

## **Compartment Review Presentation**

**Cadillac Forest Management Unit** 

Compartment 63031 Entry Year 2019

County Osceola

Acreage: 1,876

Management Area: Evart Block

**Revision Date:** 07/06/2017

Stand Examiner: Cheryl Nelson

**Legal Description:** 

T18N R09W Section 1, 12, 13

#### **Identified Planning Goals:**

Vegetation management in the Evart Block management area will provide timber 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 years will focus on balancing the age-class distributions for aspen and regenerating oak. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity. Expected trends within this 10-year planning period are the need to regenerate oak, the need to continue to balance aspen age classes, the need to diversify forest cover types and an increase in recreation pressure.

#### Soil and topography:

Chelsea-Rubicon-Montcalm association (sands). Rolling hills, some steep areas.

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

Large contiguous state ownership. Adjacent private lands to southwest of compartment.

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

The Michigan Natural Features Inventory lists the Loon, Wood Turtle, and Blanding's Turtle as having occurred in this compartment. This compartment has the potential for the Red-Shouldered Hawk, Goshawk, and Box Turtle.

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

None

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

The roads in this area are generally of poor quality. Efforts continue to upgrade them. Visual management techniques will be followed where necessary.

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

Compartment 31 contains Whitmore Pond and the headwaters of Twin Creek. No fisheries information is available for Whitmore Pond. Twin Creek is a Designated Trout stream with self-sustaining populations of brown and brook trout. Timber management near Twin Creek should be conducted with the health of the stream in mind.

#### Wildlife Habitat Considerations:

Featured wildlife species are deer, ruffed grouse and pileated woodpecker. Woodcock as well as a variety of species utilizing early-successional communities and young forests will also benefit from management in this area. Management objectives are to maintain and regenerate oak stands, and to maintain the aspen type with age class diversity to provide continually available early-successional habitat for hunting and viewing 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. Sand/gravel pits are not located in this area, but there appears to be some sand and gravel potential within the compartment. The nearest producing oil and gas wells are more than two miles away, but there has been past production less than one mile from the compartment. All of sections 12 and 13 are currently leased for oil and gas exploration and development. Furthermore, a new well permit was issued just to the east of the compartment in 2015. There has been no well construction reported at this site to date and the permit would be due to expire in August of this year if a well is not drilled. Nevertheless, oil and gas potential is considered high for the compartment.

#### **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:**

A major portion of the Evart Single Track Motorcycle trail runs through all sections of this compartment. The Evart Single Track Motorcycle trail is designated via Director's Order for cycle trail use only, therefore the trail should be kept narrow to dissuade use by larger ORV types--such as quads. 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:**

This area is fairly remote, with very little urban interface. Fire protection would be from the Evart Field Office. The access would be fairly good for equipment. There is the potential for larger fires, due to the lack of natural barriers. Most fires would be surface fires, with not many areas having the potential for crown fires.

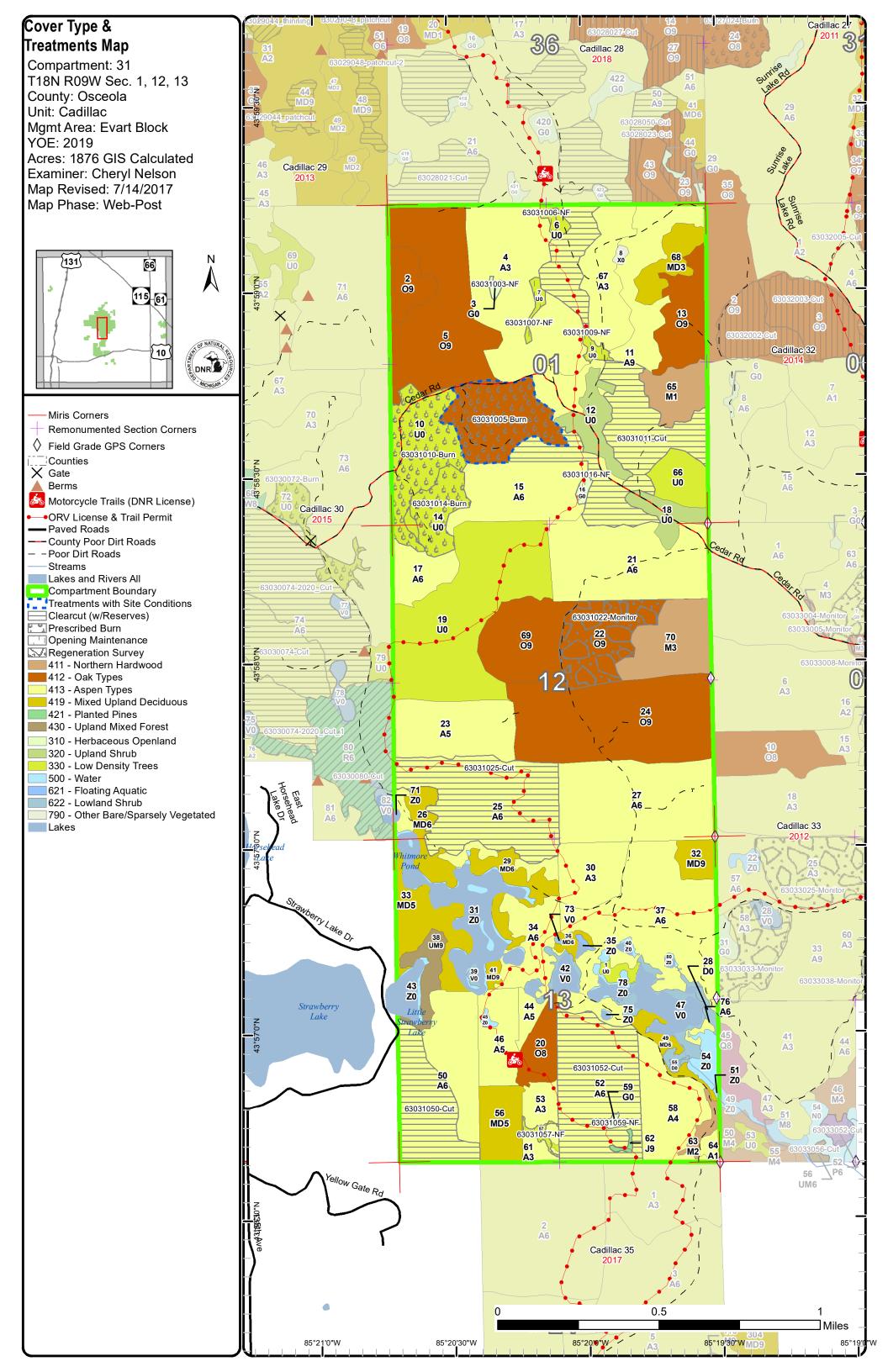
#### **Additional Compartment Information:**

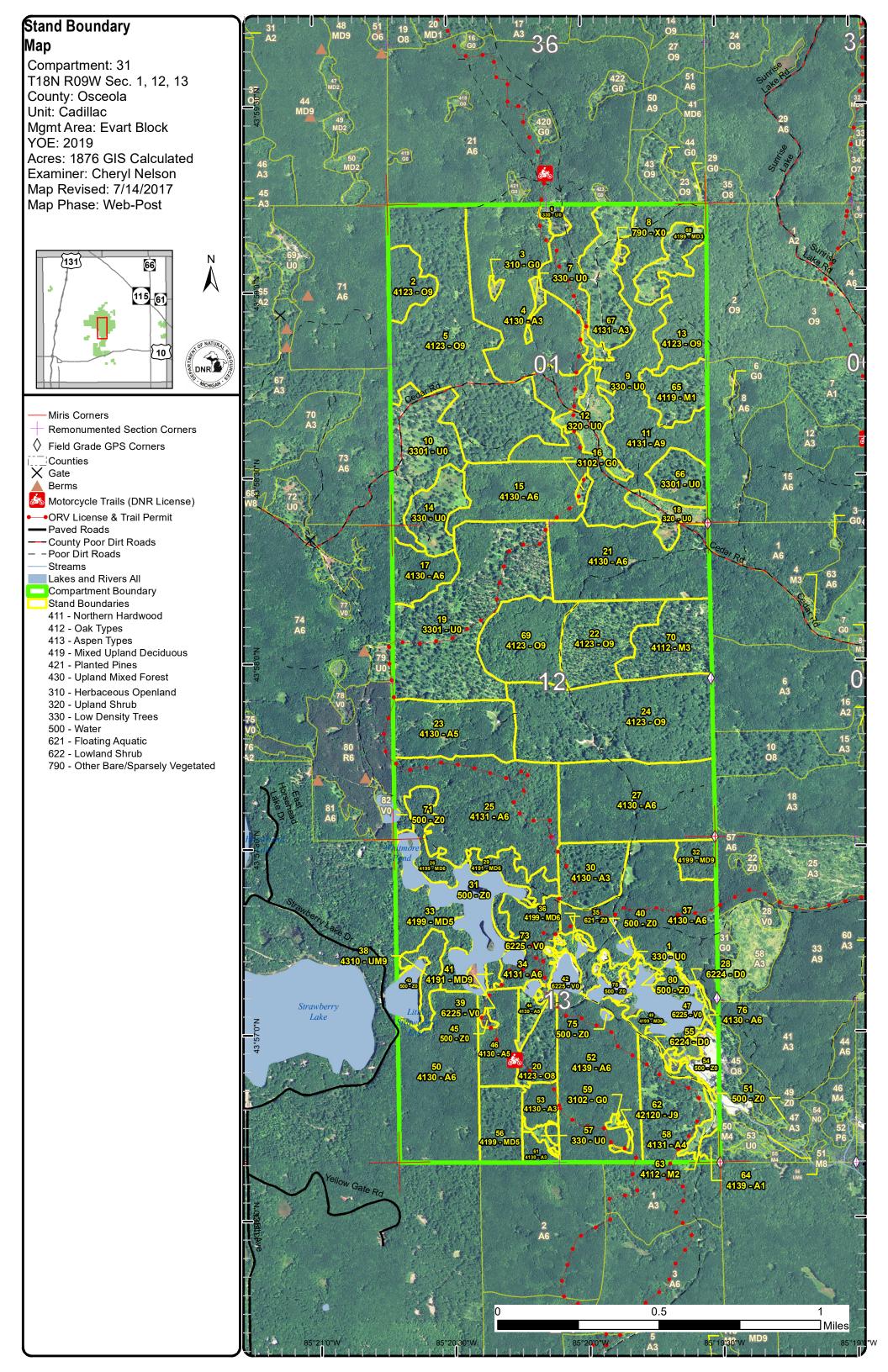
The following reports from the Inventory are attached:

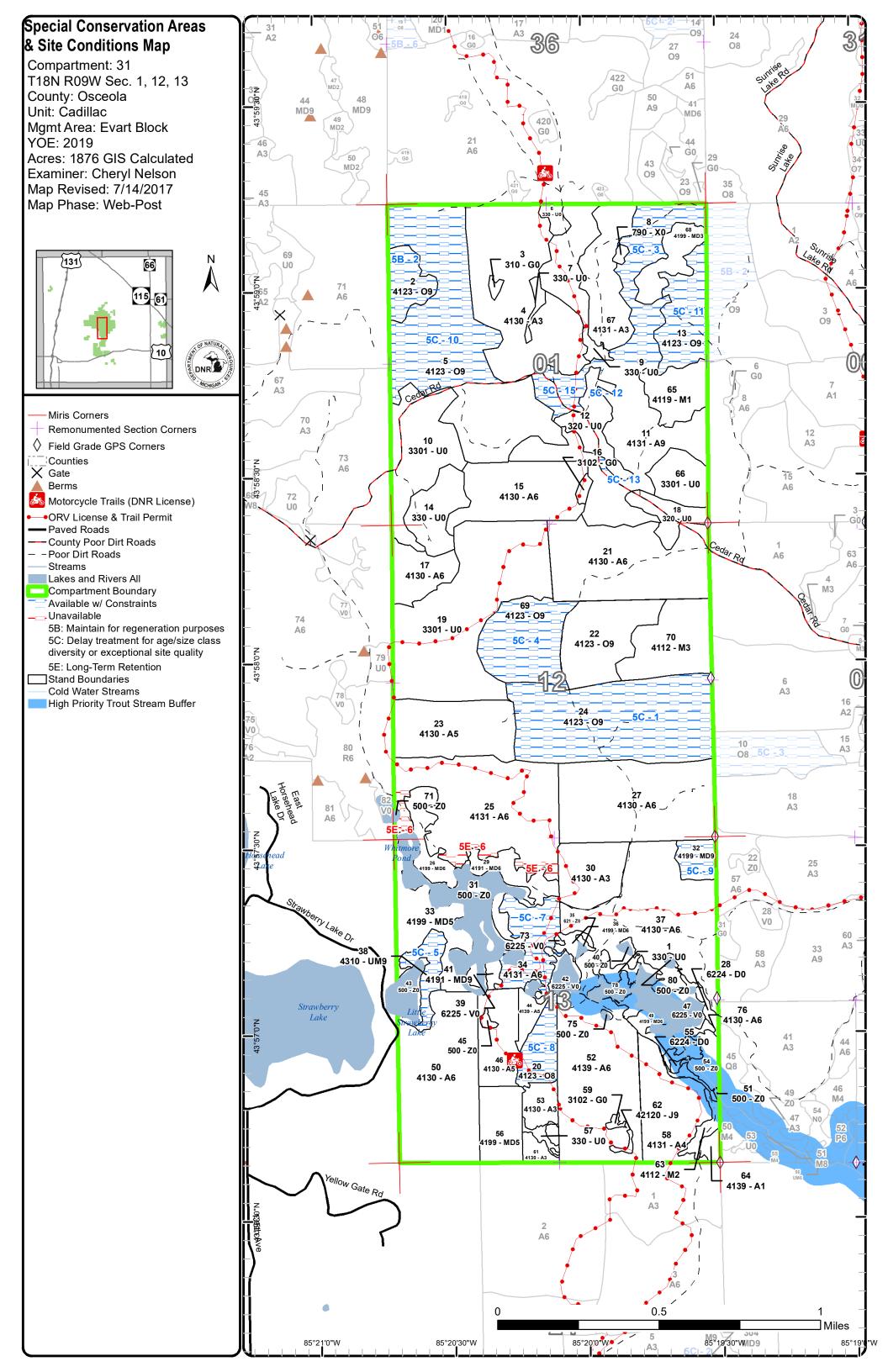
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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 31 Year of Entry 2019

**Cheryl Nelson: Examiner** 

Cadillac Mgt. Unit



### Age Class

	No.	A STATE OF THE PROPERTY OF THE		\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8 / 4	10 10 N	, % /&	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	8, 8	\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	70,	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$5.75 \n	Z Z Z	gr Jre	N. A.
Aspen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	986
Bare/Sparsely Vegetated	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bog	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Jack Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Low-Density Trees	2799	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2799
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363
Treed Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Upland Shrub	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Water	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68
Total	2939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4478



## Report 2 - Treatment Summary

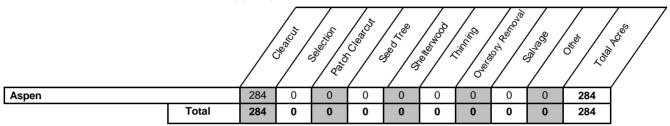
## Cadillac Mgt. Unit Year of Entry: 2019

#### **Acres of Harvest**

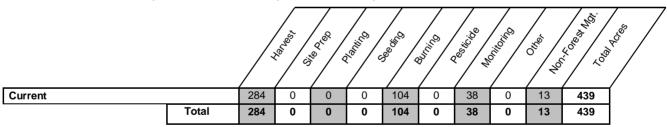
Compartment 31
Total Compartment Acres: 1,876

Commercial Harvest - 284 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: 31 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Method Objective Status Name Density Range Structure d CoverType Age **Type** 63031003-NF 3 1.2 310 - Herbaceous Nonstocked NonForestMgt **Brush Cutting** 310 -Proposal Herbaceous Openland 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: <u>Acceptable</u> Regen: Other Comment: Proposed Start Date: 10/01/2018 5 63031005-42.4 4123 - Red Oak Sawtimber 97 81-110 Burn Understory 4319 - Mixed Even-Aged Proposal Burn Well **Upland Forest** Site Condition: Age-Class or Site Quality **Habitat Cut: No** Prescription Burn to set back red maple and encourage oak seedling growth. Specs: Next Step **Treatments:** Acceptable Mix of upland species. Regen: **Other** Comment: **Proposed Start Date:** 05/31/2017 310 -63031006-NF 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** Proposal Trees 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 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:** 06/06/2017 63031007-NF 2.7 330 - Low-Density **Brush Cutting** 310 -Nonstocked NonForestMgt Proposal Trees 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: 31 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Method Objective Status Name Density Structure d CoverType Age Range **Type** 63031009-NF 2.9 330 - Low-Density 310 g Nonstocked Unspec NonForestMgt **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 10 63031010-42.7 3301 - Low Density Nonstocked 0 Unspec Burn Understory 3301 - Low Proposal Burn **Deciduous Trees** ified Density **Deciduous Trees Habitat Cut: No Site Condition:** Prescription Burn to set back red maple. Specs: Next Step Treatments: Acceptable Mix of oak, aspen, and other upland deciduous species. Regen: Other Stand prescribed burn FTP #C63-681, "Cedar Road #2". Comment: **Proposed Start Date:** 10/01/2018 63031011-Cut 91.4 4131 - Aspen, Oak Sawtimber 53 141-Clearcut with 4139 - Aspen, Proposal Harvest Even-Aged 170 Mixed Deciduous **Habitat Cut: No Site Condition:** Prescription Clearcut with retention. Cut all species. Mark to keep and occasional oak. Retention in the form of patches. Protect single-track ORV during timber sale. Use Grouse spec in timber sale. Specs: Next Step **Treatments:** Acceptable Aspen with a mix of upland deciduous species. Regen: Other Comment: 10/01/2018 **Proposed Start Date:** 14 63031014-19.3 330 - Low-Density Nonstocked Burn 310 -Opening Approved Herbaceous Proposal Burn Trees Openland

Comment: Proposed St

**Habitat Cut: No** 

Specs:
Next Step
Treatments:
Acceptable
Regen:
Other

Proposed Start Date: 10/01/2008

Prescription Burn on a 3-5 year rotation.

**Site Condition:** 

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 31 s Year of Entry: 2019 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Method Objective Status Name Density Structure d CoverType Age Range **Type** 63031016-NF 310 -16 1.8 3102 - Grass Nonstocked Unspec NonForestMgt **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 22 63031022-37.8 4123 - Red Oak Sawtimber 100 51-80 Monitoring Natural Regen 4121 - Oak, Two-Aged Draft Field **Monitor** Well (Intermediate) Aspen Boundary **Habitat Cut:** No Site Condition: **Prescription** Specs: Next Step Treatments: Acceptable Mix of oak and upland deciduous species. Regen: Other Percent to Treat = 100% Comment: **Proposed Start Date:** 06/14/2017 63031025-Cut 80.6 4131 - Aspen, Oak Poletimber 48 81-110 Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Retention Mixed Deciduous **Site Condition: Habitat Cut: No** Prescription Clearcut with retention. Cut all species. Mark an occasional oak to keep. Retention in the form of patches and include a few pine trees. Use Specs: Grouse spec in timber sale. Next Step Treatments:

Acceptable Aspen with a mix of upland deciduous species.

Regen:

Other Comment:

**Proposed Start Date:** 

10/01/2018

63031050-Cut 41.6 Poletimber 1-50 Harvest 4139 - Aspen, 4130 - Aspen Clearcut with Even-Aged Proposal Mixed Deciduous Well Retention

**Habitat Cut: No Site Condition:** 

Prescription Cut all species to a 2" dbh. Do not cut any black cherry. Retention in the form of patches. Use grouse spec in timber sale.

Specs:

Next Step

Treatments:

Acceptable Aspen with a mix of deciduous tree species.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018 Cadillac Mgt. Unit

Report 3 -- Treatments

Compartment: 31 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 63031052-Cut Clearcut with 70.1 4139 - Aspen, Mixed Poletimber 36 Unspec Harvest 4139 - Aspen, Even-Aged Proposal Deciduous Mixed Deciduous

Retention

**Habitat Cut: No Site Condition:** 

Prescription Cut all species to a 2" dbh. Do not cut any oak, jack pine, white pine, or black cherry. Set sale boundary back from the Whitmore pond complex using Best Management Practices guideline. Focus retention along the single-track ORV trail. Use Grouse spec in timber sale. Specs:

ified

Next Step Treatments:

Acceptable Aspen with a mix of deciduous species. Small amount of conifer may be present.

Well

Regen:

s

Other Comment:

Proposed Start Date: 10/01/2018

63031057-NF 310 -330 - Low-Density Nonstocked Unspec NonForestMat **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

63031059-NF 1.0 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 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

**Total Treatment** Acreage Proposed: 439.3

Cadillac Mgt. Unit

Cheryl Nelson : Examiner

Compartment: 31 Year of Entry: 2019

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cone	ditions
Acres	Available	With Condition	Not Available		5B	5C	5E	
986	898	77	11	Aspen		77	11	Ī
1	1	0	0	Bare/Sparsely Vegetated				
34	34	0	0	Bog				
4	4	0	0	Herbaceous Openland				
1	1	0	0	Jack Pine				
202	202	0	0	Low-Density Trees				
120	110	9	0	Mixed Upland Deciduous		9		
58	58	0	0	Northern Hardwood				
363	80	283	0	Oak	15	268		
3	3	0	0	Treed Bog				
12	0	12	0	Upland Mixed Forest		12		
30	30	0	0	Upland Shrub				
62	62	0	0	Water				
1,876	1,484	382	11	Total Forested Acres	15	366	11	
	79%	20%	1%	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	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	99	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
2	Available	5B: Maintain for regeneration purposes	15	Unspecified	Unspecified	Unspecified	Unspecified
		regeneration purposes					
C	Comments:	regeneration purposes					
C	Comments:	regeneration purposes					

# **Report 4 – Site Conditions**

Cadillac Mgt. Unit

**Cheryl Nelson: Examiner** 

3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	37	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	40	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
6	Unavailable	5E: Long-Term Retention	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retention for treat	ment 63031025-Cut					
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	26	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

# **Report 4 – Site Conditions**

Cadillac Mgt. Unit **Cheryl Nelson: Examiner** 

	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	82	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	29	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	0	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	1	Unspecified	Unspecified	Unspecified	Unspecified
0-	mments:						

# **Report 4 – Site Conditions**

Cadillac Mgt. Unit
Cheryl Nelson: Examiner

Compartment: 31 Year of Entry: 2019

15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						

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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: 31





## 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.

Conservation Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area					
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen of stocked trout populations and those of other coldwater fish s year to year. Coldwater streams in Michigan typically provide contributions of groundwater to their stream flows. Such street designated as trout resources by Fisheries Order 210.	species (e.g., slimy sculpin) to persist from ethese conditions due to substantial					
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of streams and open water wetlands, riparian areas harbor a high communities 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					

S t	Cadilla	c Mgt. Unit		Report 7	- Forested	Stands Compartment: 31 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4123 - Red Oak	Sawtimber Well	15.2	92	111-140	Stand treated sale # 630820101, "Willy Nilly Hardwoods". Specs allowed for the removal of all red maple and aspen 2" dbh or greater, and all orange marked oak trees. Sale closed August 2005.
4	4130 - Aspen	Sapling Well	85.4	27	Unspecified	stand treated timber sale #63-025-88-01, "Cedar Twp #1". Specs allowed for the removal of all aspen, oak, and mixed hardwood containing any commercial value.
5	4123 - Red Oak	Sawtimber Well	127.1	97	81-110	Northern edge contains aspen that was cut in 1973 but too small to make its' own stand. Stand harvested timber sale #63-078-99-01, "Beechnut Bruin". Cut in 2003. Specs called for cutting of all aspen and red maple, no cutting of oak or beech. Lots of red maple stump sprouts and single-stem regen. Red maple and oak seedling average less than 1" in height. Stand in the process of regeneration.
11	4131 - Aspen, Oak	Sawtimber Well	142.8	53	141-170	Stand was treated in 1964. Specs allowed for removal of all merchantable aspen & soft maple containing one or more 100" pulpwood bolt to a 4" top dib. Treated areas were not mapped. Stand densities and sizes vary due to previous treatment.
13	4123 - Red Oak	Sawtimber Well	28.7	92	81-110	Stand treated sale # 630820101, "Willy Nilly Hardwoods". Specs allowed for the removal of all red maple and aspen 2" dbh or greater, and all orange marked oak trees. Sale closed August 2005.
15	4130 - Aspen	Poletimber Well	44.0	27	Unspecified	Stand treated sale # 63-027-88-01, "Osceola 2 Areas". Specs allowed for the removal of all aspen, oak, and mixed hardwood trees containing any commercial value.
17	4130 - Aspen	Poletimber Well	17.9	27	1-50	Stand is comprised of varying diameters of aspen and red maple. BA's range from 6" to 8". Stand treated sale # 630278801. Specs allowed for the removal of all aspen, oak, and mixed hardwood trees "containing any commercial value".
20	4123 - Red Oak	Sawtimber Medium	15.2	98	1-50	Stand treated sale #630279901 "Beaver Knows Aspen". Specs allowed for the removal of all red maple, red oak, and bigtooth aspen logs and pulp, and white oak and black cherry pulp. Scattered open areas with grass, sweetfern, and raspberries.
21	4130 - Aspen	Poletimber Well	71.8	36	51-80	Stand treated t-sale #630287901 (28-79A). Specs allowed for the removal of all aspen and mixed hardwood trees which yield one or more 8' bolts to a 4" DIB. Hawthorne and autumn olive in spots along road edges.
22	4123 - Red Oak	Sawtimber Well	37.7	100	51-80	Stand treated timber sale #63-026-09-01, "C31 Oak". Specs allowed for the removal of all species except those marked with green paint. Stand treated t-sale # 63-014-89-01. Sale closed 1990. Specs allowed for the removal of all aspen and red maple with any commercial value. No cutting of oak, beech, or black cherry was allowed.
23	4130 - Aspen	Poletimber Medium	42.8	27	1-50	Stand treated t-sale #63-028-88-01, "No Name Sale". Cut in 1991. Specs allowed for the removal of all aspen, oak, and mixed hardwood trees containing any commercial value.

S t	Cadillac	; Mgt. Unit		Report 7	- Forested	Stands Compartment: 31 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4123 - Red Oak	Sawtimber Well	99.4	100	51-80	Stand treated sale #630619901, "Bunkerhill Aspen". Specs allowed for the removal of red maple, aspen, and a few marked hirisk oak. Red maple and aspen were left in areas that needed them to retain 70 BA. Small amount of oak seedling less than 1' in height.
25	4131 - Aspen, Oak	Poletimber Well	91.4	48	81-110	Some fire scarring from illegal wildfire in the southeast portion of stand. Stand treated sale # 6-66A. Specs allowed for the removal of all aspen, red maple, and white birch. Trace of sugar maple in overstory.
26	4199 - Other Mixed Upland Deciduous	Poletimber Well	13.7	48	51-80	Stand treated timber sale # 6-66A. Specs allowed for the removal of all aspen, red maple, and white birch.
27	4130 - Aspen	Poletimber Well	76.5	35		Stand treated sale #27-79A. Sale closed Oct. 1982. Specs allowed for the removal of all aspen and mixed hardwood trees which would yield one or more 8' bolts to a 4" DIB.
29	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	17.0	48	51-80	Some fire scarring from illegal wildfire. This stand was treated sale # 6-66A. Specs allowed for the removal of all aspen, red maple, and white birch.
30	4130 - Aspen	Sapling Well	24.7	17	1-50	Stand treated sale #630419901 "Sassafras Bluffs Aspen". Specs allowed for the removal of all bid species (red maple, BTA, black cherry, logs and pulp of each spp.), as well as red maple to 2" DBH.
32	4199 - Other Mixed Upland Deciduous	Sawtimber Well	9.2	92	81-110	Leave stand for wildlife mast. Stand is surrounded by younger aspen.
33	4199 - Other Mixed Upland Deciduous	Poletimber Medium	29.4	47	51-80	Stand treated sale # 6-66A. Specs allowed for the removal of all aspen, red maple, and white birch. Sale closed 1970. Trace of White Birch in canopy.
34	4131 - Aspen, Oak	Poletimber Well	25.6	48	81-110	Stand treated sale # 6-66A. Specs allowed for the removal of all aspen, red maple, and white birch. There is a trace of Sugar Maple log trees. Clone of large, mature aspen, but overall stand is smaller diameter pulp. 2006 comment: One aspen tree measured 72' and 49 rings to equal a SI of 70.
36	4199 - Other Mixed Upland Deciduous	Poletimber Well	3.1	27	1-50	Stand treated sale #630238801. Sale closed April 1990. There are a lot of stump sprout red maple stems.
37	4130 - Aspen	Poletimber Well	89.9	27	Unspecified	Stand treated sale #630238801. Sale closed April 1990. Specs allowed for the removal of all aspen, oak, and mixed hardwood trees containing any commercial value. White pine log trees to south of stand especially along edge with lowland.
38	4310 - Pine, Oak Mix	Sawtimber Well	12.1	90	81-110	
41	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	2.4	100	111-140	

S t	Cadilla	c Mgt. Unit		Report 7	- Forested	Stands Compartment: 31 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4139 - Aspen, Mixed Deciduous	Poletimber Medium	5.7	18	1-50	Few scattered river birch. Stand treated sale #630279901 "Beaver Knows Aspen". Specs allowed for the removal of all red maple, red oak, and bigtooth aspen logs and pulp, and white oak and black cherry pulp. Area of landing is non-forested, but this area is smaller than 1 ac.
46	4130 - Aspen	Poletimber Medium	22.5	28	1-50	Stand treated sale #630228801, "Whitmore Bobcat". Specs allowed for the removal of aspen, oak, and mixed hardwood containing any commercial value.
49	4199 - Other Mixed Upland Deciduous	Poletimber Well	8.9	50	51-80	Stand is a nice mix of species and diameters.
50	4130 - Aspen	Poletimber Well	77.2	36	1-50	
52	4139 - Aspen, Mixed Deciduous	Poletimber Well	78.7	36	Unspecified	Stand treated sale #30-79A, "Whitmore Pond Sale". Specs allowed for the removal of all aspen and mixed hardwoods which would yield one or more 8' bolt to a 4" DIB.
53	4130 - Aspen	Sapling Well	9.1	28		Stand treated sale #630228801, "Whitmore Bobcat". Specs allowed for the removal of aspen, oak, and mixed hardwood containing any commercial value. Stand has some small open areas of grass, sweetfern, black cherry, and raspberry.
56	4199 - Other Mixed Upland Deciduous	Poletimber Medium	20.3	17	1-50	Stand treated sale #630279901 "Beaver Knows Aspen".
58	4131 - Aspen, Oak	Poletimber Poor	36.8	17	1-50	Stand treated sale #630419901 "Sassafras Bluffs Aspen". Specs allowed for the removal of all bid species (red maple, BTA, black cherry, logs and pulp of each spp.), as well as red maple to 2" DBH. Small amount of raspberry.
61	4130 - Aspen	Sapling Well	6.0	28	Unspecified	Stand treated sale #630228801, "Whitmore Bobcat". Specs allowed for the removal of aspen, oak, and mixed hardwood containing any commercial value.
62	42120 - Planted Jack Pine	Sawtimber Well	1.0	67	51-80	
63	4112 - Maple, Beech, Cherry Association	Sapling Medium	4.8	6	Immature	Stand treated timber sale #63-079-09-01, "Snakeskin Mix".
64	4139 - Aspen, Mixed Deciduous	Sapling Poor	3.2	11	1-50	Stand treated timber sale #63-079-09-01, "Snakeskin Mix".
65	4119 - Mixed Northern Hardwoods	Sapling Poor	18.9	6	1-50	2012 Comment: Stand treated timbersale #63-076-09-01, "Snakeskin Mix". Previous Comments: Stand was treated in 1964. Specs allowed for removal of all merchantable aspen & soft maple containing one or more 100" pulpwood bolt to a 4" top dib. Treated areas were not mapped. Would like to do stage 2 to better map out areas to be treated.Break into smaller areas to diversity age classes. Harvest in areas of older-aged aspen. Cut all red maple and aspen. Leave oak in lower oak BA areas and mark oak to leave in higher oak BA areas within the older aspen zones. Mark some beech to keep.

S t	Cadilla	c Mgt. Unit		Report 7	– Forested	Stands Compartment: 31 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
67	4131 - Aspen, Oak	Sapling Well	32.4	5	1-50	Stand treated timbersale #63-076-09-01, "Snakeskin Mix".
68	4199 - Other Mixed Upland Deciduous	Sapling Well	15.7	6	1-50	Stand treated timber sale #63-076-09-01, "Snakeskin Mix".
69	4123 - Red Oak	Sawtimber Well	40.2	105	51-80	Stand treated t-sale # 630148901. Sale closed 1990. Specs allowed for the removal of all aspen and red maple with any commercial value. No cutting of oak, beech, or black cherry was allowed.
70	4112 - Maple, Beech, Cherry Association	Sapling Well	34.3	3	1-50	Full of red maple saplings, mostly stump sprouts. Trace of red maple, black cherry, and beech log to pole left in stand. Stand treated timber sale #63-026-09-01, "C31 Oak". Sale completed in June of 2014. Specs allowed for the removal of all species except those marked with green paint. Previously, stand treated t-sale # 630148901. Sale closed 1990. Specs allowed for the removal of all aspen and red maple with any commercial value. No cutting of oak, beech, or black cherry was allowed.
76	4130 - Aspen	Poletimber Well	1.7	27		Stand treated sale #630238801. Sale closed April 1990. Specs allowed for the removal of all aspen, oak, and mixed hardwood trees containing any commercial value.

# Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:	CHIGA
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		
1	330 - Low-Density Trees	3.4	No		



Stand	Cover Type	Acres	Managed Site	General Comments:	OCHIGA!
3	310 - Herbaceous Openland	1.2	No		
6	330 - Low-Density Trees	3.8	No		
7	330 - Low-Density Trees	2.7	No		
8	790 - Other Bare/Sparsely Vegetate	1.2	No		
9	330 - Low-Density Trees	2.9	No	Scattered black cherry pulp to log.	
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand
10	3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. treated timber sale #63-026-09-01, "C31 Oak".	Stand



Cover Type	Acres	Managed Site	General Comments:	
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. Streated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. \$ treated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. \$ treated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. \$ treated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. Streated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. Streated timber sale #63-026-09-01, "C31 Oak".	Stand
3301 - Low Density Deciduous Trees	42.7		Stand prescribed burn per FTP #C63-682, "Cedar Rd #2" in spring of 2015. Streated timber sale #63-026-09-01, "C31 Oak".	Stand
320 - Upland Shrub	17.7		Red pine was planted around aspen pockets and are growing well. Red pine per FTP# C63-683 & 684, 05/01/2015. Stand treated timbersale #63-076-09 "Sknakeskin Mix".	
330 - Low-Density Trees	20.7	No		
3102 - Grass	1.8	No		
320 - Upland Shrub	12.1		Red pine was planted around aspen pockets and are growing well. Red pine p per FTP# C63-683 & 684, 05/01/2015. Stand treated timbersale #63-076-09 "Sknakeskin Mix".	
3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sa 026-09-01, "C31 Oak".	ale #63-
3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sa 026-09-01, "C31 Oak".	ale #63-
3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sa 026-09-01, "C31 Oak".	ale #63-
3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sa 026-09-01, "C31 Oak".	ale #63-
	3301 - Low Density Deciduous Trees  320 - Upland Shrub  330 - Low-Density Trees  3102 - Grass  320 - Upland Shrub  3301 - Low Density Deciduous Trees	3301 - Low Density Deciduous Trees	Cover Type         Acres         Site           3301 - Low Density Deciduous Trees         42.7           320 - Upland Shrub         17.7           330 - Low-Density Trees         20.7         No           3102 - Grass         1.8         No           320 - Upland Shrub         12.1         106.7           3301 - Low Density Deciduous Trees         106.7         106.7           3301 - Low Density Deciduous Trees         106.7         106.7	Stand prescribed burn per FTP #C83-682, 'Coda'r Rd #2' in spring of 2015.



Stand	Cover Type	Acres	Managed Site	General Comments:
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
19	3301 - Low Density Deciduous Trees	106.7		Stand prescribed burn FTP#C63-682, "Cedar Rd #1". Stand treated timber sale #63-026-09-01, "C31 Oak".
28	6224 - Treed Bog	2.4	No	
31	500 - Water	36.3	No	Open water with leatherleaf.

# Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
35	621 - Floating Aquatic	1.1	No	
39	6225 - Bog	1.4	No	
40	500 - Water	1.3	No	
42	6225 - Bog	8.1	No	
43	500 - Water	7.8	No	
45	500 - Water	1.1	No	
47	6225 - Bog	23.6	No	
51	500 - Water	0.3	No	
54	500 - Water	7.4	No	
55	6224 - Treed Bog	0.8	No	
57	330 - Low-Density Trees	2.4	No	
59	3102 - Grass	1.0	No	
66	3301 - Low Density Deciduous Trees	16.2		Occasional overstory oak and red maple. Good aspen regen with pockets of black cherry red maple. Stand treated timbersale #63-076-09-01, "Snakeskin Mix". Stand treated timber sale in 1964. Specs allowed for removal of all merchantable aspen & soft maple containing one or more 100" pulpwood bolt to a 4" top dib. Treated areas were not mapped.
71	500 - Water	0.3	No	
71	500 - Water	0.3	No	
71	500 - Water	0.3	No	
71	500 - Water	0.3	No	

Cadillac Mgt. Unit

# Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:	WCHIGK!
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
71	500 - Water	0.3	No		
73	6225 - Bog	0.4	No		
75	500 - Water	0.5	No		
78	500 - Water	5.5	No		
80	500 - Water	0.8	No		