CADILLAC FOREST MANAGEMENT UNIT



COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 029 ENTRY YEAR: 2013

Compartment Acreage (GIS Acres): 1573 County: Osceola

Revision Date: 10/07/2011 10:14 AM

Stand Examiner: Cheryl Nelson, Forester

Legal Description: T19N R09W Sections 22, 26, 34, 35

Management Goals: Habitat/Vegetation – Timber intensive. Production of high quality timber along with maintaining the aspen type and age class diversity are main goals.

Soil and Topography: Montcalm, Chelsea, Rubicon. Areas vary from nearly level to very steep terrain.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Private farm and woodlands border the north and west edges of this compartment. Isolated block of private ownership in section 34 consisting of approximately 200 acres which would be desirable for acquisition by the State to help keep state land contiguous and improve access and management options. Acquisition of the 40 acre parcel in section 26 SWSW is encouraged.

Unique, Natural Features (include only non-site specific and non-sensitive information): Loons, Blanding's turtle, wood turtle, grasshopper sparrow, and Henslow's sparrow recorded for this compartment. Potential for Karner blue, dusted skipper, ottoe skipper, Great Plains spittlebug, box turtle, Hill's thistle, Alleghany plum, and Missouri rock cress.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): Areas within the Evart block of state lands were once maintained as a sheep ranch.

Special Management Designations or Considerations: The major emphasis for this compartment as outlined by the RMU in the Pere Marquette Plan is for the production of high volume, quality timber along with maintaining the aspen type and age class diversity. Visual management techniques along roads and recreational trails is encouraged. Efforts to upgrade state forest roads will continue.

Watershed and Fisheries Considerations: No Fisheries comments at this time.

Wildlife Habitat Considerations: <u>Priority Wildlife Species:</u> Wildlife species associated with mixed hardwood and aspen forested community types.

<u>Habitat Objectives:</u> This compartment in located within the Highplains Ecosystem, Cadillac Subsection, LTA 1121. Soils in this area are characterized by well-drained loamy sand. The surrounding landscape is primarily forested with the exception of the area surrounding the community of Evart to the southeast. Historically this area was composed of mesic forest types. Presently, early seral stage north and central hardwood and mesic pine dominate the landscape. Regeneration of the oak component both within the aspen and northern hardwood types are a concern. Red maple and cherry generally regenerate in heavily thinned stands. Wildlife habitat objectives are to continue to manage for high structural diversity with stands and age class diversity across the compartment. (TL 9/30/11)

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of an end moraine of coarse-textured till. The glacial drift thickness varies between 800 and 1,000 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for clay/shale in other parts of the State. The nearest gravel pit is two miles to the northwest and gravel potential is considered to be good. The compartment lies one mile east of Rose Lake Field. The field has produced over 2.0 million BO from the Devonian Traverse Limestone and over 3.3 Bcf gas from the PdC. Section 35 has been leased for oil and gas and also nonmetallic potash development.

Vehicle Access: Projects will continue to upgrade and improve state forest road conditions in the area. Consideration should be given to building a road from 12 Mile into the SWSW sec. 34 in case the private landowner to the east denies access across his property.

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. Proposed new roads or roads recommended for substantial improvement are noted below:

Survey Needs: Remaining corners around the private land in sections 34 and 26 are needed.

Recreational Facilities and Opportunities: Area is used by recreationist for berry picking, hunting, dispersed camping and color touring. (BET 08/2011)

Fire Protection: With the reduction of fire suppression personnel at the Evart Field Office, fires could easily increase in size. County road to the south of the compartment will allow access for fire suppression. Large equipment will be limited to county roads. Forest roads will allow access with 4 wheel drive fire suppression equipment. Most fuel type will not support crown fire. The private property adjoining the state land has cabins in remote areas, which could be an urban interface issue. (BET 08/2011)

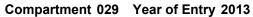
Additional Compartment Information:

- > The following 5 reports from the Operations Inventory System (OIPC) are attached:
 - Cover Type by Age Class
 - Cover Type by Management Objective
 - ♦ Compartment Volume Summary
 - Proposed Treatments No Limiting Factors
 - Proposed Treatments With Limiting Factors
- > The following information is displayed, where pertinent, on the attached compartment maps:
 - Base feature information, stand numbers, cover types
 - Proposed treatments
 - Proposed road access system
 - Suggested potential old growth

Table 1 – Total Acres by Cover Type and Age Class

Cadillac Mgt. Unit

Cheryl Nelson : Examiner





Age Class																	
	Nor	A See	6.z	61.02	62. 2.2		10-12- 14-14-14-14-14-14-14-14-14-14-14-14-14-1	£.30	60.03	P	69-100 69-100	66'.a	100 ¹⁰¹ ,	10,720	ND XD	ACC	
Aspen	0	137	121	253	365	19	0	0	0	0	0	0	0	0	0	894	
Bog	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
Herbaceous Openland	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	
Low-Density Trees	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
Mixed Upland Deciduous	0	28	70	0	0	0	0	0	0	290	78	0	0	0	0	466	
Northern Hardwood	0	0	32	0	0	0	0	0	0	11	0	0	0	0	0	44	
Oak	0	0	0	0	0	0	0	0	6	0	78	0	0	0	0	84	
Red Pine	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	30	
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total	56	165	223	253	395	19	0	0	6	302	156	0	0	0	0	1573]



Table 2 – Proposed Treatment Summaries

He Michigan	Cadillac Mgt. Unit Year of Entry 2013							Compartment Total Compartment Acres:	
			Α	cres by 1	reatment T	уре			
	Commercial Harvest - 276	Site Prep - 0		Tree P	lanting - 0		Prescribed Burn - 0	Other - 0	
	Habitat Cut - 0	Opening Mainter	ance - 0	Tree S	eeding - 0		Pesticide - 0		
			(Cover Ty	pe by Harve	st Metho	d		
					/ */_	/ ~/	/		
	Aspen			2 0	0 0	0	82		
	Mixed U	pland Deciduous	64	0 0	0 100	0	164		
	Red Pine	e	0	0 0	0 30	0	30		
		Total	144	2 0	0 130	0	276		

S t			Ca	adillac Mgt. Unit			atments Pre _imiting Fac		Compartment: 029 Year of Entry 2013	AN ATURAL AND
a n d	Treatn Nan		Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	6302900)8_cut	62.4	4130 - Aspen	High Density Pole	37	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Pres</u> Spe		Cut all as	spen an	d red maple. Do not o	cut any oak. Protec	t regen u	nder 4.5" DBH.	Retention in the form of	of small islands.	
Othe Corr Next Step	<u>iments:</u> t	Stand tre	ated in	1974. Varying pocke	ts of mature aspen,	red map	le, and oak with	in stand.		
13	630290 ⁷	13-Cut	28.2	4199 - Other Mixed Upland Deciduous	High Density Log	88	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<u>Pres</u> Spe		Cut all as	spen an	d red maple. Keep al	oak except in high	aspen d	ensity areas. M	ark to cut oak in these a	areas.	
<u>Othe</u> Corr	<u>er</u> L nments:	ots of oa	ak clum	ps.						
<u>Nex</u> Step										
21	6302902	21-Cut	29.9	42110 - Planted Red Pine	High Density Pole	37	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
Pres Spe		hird row	thin. C	Cut other species as n	ecessary for maneu	iverabilty	within rows.			
	<u>iments:</u>	Possibly	create a	a new road into area v	vith timber sale. Sta	and plant	ed 1974. Black	cherry, red maple, and	/or oak in rows.	
<u>Nex</u> Step	-									
26	6302902	26-Cut	9.2	4199 - Other Mixed Upland Deciduous	High Density Log	88	Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
Pres Spe		Cut all sp	ecies e	except oak. Focus rete	ention alsong west t	ooundary	with private lan	ıd.		
<u>Othe</u> Corr	e <u>r</u> F 1 <u>ments:</u>	Possibly	create a	a new road into area v	vith timber sale.					
<u>Nex</u> Step		Regenera	ation su	rvey.						
37	6302903	37-Cut	79.3	4199 - Other Mixed Upland Deciduous	High Density Log	82	Harvest	Low Thinning	4131 - Aspen, Oak	Cmpt. Review Proposal
Pres Spe		Cut all as	spen Tł	nin oak and red maple	to average 70-80 E	8A, remo	ving approximat	ely 50% of red maple.	Do not cut any oak unde	r 4.5" DBH.
<u>Othe</u> Corr	er_ hments:									
<u>Nex</u> Step										

S t		Ci	adillac Mgt. Unit			atments Pre- Limiting Fact		Compartment: 029 Year of Entry 2013	ANATURAL PRODUCTS
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	63029038-Cut	17.2	4131 - Aspen, Oak	High Density Pole	47	Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
Prese Spec		pecies e	except oak. Mark indivi	idual trees for reten	tion.				
<u>Othe</u> Com	r_ Use cont ments:	ract spe	ec to protect hawthorn.						
<u>Next</u> Step		ation su	irvey.						
41	63029041-Cut	2.0	4131 - Aspen, Oak	High Density Pole	47	Harvest	Group Selection	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
Prese Spec	<u>cription</u> Cut all as s:	spen.							
<u>Othe</u> Com	<u>r</u> ments:								
<u>Next</u> Step	•	ation su	irvey.						
44	63029044_pat chcut	8.4	4199 - Other Mixed Upland Deciduous	High Density Log	88	Harvest	Clearcut	4129 - Mixed Oak	Cmpt. Review Proposal
Prese Spec		all spec	cies in treatment area.						
<u>Othe</u>		t oak re	generation appearing i	n previous patch cu	ts. Actu	al stand shape r	may vary with terrain an	d oak densities.	
<u>Next</u> Step:		ation su	irvey.						
44	63029044_thin ning	21.2	4199 - Other Mixed Upland Deciduous	High Density Log	88	Harvest	Crown Thinning	4121 - Oak, Aspen	Cmpt. Review Proposal
Prese Spec		spen. T	hin rest of stand to an	average BA of 80-9	90. Foci	is on opening up	o crown for sunlight to re	each oak seedlings.	
<u>Othe</u> Com	<u>r</u> ments:								
<u>Next</u> Step:									
48	63029048_pat chcut	5.0	4199 - Other Mixed Upland Deciduous	High Density Log	91	Harvest	Clearcut	4121 - Oak, Aspen	Cmpt. Review Proposal
Prese Spec		all spec	cies in treatment areas						
<u>Othe</u>		t oak re	generation appearing i	n previous patch cu	its. Actu	al stand shape r	may vary with terrain an	d oak densities.	
<u>Next</u> Step:		ation su	irvey.						
48	63029048- patchcut-2	13.1	4199 - Other Mixed Upland Deciduous	High Density Log	91	Harvest	Clearcut	4121 - Oak, Aspen	Cmpt. Review Proposal
Pres Spec		all spec	cies in treatment area.						
<u>Othe</u> Com	r_ Excellen ments:	t oak re	generation appearing i	n previous patch cu	its. Actu	al stand shape r	may vary with terrain an	d oak densities.	
<u>Next</u> Step		ation su	irvey.						

S		Cad	illac Mgt. Unit			atments Pres _imiting Facto		Compartment: 029 Year of Entry 2013	AND
t a						_			AND MICHIGAN
n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	Total Treatme	nt							

Total Treatment Acreage Proposed: 275.8

S t a		Cadi	llac Mgt. Unit	Table 4		ents Prescrib ng Factor	ed with	Compartment: 029 Year of Entry 2013	DI NATURAL
n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						
Presc Spece	ription <u>s:</u>								
<u>Other</u> Comr									
<u>Next</u> <u>Steps</u>	<u>:</u>								
	ng Factor and No ment Reason	<u>)</u>							
Ac	Total Treatmer creage Propose		0						

Out of YOE -- Treatments Prescribed with No Limiting

its Factor	Year of Entry: 2	U13
Treatment	Cover Type	Approval
Method	Objective	Status

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63102_OutOfY OE_1-Cut	7.2				Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
Prescription Fina Specs:	Il harvest p	lant to red pine						
<u>Other</u> Comments:								
<u>Next</u> Writ <u>Steps:</u>	e FTP							
Total Treat Acreage Prop		7.2						

S t	Cadilla	Cadillac Mgt. Unit		5 – Fo	prested Sta	rinds Compartment: 029 Year of Entry: 2013
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6	4131 - Aspen, Oak	Medium Density	29.2	17		Stand treated timber sale #63-030-90-01, "Back Forties". Cut 1993-1994.
8	4130 - Aspen	High Density Pole	250.3	37	200+	Large, varied stand. Stand treated in 1974, #21-73A. Stand has regenerated very well with pockets of mature big tooth aspen mixed in with medium to large pulp aspen, red maple pulp to small logs, and light to heavy witch hazel. Small amount of red oak pulp to log, occassional white birch and black cherry. Some quaking aspen mixed in with big tooth.
13	4199 - Other Mixed Upland Deciduous	High Density Log	28.2	88	111-140	Lots of oak clumps.
15	4130 - Aspen	High Density Pole	80.2	25	51-80	
17	4119 - Mixed Northern Hardwoods	High Density Sapling	32.2	15	51-80	Stand treated timber sale #63-030-93-01, "Back Forties". Cut 1993-1994.
18	4119 - Mixed Northern Hardwoods	High Density Pole	11.4	88	51-80	Lots of oak and red maple clumps. Pockets of larger and smaller basal areas. Pockets of sassafras. Occassional white oak.
19	4130 - Aspen	High Density Pole	45.0	26	51-80	Occassional white birch.
21	42110 - Planted Red Pine	High Density Pole	29.9	37	200+	Stand planted 1974. Some aspen, black cherry, red maple, and/or oak in rows.
22	4199 - Other Mixed Upland Deciduous	Medium Density	63.8	16	51-80	Stand treated in 1995, cutting only aspen and red maple. Pockets of aspen regeneration scattered in stand. Overstory oak approx. 12" DBH.
25	4131 - Aspen, Oak	High Density Sapling	36.6	6		Stand treated timber sale #63-028-03-01, "Evart Morel Hardwoods". Cut 1995.
26	4199 - Other Mixed Upland Deciduous	High Density Log	9.2	88	81-110	Single stem as well as clump sprout pole to log red maple.
27	4130 - Aspen	High Density Sapling	31.2	17		Stand treated timber sale #63-003-93-01, "Camo Cabin Aspen". Cut 1994.
28	4131 - Aspen, Oak	Medium Density	78.4	4	1-50	Stand treated timber sale #63-034-04-01, "Hamstring Oak". Sale cut 2007. Aspen regen with areas of blackberries and overstory oak.
30	4130 - Aspen	High Density Pole	114.4	33		Stand treated timber sale #24-76A. Cut in 1978.
31	4130 - Aspen	Medium Density	58.9	26		Stand treated timber sale #63-018-83-012. Cut in 1985.

S t	Cadilla	c Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 029 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	4130 - Aspen	High Density Pole	68.5	26	51-80	Stand treated timber sale #63-018-83-01. Cut in 1985.
33	4199 - Other Mixed Upland Deciduous	Medium Density	13.8	4		Stand treated timber sale #63-034-04-01, "Hamstring Oak". Cut in 2007. Good amount of red oak seedlings up to 2" as well as stump sprouts.
36	4199 - Other Mixed Upland Deciduous	High Density Log	62.3	87	81-110	Stand treated timber sale #63-029-93-01, "NW Territory". Previous comment: Excellent acorn year when cut in 1996.
37	4199 - Other Mixed Upland Deciduous	High Density Log	79.3	82	141-170	Stand set up previous entry but not cut (old #63-043-03-01, Indian Pipe Mix"). Nice quality aspen and red oak. Very little paint still noticeable.
38	4131 - Aspen, Oak	High Density Pole	17.2	47	141-170	Patches of hawthron and witch hazel. High quality aspen and oak. Overall lower BA of red maple.
39	4124 - Red with White Oak	High Density Pole	5.8	78	141-170	Do not treat for age class diversity and mast trees.
40	4130 - Aspen	High Density Sapling	5.2	15		Stand treated timber sale #63-014-95-01, "Sugar Bowl Aspen & Oak". Cut in 1996.
41	4131 - Aspen, Oak	High Density Pole	2.0	47	141-170	Same as stand 51. This stand was left out of harvest when stand 39 was treated.
42	4130 - Aspen	High Density Sapling	32.3	17		Stand treated timber sale #63004-93-01, "Cat Track Hills I + II". Cut in 1994.
43	4199 - Other Mixed Upland Deciduous	Medium Density	6.0	15		Stand treated timber sale #63-008-95-01, "Cat Scat HDWD". Previous comment: Excellent acorn production when stand was cut in fall of 1996.
44	4199 - Other Mixed Upland Deciduous	High Density Log	111.4	88	200+	Small pockets of black oak/lower quality red oak scattered through stand. Pockets of smaller and larger diameters scattered throughout stand.
45	4139 - Aspen, Mixed Deciduous	High Density Sapling	21.9	6		Stand treated timber sale #63-028-03-01, "Evart Morel Hardwoods". Cut in 2005. Heavy red maple regen with some good oak regen up to 5 feet.
46	4139 - Aspen, Mixed Deciduous	High Density Sapling	22.8	17		Stand treated timber sale #63-003-93-01, "Camo Cabin Aspen".
47	4199 - Other Mixed Upland Deciduous	Medium Density	3.3	4		Stand treated timber sale #63-034-04-01, "Hamstring Oak". Cut in 2007. Good amount of red oak seedlings up to 2" as well as stump sprouts.
48	4199 - Other Mixed Upland Deciduous	High Density Log	77.8	91	171-200	Higher quality oak and aspen but quailty decrease to the south of the stand. Lower BA's of red maple overall.

S t	Cadilla		5 – Fo	prested Sta	Inds Compartment: 029 Year of Entry: 2013	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	4199 - Other Mixed Upland Deciduous	Medium Density	3.7	4		Stand treated timber sale #63-034-04-01, "Hamstring Oak". Cut in 2007. Good amount of red oak seedlings up to 2" as well as stump sprouts.
50	4199 - Other Mixed Upland Deciduous	Medium Density	7.3	4		Stand treated timber sale #63-034-04-01, "Hamstring Oak". Cut in 2007. Good amount of red oak seedlings up to 2" as well as stump sprouts.
51	4123 - Red Oak	High Density Pole	77.8	91	51-80	Stand treated timber sale #63-011-08-01, Icey Vista.

Cadillac Mgt. Unit

6 – Nonforested Stands

Compartment: 029

Year of Entry: 2013



						MICHIGAN
Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:	
1	3102 - Grass	0.7	No	Unspecified		
2	3102 - Grass	1.1	No	Unspecified		
3	3102 - Grass	8.6	No	Unspecified		
4	50 - Water	2.5	No	Unspecified		
5	6225 - Bog	7.9	No	Unspecified		
7	3102 - Grass	2.1	No	Unspecified		
9	3102 - Grass	5.1	No	Unspecified		
10	3102 - Grass	0.7	No	Unspecified		
11	3102 - Grass	3.4	No	Unspecified		
12	3102 - Grass	1.1	No	Unspecified		
14	6225 - Bog	2.1	No	Unspecified		
16	6225 - Bog	1.3	No	Unspecified		
20	6225 - Bog	1.3	No	Unspecified		
23	6225 - Bog	2.0	No	Unspecified	Some spruce and white pine.	
24	3301 - Low Density Deciduous Tree	5.9	No	Unspecified		
29	3301 - Low Density Deciduous Tree	6.4	No	Unspecified		
34	3102 - Grass	2.2	No	Unspecified		
35	3301 - Low Density Deciduous Tree	2.0	No	Unspecified		



7 – 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.

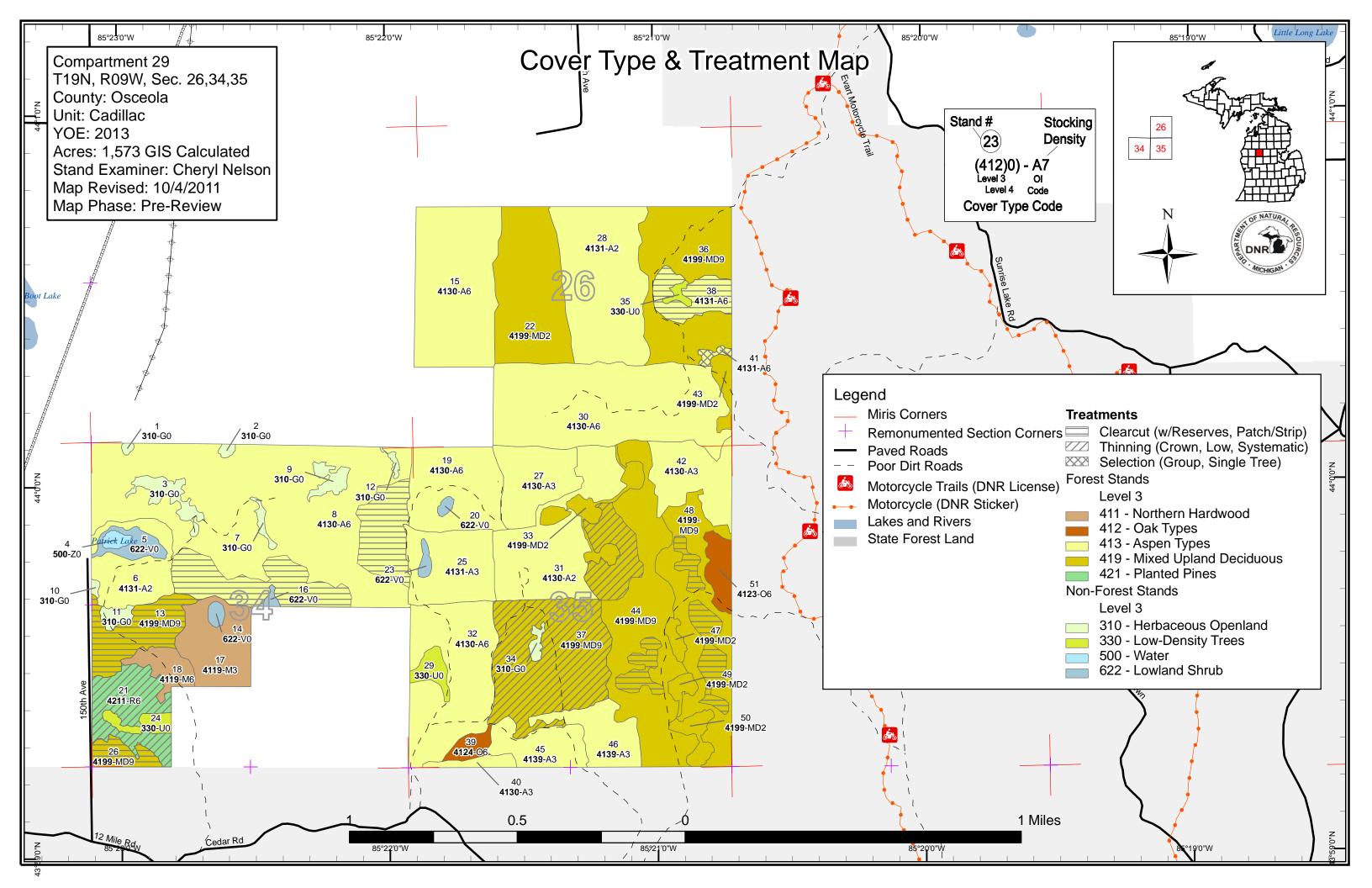
Stand	SCA Type	SCA Name	Acres	Comments



8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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



Compartment 29 T19N, R09W, Sec. 26,34,35 County: Osceola Unit: Cadillac YOE: 2013 Acres: 1,573 GIS Calculated Stand Examiner: Cheryl Nelson Map Revised: 10/4/2011 Map Phase: Pre-Review

Stand Boundary Map

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130-

0.5

35

44 199-MD

15 **4130**-A

19 **4130**-A6

622-\





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- Miris Corners
 Remonumented Set
 - Paved Roads
 - Poor Dirt Roads
- Motorcycle Trails (I
- Motorcycle (DNR S
- Utility Lines
- Pipe
- Intermittent Stream
- Stream

Stocking Density 2)0) - A7 3 Ol 914 Code Type Code	N N N N N N N N N N N N N N N N N N N	
Section Corners Fo		
(DNR License) Sticker)	Level 3 411 - Northern Hardwood 412 - Oak Types 413 - Aspen Types 419 - Mixed Upland Deciduous 421 - Planted Pines	N. Ooko
No m/Drain	on-Forest Stands Level 3 310 - Herbaceous Openland 330 - Low-Density Trees 500 - Water 622 - Lowland Shrub	

1 Miles

