



Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63028

Entry Year 2018

Acreage: 1,572

County Osceola

Management Area: Evert Block

Revision Date: 2016-06-09

Stand Examiner: Ryan Adamczyk

Legal Description:

T19N,R9W,Sec. 23, 24, 36

Identified Planning Goals:

Vegetation management in the Evert 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:

Mostly rolling topography with some steep spots. Soils are mostly Montcalm Sand and loams, Graycalm Sands, and some McBride Sands and Loams.

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

The state land is in continuous blocks with some private Parcels in the NE, NW and SE of Section 24. The state land in section 23 is boarded by private parcels. Most parcels directly adjacent to state land are recreationally used for hunting.

Unique Natural Features:

Sunrise Lake is in the NE quarter of section 24.

Common Loons have been noted nesting on Sunrise Lake. There is also potential for goshawk, red-shouldered hawk, Cooper's hawk, eastern box turtle, great blue heron rookery, eagle, osprey, ebony boghaunter and secretive locust.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Sunrise Lake is partially located within Compartment 28. Sunrise Lake is a popular fishing lake that supports populations of largemouth bass, northern pike, bluegill, pumpkinseed sunfish, and yellow perch. No treatments are scheduled near Sunrise Lake.

Wildlife Habitat Considerations:

This compartment is adjacent to the Evert GEMS. Featured wildlife species are deer, ruffed grouse and pileated woodpecker. Management emphasis will include appropriate buffers for all lowland types, oak regeneration, and balancing age classes of aspen types. Timber sale specifications to benefit these featured species (where applicable) will include 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. (Victory, 5/24/16)

Mineral Resource and Development Concerns and/or Restrictions

Osceola County 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 three miles to the northeast and potential is good. The compartment is located four miles east of Rose Lake Field. The field has produced nearly 2 million BO from the Devonian Traverse Limestone and gas from the Prairie du Chien. Part of Section 36 is currently leased for oil and gas development and additional leases are located to the west.

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:**

The Sunrise Lake State Forest Campground, and Evert motorcycle trail are located within this compartment. Timber management treatments should take into consideration impacts to campers such as treating area during off-season, as well as aesthetic concerns associated with a campground. In the north end of the compartment there is a waterfront day use park. This park has a dog run area, a beach, boat landing, volleyball courts and a picnic area. Trail protection specifications should be considered if treatments impact the designated single track motorcycle trail. (T.N. 1/29/16)

Fire Protection:

Fire Protection is supplied by the DNR out of Evert Field Office. Access would be fairly good for suppression equipment. Remote camping during summer and hunting season adds to the chance of an ignition of a wildfire.

Additional Compartment Information:**The following reports from the Inventory are attached:**

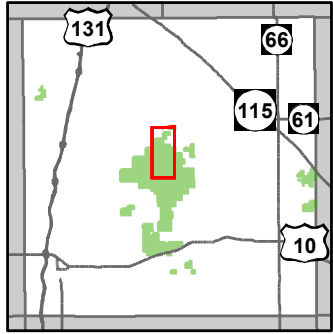
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

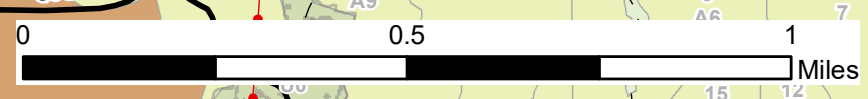
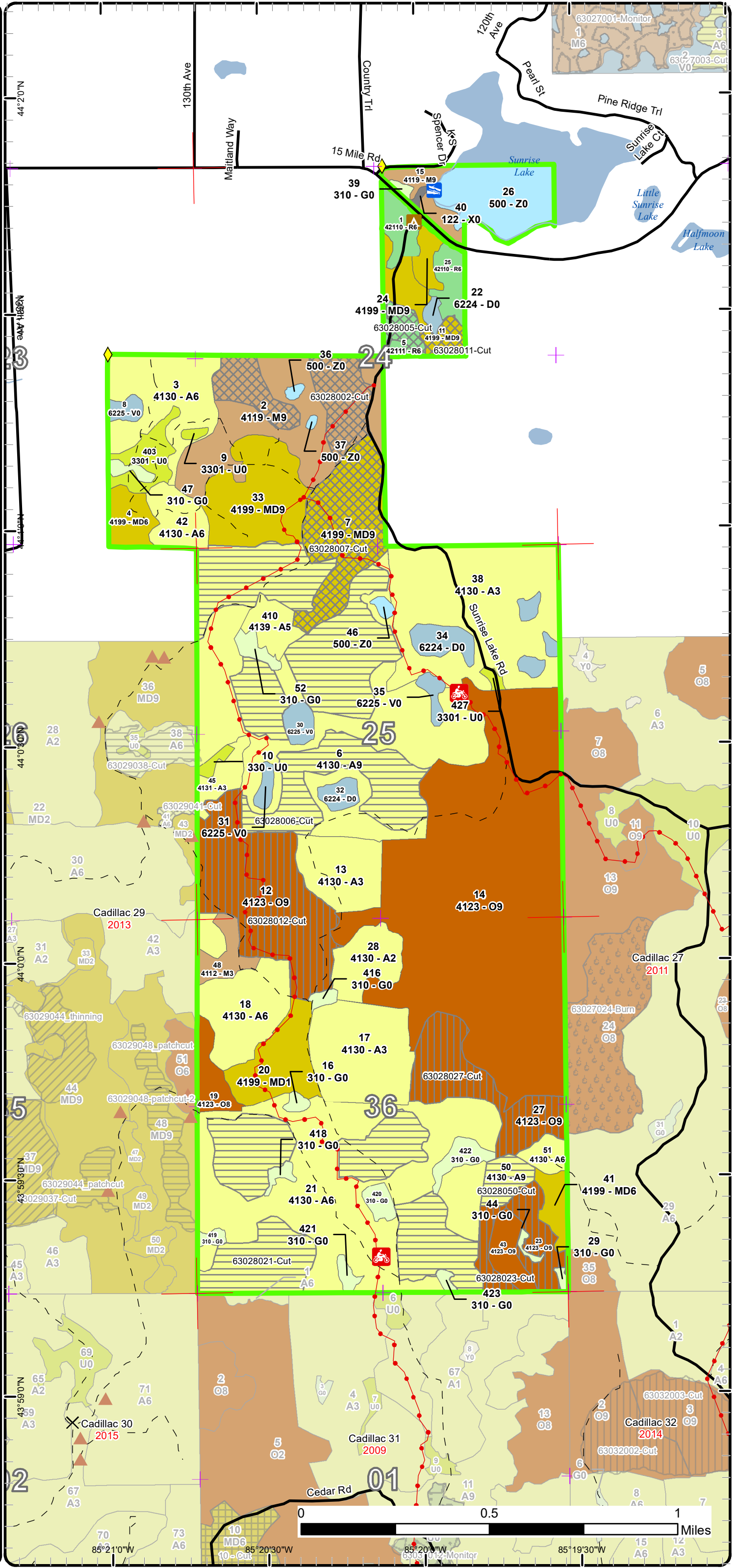
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 28
 T19N, R09W, Sec. 24, 25, 36
 County: Osceola
 Unit: Cadillac
 Mgmt Area: Evart Block
 YOE: 2018
 Acres: 1572 GIS Calculated
 Examiner: Ryan Adamczyk
 Map Revised: 7/5/2016
 Map Phase: Web-Post

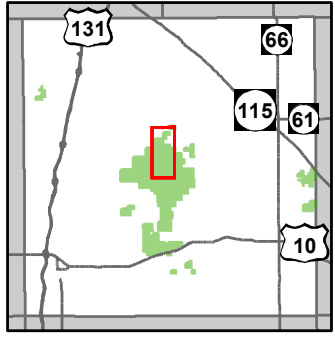


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- X Gate
- ▲ Berms
- / Boating Access Site
- ▲ Campground
- 🏍️ Motorcycle Trails (DNR License)
- ORV License & Trail Permit
- Paved Roads
- - Poor Dirt Roads
- Rivers
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes

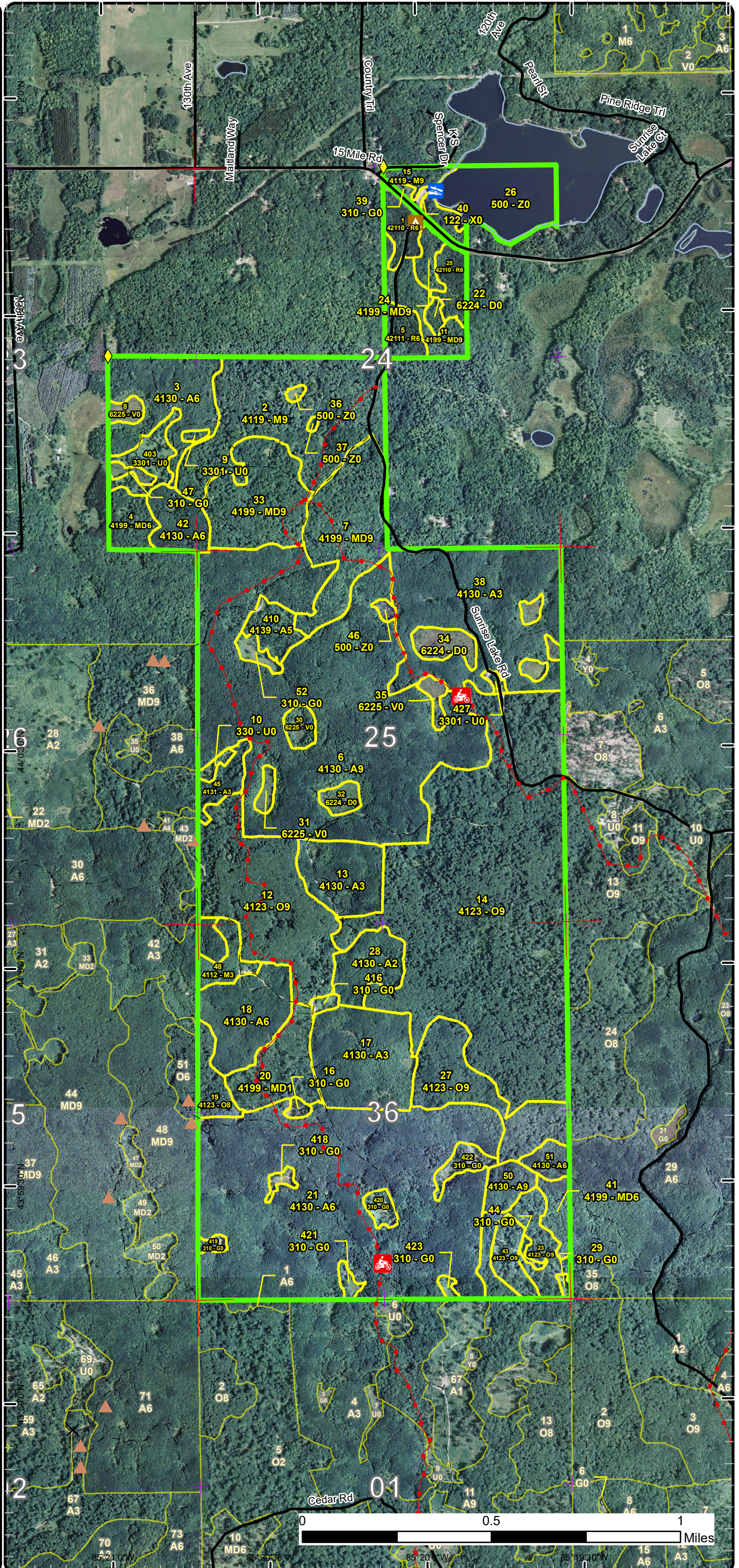


Stand Boundary Map

Compartment: 28
 T19N, R09W, Sec. 24, 25, 36
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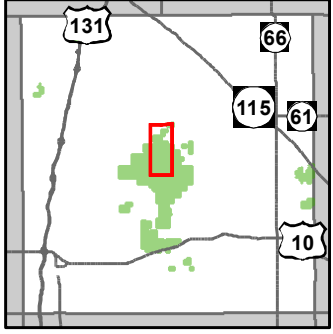


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- Stand Boundaries
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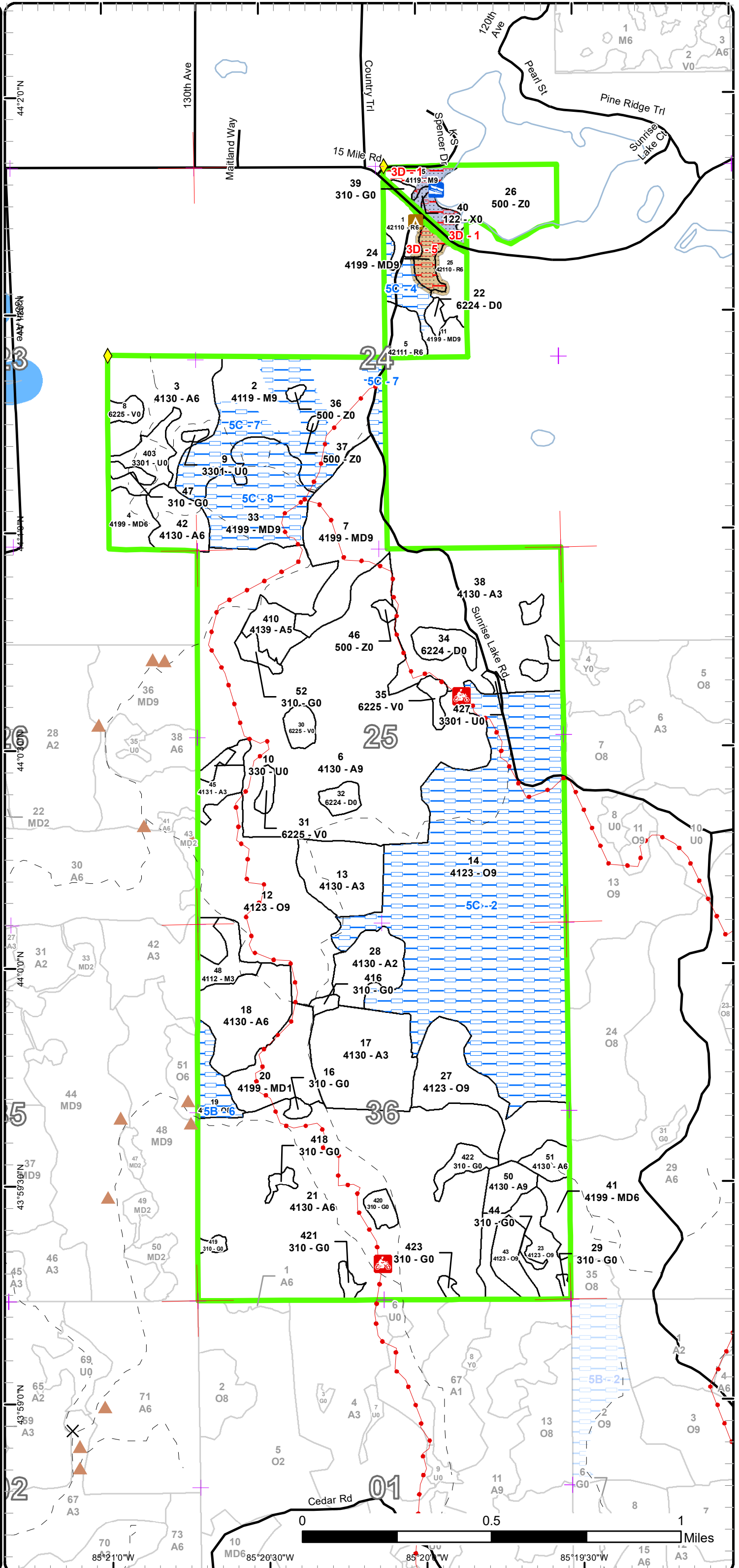


Special Conservation Areas & Site Conditions Map

Compartment: 28
 T19N, R09W, Sec. 24, 25, 36
 County: Osceola
 Unit: Cadillac
 Mgmt Area: Evart Block
 YOE: 2018
 Acres: 1572 GIS Calculated
 Examiner: Ryan Adamczyk
 Map Revised: 7/5/2016
 Map Phase: Web-Post



- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
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- ▲ Berms
- / Boating Access Site
- ▲ Campground
- 🏍️ Motorcycle Trails (DNR License)
- ORV License & Trail Permit
- Paved Roads
- Poor Dirt Roads
- Rivers
- Compartment Boundary
- SCA
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3D: Recreational / Scenic values
- Stand Boundaries
- High Priority Trout Stream Buffer
- Fishing Access Site
- State Forest Campground



Report 1 – Total Acres by Cover Type and Age Class

Cadillac Mgt. Unit

Compartment 28 Year of Entry 2018

Ryan Adamczyk : Examiner



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	36	248	0	472	0	0	9	0	0	0	0	0	0	0	0	0	765
Bog	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Herbaceous Openland	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Low-Density Trees	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Mixed Upland Deciduous	0	25	0	11	0	8	0	0	0	46	21	0	0	0	0	0	0	41	152
Northern Hardwood	0	0	0	9	0	0	0	0	0	0	10	0	0	0	0	0	0	83	102
Oak	0	0	0	0	0	0	0	0	295	10	105	0	0	0	0	0	0	0	410
Red Pine	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	27
Treed Bog	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Total	118	25	36	268	0	480	27	0	9	341	41	105	0	0	0	0	0	124	1574



Report 2 – Treatment Summary

Cadillac Mgt. Unit

Year of Entry: 2018

Acres of Harvest

Compartment 28

Total Compartment Acres: 1,572

Commercial Harvest - 463
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	239	0	0	0	0	0	0	0	0	239
Mixed Upland Deciduous	0	51	0	0	0	0	0	0	0	51
Northern Hardwood	0	34	0	0	0	0	0	0	0	34
Oak	0	0	0	0	132	0	0	0	0	132
Red Pine	0	6	0	0	0	0	0	0	0	6
Total	239	92	0	0	132	0	0	0	0	463

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	463	0	0	0	0	0	0	0	0	463
Next Step	0	0	0	0	132	0	331	0	0	463
Total	463	0	0	0	132	0	331	0	0	926



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
2	63028002-Cut	34.3	4119 - Mixed Northern Hardwoods	Sawtimber Well	86	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Two-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Use a select harvest to thin treatment areas down to 60 - 80 BA. Focus on high quality hickory and sugar maple as leave trees in order to accelerate growth of existing trees and promote regeneration. Leave occasional healthy ash, basswood, and beech for species diversity. Do not cut any wolfy trees or trees containing wildlife cavities. Maintain a buffer of at least 100' around all vernal ponds. Use the ORV spec to protect the ORV trail.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Regen: Sugar maple, red oak, white ash, hickory sp., basswood, bigtooth aspen, red maple

Other Comment:

Proposed Start Date: 10/01/2017

5	63028005-Cut	6.0	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	57	111- 140	Harvest	Single Tree Selection	4199 - Other Mixed Upland Deciduous	Two-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin red pine down to 40 - 50 BA to promote understory development and restore the stand to a mixed deciduous.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Regen: Bigtooth aspen, sugar maple, beech, red oak, red pine

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

6	63028006-Cut	134.9	4130 - Aspen	Sawtimber Well	45	141- 170	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all aspen and red maple. Do not cut any sugar maple or black cherry unless marked. Cut all poor form double/triple stemmed red oak which are mainly located in the portion NE of stand 30. Use residual trees as retention as there are natural pockets of mixed hardwoods throughout this stand. Keep a minimum distance of 100' away from all lowland water sources. Use sale spec to seed landing after harvest. Use grouse spec. in timber sale leaving at least 1, 10" or larger log-length (8 foot minimum) piece on the ground for every 2 acres, and at least 6 large tops per acre. Use ORV spec to protect ORV trail. In the furthest NW portion, allow equipment to cross into the unit along the road to the SW in order to prevent equipment crossing the ORV trail.

Next Step Monitoring, Natural Regen (Re-Inventry)

Treatments:

Acceptable Regen: Bigtooth Aspen, Trembling Aspen, Red Maple, Black Cherry, Sugar Maple, Red Oak

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

7	63028007-Cut	45.2	4199 - Other Mixed Upland Deciduous	Sawtimber Well	87	111- 140	Harvest	Single Tree Selection	4199 - Other Mixed Upland Deciduous	Two-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Mark for a selection harvest, reducing BA to 70-80. Cut all ash, aspen, and most of the beech and red maple; also target multi-stemmed and low quality trees of other species. Focus retention on hickory and high quality sugar maple and red oak. Put in a payment unit line boundary in the southern portion where bigtooth aspen becomes prominent, as marking will not be necessary in this portion. Use ORV spec to protect ORV trail.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Regen: Red/white oak, red maple, sugar maple, aspen, hickory sp, beech, black cherry, basswood

Regen:

Other Comment:

Proposed Start Date: 10/01/2018



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
11	63028011-Cut	6.1	4199 - Other Mixed Upland Deciduous	Sawtimber Well	90	81-110	Harvest	Single Tree Selection	4199 - Other Mixed Upland Deciduous	Uneven- Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Mark for a selection harvest, reducing the BA to 70-80. Cut all ash and aspen; also target multi-stemmed and low quality trees of other species. Use
Specs: BA as retention. Restrict cutting to dry summer or frozen winter months due to seasonally wet soils.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Sugar maple, beech, ash, aspen, basswood and oak.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

12	63028012-Cut	73.0	4123 - Red Oak	Sawtimber Well	104	81-110	Harvest	Shelterwood	412 - Oak Types	Two-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin down to 40-60 BA with a focus on opening up pockets with existing oak regen. Cut oak only. Use the ORV spec to protect the trail.
Specs:

Next Step Burn, Understory
Treatments:

Acceptable Red oak, white oak, bigtooth aspen, red maple
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

21	63028021-Cut	95.5	4130 - Aspen	Poetimber Well	43	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all species except oak leaving areas marked with paint for retention. Retention in the form of patches and residual BA. Use sale spec to seed
Specs: landing after harvest. Use grouse spec. in timber sale leaving at least 1, 10" or larger log-length (8 foot minimum) piece on the ground for every 2 acres, and at least 6 large tops per acre. Use ORV spec to protect ORV trail.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Bigtooth aspen, red maple, red oak, trembling aspen
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

23	63028023-Cut	21.6	4123 - Red Oak	Sawtimber Well	104	111- 140	Harvest	Shelterwood	412 - Oak Types	Two-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Treat this stand down to 50-60 BA. Cut all aspen. Do not cut any red maple. Retention will be in the form of residual BA. Acceptable regen is a mix of
Specs: oak, red maple, and aspen. This stand is already set up and trees marked. The stand was partially cut in 2012 due to a slop over from an adjacent stand in 63031. The unit boundary needs to be redone.

Next Step Burn, Understory
Treatments:

Acceptable red/white oak, aspen, red maple, black cherry
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
27	63028027-Cut	37.8	4123 - Red Oak	Sawtimber Well	88	111- 140	Harvest	Shelterwood	412 - Oak Types	Two-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Treat oak to a residual BA of 50-60'. Do not cut any red maple or aspen. Acceptable regen is a mix of oak, red maple, and aspen. Leave retention
Specs: in the form of residual BA. Focus retention on white oak and leave wolfy red/white oaks and beech.

Next Step Burn, Understory

Treatments:

Acceptable red/white oak, aspen, red maple, beech

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

50	63028050-Cut	8.8	4130 - Aspen	Sawtimber Well	70	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all aspen and red maple leaving all oak as retention and seed source

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable bigtooth aspen. red oak, red maple

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 463.2**

Report 4 – Site Conditions

Cadillac Mgt. Unit
Ryan Adamczyk : Examiner

Compartment: 28
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5B	5C	3D
		With Condition	Not Available				
764	764	0	0	Aspen			
15	15	0	0	Bog			
30	30	0	0	Herbaceous Openland			
16	16	0	0	Low-Density Trees			
152	96	50	6	Mixed Upland Deciduous		50	6
102	43	49	10	Northern Hardwood		49	10
409	142	267	0	Oak	10	257	
27	27	0	0	Red Pine			
20	20	0	0	Treed Bog			
1	1	0	0	Urban			
35	35	0	0	Water			
1,572	1,191	366	16	Total Forested Acres	10	355	16
	76%	23%	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	Unavailable	3D: Recreational / Scenic values	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	257	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Review stand for select tree harvest in 20 years to promote understory regen and greater dbh/ba within red oaks							

Report 4 – Site Conditions

Cadillac Mgt. Unit

Compartment: 28

Ryan Adamczyk : Examiner

Year of Entry: 2018

4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3D: Recreational / Scenic values	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This is where the Sunrise Lake Campground is located							
6	Available	5B: Maintain for regeneration purposes	10	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	49	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



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
Sunrise lake access site Comments	Concentrated Recreation Area	Fishing Access Site	Proposed SCA	9
Sunrise Lake campground Comments	Concentrated Recreation Area	State Forest Campground	Proposed SCA	9



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	Poletimber Well	9.3	57	141-170	OPIC - FMD: 2014 Comment: Stand treated timber sale #63-029-08-01, "Sunrise Red Pine". Stand should be thinned, mark cut tree. The Sunrise Lake Campground is within this stand. The Key Value Designation of this compartment is TIMBER INTENSIVE. When the stand is harvested safety and time of harvest should be factors when determining the boundary of the sale area. Occasional wolffy beech, big tooth, and sugar maple throughout
2	4119 - Mixed Northern Hardwoods	Sawtimber Well	82.8	86	111-140	OPIC - FMD: INITIAL THIN NORTHERN HARDWOOD STAND; STAND TREATED BY WEYERHAEUSER IN 2000-2002. SALE # 215/98/01 (Sunrise Lake Hardwoods) STORM DAMAGE CAUSED A SALVAGE OPERATION TO PARTS OF THE STAND. There is very little regeneration in this stand which is taller than waist height. The stand was treated last entry but the canopy appears to be uniform in cover. The stand will hold for now. This stand could be treated next entry and that treatment might be to create some openings in the canopy to promote some regeneration. When this stand is treated, Std. 7 should be considered for treatment also.
3	4130 - Aspen	Poletimber Well	38.5	25	Unspecified	Stand was treated in 1991 with sale #63-009-90-01 "Sunrise Lake 23 #2". Specs were to cut all aspen, oak, and mixed hardwood trees containing any commercial value.
4	4199 - Other Mixed Upland Deciduous	Poletimber Well	11.1	25	Unspecified	OPIC - FMD: OI Stand Year Origin was 1991
5	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	8.5	57	111-140	OPIC - FMD: 2014 Comments: Stand treated timber sale #63-029-08-01, "Sunrise Red Pine". Red pine is planted in rows with lots of aspen, ash, beech, maple, and oak regeneration. Thin red pine now to prevent damage to regen in order to restore stand to a MD.
6	4130 - Aspen	Sawtimber Well	235.3	45	141-170	There are scattered red oaks and red maple throughout the stand with a heavy concentration of low quality double/triple stemmed red oaks southeast of unit 410. The sugar maple and black cherry are located near and around unit 46. A treatment should be created to break up the large stand into multiple age class types while leaving adequate retention in the form of patches and leave trees for wildlife benefits.
7	4199 - Other Mixed Upland Deciduous	Sawtimber Well	46.1	87	111-140	This is a northern hardwood stand with lesser quality than unit 2 which borders this stand. Thin and cut to 70 or 80 BA while removing all aspen, ash, and the majority of beech and red maple. Focus retention on hickory and high quality sugar maple and red oak. The majority of aspen is located in the southern boot portion of the unit. I would recommend only removing aspen throughout most of this portion. This cut may have to occur during a dry or frozen season as there are some low areas throughout the unit that could possibly be heavily impacted by large equipment. The dirt bike trail runs through this stand.
11	4199 - Other Mixed Upland Deciduous	Sawtimber Well	15.5	90	81-110	OPIC - FMD: This stand is adjacent to the Sunrise Lake Campground.
12	4123 - Red Oak	Sawtimber Well	73.0	104	81-110	OPIC - FMD: INITIAL THIN OF NORTHERN RED OAK STAND. Stand treated in 2001 sale #2169801("Over the Top Removal"). Regen is mostly Red Maple and Aspen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	4130 - Aspen	Sapling Well	25.1	26	Immature	Stand was treated in 1990 with sale #63-024-87-01 "Rose Lake 36".
14	4123 - Red Oak	Sawtimber Well	256.8	88	111-140	OPIC - FMD: GOOD QUALITY RED OAK THIN BY REMOVING ASPEN, RED MAPLE & POLE OAK; stand treated 2001 sale # 2049801 ("Seismic Oak") Fire Specialist will assess need for burn. The stand is closer to the 110 BA. Lots of aspen, maple, oak regen in this stand. It would be advisably to add a site condition to allow regen and canopy to mature more before thinning to a BA of 30-40.
15	4119 - Mixed Northern Hardwoods	Sawtimber Well	10.1	90	81-110	OPIC - FMD: This stand is adjacent to the Sunrise Lake Campground. It is at the boat launch and should not be treated do to its proximity to the launch and Sunrise Lake.
17	4130 - Aspen	Sapling Well	43.4	26	Immature	Stand was treated in 1990 with sale #63-024-87-01 "Rose Lake 36". Stand is still less than pulp size. There are some pulp trees in the stand. It is in good condition.
18	4130 - Aspen	Poletimber Well	35.8	26	Immature	Stand was treated in 1990 with sale #63-024-87-01 "Rose Lake 36".
19	4123 - Red Oak	Sawtimber Medium	10.3	90	51-80	OPIC - FMD: This stand has the Cycle Trail going through it. Stand treated with sale #63-011-08-01. Deer browse on red oak regen. Lots of maple stump sprouts with scattered raspberry throughout.
20	4199 - Other Mixed Upland Deciduous	Sapling Poor	24.9	6	1-50	OPIC - FMD: The stand has a range of diameters, stand should be clearcut. There is serviceberry, witch hazel and hawthorn component in the stand. Mark oak to leave about 10 sq ft heavier around ORV trail. Stand treated with sale #63-011-08-01.
21	4130 - Aspen	Poletimber Well	230.2	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1973 Pockets of oak/maple dominate throughout unit as seen in aerial photos. density of understory increases from low to medium with elevation gain. traces of black cherry throughout.
23	4123 - Red Oak	Sawtimber Well	21.6	104	111-140	OPIC - FMD: Mostly oak with some Aspen. Stand 43 was thinned in 2012 during a slop over from another adjacent cut.
24	4199 - Other Mixed Upland Deciduous	Sawtimber Well	5.7	90	81-110	OPIC - FMD: This stand is adjacent to the Sunrise Lake Campground.
25	42110 - Planted Red Pine	Poletimber Well	9.3	57	141-170	OPIC - FMD: THIN RED PINE PLANTATION USE SELECTION METHOD DUE TO CAMPGROUND; STAND TREATED WINTER 2001-SPRING 2002 SALE # 75/99/02 CUT BY NELSON SAWMILL. Stand should be thinned, possibility of marking orange to. This stand is adjacent to the Sunrise Lake Campground. The Key Value Designation of this compartment in the Pere Marquette Plan is TIMBER INTENSIVE. When the timber sale boundary is laid out, safety and time of harvest should be a factors to be considered when determining the location of the sale line. Long term MO is hardwood



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	4123 - Red Oak	Sawtimber Well	37.8	88	111-140	Oak stand to the north was treated in 2001 with sale # 2049801 ("Seismic Oak")
28	4130 - Aspen	Sapling Medium	17.7	17	Immature	OPIC - FMD: stand treated 1998-99 sale # 212-98-01("Shamrock Hardwoods"); FINAL HARVEST ASPEN
33	4199 - Other Mixed Upland Deciduous	Sawtimber Well	40.6	86	111-140	OPIC - FMD: INITIAL THIN NORTHERN HARDWOOD STAND; STAND TREATED BY WEYERHAEUSER IN 2000-2002. SALE # 215/98/01 (Sunrise Lake Hardwoods) STORM DAMAGE CAUSED A SALVAGE OPERATION TO PARTS OF THE STAND. There is very little regeneration in this stand which is taller than waist height. The stand was treated last entry but the canopy appears to be uniform in cover. The stand will hold for now. This stand could be treated next entry and that treatment might be to create some openings in the canopy to promote some regeneration. When this stand is treated, Std. 7 should be considered for treatment also.
38	4130 - Aspen	Sapling Well	90.9	27	Unspecified	Stand treated in 1989 with sale # 63-022-87-01 "Osceola Many Bogs".
41	4199 - Other Mixed Upland Deciduous	Poletimber Well	8.2	41	81-110	OPIC - FMD: OI Stand Year Origin was 1975
42	4130 - Aspen	Poletimber Well	14.4	25	Unspecified	OPIC - FMD: OI Stand Year Origin was 1991
43	4123 - Red Oak	Sawtimber Well	9.7	104	1-50	OPIC - FMD: Mostly oak with some Aspen. Stand 43 was thinned in 2012 during a slop over from another adjacent cut.
45	4131 - Aspen, Oak	Sapling Well	8.2	15	Immature	OPIC - FMD: INITIAL THIN OF NORTHERN RED OAK STAND. Stand treated in 2001 sale #2169801("Over the Top Removal"). Regen is mostly Red Maple and Aspen a burn would help the oaks get established in this site. Exclude areas of Aspen and Oak regen
48	4112 - Maple, Beech, Cherry Association	Sapling Well	8.9	26	Immature	OPIC - FMD: OI Stand Year Origin was 1990
50	4130 - Aspen	Sawtimber Well	8.8	70	Unspecified	
51	4130 - Aspen	Poletimber Well	6.1	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1973 Pockets of oak/maple dominate throughout unit as seen in aerial photos. density of understory increases from low to medium with elevation gain. traces of black cherry throughout.
410	4139 - Aspen, Mixed Deciduous	Poletimber Medium	10.1	15	Unspecified	OPIC - FMD: OI Stand Year Origin was



Stand	Cover Type	Acres	Managed Site	General Comments:
8	6225 - Bog	3.4	No	OPIC - FMD: OI Stand Year Origin was
9	3301 - Low Density Deciduous Trees	1.1	No	OPIC - FMD: OI Stand Year Origin was
10	330 - Low-Density Trees	2.1	No	
16	310 - Herbaceous Openland	1.7	No	OPIC - FMD: OI Stand Year Origin was
22	6224 - Treed Bog	2.2	No	
26	500 - Water	32.4	No	Sunrise Lake
29	310 - Herbaceous Openland	1.0	No	small grass opening within an oak stand
30	6225 - Bog	5.0	No	OPIC - FMD: OI Stand Year Origin was
31	6225 - Bog	2.8	No	OPIC - FMD: OI Stand Year Origin was
32	6224 - Treed Bog	4.5	No	Treed bog with sparse trees throughout. A few dead white pine snags scattered throughout. Occasional yellow birch.
34	6224 - Treed Bog	13.1	No	OPIC - FMD: OI Stand Year Origin was
35	6225 - Bog	3.4	No	lowland leatherleaf bog with islands of red oak, fir, and tamarack to the south
36	500 - Water	1.0	No	
37	500 - Water	0.6	No	OPIC - FMD: OI Stand Year Origin was
39	310 - Herbaceous Openland	1.1	No	OPIC - FMD: This is the stand on the north side of 15 Mile Rd. and it is the access site and swimming area used by local residents. The site is also used by campers from the Sunrise Lake campground which is administered by Osceola Co..
40	122 - Road/Parking Lot	1.0	No	OPIC - FMD: This is the stand on the north side of 15 Mile Rd. and it is the access site and swimming area used by local residents. The site is also used by campers from the Sunrise Lake campground which is administered by Osceola Co..
44	310 - Herbaceous Openland	1.1	No	Small herbaceous opening located within a large oak stand.



Stand	Cover Type	Acres	Managed Site	General Comments:
46	500 - Water	1.5	No	small pond with a dozen standing large pine snags
47	310 - Herbaceous Openland	2.4	No	OPIC - FMD: OI Stand Year Origin was
52	310 - Herbaceous Openland	3.8	No	OPIC - FMD: OI Stand Year Origin was
403	3301 - Low Density Deciduous Trees	11.7	No	OPIC - FMD: OI Stand Year Origin was
416	310 - Herbaceous Openland	1.8	No	OPIC - FMD: OI Stand Year Origin was
418	310 - Herbaceous Openland	2.0	No	OPIC - FMD: OI Stand Year Origin was
419	310 - Herbaceous Openland	1.7	No	OPIC - FMD: OI Stand Year Origin was
420	310 - Herbaceous Openland	4.0	No	OPIC - FMD: OI Stand Year Origin was
421	310 - Herbaceous Openland	2.3	No	herbaceous openland within aspen stand containing sparse poor form black cherry
422	310 - Herbaceous Openland	6.0	No	OPIC - FMD: OI Stand Year Origin was
423	310 - Herbaceous Openland	1.4	No	open grass area within aspen stand with sparse poor form cherry
427	3301 - Low Density Deciduous Trees	1.4	No	OPIC - FMD: OI Stand Year Origin was