

Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63111 Entry Year 2019 Acreage: 2,279

County Missaukee

Management Area: Upper Muskegon

Revision Date: 2017-06-08

Stand Examiner: Blair Tweedale

Legal Description:

T22N, R8W, Sec 6; T23N R08W, Sec. 19, 20, 29, 30, 31

Identified Planning Goals:

Vegetative management in the Upper Muskegon 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 period will focus on harvesting older jack pine and balancing age class distributions of oak, aspen and red pine. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation. Expected trends within this 10-year planning period are the need to manage exotic species (especially Phragmites and glossy buckthorn), the need to continue to manage cover types for a balanced age-class distribution and an expected increase in recreation pressure.

Soil and topography:

Gray calm. Rubicon sands with some Loxley and Lupton mucks. Hilly terrain with many small ponds, lakes, marsh's and lowland areas.

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

Solid state ownership with private to the north, south and east.

Unique Natural Features:

Whitlock and Sheridan lake. Vernal ponds, bogs and marshes.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Old railroad grades through out the compartment. Near by Jennings was a thriving logging town in the early 1900's. Loons* documented within compartment on Whitlock Lake (section 30) and Sheridan Lake (section 31); loon south e and w. Great blue heron rookery* in se 1/4 of section 6. Bald eagle to the e. Potential for great blue heron rookery, osprey, eagle, goshawk, red-shouldered hawk, massasauga, and Blanding's turtle. Potential for ebony boghaunter and secretive locust. Potential for marsh birds: common moorhen, black tern, yellow rail, American bittern, least bittern, and marsh wren.

Watershed and Fisheries Considerations:

Whitlock and Sheridan Lakes are in Compartment 111. These lakes are shallow bog lakes with limited fishing potential due to winterkill.

Wildlife Habitat Considerations:

Featured wildlife species include deer, bear, ruffed grouse, woodcock, and beaver. 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

Surface sediments consist of an end moraine of coarse-textured till and glacial outwash sand and gravel and post-glacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Mississippian Michigan Formation and Bayport Limestone and Pennsylvanian Grand River and Saginaw Formations. The Michigan is quarried for gypsum, Bayport for limestone and Saginaw for clay/shale in other parts of the State. There is currently no known metallic mineral potential in this part of the state. Sand/gravel pits are not located in the area, but there appears to be some sand potential within the compartment. Gravel appears to be relatively limited. The compartment includes the one-well, abandoned Jennings Stray Sand Field and the one-well, abandoned Caldwell Traverse Limestone Field is just

outside the compartment. Neither field produced much hydrocarbons. In addition, there are two dry holes within the compartment. Much of the state-owned mineral rights in the compartment are currently leased to West Bay for oil and gas exploration and development.

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:

Recreational Facilities and Opportunities:

There are no designated recreational facilities within this compartment, however, dispersed camping does occur within this compartment. (T.M.N. 12-6-16)

Fire Protection:

Initial Attack for this unit is from the Manton Field Office. There are urban interface areas within the compartment. Terrain & timber types would make for fairly good access for equipment.

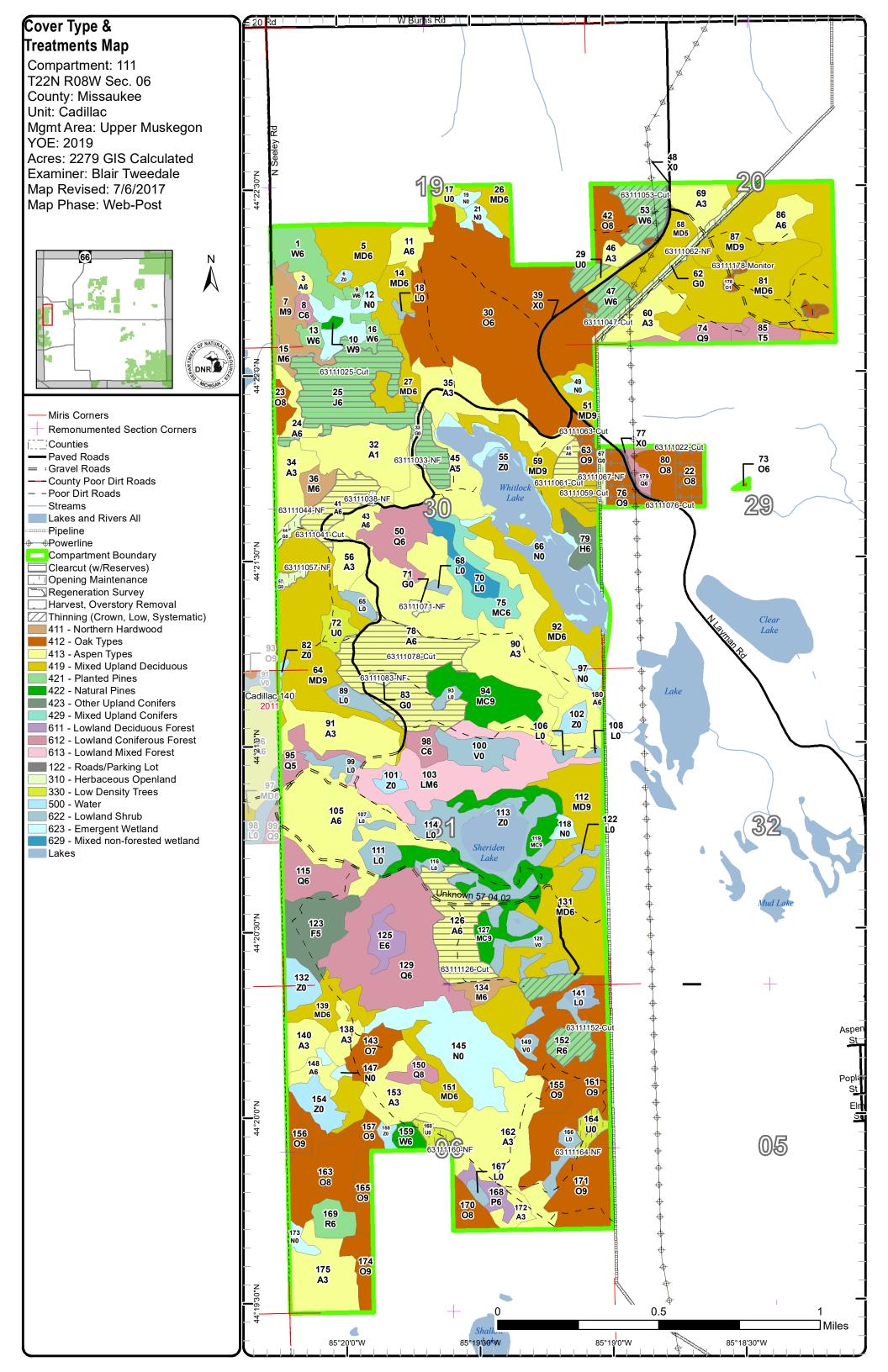
Additional Compartment Information:

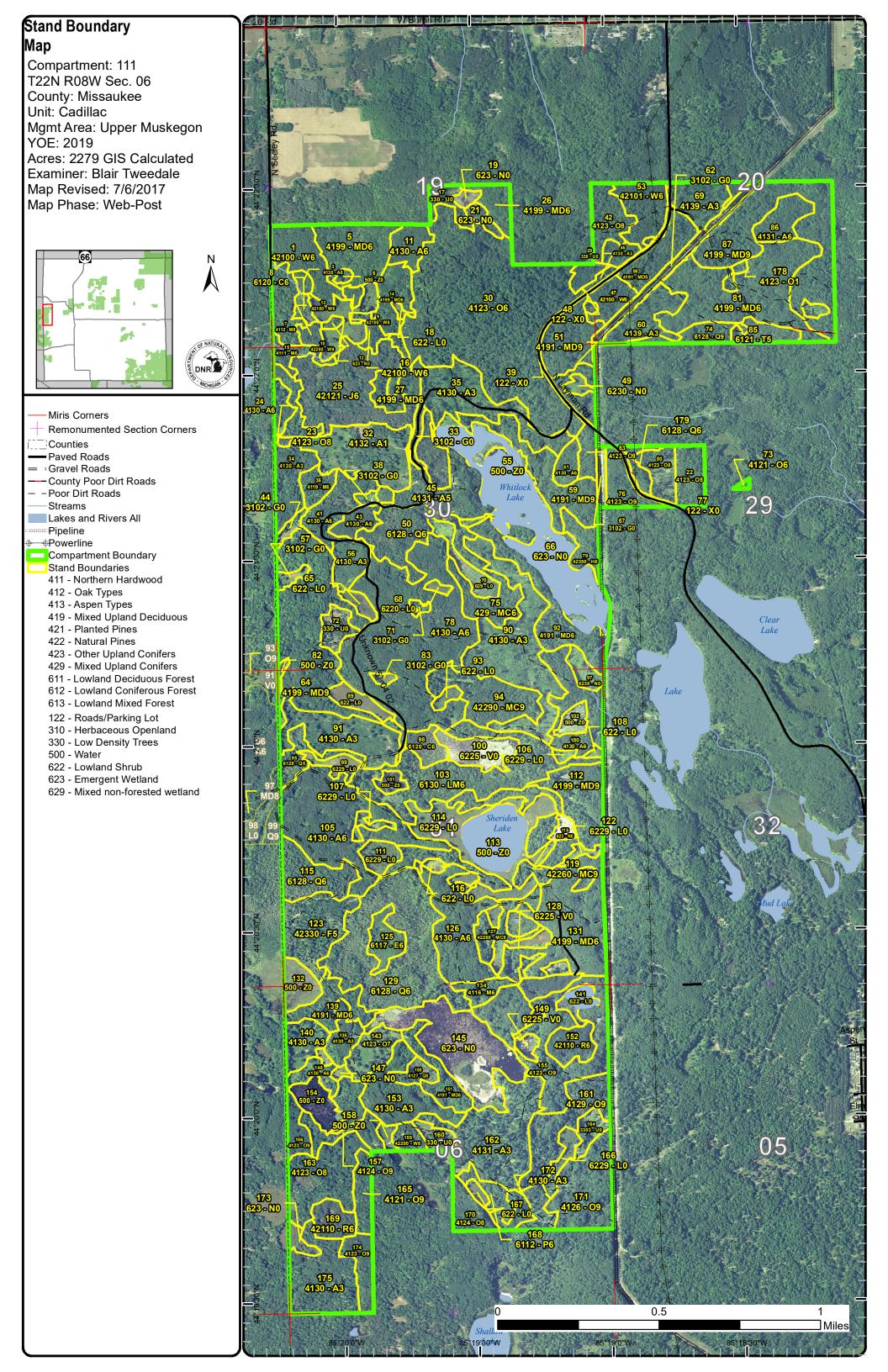
The following reports from the Inventory are attached:

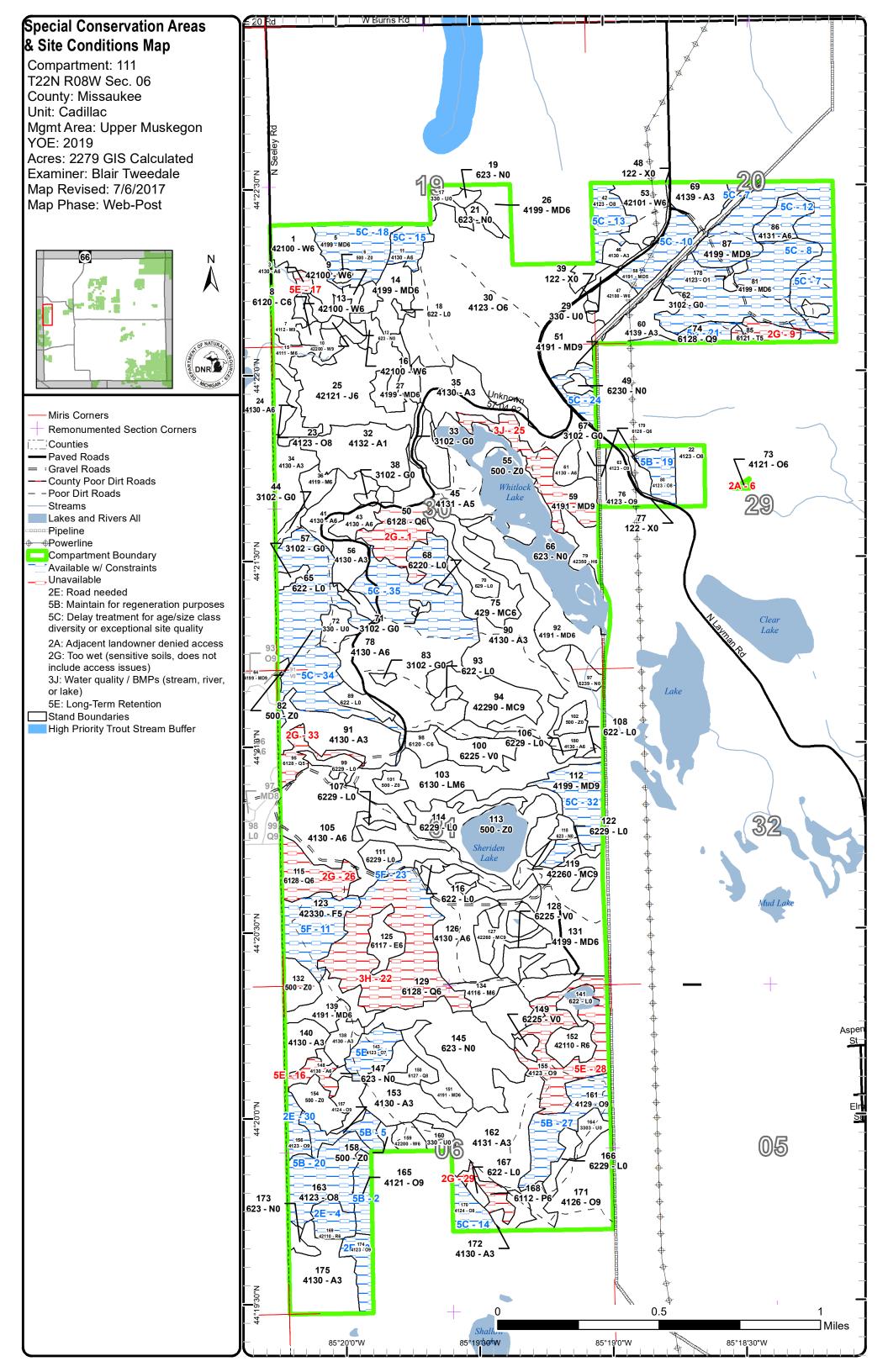
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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

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







Compartment 111 Year of Entry 2019

Blair Tweedale: Examiner

Cadillac Mgt. Unit



Age Class

						,													, ,
	¥ or	Kor C				8 / 4		, } / &				\$ \ \g	70,	,				St Sue	No. No.
Aspen	0	170	124	31	0	114	159	6	2	0	0	0	0	0	0	0	0	0	605
Bog	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Cedar	0	0	0	0	0	0	0	3	0	0	7	0	0	0	0	0	0	0	10
Hemlock	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9
Herbaceous Openland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Jack Pine	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	55
Low-Density Trees	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	0	0	0	5	0	32	84	0	8	0	0	0	0	0	129
Lowland Deciduous	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Mixed Forest	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	50
Lowland Shrub	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
Marsh	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
Mixed Upland Deciduous	0	0	0	12	59	28	21	31	0	173	87	0	0	0	0	0	0	8	418
Natural Mixed Pines	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	38	62
Northern Hardwood	0	0	0	6	0	0	6	0	12	6	0	0	0	0	0	0	0	0	30
Oak	0	5	0	0	0	0	5	0	28	104	85	0	0	0	0	0	0	156	383
Red Pine	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	24
Tamarack	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19
Upland Spruce/Fir	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Water	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65
White Pine	0	0	0	0	0	0	59	0	0	0	1	0	0	0	0	0	0	0	60
Total	374	175	124	49	84	151	335	102	66	324	264	0	8	0	0	0	0	221	2274



Report 2 - Treatment Summary

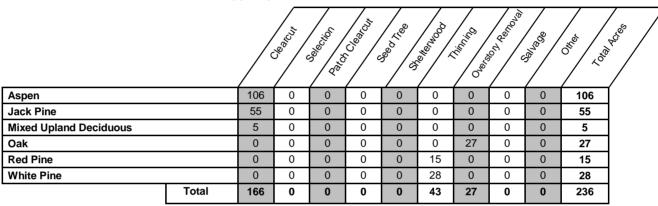
Cadillac Mgt. Unit Year of Entry: 2019

Acres of Harvest

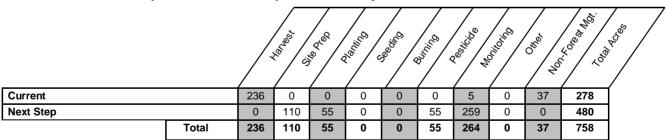
Compartment 111
Total Compartment Acres: 2,279

Commercial Harvest - 236 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Habitat Cut: No Site Condition:

Prescription Final harvest over story removal. Protect advance regeneration. May leave a scattered legacy tree (white pine).

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory); Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable white pine, oak, maple, aspen, cherry

Regen: Other Comment:

Proposed Start Date: 10/01/2018

63111025-Cut 42121 - Planted 4211 - Planted Poletimber 111-Harvest Clearcut Even-Aged Proposal

> Jack Pine, Mixed Well 140 Red Pine

Deciduous

Habitat Cut: No Site Condition:

Prescription final harvest. no retention.

Specs:

Next Step Pesticide, Skidder/Mechanical; SitePrep, Scarification; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(1yr);

Treatments: SitePrep, Other - Specify

Acceptable red pine

Regen:

Other Site prep spray 2-4 growing seasons after harvest to let jack pine sprout to have greater success for competition control. Then trench and plant red

Comment:

Proposed Start Date: 10/01/2018

63111033-NF 3.2 3102 - Grass Nonstocked Unspec NonForestMgt **Brush Cutting** 310 -Proposal

ified

Herbaceous Openland

Site Condition: Habitat Cut: No

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

Comment:

Regen:

Other

Proposed Start Date:

10/01/2018

63111038-NF 1.5 3102 - Grass **Brush Cutting** 310 -Proposal Nonstocked Unspec NonForestMgt

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 Specs:

shrubs and trees may be planted. Treatment of invasive species as needed.

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 111 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 Structure d CoverType Range Type 63111041-Cut 41 15.4 4130 - Aspen Poletimber 50 Unspec Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Mixed Deciduous Well ified Retention **Habitat Cut: No Site Condition:** Prescription Final harvest. Wind damage in stand. some areas may be challenging to harvest with the steep terrain and road located at bottom of the hill. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen, mixed deciduous Regen: Other Comment: Proposed Start Date: 10/01/2018 63111044-NF 310 -2.6 3102 - Grass Nonstocked Unspec NonForestMat **Brush Cutting** Proposal 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 63111047-Cut 12.6 42100 - Planted Poletimber 111-Harvest Crown Thinning 4319 - Mixed Two-Aged Proposal White Pine Well 140 **Upland Forest Habitat Cut: No Site Condition:** Prescription Thin to a residual 60-70 BA. Next Step **Treatments:** Acceptable white pine, with other mixed conifer and deciduous

Specs:

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

42101 - Planted Poletimber 111-Harvest 4319 - Mixed 63111053-Cut Crown Thinning Two-Aged Proposal

Upland Forest

140

White Pine, Mixed Well

Deciduous

Habitat Cut: No Site Condition:

Prescription Thin to a residual 60-70 BA.

Specs:

Next Step **Treatments:**

Acceptable White pine and other mixed conifer and deciduous species

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 111 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Type Method Objective Status Name Density Structure d CoverType Age Range 63111057-NF 310 -57 2.5 3102 - Grass Nonstocked Unspec NonForestMgt **Brush Cutting** Proposal Herbaceous ified Openland **Habitat Cut: No Site Condition:** <u>Prescription</u> 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 63111059-Cut 4.8 4191 - Mixed Sawtimber 90 141-Harvest Clearcut 4319 - Mixed Even-Aged Proposal **Upland Deciduous** Well 170 **Upland Forest** with Conifer **Habitat Cut: No Site Condition:** Prescription Final harvest. Protect advanced regeneration. Protect white pine regeneration. Do not cut hemlock. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable white pine, aspen and mixed deciduous Regen: Other Comment: **Proposed Start Date:** 05/26/2017 63111061-Cut 5.5 4130 - Aspen Poletimber 50 Unspec Harvest 4139 - Aspen, Proposal Clearcut Even-Aged ified Mixed Deciduous **Habitat Cut: No Site Condition:** Prescription Final harvest. No retention due to small acreage. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, mixed deciduous, white pine.

Regen:

Other May retain a legacy white pine if in stand.

Comment:

Proposed Start Date: 10/01/2018

3102 - Grass Brush Cutting 63111062-NF 10.9 310 -Proposal Nonstocked Unspec NonForestMgt Herbaceous

ified

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:

<u>Acceptable</u>

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018 Openland

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date:

10/01/2018

63111076-Cut 10.0 4123 - Red Oak Sawtimber 85 51-80 4319 - Mixed Overstory Even-Aged Proposal Harvest Well Removal **Upland Forest**

Habitat Cut: No Site Condition:

Prescription Final harvest over story removal. Protect advance regeneration. May leave a scattered legacy tree (white pine).

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine, red maple, oak, aspen, cherry

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 111 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n CoverType Method Objective Status Name Density Age Structure d Range Type 63111078-Cut Clearcut with 4139 - Aspen, 78 55.5 4130 - Aspen Poletimber 55 Unspec Harvest Even-Aged Proposal Mixed Deciduous Well ified Retention **Habitat Cut: No Site Condition:** Prescription Final Harvest. Retention should be left in pocket(s). Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen, mixed deciduous Regen: Other Comment: Proposed Start Date: 10/01/2018 63111083-NF 1.4 3102 - Grass 310 -Nonstocked Unspec NonForestMat **Brush Cutting** Proposal Herbaceous ified 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 126 63111126-Cut 30.0 4130 - Aspen Poletimber 50 Unspec Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Well ified Retention Mixed Deciduous **Habitat Cut: No Site Condition:** Prescription Final harvest. Leave retention in islands or a strip to created added edge. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable aspen

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

152 63111152-Cut 42110 - Planted Poletimber 171-Harvest Systematic 4211 - Planted Even-Aged Proposal Red Pine Thinning Red Pine Well 200

Habitat Cut: No Site Condition:

Prescription third row thin.

Specs:

Next Step Treatments:

Acceptable N/A

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 111 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n CoverType Range Method Objective Status Name Density Structure d Age Type 63111160-NF 4.8 330 - Low-Density NonForestMgt 310 -160 Nonstocked Unspec **Brush Cutting** Proposal Herbaceous Trees ified 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 63111164-NF 5.6 3303 - Mixed Low Nonstocked Unspec NonForestMgt **Brush Cutting** 310 -Proposal **Density Trees** ified Herbaceous Openland **Site Condition: Habitat Cut: No** 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 63111178-4123 - Red Oak 178 5.3 Sapling 2 Immatu Natural Regen 412 - Oak Types Two-Aged Proposal Monitoring Monitor Poor (Intermediate) re **Habitat Cut: No Site Condition:**

Prescription Monitor for spread of oak wilt.

Specs:

Next Step

Treatments:

Acceptable oak and mixed deciduous

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed:

278.4

Compartment: 111

Cadillac Mgt. Unit

8%

Blair Tweedale : Examiner Year of Entry: 2019

Availa	ability for	Managemer	nt										
Total	Acres	Acres Avail	Acres	De	omina	nt Site	e Cond	dition	S				
Acres	Available	With Condition	Not Available		2E	5B	5C	5F	2A	2G	3Н	3J	5E
606	537	62	8	Aspen			62						8
32	32	0	0	Bog									
9	9	0	0	Cedar									
9	9	0	0	Hemlock									
27	27	0	0	Herbaceous Openland									
55	55	0	0	Jack Pine									
24	24	0	0	Low-Density Trees									
6	0	0	6	Lowland Aspen/Balsam Poplar						6			
130	9	15	106	Lowland Conifers			8	7		45	60		
9	9	0	0	Lowland Deciduous									
50	50	0	0	Lowland Mixed Forest									
89	89	0	0	Lowland Shrub									
130	130	0	0	Marsh									
418	156	242	20	Mixed Upland Deciduous			242					20	
62	35	28	0	Natural Mixed Pines				28					
30	30	0	0	Northern Hardwood									
384	221	128	35	Oak	16	90	22		1				34
24	15	9	0	Red Pine	9								
7	0	0	7	Tamarack						7			
19	19	0	0	Upland Conifers									
25	0	25	0	Upland Spruce/Fir				25					
7	7	0	0	Urban									
65	65	0	0	Water									
61	61	0	0	White Pine									
2,279	1,588	508	182	Total Forested Acres	25	90	334	60	1	59	60	20	42

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.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

70%

22%

Cadillac Mgt. Unit
Blair Tweedale: Examiner

2	Available	5B: Maintain for regeneration purposes	9	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
	Comments:						
3	Available	2E: Road needed	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Available	2E: Road needed	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5B: Maintain for regeneration purposes	9	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2A: Adjacent landowner denied access	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	55	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Cadillac Mgt. Unit

Blair Tweedale : Examiner

8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	55	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
11	Available	5F: Evaluated for Forest Health Considerations	25	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

Cadillac Mgt. Unit
Blair Tweedale: Examiner

14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
16	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
17	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
18	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
	omments: lay want to create	e a hard factor limit on this stand	. Steep o	draws with springs and s	eeps throughout.		
19	Available	5B: Maintain for regeneration purposes	10	Unspecified	Unspecified	Unspecified	Unspecified
	omments: las already been	thinned.					

Cadillac Mgt. Unit
Blair Tweedale: Examiner

20	Available	5B: Maintain for regeneration purposes	27	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
	Comments:						
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
22	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	60	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
23	Available	5F: Evaluated for Forest Health Considerations	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand should be tr	eated with stand to the south if (conditi	ons warrant treatment.			
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Large trees in this	stand. Leave for aesthetics.					

Cadillac Mgt. Unit
Blair Tweedale: Examiner

25	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	21	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
C	Comments:						
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
27	Available	5B: Maintain for regeneration purposes	24	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
28	Unavailable	5E: Long-Term Retention	35	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
29	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
30	Available	2E: Road needed	7	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Cadillac Mgt. Unit

Blair Tweedale : Examiner

31	Available	5B: Maintain for regeneration purposes	11	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
32	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
33	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
34	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	61	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
35	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	42	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Freated half this st	tand this entry period.					

Cadillac Mgt. Unit

Compartment: 111
Year of Entry: 2019



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
	Potential Old Growth		SCA Removal	365
Comments				
This area no longer m	eets the criteria to be classified as a Spec	ial Conservation Area.		

Cadillac Mgt. Unit Compartment: 111
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	туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems influences the aquatic ecosystem and vice-versa. Because of streams and open water wetlands, riparian areas harbor a hig communities are ecologically and socially significant in their eas aesthetics, habitat, bank stability, timber production, and the	the unique conditions adjacent to lakes, h diversity of plants and wildlife. Riparian ffects on water quality and quantity, as well

S t	Cadillac	: Mgt. Unit		Report 7	- Forested	Stands Compartment: 111 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42100 - Planted White Pine	Poletimber Well	17.8	57	141-170	
3	4130 - Aspen	Poletimber Well	2.1	70	Unspecified	Hillside of mature trees left out of sale last time. Leave as buffer/retention
5	4199 - Other Mixed Upland Deciduous	Poletimber Well	23.7	80	81-110	ravines and draws created by seeps.
7	4112 - Maple, Beech, Cherry Association	Sawtimber Well	11.9	70	51-80	
8	6120 - Lowland Cedar	Poletimber Well	2.8	65	Unspecified	Small acreage but different from surrounding stands. drains out to flood area
9	42100 - Planted White Pine	Poletimber Well	1.9	57	171-200	Thin if you can access,, alot of water around it
10	42200 - Natural White Pine	Sawtimber Well	1.2	95	81-110	White pine
11	4130 - Aspen	Poletimber Well	8.6	49	Unspecified	Some wet areas in stand. Aspen in good shape can hold. Hardwoods mixed in.
13	42100 - Planted White Pine	Poletimber Well	3.1	57	51-80	Planted white pine.
14	4199 - Other Mixed Upland Deciduous	Poletimber Well	12.0	68	81-110	Ridge of mixed hardwoods. Steep with water/wet areas on both sides.
15	4111 - S.Maple, Hard Mast Association	Poletimber Well	5.8	55	81-110	
16	42100 - Planted White Pine	Poletimber Well	4.3	57	81-110	Planted white pine with some jp on ridge between drainage and pond. No access for equipment. Leave as buffer or retention.
22	4123 - Red Oak	Sawtimber Medium	10.8	90	81-110	
23	4123 - Red Oak	Sawtimber Medium	4.9	54	51-80	Cut last time, left some residual oak, aspen and hardwoods.
24	4130 - Aspen	Poletimber Well	7.3	17	51-80	Can hold but if adjacent stands get treated then treat this one
25	42121 - Planted Jack Pine, Mixed Deciduous	Poletimber Well	55.2	57	111-140	low quality jack pine
26	4199 - Other Mixed Upland Deciduous	Poletimber Well	8.2	68	81-110	Small acreage hardwood stand with tough access. Ash is dead.
27	4199 - Other Mixed Upland Deciduous	Poletimber Well	10.7	69	81-110	Stream/drainage on east side of stand

s t	Cadillad		Report 7	- Forested	Stands Compartment: 111 Year of Entry: 2019	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	4123 - Red Oak	Poletimber Well	156.2	95	81-110	Stand treated 2 entries ago. Variable size, density and species composition throughout stand. Areas heavy to pole size oak, areas of low density log+ oak, areas of advanced regeneration. North end of stand heavier to red maple and log oak. Beech dominates most canopy gaps.
32	4132 - Aspen, Jack Pine	Sapling Poor	30.5	6	Immature	
34	4130 - Aspen	Sapling Well	15.2	18	Unspecified	
35	4130 - Aspen	Sapling Well	30.6	5	1-50	Treated with sale # 63-001-09-01
36	4119 - Mixed Northern Hardwoods	Poletimber Well	6.1	80	81-110	This stand was thinned/select cut last time with sale #67-99 Layman Mix.
41	4130 - Aspen	Poletimber Well	15.4	50	Unspecified	Wind even caused excessive blow down in North section of stand. Stand has steep terrain with road at bottom.
42	4123 - Red Oak	Sawtimber Medium	12.8	85	1-50	Treated last time, some thick regen in spots underneath mature scattered oaks.
43	4130 - Aspen	Poletimber Well	7.9	44	Unspecified	
45	4131 - Aspen, Oak	Poletimber Medium	23.7	45	51-80	A lot of open areas in stand. Treat next time.
46	4130 - Aspen	Sapling Well	4.4	18	Unspecified	Treated last time, came back solid
47	42100 - Planted White Pine	Poletimber Well	12.6	57	111-140	WP plantation thinned last time
50	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	18.9	86	Unspecified	Small diameter balsam fir and aspen on edge of cedar. Wet area through middle of stand. Topography is rolling on edges.
51	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	7.8	85	111-140	Mixed stand around a bog/marsh. Small acreage. Leave as retention or buffer.
53	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	15.1	57	111-140	
56	4130 - Aspen	Sapling Well	9.4	6	Immature	Treated with sale # 63-001-09-01. Merge southern portion of stand 41
 58	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	15.2	84	51-80	Treated last time. Very mixed species and stocking.

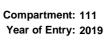
S t	Cadillac	Cadillac Mgt. Unit			- Forested	Stands Compartment: 111 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	25.3	90	141-170	
60	4139 - Aspen, Mixed Deciduous	Sapling Well	14.6	12	1-50	Final harvest. Leave smaller oak Treated with sale # 63-001-09-01
61	4130 - Aspen	Poletimber Well	5.5	50	Unspecified	
63	4123 - Red Oak	Sawtimber Well	5.8	85	111-140	Treated last time. Scattered mature oak over aspen/red maple/wp regen
64	4199 - Other Mixed Upland Deciduous	Sawtimber Well	61.2	98	81-110	
69	4139 - Aspen, Mixed Deciduous	Sapling Well	12.6	5	Unspecified	Mark some oak to leave Treated with sale #63-001-09-01
73	4121 - Oak, Aspen	Poletimber Well	0.5	98	81-110	dispose of property.
74	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	8.1	115	1-50	Low wet coniferous
75	429 - Mixed Upland Conifers	Poletimber Well	18.8	110	81-110	
76	4123 - Red Oak	Sawtimber Well	10.0	85	51-80	oak stand with heavy white pine understory.
78	4130 - Aspen	Poletimber Well	97.8	55	Unspecified	Large aspen stand with some wet pockets.
79	42350 - Upland Hemlock	Poletimber Well	8.7	80	141-170	Hemlock stand, drains to lake.
80	4123 - Red Oak	Sawtimber Medium	9.5	90	1-50	Sale # 48-09
81	4199 - Other Mixed Upland Deciduous	Poletimber Well	55.0	86	51-80	Red oak with a mix of deciduos. Shelterwood oak, remove aspen red maple and some beech.
85	6121 - Tamarack	Poletimber Medium	7.2	69	1-50	Tamarack, boggy with leatherleaf
86	4131 - Aspen, Oak	Poletimber Well	10.6	52	Unspecified	•
87	4199 - Other Mixed Upland Deciduous	Sawtimber Well	54.5	89	51-80	Treated last time. Good regen coming with a mix of beech.
90	4130 - Aspen	Sapling Well	49.1	5	Immature	

S t	Cadillac	Mgt. Unit		Report 7	- Forested	Stands Compartment: 111 Year of Entry: 2019	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
91	4130 - Aspen	Sapling Well	27.2	5	Immature	May need to merge northern portion with stand 64	
92	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	28.2	47	81-110		
94	42290 - Natural Mixed Pine	Sawtimber Well	24.0	70	81-110		
95	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	8.9	89	Unspecified		
98	6120 - Lowland Cedar	Poletimber Well	6.6	90	Unspecified		
103	6130 - Fir, Aspen, Maple	Poletimber Well	50.4	69	51-80	No treatment. Springs, seeps, some flowing water.	
105	4130 - Aspen	Poletimber Well	53.8	44	Unspecified	Solid aspen stand with a mix of red maple and oak. Hold till next time.	
112	4199 - Other Mixed Upland Deciduous	Sawtimber Well	24.6	87	81-110	Springs, seeps and small ponds. More aspen to the north.	
115	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	17.5	95	Unspecified	Low and wet with a mix of conifers.	
119	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	27.8	87	81-110	Potential old growth	
123	42330 - Upland Fir	Poletimber Medium	25.0	32	1-50	upland balsam stand with scattered large oak.	
125	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	8.9	45	Unspecified	appears to be an upland island in a low conifer stand.	
126	4130 - Aspen	Poletimber Well	30.0	50	Unspecified	Solid aspen red maple stand. Will be ready next time.	
127	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	10.6	89	51-80	Potential old growth	
129	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	66.9	95	111-140	Low wet coniferous.	
131	4199 - Other Mixed Upland Deciduous	Poletimber Well	59.2	37	81-110	Pole size oak mixed with aspen and red maple.	
134	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	5.7	28	Immature		

S	Cadillac Mgt. Unit			Report 7	- Forested	Stands Compartment: 111 Year of Entry: 2019
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
138	4130 - Aspen	Sapling Well	8.4	25	Immature	Came back solid to aspen and red maple.
139	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	20.9	59	51-80	
140	4130 - Aspen	Sapling Well	10.2	4	Unspecified	
143	4123 - Red Oak	Sawtimber Poor	11.4	90	1-50	Seed tree oak stand.
148	4130 - Aspen	Poletimber Well	6.0	65	Unspecified	This is a ridge between wet areas. Leave as retention
150	6127 - Lowland Pine	Sawtimber Medium	5.0	61	1-50	Dead and dying pine in bog area. Upland white pine transition to the west
151	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	11.7	27	51-80	White pine is dominant around stand 145.
152	42110 - Planted Red Pine	Poletimber Well	15.2	57	171-200	Thin, remove every third row.
153	4130 - Aspen	Sapling Well	22.9	25	Immature	
155	4123 - Red Oak	Sawtimber Well	34.5	94	81-110	Some of this stand was treated last time.
156	4123 - Red Oak	Sawtimber Well	6.8	83	141-170	Few road oak seedlings being heavily browsed. Red maple stump sprouts coming up.
157	4124 - Red with White Oak	Sawtimber Well	9.2	86	81-110	Small creek running through eastern portion of the stand, with middle section being a ridge. Difficult access to stand.
159	42200 - Natural White Pine	Poletimber Well	4.6	52	111-140	
161	4129 - Mixed Oak	Sawtimber Well	23.9	85	81-110	Very mixed stand / low quality. frost pockets
162	4131 - Aspen, Oak	Sapling Well	48.9	17	1-50	Mature scattered oak left over aspen/red maple regen. (Regen thick in open areas.)
163	4123 - Red Oak	Sawtimber Medium	27.4	83	1-50	Vernal ponds scattered throughout.
165	4121 - Oak, Aspen	Sawtimber Well	8.5	89	111-140	This strip was cut by private a while back but left the aspen and red maple. Get private line established.
168	6112 - Lowland Aspen	Poletimber Well	6.2	52	Unspecified	Low quality aspen, wet site, with a mix of conifer and deciduos.

S t	Cadill	ac Mgt. Unit
a n d	Level 4 Cover Type	Size Density

Report 7 - Forested Stands





t a n	Level 4	Size		Stand	ВА	General General
d	Cover Type	Density	Acres	Age	Range	Comments:
169	42110 - Planted Red Pine	Poletimber Well	8.6	57	171-200	Red Pine plantation, thinned last time. Frost pockets
170	4124 - Red with White Oak	Sawtimber Medium	9.0	90	81-110	Cut last time. Scattered mature oak left over red maple/aspen sprouts. Lowland pockets present.
171	4126 - White, Black, N. Pin Oak	Sawtimber Well	28.0	71	111-140	Better quality oak than adjoining stands with some aspen/red maple mixed in.
172	4130 - Aspen	Sapling Well	5.2	16	Unspecified	Recent cut. Sale closed out in 02
174	4123 - Red Oak	Sawtimber Well	9.7	98	111-140	This was treated by private land owner a while back. Treat if you can get access
175	4130 - Aspen	Sapling Well	28.7	17	Unspecified	Red Pine planted around east edge of 173
178	4123 - Red Oak	Sapling Poor	5.3	2	Immature	All were areas of active oak wilt in 2014. Were vibrator plowed by forest heath and cut down by Manton and Cadillac FMD staff in Feb 2015. (All hand cut) Some of the wood was skidded and sold to local producer. Infected trees were burned on site. All was done to try and slow spread of oak wilt. Only oak was cut regardless of diameter.
179	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	4.4	89	Unspecified	
180	4130 - Aspen	Poletimber Well	19.9	47	Unspecified	

Cadillac Mgt. Unit

Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
6	500 - Water	1.2	No	
12	623 - Emergent Wetland	14.1	No	
17	330 - Low-Density Trees	4.8	No	
18	622 - Lowland Shrub	1.1	No	
19	623 - Emergent Wetland	2.1	No	
21	623 - Emergent Wetland	4.0	No	
29	330 - Low-Density Trees	1.7	No	
33	3102 - Grass	3.2	No	
38	3102 - Grass	1.5	No	
39	122 - Road/Parking Lot	2.2	No	Layman Rd.
44	3102 - Grass	2.6	No	
48	122 - Road/Parking Lot	2.4	No	
49	6230 - Cattail	2.4	No	lowland type
55	500 - Water	16.5	No	
57	3102 - Grass	2.5	No	
62	3102 - Grass	10.9	No	Power line and pipeline
65	622 - Lowland Shrub	3.4	No	Lowland low shrub bog
66	623 - Emergent Wetland	49.3	No	
-				

Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
67	3102 - Grass	3.4	No	Power line and pipe line ROW
68	6220 - Alder/willow	1.4	No	
70	629 - Mixed non-forested wetland	8.5	No	
71	3102 - Grass	1.3	No	
72	330 - Low-Density Trees	6.8	No	
77	122 - Road/Parking Lot	1.9	No	
82	500 - Water	1.1	No	
83	3102 - Grass	1.4	No	
89	622 - Lowland Shrub	6.3	No	
93	622 - Lowland Shrub	2.3	No	
97	6239 - Mixed Emergent Wetland	5.4	No	
99	6229 - Mixed lowland shrub	4.8	No	
100	6225 - Bog	12.4	No	Flooded. Dead cedar snags.
101	500 - Water	3.2	No	
102	500 - Water	4.4	No	
106	6229 - Mixed lowland shrub	1.4	No	
107	6229 - Mixed lowland shrub	2.9	No	
108	622 - Lowland Shrub	0.9	No	
108	622 - LOWIANG STITUD	0.9	INO	



Stand	Cover Type	Acres	Managed Site	General Comments:
111	6229 - Mixed lowland shrub	6.2	No	
113	500 - Water	17.7	No	
114	6229 - Mixed lowland shrub	33.2	No	Lowland shrub with some mature white pine and small balsam
116	622 - Lowland Shrub	1.8	No	
118	623 - Emergent Wetland	2.7	No	
122	6229 - Mixed lowland shrub	2.2	No	
128	6225 - Bog	15.7	No	
132	500 - Water	8.8	No	flooded beaver pond.
141	622 - Lowland Shrub	5.2	No	some trees in high spots
145	623 - Emergent Wetland	45.0	No	
147	623 - Emergent Wetland	2.2	No	
149	6225 - Bog	3.8	No	
154	500 - Water	10.1	No	Beaver pond with standing dead trees.
158	500 - Water	2.3	No	Beaver pond with tag alder around the edge. The road going through the stand is covered with water and most likely washed out.
160	330 - Low-Density Trees	4.8	No	
164	3303 - Mixed Low Density Trees	5.6	No	
166	6229 - Mixed lowland shrub	5.5	No	
167	622 - Lowland Shrub	1.9	No	
166	6229 - Mixed lowland shrub	5.5	No	

Cadillac Mgt. Unit

Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
173	623 - Emergent Wetland	3.2	No	