

Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63035 Entry Year 2017 Acreage: 1,829

County Osceola

Management Area: Evart Block

Revision Date: 2015-06-12

Stand Examiner: Cheryl Nelson

Legal Description:

T17N R08W section 6 T17N R08W section 1 T18N R08W section 19 T18N R09W section 24, 25

Identified Planning Goals:

Vegetation management will provide timber products; maintain or enhance wildlife habitat; protect area of unique threatened, endangered, and special concern species; and provide for forest-based recreational uses.

Soil and topography:

Predominantly Chelsea, Rubicon and Montcalm Assoc. The terrain in the compartment is rolling.

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

This compartment has large acreages of state land broken up by areas of private land.

Unique Natural Features:

Michigan Natural Features Inventory lists the potential for the ebony boghaunter in bog habitat areas. There is also the potential for spotted turtle, Blanding's turtle, secretive locust, and the wood turtle.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

None known.

Watershed and Fisheries Considerations:

There is an intermittent drainage running southerly through T17N R09W section 1 into the Muskegon River. A standard buffer of 50 feet either side is requested.

Wildlife Habitat Considerations:

This compartment is located in the Highplains Ecosystem, Cadillac Subsection, LTA 1121. Soils in this area are characterized by well-drained loamy sands. The surrounding landscape is primarily forested with the exception of the areas surrounding the community of Evart to the southeast. Historically, this area was composed of mesic forest types. Presently, early serial stage northern and central hardwoods 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 within stands and age class diversity across the compartment. Primary featured species considerations are for ruffed grouse and deer. Timber sale specifications to benefit wildlife (where applicable) will include brush pile creation along lowland edges, protection of mast-bearing wildlife shrubs and ironwood, protection of standing dead snags, and creation of drumming logs (1-2 per acre) and woody debris (tops or whole trees) in aspen cuts. (E. Victory 6/2015)

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of an end moraine of coarse-textured till and minor glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Jurassic Red Beds and 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 just to the east and gravel potential is good. The compartment is located 1.5 miles east of Cedar Field. The field has produced over 1.2 million BO from the Devonian Detroit River Formation and over 1.4 Bcf gas from the Stray sandstone.

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:

Portions of the Evart motorcycle trail are in this compartment. This motorcycle trail is designed and maintained to be narrow (24 inches at ground level, 40 inches at handlebar height) to provide a unique motorcycling experience, as well as deter larger unwanted ORV's from accessing state lands. Where practical, recommend leaving or protecting trees that provide a narrow corridor to dissuade larger vehicles from entering the motorcycle trail. Additional trail protection measures identified in DNR Policy & Procedure 32.22XX (Best Management Practices for Forest and Wildlife Management Adjacent to Recreation Trails) should be taken into consideration when setting up timber sales in this compartment. Dispersed camping, and mushroom hunting are both common activities within this compartment (T.M.N. 12/16/14)

Fire Protection:

Forest and county roads provide good access. Dispersed camping and ORV trails are a concern for wildfire ignitions. Timber types do not support crown fire activities.

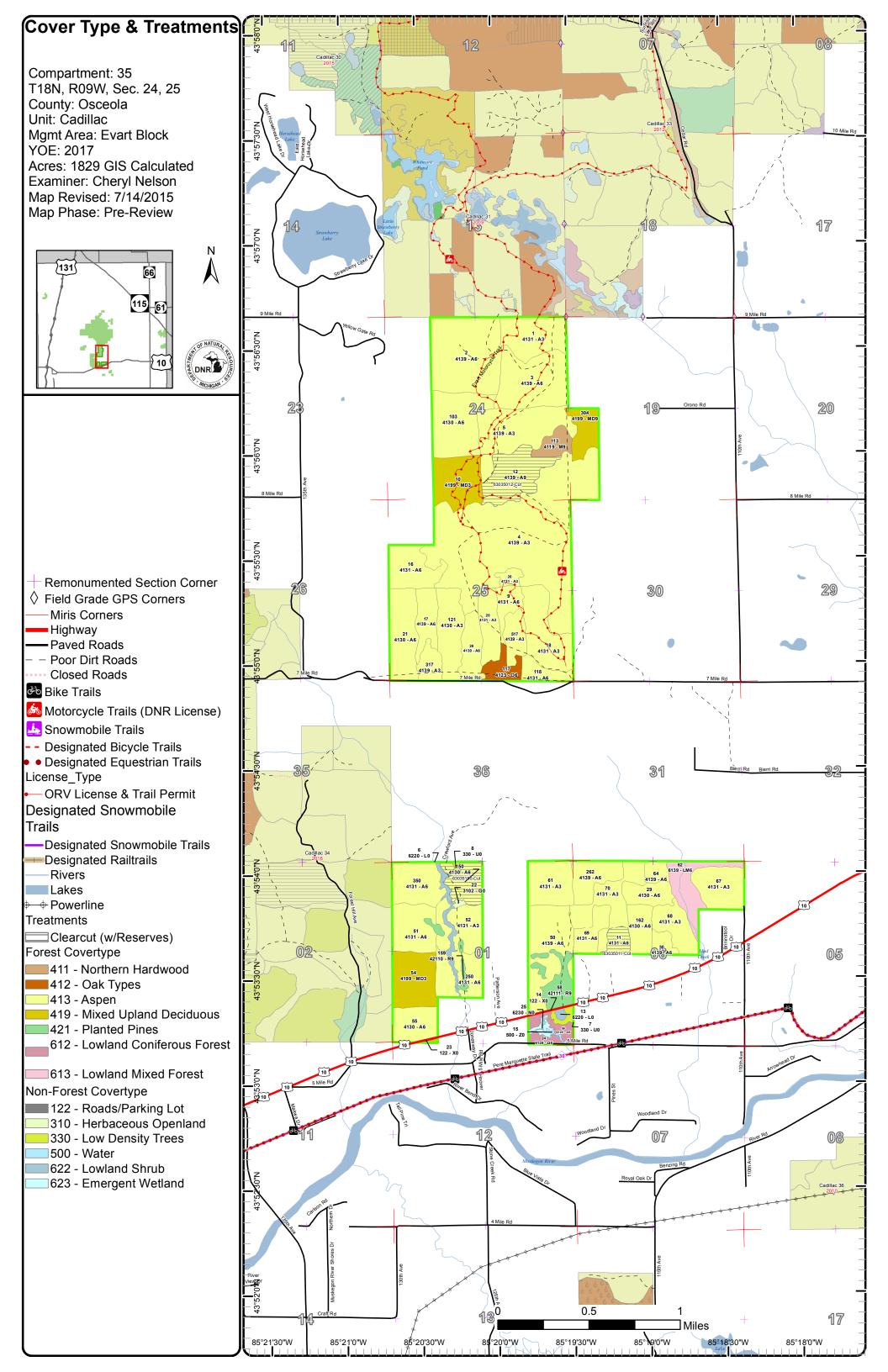
Additional Compartment Information:

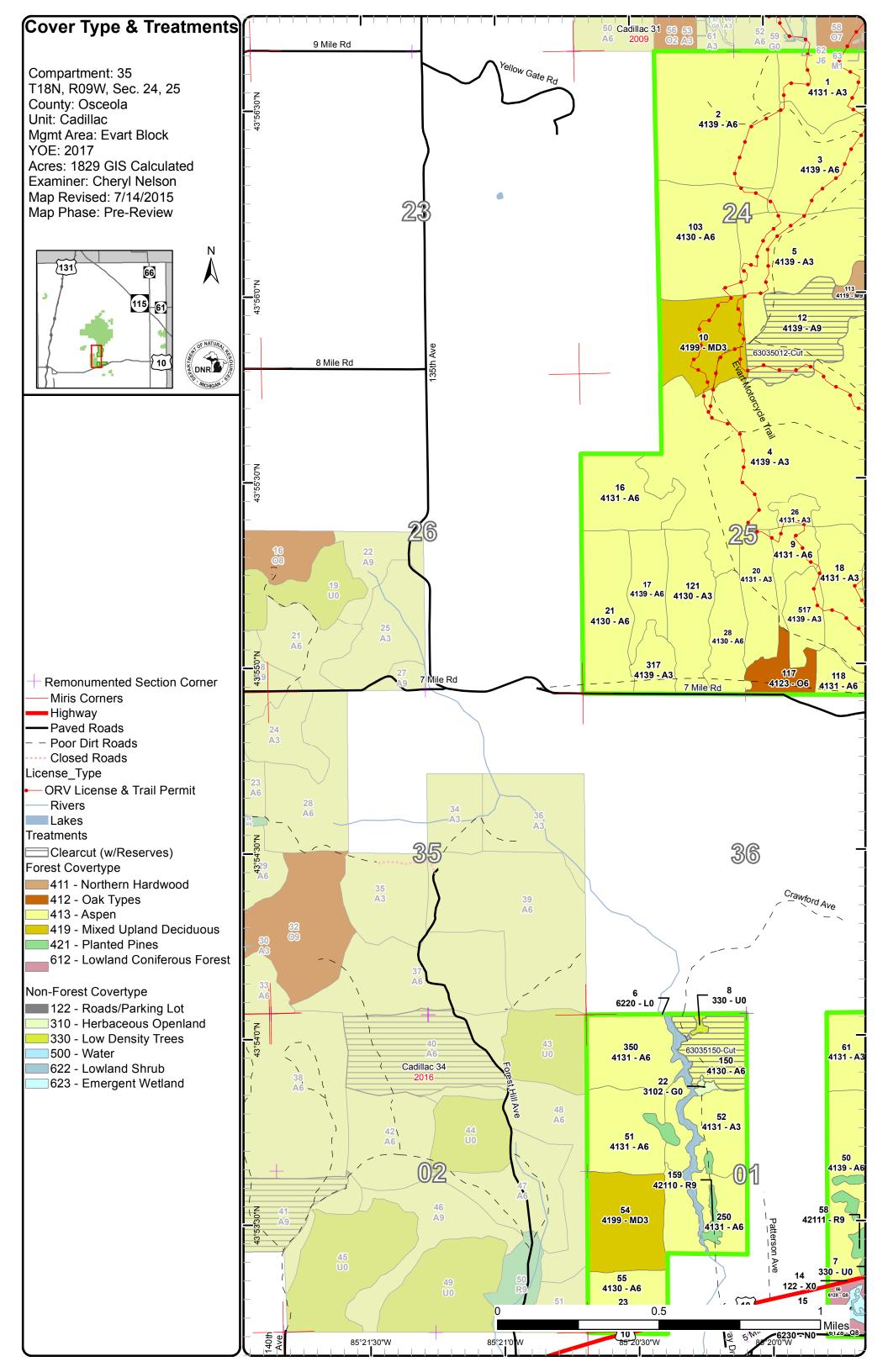
The following reports from the Inventory are attached:

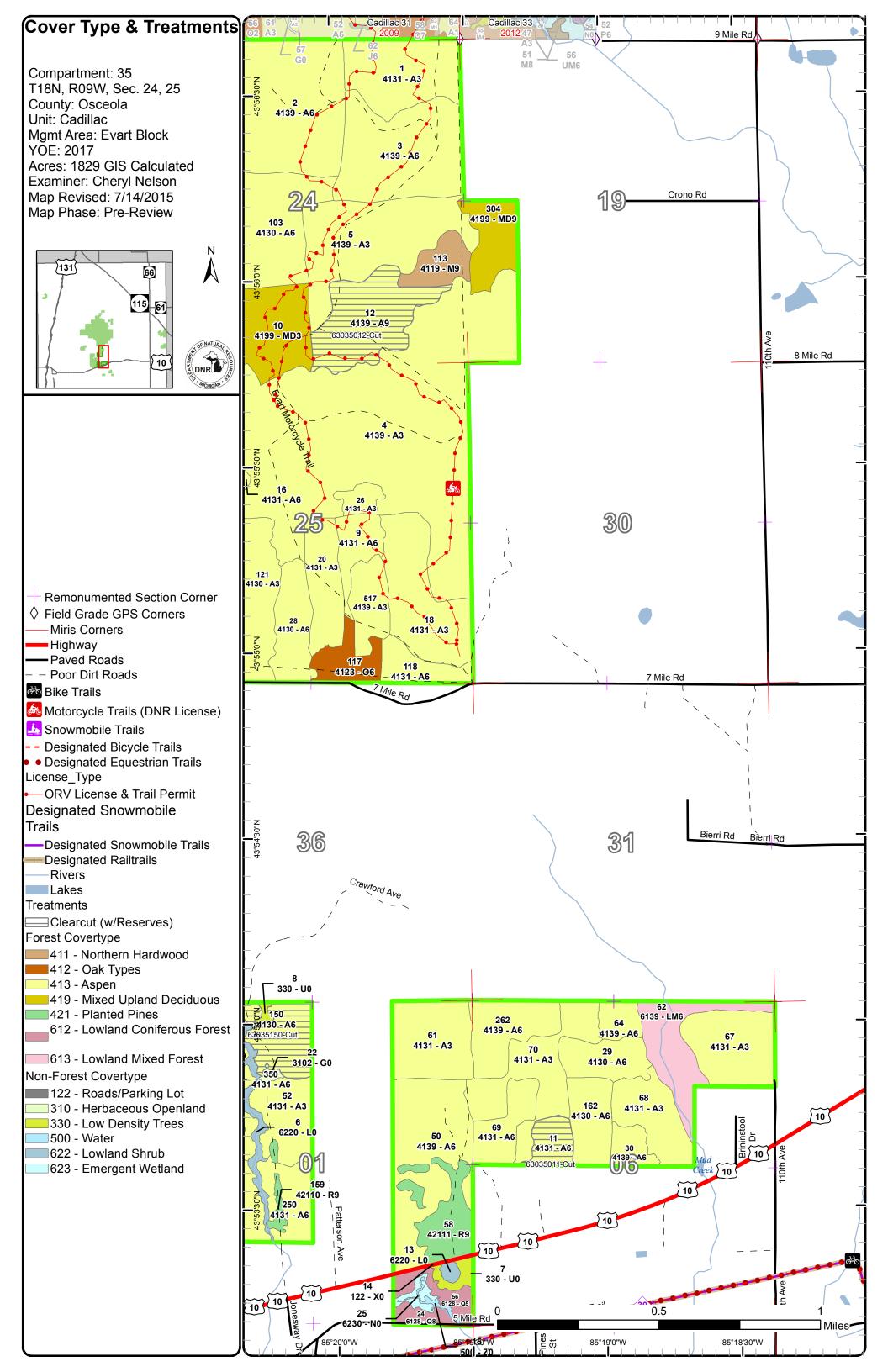
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

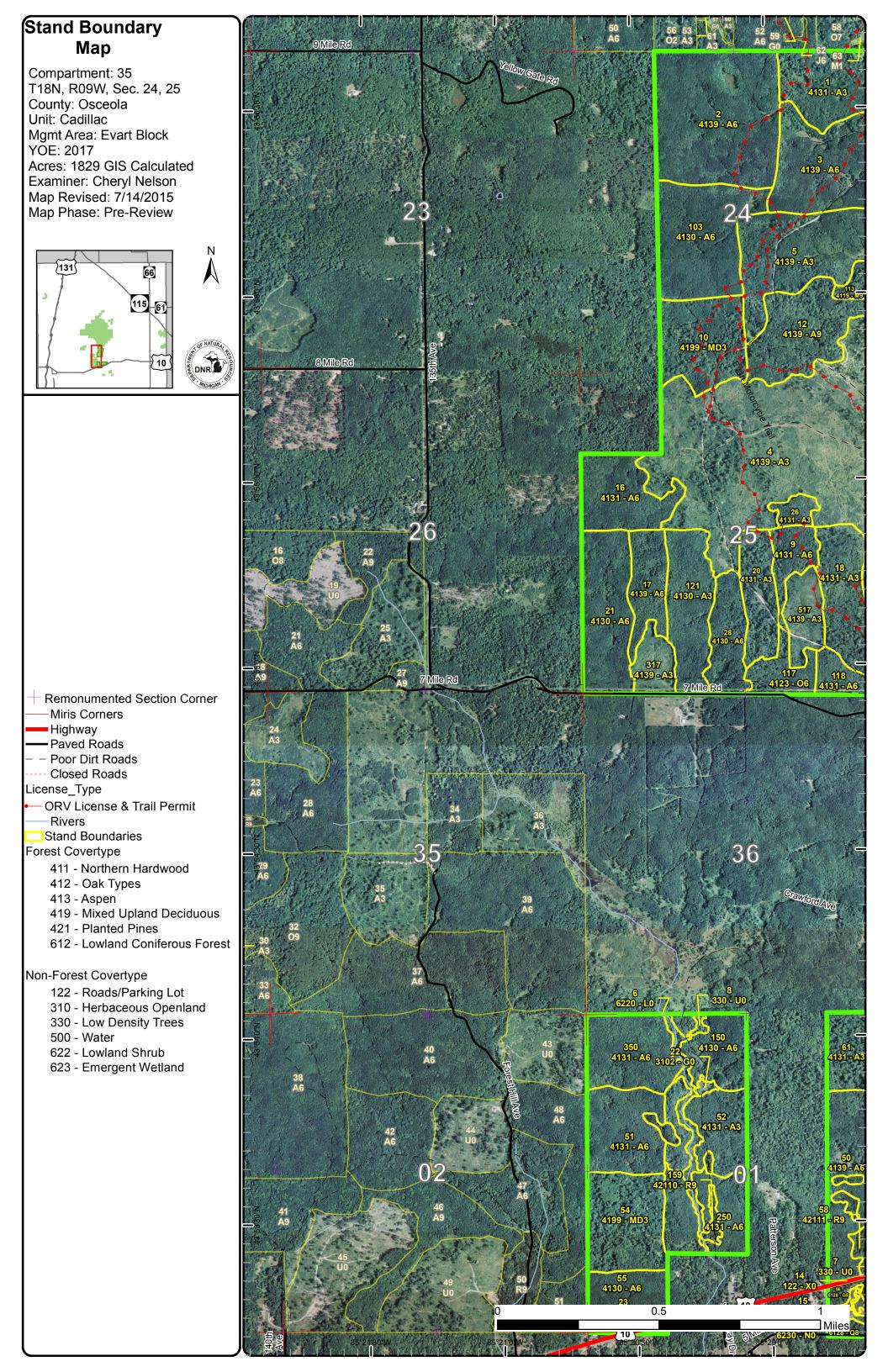
The following information is displayed, where pertinent, on the attached compartment maps:

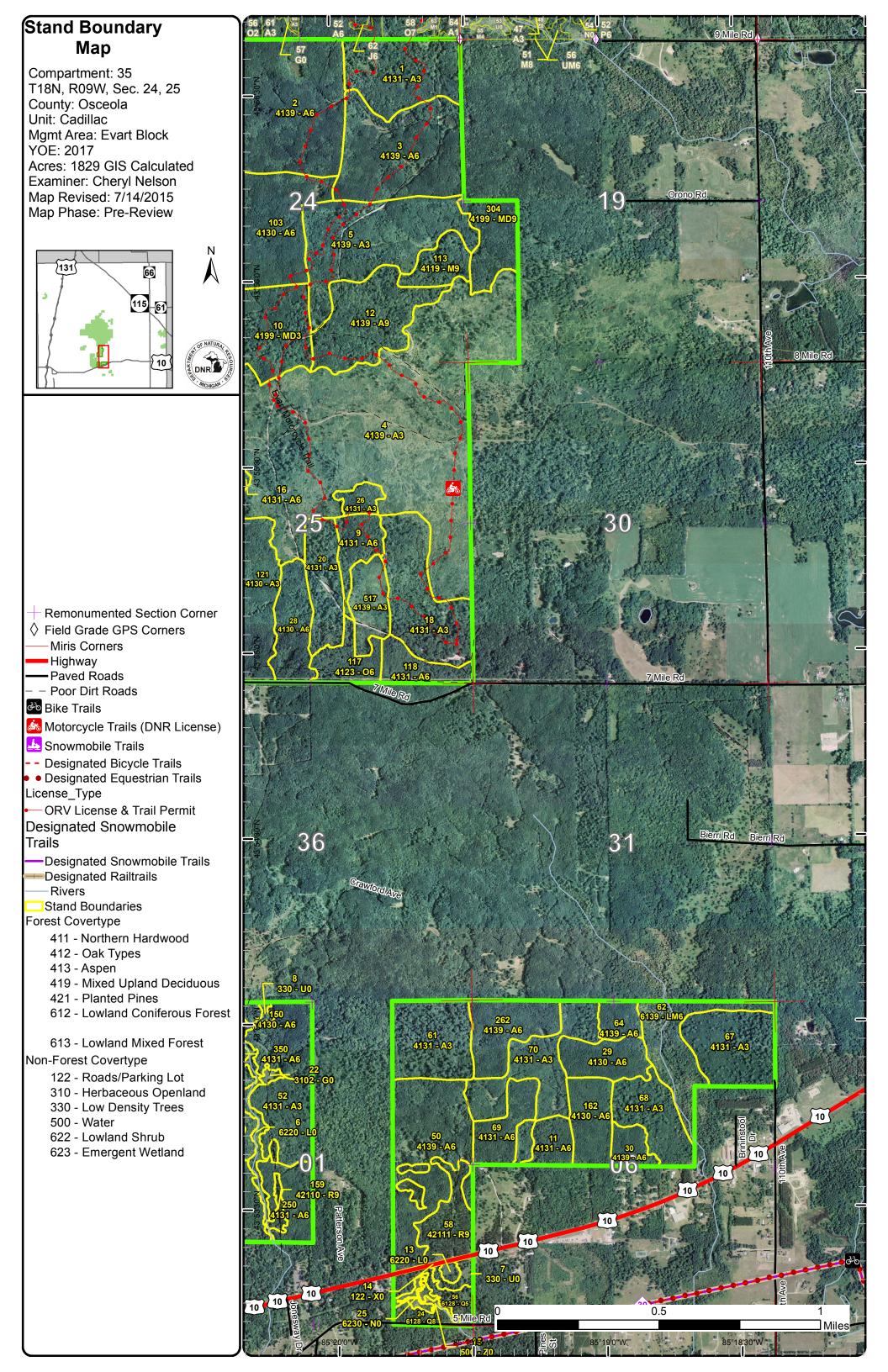
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

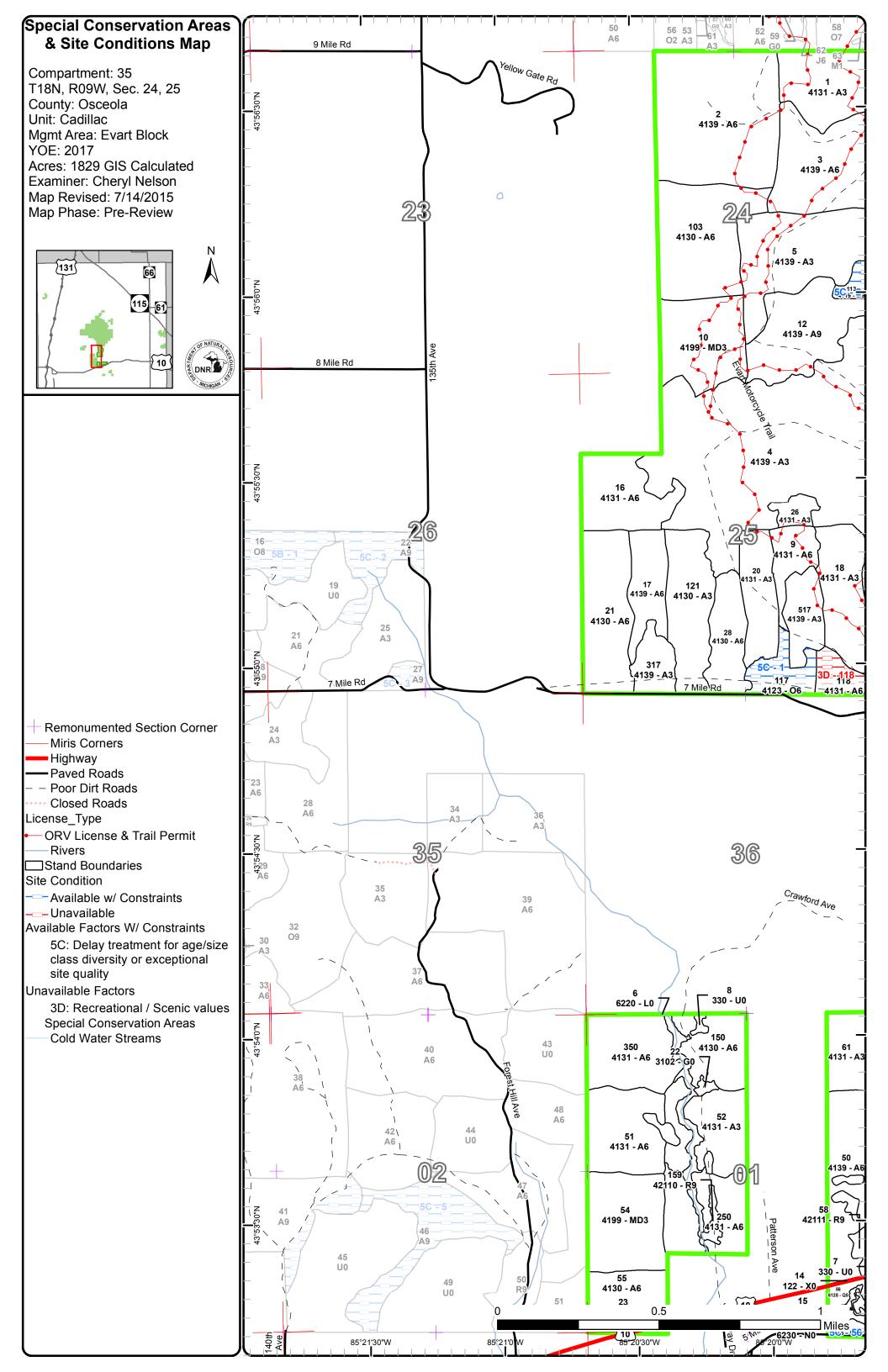


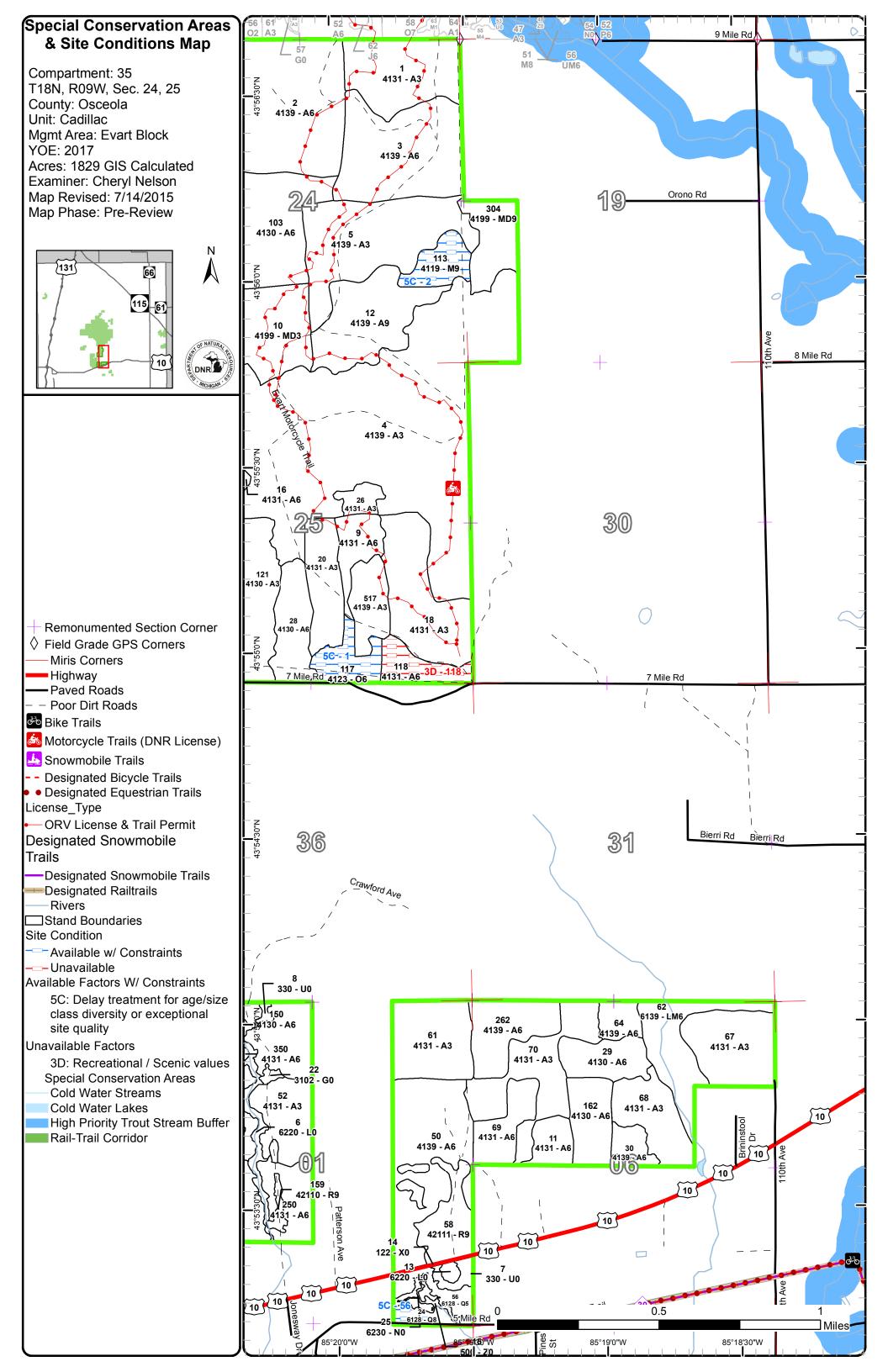












Compartment 35 Year of Entry 2017



Cheryl Nelson: Examiner

Age Class

	No.	A DEST		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		8 / 4	\$ 20,00	/ § / &				\$ \ \&	70,					g* Jre	OF TO TO
Aspen	0	340	383	326	188	269	16	49	0	0	0	0	0	0	0	0	0	0	1571
Herbaceous Openland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Low-Density Trees	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	17
Lowland Mixed Forest	0	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	34
Lowland Shrub	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Marsh	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	45	47	0	23	0	0	0	0	0	0	0	0	0	0	0	0	115
Northern Hardwood	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	15
Oak	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	17
Red Pine	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	32
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	29	340	428	373	188	292	48	83	17	15	17	0	0	0	0	0	0	0	1830



Report 2 – Treatment Summary

Cadillac Mgt. Unit Year of Entry: 2017

Acres of Harvest

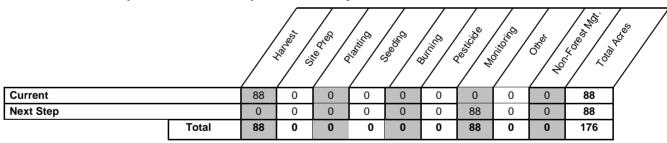
Compartment 35
Total Compartment Acres: 1,829

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

Cover Type by Harvest Method



Proposed and Next Step Treatments by Harvest Method



S

Report 4 -- Treatments

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
11	63035011-Cut	11.8	4131 - Aspen, Oak	Poletimber Well	45	81-110	Harvest	Clearcut with	4131 - Aspen, Oak	Two-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Cut all aspen and red maple. Do not cut any oak. Do not cut any regen 4.5" and under except where needed for equipment maneuverability. Specs:

Retention will be the residual BA and an occasional marked to keep aspen and red maple.

Next Step Treatments:

Acceptable Mix of upland species.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

4139 - Aspen, Sawtimber 12 63035012-Cut 49.2 60 81-110 Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Mixed Deciduous Well Retention

Mixed

Deciduous

Compartment: 35

Year of Entry: 2017

Habitat Cut: No Site Condition:

Prescription Cut all beech and aspen. Mark a mix of species to leave averaging 40-50 BA where applicable. Retention will be the residual BA.

Specs:

Next Step Treatments:

Acceptable Mix of upland species.

Regen:

Other Beech bark disease in stand. Do not cut regen 4.5" and under except where needed for equipment maneuverability. Treatment may extend into

stand 113 if needed. Use timber sale spec to protect ORV Trail. Old next step comments: Comment:

Proposed Start Date: 10/1 /2016

150 63035150-Cut Poletimber 45 81-110 26.9 4130 - Aspen Harvest Clearcut with 4199 - Other Two-Aged Proposal Well Retention Mixed Upland Deciduous

Habitat Cut: No Site Condition:

Prescription Cut all aspen and red maple. Do not cut any oak or black cherry. Do not cut any regen 4.5" and under except where needed for equipment

maneuverability. Retention will be the residual BA and an occasional marked to keep aspen and red maple. Specs:

Next Step

Treatments:

Acceptable Mix of upland species.

Regen:

Other Old next step comments:

Comment:

10/1 /2016 **Proposed Start Date:**

Total Treatment Acreage Proposed:

87.9

Report 5 – Site Conditions

Cadillac Mgt. Unit

Compartment: 35 Year of Entry: 2017 **Cheryl Nelson: Examiner**

Availa	ability for N	lanagement				
Total	Acres	Acres		Domina	nt Site	Conditions
Acres	Available	Not Available		3D	5C	
1570	1554	16	Aspen	16		
1	1	0	Herbaceous Openland			
6	6	0	Low-Density Trees			
17	13	4	Lowland Conifers		4	
34	34	0	Lowland Mixed Forest			
13	13	0	Lowland Shrub			
4	4	0	Marsh		0	
115	115	0	Mixed Upland Deciduous			
15	0	15	Northern Hardwood		15	
17	0	17	Oak		17	
32	32	0	Red Pine			
3	3	0	Urban			
2	2	0	Water			
1,829	1,777	51	Total Forested Acres	16	36	
	97%	3%	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.

		5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified			
Comn						·	5.15p-5.11.5			
Comments: This stand is the only oak dominant stand in the area. Do not treat due to large amount of young aspen surrounding the stand.										
	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified			
Comn	ments:									

Report 5 – Site Condition

Cheryl Nelson : Examiner

Compartment: 35 Year of Entry: 2017

56	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	4	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
118	Unavailable	3D: Recreational / Scenic values	16	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

Mgt. Unit

Compartment: #Type! Year of Entry:

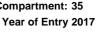


Report 6 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* 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: 35





Report 7 – 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	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area					
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by					
SCA	Cold Water Stream	stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the	tter stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from ear. Coldwater streams in Michigan typically provide these conditions due to substantial ions of groundwater to their stream flows. Such streams are established by Director's action and ed as trout resources by Fisheries Order 210.					
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.						

S t				Report 8	- Forested	Stands Compartment: 35 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4131 - Aspen, Oak	Sapling Well	46.3	16	Immature	Stand treated timber sale #63-015-97-01, "Evart Block Hdwd". Occasional hemlock, white pine, and cherry. Some low, wet areas within stand. ORV Trail runs through stand.
2	4139 - Aspen, Mixed Deciduous	Poletimber Well	101.1	35	1-50	Stand treated timber sale #26-77A. Cut in 1980. ORV Trail runs through stand.
3	4139 - Aspen, Mixed Deciduous	Poletimber Well	71.0	27	51-80	Stand treated timber sale #63-63-045-86-01, "Cedar 24". Cut in 1990. ORV Trail runs through stand.
4	4139 - Aspen, Mixed Deciduous	Sapling Well	298.7	5	Immature	Stand is a combination of two timber sales, #63-025-08-01 Osceola Salvage and #63-028-08-01 Big Salvage. These large sales were the result of storm damage from up to 60 mph winds that occurred in early June of 2008. ORV Trail runs through the stand.
5	4139 - Aspen, Mixed Deciduous	Sapling Well	72.4	16	Immature	Stand treated timber sale #63-015-97-01, "Evart Block Hdwd". ORV Trail runs through stand.
9	4131 - Aspen, Oak	Poletimber Well	15.5	43	51-80	ORV Trails runs through stand.
10	4199 - Other Mixed Upland Deciduous	Sapling Well	44.7	16	Immature	Stand treated timber sale #63-015-97-01, "Evart Block Hdwd". ORV Trail runs through stand.
11	4131 - Aspen, Oak	Poletimber Well	11.8	45	81-110	
12	4139 - Aspen, Mixed Deciduous	Sawtimber Well	49.2	60	81-110	Occasional sassafras. Beech bark disease was found on a couple of trees to the very northeast part of the stand, adjacent to stand 113.
16	4131 - Aspen, Oak	Poletimber Well	36.5	45	51-80	Past treatment paperwork could not be found.
17	4139 - Aspen, Mixed Deciduous	Poletimber Well	24.0	40	1-50	Stand treated timber sale "Old Grand Block" in 1977.
18	4131 - Aspen, Oak	Sapling Well	52.6	17	Immature	Stand treated timber sale #63-001-98-01, "Cedar Township Hdwd". ORV Trail runs through stand.
20	4131 - Aspen, Oak	Sapling Well	26.6	17	Immature	Stand treated timber sale #63-001-98-01, "Cedar Township Hdwd".
21	4130 - Aspen	Poletimber Well	48.4	26	51-80	Stand treated timber sale #63-042-86-01, "2 Long 40".
24	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Medium	6.2	70	111-140	
26	4131 - Aspen, Oak	Sapling Well	6.9	5	Immature	ORV Trail runs through stand.

S t				Report 8	- Forested	Stands Compartment: 35 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	4130 - Aspen	Poletimber Well	25.5	35	51-80	
29	4130 - Aspen	Poletimber Well	20.8	45	81-110	
30	4139 - Aspen, Mixed Deciduous	Poletimber Well	9.6	45	51-80	
50	4139 - Aspen, Mixed Deciduous	Poletimber Well	64.1	26	81-110	Stand treated timber sale #63-046-86-01, "US-10".
51	4131 - Aspen, Oak	Poletimber Well	38.9	27	Immature	Stand treated timber sale #63-025-87-01, "Evart-West".
52	4131 - Aspen, Oak	Sapling Well	35.8	14	Immature	Stand treated timber sale #63-020-97-01, "Mudpuppy Trout Hardwoods".
54	4199 - Other Mixed Upland Deciduous	Sapling Well	46.9	21	Immature	Stand treated timber sale #63-020-97-01, "Mudpuppy Trout Hardwoods".
55	4130 - Aspen	Poletimber Well	28.8	40	51-80	XLog-Log sized red and white oaks scattered throughout.
56	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	10.8	70	1-50	
58	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	25.0	54	51-80	Stand treated timber sale #63-006-07-01, "Elevens Red Pine". Stand planted per FTP# 25 and 27 in 1961.
61	4131 - Aspen, Oak	Sapling Well	38.1	18	Immature	Stand treated timber sale #63-019-97-01, "Off 10 Aspen".
62	6139 - Mixed Lowland Forest	Poletimber Well	34.1	60	51-80	Small areas west of drainage were habitat cut in 2007.
64	4139 - Aspen, Mixed Deciduous	Poletimber Well	9.4	35	81-110	
67	4131 - Aspen, Oak	Sapling Well	38.4	18	Immature	Stand treated timber sale #63-019-97-01, "Off 10 Aspen".
68	4131 - Aspen, Oak	Sapling Well	29.0	17	Immature	Stand treated timber sale #63-019-97-01, "Off 10 aspen".
69	4131 - Aspen, Oak	Poletimber Well	19.5	45	81-110	
70	4131 - Aspen, Oak	Sapling Well	44.5	17	Immature	Stand treated timber sale #63-019-97-01, "Off 10 Aspen".
103	4130 - Aspen	Poletimber Well	62.1	25	Immature	ORV Trail runs through stand.

S t	Cadilla	Cadillac Mgt. Unit				Stands Compartment: 35 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
113	4119 - Mixed Northern Hardwoods	Sawtimber Well	15.4	80	111-140	
117	4123 - Red Oak	Poletimber Well	16.6	90	51-80	Occasional aspen. Eastern portion of stand has smaller canopy red maple, aspen, and oak. Treated at some point in the past but paperwork could not be found.
118	4131 - Aspen, Oak	Poletimber Well	15.8	50	81-110	
121	4130 - Aspen	Sapling Well	41.1	26	Immature	Stand treated timber sale #63-042-86-01, "2 Long 40".
150	4130 - Aspen	Poletimber Well	26.9	45	81-110	
159	42110 - Planted Red Pine	Sawtimber Well	6.7	53	111-140	Stand planted per FTP #25 in 1961.
162	4130 - Aspen	Poletimber Well	22.3	35	51-80	
250	4131 - Aspen, Oak	Poletimber Well	36.0	45	81-110	
262	4139 - Aspen, Mixed Deciduous	Poletimber Well	29.3	35	51-80	
304	4199 - Other Mixed Upland Deciduous	Sawtimber Well	23.4	45	51-80	
317	4139 - Aspen, Mixed Deciduous	Sapling Well	14.8	6	Immature	Stand treated timber sale #63-025-08-01, "Osceola Salvage".

51-80

Immature

4131 - Aspen, Oak

4139 - Aspen, Mixed Deciduous

350

517

Poletimber Well

Sapling Well

39.3

19.2

45

6

Stand treated timber sale #63-025-08-01, "Osceola Salvage".

Report 9 - Nonforested Stands

Compartment: 35 Year of Entry: 2017



Stand	Cover Type	Acres	Managed Site	General Comments:
6	6220 - Alder/willow	11.4	No	Tag alder, willow, perennial stream.
7	330 - Low-Density Trees	4.5	No	
8	330 - Low-Density Trees	1.3	No	
13	6220 - Alder/willow	2.0	No	Tag alder, willow.
14	122 - Road/Parking Lot	1.5	No	US-10
15	500 - Water	1.8	No	
22	3102 - Grass	1.5	No	
23	122 - Road/Parking Lot	1.0	No	US-10
25	6230 - Cattail	3.9	No	