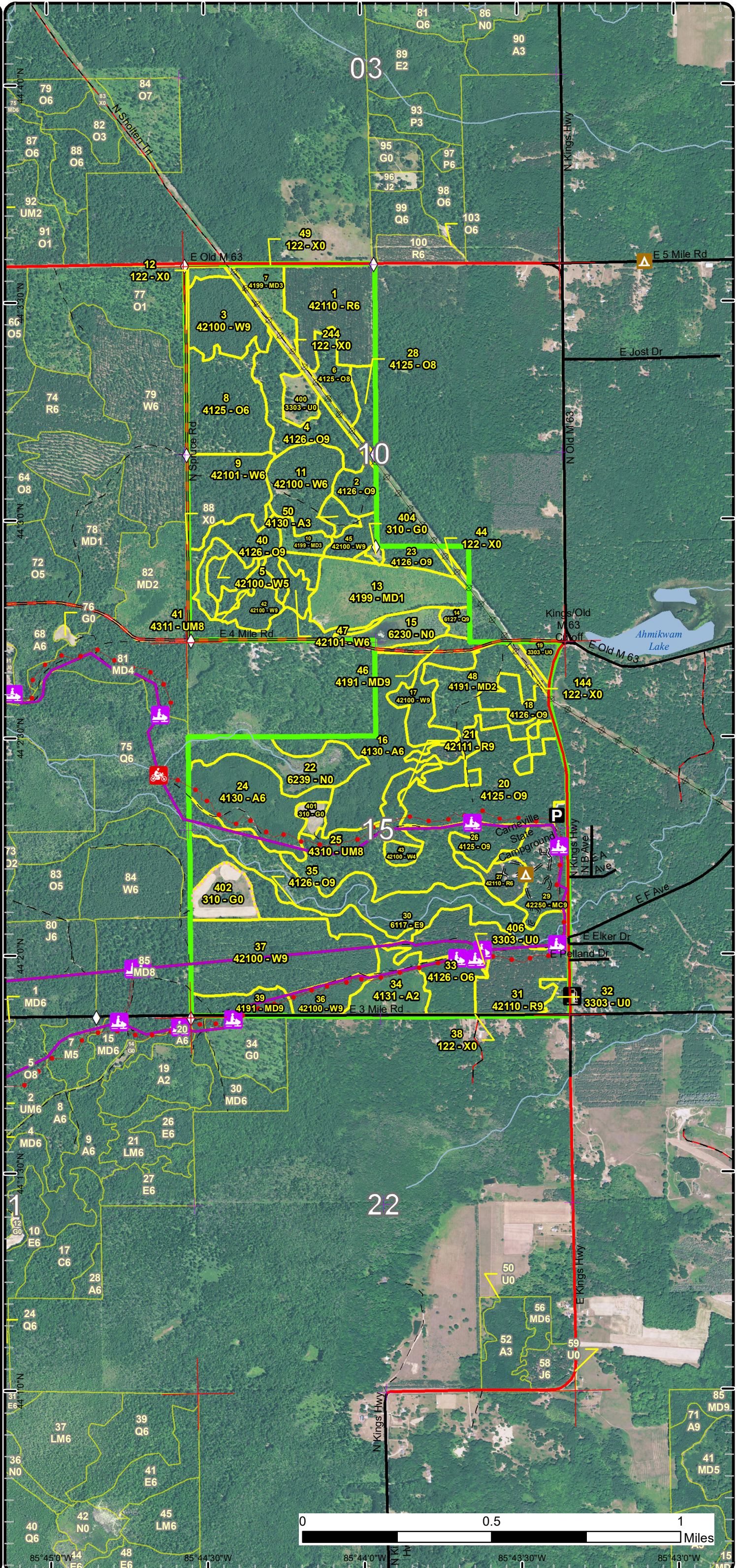
85°45'0"W 85°44'30"W 85°44'0"W 85°43'30"W 85°43'0"W

Stand Boundary Map

Compartment: 11
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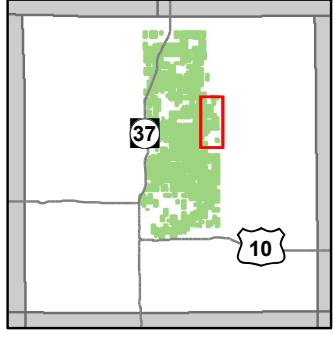
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- ◇ Field Grade GPS Corners
- Counties
- Ⓜ Gas Station
- ▲ Campground
- P Parking Lot
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- 🛷 Snowmobile Trails
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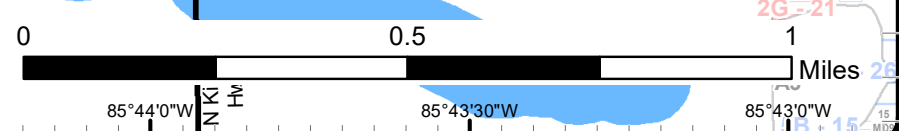
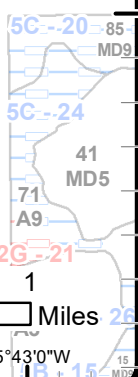
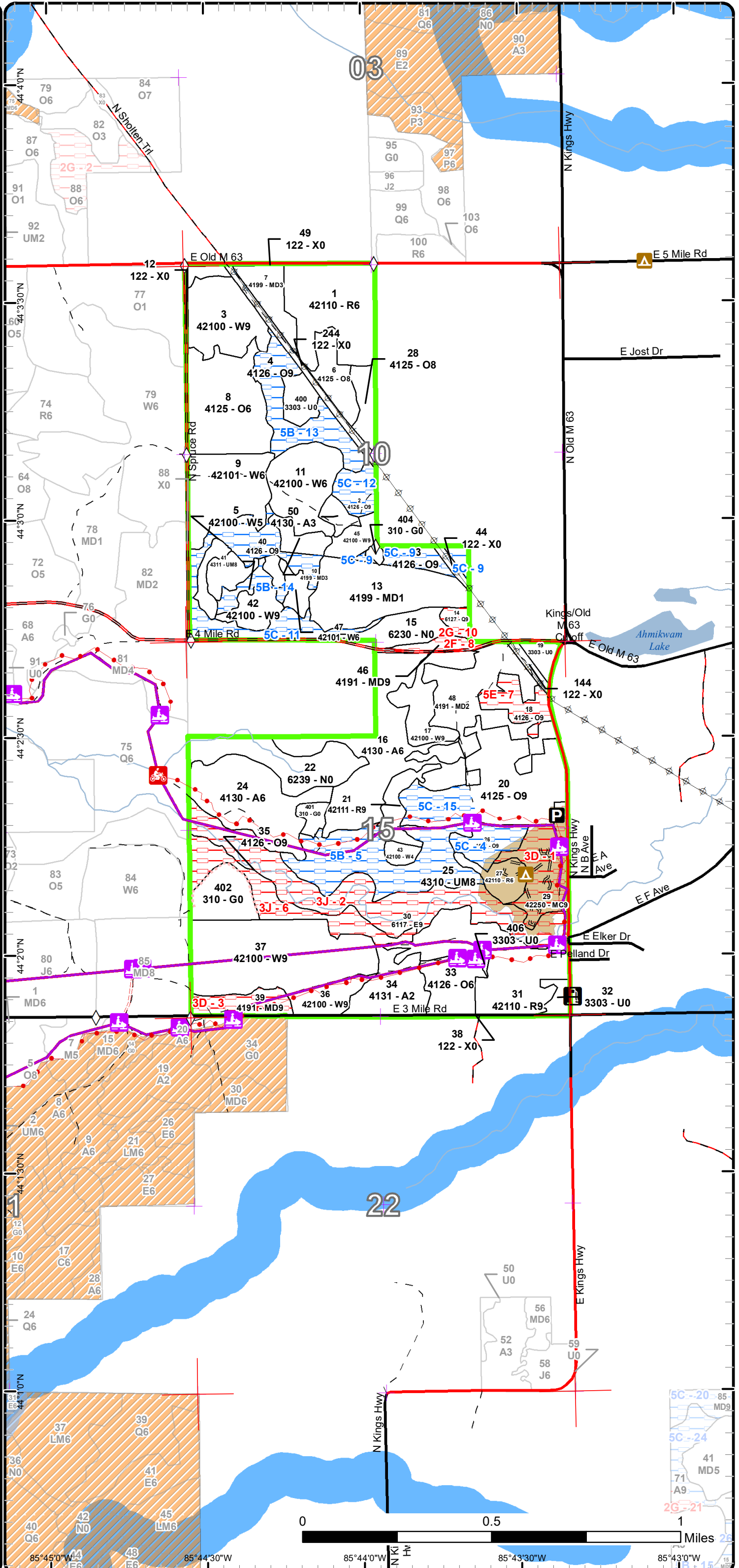
85°45'0"W 85°44'30"W 85°44'0"W 85°43'30"W 85°43'0"W

Special Conservation Areas & Site Conditions Map

Compartment: 11
 T19N R12W Sec. 10, 15
 County: Lake
 Unit: Cadillac
 Mgmt Area: Lake County Outwash
 YOE: 2019
 Acres: 905 GIS Calculated
 Examiner: Ryan Adamczyk
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- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Zoning District
- Eastern Massasauga Managed Land
- Cold Water Streams
- High Priority Trout Stream Buffer
- State Forest Campground



85°45'0"W 85°44'30"W 85°44'0"W 85°43'30"W 85°43'0"W

Report 1 – Total Acres by Cover Type and Age Class

Cadillac Mgt. Unit

Compartment 11

Year of Entry 2019

Ryan Adamczyk : Examiner



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Herbaceous Openland	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Low-Density Trees	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Marsh	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
Urban	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184
Total	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1037



Report 2 – Treatment Summary

Cadillac Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 11

Total Compartment Acres: 905

Commercial Harvest - 152
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Oak	18	34	0	0	0	0	0	0	0	52
White Pine	0	32	0	0	0	69	0	0	0	100
Total	18	65	0	0	0	69	0	0	0	152

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	152	0	0	0	0	0	0	0	25	177
Total	152	0	0	0	0	0	0	0	25	177



S t 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	63011003-Cut	22.7	42100 - Planted White Pine	Sawtimber Well	58	111- 140	Harvest	Systematic Thinning	4210 - Planted White Pine	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin to 50 - 60 BA unless distinct rows can be defined, then cut 2 leave 2. Don't cut any red pine and avoid the handful of aspen/oak pockets due to
Specs: size class and for diversity

Next Step
Treatments:

Acceptable white pine, red pine, mixed oak, aspen
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

6	63011006-Cut	10.6	4125 - Black, N. Pin Oak	Sawtimber Medium	92	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all trees, Trench and plant to red pine.
Specs:

Next Step
Treatments:

Acceptable red pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

9	63011009-Cut	26.9	42101 - Planted White Pine, Mixed Deciduous	Poetimber Well	39	141- 170	Harvest	Systematic Thinning	4210 - Planted White Pine	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut two rows leave two removing most poor quality overstory oak.
Specs:

Next Step
Treatments:

Acceptable white pine, mixed oak
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

17	63011017-Cut	14.4	42100 - Planted White Pine	Sawtimber Well	58	141- 170	Harvest	Systematic Thinning	4210 - Planted White Pine	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut two rows leave two rows. Only cut white pine.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



S t 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
20	63011020-Cut	33.9	4125 - Black, N. Pin Oak	Sawtimber Well	92	81-110	Harvest	Single Tree Selection	4191 - Mixed Upland Deciduous with Conifer	Two-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut mature oak to 30 ba. Cut all aspen and red maple. Don't cut oak less than 6". Don't cut any red/white pine for species diversity.

Specs:

Next Step

Treatments:

Acceptable mixed oak, aspen, red maple, white/red pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

28	63011028-Cut	7.2	4125 - Black, N. Pin Oak	Sawtimber Medium	92	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all trees. Trench and plant to red pine.

Specs:

Next Step

Treatments:

Acceptable red pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

36	63011036-Cut	8.9	42100 - Planted White Pine	Sawtimber Well	64	111- 140	Harvest	Single Tree Selection	42101 - Planted White Pine, Mixed Deciduous	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all hardwoods to release white pine. Remove 50sf of white pine. Mark to cut.

Specs:

Next Step

Treatments:

Acceptable white pine, aspen, mixed oak

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

42	63011042-Cut	16.1	42100 - Planted White Pine	Sawtimber Well	58	111- 140	Harvest	Single Tree Selection	4210 - Planted White Pine	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut white pine to 30-40 ba removing all overstory oak. Don't cut any oak less than 8". Retention will be in the form of residual trees. Mark to cut.

Specs:

Next Step

Treatments:

Acceptable white pine, aspen, mixed oak

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



S t 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
45	63011045-Cut	6.5	42100 - Planted White Pine	Sawtimber Well	58	141- 170	Harvest	Single Tree Selection	4210 - Planted White Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin the white pine to 40-50 BA. Cut out all hybrid oak while trying to focus on removing white pine near better quality white oaks.											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> white pine, mixed oak, aspen											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
47	63011047-Cut	4.6	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	39	141- 170	Harvest	Systematic Thinning	4210 - Planted White Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut two rows leave two removing most poor quality overstory oak											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> white pine, mixed oak											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
400	63011400-NF	6.7	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	330 - Low- Density Trees		Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut some trees and brush to maintain stand in open condition. Retain some mast producing trees. May plant mast producing trees and shrubs and											
<u>Specs:</u> forage species. Invasive plant treatments as needed.											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2017											
401	63011401-NF	3.5	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> 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											
<u>Specs:</u> plant mast producing shrubs or trees. Treatment of invasive species as needed.											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2017											



S t 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
402	63011402-NF	13.2	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal

Habitat Cut: No**Site Condition:**

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

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

404	63011404-NF	1.0	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	310 - Herbaceous Openland		Proposal
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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
Specs: shrubs and trees may be planted. Treatment of invasive species as needed.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

406	63011406-NF	0.5	3303 - Mixed Low Density Trees	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	330 - Low- Density Trees		Proposal
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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
Specs: shrubs and trees may be planted. Treatment of invasive species as needed.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 176.7**

Report 4 – Site Conditions

Cadillac Mgt. Unit
Ryan Adamczyk : Examiner

Compartment: 11
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions						
		With Condition	Not Available		5B	5C	2F	2G	3D	3J	5E
100	100	0	0	Aspen							
18	18	0	0	Herbaceous Openland							
15	15	0	0	Low-Density Trees							
3	0	0	3	Lowland Conifers				3			
53	0	0	53	Lowland Deciduous						53	
34	34	0	0	Marsh							
100	85	0	15	Mixed Upland Deciduous			5		10		
21	0	0	21	Natural Mixed Pines					21		
221	99	92	30	Oak	22	70				20	10
95	95	0	0	Red Pine							
44	0	44	0	Upland Mixed Forest	44						
17	17	0	0	Urban							
184	184	0	0	White Pine							
905	646	136	123	Total Forested Acres	66	70	5	3	31	74	10
	71%	15%	14%	Relative Percent							

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3D: Recreational / Scenic values	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Carrieville Campground and ORV trail parking lot							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	54	3D: Recreational / Scenic values	3L: Other wildlife concerns	Unspecified	Unspecified
Comments: Little Manistee River and buffer							

Report 4 – Site Conditions

Cadillac Mgt. Unit
 Ryan Adamczyk : Examiner

Compartment: 11
 Year of Entry: 2019

3	Unavailable	3D: Recreational / Scenic values	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5B: Maintain for regeneration purposes	39	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5E: Long-Term Retention	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2F: Too steep	5	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Cadillac Mgt. Unit

Compartment: 11

Ryan Adamczyk : Examiner

Year of Entry: 2019

9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Available	5B: Maintain for regeneration purposes	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Available	5B: Maintain for regeneration purposes	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Cadillac Mgt. Unit

Compartment: 11

Ryan Adamczyk : Examiner

Year of Entry: 2019

15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
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Comments:

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments

**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.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	Poletimber Well	34.6	60	111-140	Third row thinning completed as sale # 60-016-09-01 (Old M-63 Red Pine). Sale went well.
2	4126 - White, Black, N. Pin Oak	Sawtimber Well	8.0	94	51-80	Southern portion of stand 4. Has more red maple in the canopy and understory
3	42100 - Planted White Pine	Sawtimber Well	22.7	58	111-140	Thin to 50 - 60 BA unless distinct rows can be defined, then cut 2 leave 2. Don't cut any red pine and avoid the handful of aspen/oak pockets due to size class/diversity
4	4126 - White, Black, N. Pin Oak	Sawtimber Well	21.8	94	51-80	Wait for the understory to mature before removing the top unless stand begins to show signs of decline. Also holding for age class diversity
5	42100 - Planted White Pine	Poletimber Medium	4.7	58	51-80	There is an overstory of oak and red maple so release the white pine and get some oak sprouting. Do not cut white pine under 70 SF if possible. Stand was cut last yoe.
6	4125 - Black, N. Pin Oak	Sawtimber Medium	10.6	92	51-80	Stand 6 and 28 are in decline. The BA in 28 is less than 6. Good oak and cherry regen throughout both. Clearcut both stands. Do not cut any oak <6" dbh or any pine for diversity
7	4199 - Other Mixed Upland Deciduous	Sapling Well	12.4	7	Immature	Harvested as part of sale 63-055-09-01 (Road Commission Corners). Stand has very good oak regen, along with red maple and aspen.
8	4125 - Black, N. Pin Oak	Poletimber Well	34.3	27	Immature	A nice mix for this type of site with aspen, oak, red maple, jack, and red pine
9	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	26.9	39	141-170	A white pine stand with some overstory oak. This stand should have the overstory removed to release the white pine do not cut the pine any lower then 70 SF if possible. Leave an oak once in a while to help species diversity. Retention will be included in the white pine residual and the oak being left. Similar to stand 54.
10	4199 - Other Mixed Upland Deciduous	Sapling Well	5.8	28	Immature	Area treated 28 years ago near stand 11 is a black cherry and oak stand in sappling stage with a few large overstory white pines and a small aspen pocket to the north.
11	42100 - Planted White Pine	Poletimber Well	22.6	58	51-80	White pine stand was released in 1989 thin 40 to 50 SF out of the stand by marking because of indistinct rows. Retention will be included in the white pine residual. 1/3/12: Harvested as part of sale 63-011-09-01 Snow white pine.
13	4199 - Other Mixed Upland Deciduous	Sapling Poor	34.9	4	Immature	Stand was clearcut in 2012 as part of Pipeline Planting "63-063-09-01". It was trenched and planted on 05/05/13 to red pine. Aspen, red maple, and oak are beginning to out compete the red pine. Its recommended to herbicide to control non-desirable species.
14	6127 - Lowland Pine	Sawtimber Well	3.3	97	51-80	Nice large white pine with a mix of cedar. A lowland that's too wet to harvest.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4130 - Aspen	Poletimber Well	45.0	44	81-110	Mostly aspen with a good mix of mature white pine and pole sized oak.
17	42100 - Planted White Pine	Sawtimber Well	14.4	58	141-170	Cut 2 leave 2 while removing overstory to release white pine. Theres good white oak regen in the north section along 4 mile
18	4126 - White, Black, N. Pin Oak	Sawtimber Well	10.1	92	51-80	Area of residual trees in patch cut stand. hold for seed and mast. was a retention area for the patch cuts around it in stand 118. Hold for now.
20	4125 - Black, N. Pin Oak	Sawtimber Well	46.4	92	81-110	Stand is mature and should be cut to promote oak regen. Cut mature oak to 30 ba. Cut all aspen. Don't cut oak less than 6". Don't cut any red/white pine for species diversity. The ORV trailhead parking lot is located in the SE corner of this stand along Kings Hwy.
21	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	11.0	59	111-140	Stand was row thinned last yoe. There are scattered mature oak in this stand as well as cherry, maple, and aspen.
23	4126 - White, Black, N. Pin Oak	Sawtimber Well	8.7	92	51-80	Theres a good amount of downed oak throughout the stand. Hold for age class diversity and mast production.
24	4130 - Aspen	Poletimber Well	34.6	28	141-170	A young aspen stand with lots of beaver activity in the northern section. Good stocking of sapling sized aspen.
25	4310 - Pine, Oak Mix	Sawtimber Medium	38.9	92	1-50	STAND TREATED IN 2001 DIAM. CUT SALE # 429901, stand has high stocking of scrub oak with a mix of aspen, white pine, red maple and oak coming back. Theres a good diversity of mature oak and red/white pine. Aspen near the little manistee river have been getting killed by beaver.
26	4125 - Black, N. Pin Oak	Sawtimber Well	9.8	92	81-110	Broke off from stand 20. Hold for recreation value and visual concerns near Carrieville Campground.
27	42110 - Planted Red Pine	Poletimber Well	7.8	59	141-170	Stand was treated last yoe. It should be held for visual esthetics within the campground
28	4125 - Black, N. Pin Oak	Sawtimber Medium	7.2	92	51-80	Stand 6 and 28 are in decline. The BA in 28 is less than 6. Good oak and cherry regen throughout both. Clearcut both stands. Do not cut any oak <6" dbh or any pine for diversity
29	42250 - Pine, Oak	Sawtimber Well	20.9	92	81-110	CARRIEVILLE CAMPGROUND. I would recommend a crew come through and fall all snags to minimize hazard trees. Buck and leave trees. They'll be used by campers for firewood.
30	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	53.5	51	51-80	Riparian area near the Little Manistee with a good diversity of shrubs and graminoids. Leave as a buffer.
31	42110 - Planted Red Pine	Sawtimber Well	41.3	58	111-140	Stand thinned 2010 sale # 63-058-09-01.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	4126 - White, Black, N. Pin Oak	Poletimber Well	12.7	43	1-50	Very good oak regen with a few nice pockets of aspen
34	4131 - Aspen, Oak	Sapling Medium	16.9	5	Immature	Stand was clearcut in 2012 as part of Pipeline Planting "63-063-09-01". It was trenched and planted on 05/05/13 to red pine. Aspen, red maple, and oak are beginning to out compete the red pine.
35	4126 - White, Black, N. Pin Oak	Sawtimber Well	20.2	92	81-110	Due not treat. Leave for mast and other wildlife and fisheries values. Aspen regen would attract heavy beaver use along the Little Manistee.
36	42100 - Planted White Pine	Sawtimber Well	8.9	64	111-140	This stand should be thinned this year of entry with a removal of 50 sf of white pine. It's already marked and was not cut with stand 37. Stand 37 was thinned as part of sale # 63-011-09-01 (Snow White Pine) by Doyle Forest Products.
37	42100 - Planted White Pine	Sawtimber Well	53.5	64	81-110	This stand was thinned as part of sale # 63-011-09-01 (Snow White Pine) by Doyle Forest Products.
39	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	10.1	92	51-80	Stand is mature but should be held for wildlife, biodiversity and visual concerns along 3 mile road.
40	4126 - White, Black, N. Pin Oak	Sawtimber Well	31.0	92	51-80	Stand has some scattered large ~20" dbh oaks mixed throughout. A small aspen clone in the southern portion. Most of the white pine is located in the WSW portion of the stand. Hold this stand for species diversity and mast.
41	4311 - Pine, Aspen Mix	Sawtimber Medium	5.2	58	1-50	
42	42100 - Planted White Pine	Sawtimber Well	16.1	58	111-140	Mature white pine with lots of stunted or forked stems. Cut white pine to 30-40 ba removing all overstory oak. Don't cut any oak less than 8". Retention will be in the form of residual trees.
43	42100 - Planted White Pine	Poletimber Poor	3.0	59	51-80	This stand was cut heavy last yoe. There's a bit of oak stump sprouts.
45	42100 - Planted White Pine	Sawtimber Well	6.5	58	141-170	This is the SE portion of stand 11 that appears to be partially marked. Thin stand to 40 - 50 BA
46	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	5.0	92	81-110	Small stand on north side of 4 mile rd south of stand 15. This stand is being left due to traval influence as well as diversity.
47	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	4.6	39	141-170	A white pine stand with some overstory oak. This stand should have the overstory removed to release the white pine do not cut the pine any lower then 70 SF if possible. Leave an oak once in a while to help species diversity. Retention will be included in the white pine residual and the oak being left. Same as stand 9.
48	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	31.9	16	Immature	Stand has lots of good oak and aspen regen.

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Cadillac Mgt. Unit

Report 7 – Forested Stands

Compartment: 11
Year of Entry: 2019



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	Sapling Well	3.7	28	Immature	Dense aspen stand with a few larger red maples. The stand is growing well.



Stand	Cover Type	Acres	Managed Site	General Comments:
12	122 - Road/Parking Lot	1.8	No	Spruce Rd
15	6230 - Cattail	11.2	No	Sedge meadow and tag alder, old beaver flooding
19	3303 - Mixed Low Density Trees	4.2		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
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Stand	Cover Type	Acres	Managed Site	General Comments:
19	3303 - Mixed Low Density Trees	4.2		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
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19	3303 - Mixed Low Density Trees	4.2		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
22	6239 - Mixed Emergent Wetland	23.0	No	Dead cedar along with white pine and mixed oak along the perimeter
32	3303 - Mixed Low Density Trees	3.5		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
32	3303 - Mixed Low Density Trees	3.5		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
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32	3303 - Mixed Low Density Trees	3.5		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
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32	3303 - Mixed Low Density Trees	3.5		Harvested as part of sale # 63-055-09-01 (Road Commission Corners). Retention was white oak at 30 ba with scattered white pine.
38	122 - Road/Parking Lot	2.2	No	3 Mile Road
44	122 - Road/Parking Lot	1.8	No	roads,power line corador
49	122 - Road/Parking Lot	1.8	No	
144	122 - Road/Parking Lot	2.4	No	roads,power line corador
244	122 - Road/Parking Lot	7.1	No	power line corador
400	3303 - Mixed Low Density Trees	6.7	No	Old wildlife opening no longer cultivated jack pine is starting to grow in the open areas. Sparsely scattered large black oaks are dying from decline.
401	310 - Herbaceous Openland	3.5	Yes	cultivated wildlife opening.
402	310 - Herbaceous Openland	13.2	Yes	cultivated wildlife opening.



Stand	Cover Type	Acres	Managed Site	General Comments:
404	310 - Herbaceous Openland	1.0	No	Old landing from aspen sale in stand 24. Good wildlife/hunting value.
406	3303 - Mixed Low Density Trees	0.5	No	Small opening at the edge of stand 31.