



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33031

Entry Year 2023

Acreage: 616

County Menominee

Management Area: Menominee End Moraine

Revision Date: 2021-06-29

Stand Examiner: Dan Beaudou

Legal Description:

T34N, R29W, Sections 2, 11, 12, 13 and 14

Identified Planning Goals:

The compartment is within a landscape of more sandy soils containing oak. There are some deciduous species, such as hickory, that are seen in southern/central deciduous forest not seen in the rest of the Upper Peninsula. Upland types are aspen, mixed deciduous, mixed conifer, oak, red and white pine. Lowland types consist of ash, conifer, cedar, hardwood and open lowland. Recommended treatments are: 18.4 acres of over mature mixed deciduous will be treated by clearcutting leaving cedar, hemlock, oak less than 6" dbh and some large mast and seed trees. 19.4 acres of lowland hardwood will be treated before the Emerald Ash Borer(EAB) enters the stand which has been identified less than 10 miles away. 141.7 acres of more characteristically central hardwoods will be treated by selection thinning maintaining species of the central hardwoods and cavity prone trees. Within 300' of the Menominee River, a higher basal area of 90 will be maintained to provide a denser corridor and more large trees for cavity inhabiting wildlife species. Best Management Practices(BMP) within the Riparian Management Zone(RMZ) will also incorporate less than 10% soil disturbance within the 100' RMZ.

Oak wilt epicenters have been treated in the past by clearcutting and trenching. Oak wilt surveillance with treatment of epicenter will continue contingent upon funding.

Soil and topography:

Topography is gently rolling to level. The soils are primarily well-drained sands, loams and mucks/peats. The major soil series are Grayling, Moquah, Pemene, Tawas and Lupton.

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

The ownership is a contiguous block with state-ownership to the northwest, private to the northeast east and west and Wisconsin private to the south. There are no private in-holdings but access to several private landowners traverses this compartment. Private ownership has summer residential/recreational cabins that are in-use much of the year. Land use in the area is mainly recreational hunting, fishing, trapping and weekend camping. Northeast Wisconsin residents also frequent this area and some are landowners.

Unique Natural Features:

The south end of the compartment borders the Menominee River and contains part of Bear Point. It appears the highest elevation point in Menominee county, known as Bear Mountain, is within the adjacent westside private land.

Archeological, Historical, and Cultural Features:

None known

Special Management Designations or Considerations:

The floodplain forest along the Menominee River contains tree species (silver maple, hackberry, hickory, witch hazel, pricklyash, etc.) that typically are found more southerly. This area is within the northern range of the Central Hardwoods therefore maintenance of this diversity is desired.

Watershed and Fisheries Considerations:

Compartment 33031: NLMMU – Jennifer Johnson: This compartment contains unnamed drainage areas and the Menominee River, a large warmwater river. A 100' buffer is recommended for any waterbody in this compartment.

Given recent Great Lakes high-water levels, standing water in the form of vernal pools or temporary waterbodies may exist throughout all compartments. Therefore, buffers are recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

This compartment is within the Menominee End Moraine Management Area and contains forest types that are adapted to

sandy outwash plain conditions. Most of the unit's oak resource is located here, and perpetuation of this cover type is of high priority. The southern portion of this compartment lies adjacent the Menominee River. A diverse hardwood peninsula between a bend in the river is designated a special conservation to preserve the significant features within the area. The peninsula contains forest species that are characteristic of more southern areas (silver maple, hickory, butternut). The development of large-diameter trees, snags, and dead woody debris will be valuable to cavity nesting and insectivorous birds, small mammals, and many other species.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 31: Sections 2 & 11-14, T34N-R29W, Menominee County

No known potential exists for commercial oil & gas production in this part of the state. The closest active sand/gravel pits are more than six miles away. Sand & gravel development potential in the compartment appears to be limited. Aquila's Back Forty project is roughly six miles north, and there may be potential for discovery of additional sulfide deposits, like Back Forty, in the area. There is no current leasing activity in or around the compartment. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Decent access from the Sturgeon Landing Road, a county dirt road, that can be in very poor condition during the spring and wet periods of the year. The Sturgeon Landing Road dead ends a half mile into the compartment. State Forest road system then extends into the Compartment branching off providing access to private holdings to the south and west.

Survey Needs:

This compartment does not have any survey needs this year of entry. Most, if not all, of the 1/16 corners common with private property have previously been monumented. May need surveyor if monuments are found tampered with, damaged or missing.

Recreational Facilities and Opportunities:

There are no developed recreational facilities within this compartment. Boat launching facilities on the Menominee River are available 1.5 miles east and northwest of this compartment.

Fire Protection:

This compartment has good access by county dirt road and dirt forest roads. The Menominee River is the southern boundary. There is a wide and wet slough through the north half of the compartment. The stands north of the slough are accessed through state land from the north via good dirt forest roads.

Additional Compartment Information:

Yearly oak wilt monitoring has detected oak wilt epicenters within the compartment. Any oak wilt identification that occurs during this 10 year inventory period can be treated by using oak wilt treatment guidelines. The oak wilt epicenters will be identified and the appropriate distance away from the center will be cleared for vibratory plow operations, harvested and/or herbicide to minimize the spread of oak wilt.

The following reports from the Inventory are attached:

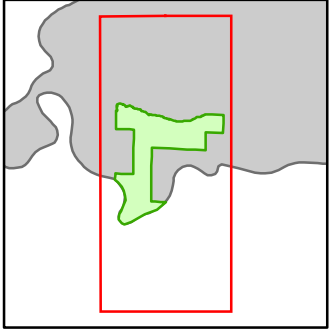
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

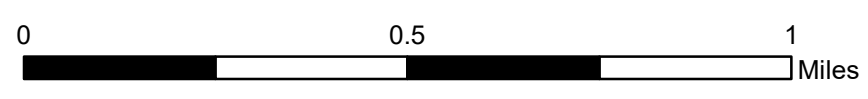
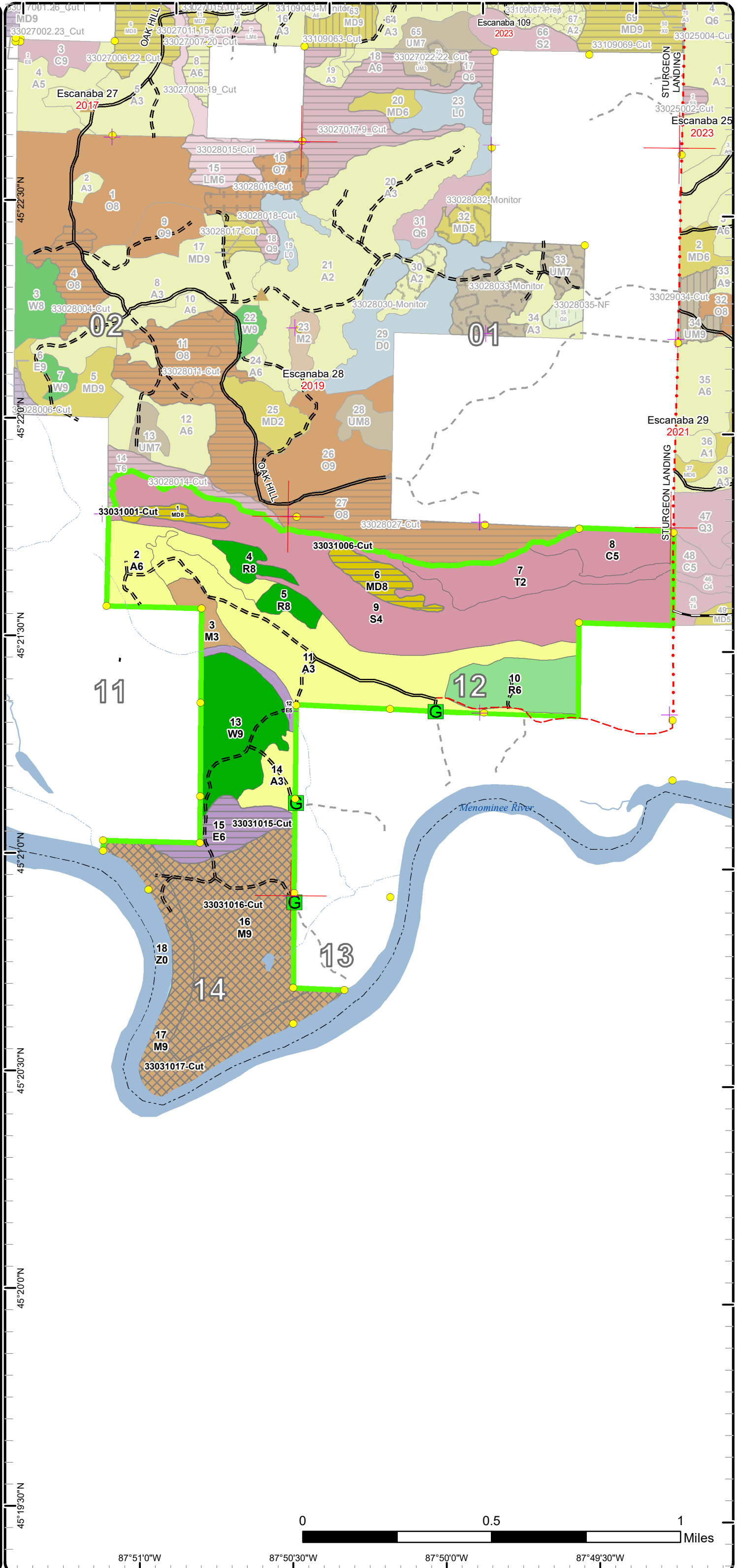
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 31
 T34N R29W Sec. 02,11-14
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Menominee End Moraine
 YOE: 2023
 Acres: 615.9 GIS Calculated
 Examiner: Dan Beaudo
 Map Revised: 7/1/2021
 Map Phase: Web-Post



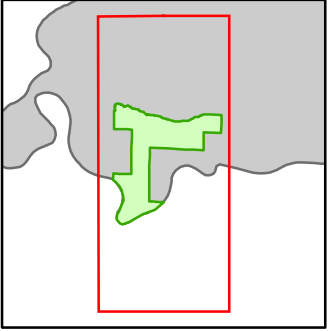
- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ▲ Berms
- G Gate
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 500 - Water



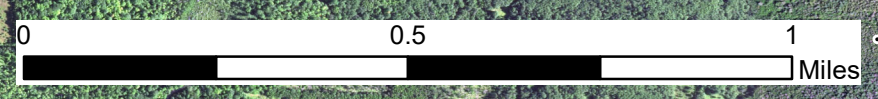
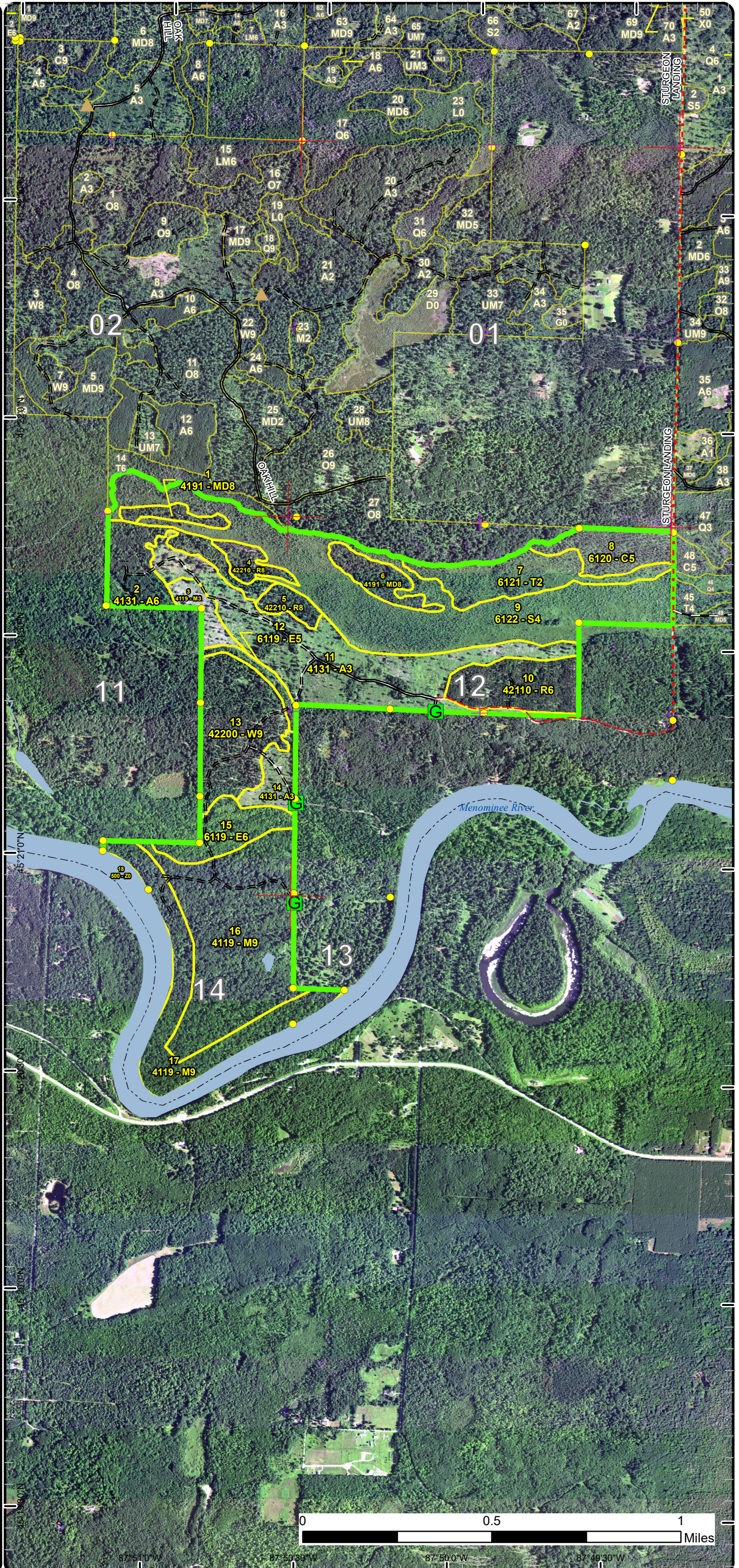
87°51'0"W 87°50'30"W 87°50'0"W 87°49'30"W

Stand Boundary Map

Compartment: 31
 T34N R29W Sec. 02,11-14
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Menominee End Moraine
 YOE: 2023
 Acres: 615.9 GIS Calculated
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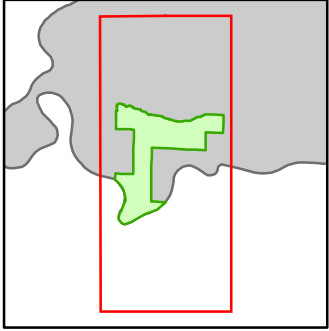
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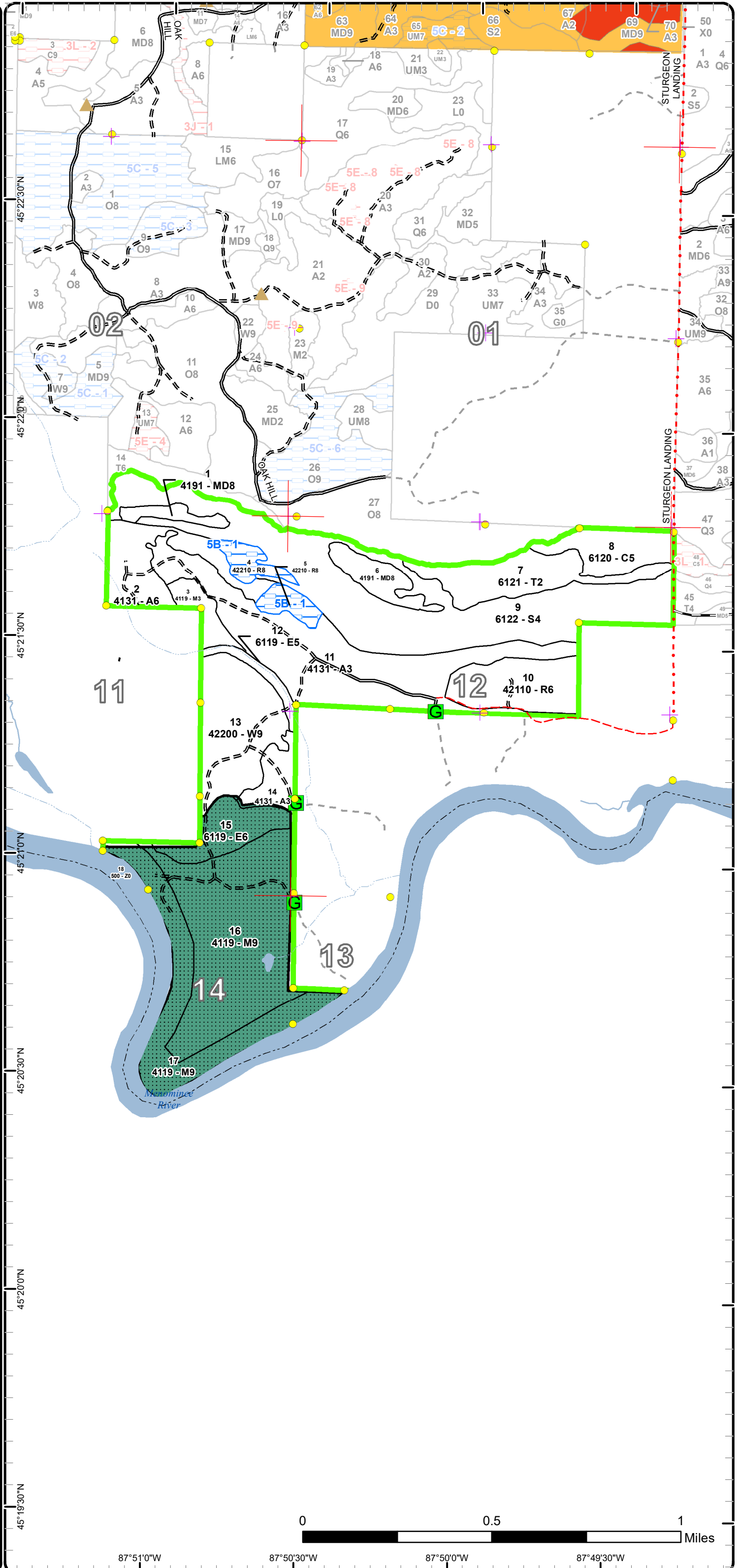
87° 51' 0" W 87° 50' 30" W 87° 50' 0" W 87° 49' 30" W

Special Conservation Areas

Compartment: 31
 T34N R29W Sec. 02,11-14
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Menominee End Moraine
 YOE: 2023
 Acres: 615.9 GIS Calculated
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 Map Revised: 7/1/2021
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- Miris Corners
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- County - Dirt Road (Seasonal)
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- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ▲ Berms
- G Gate
- Compartment Boundary
- Available w/ Constraints
- 5B: Maintain for regeneration purposes
- Stand Boundaries
- SCA
- Ecological Reference Areas
- Non-Dedicated Natural Areas and National Natural Landmarks
- Habitat Corridor



Report 1 – Total Acres by Cover Type and Age Class



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	99	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	127
Cedar	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	20
Lowland Deciduous	0	0	0	0	0	0	0	6	0	19	0	0	0	0	0	0	0	0	25
Lowland Spruce/Fir	0	0	0	0	0	0	0	123	0	0	0	0	0	0	0	0	0	0	123
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	13	6	0	0	0	0	18
Northern Hardwood	0	9	0	0	0	0	0	0	0	0	0	0	0	0	142	0	0	0	151
Red Pine	0	0	0	0	28	0	0	0	0	0	15	0	0	0	0	0	0	0	42
Tamarack	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Water	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
White Pine	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	44
Total	34	108	31	0	57	0	0	129	0	64	35	0	13	6	142	0	0	0	614



Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2023

Acres of Harvest

Compartment 31

Total Compartment Acres: 616

Commercial Harvest - 180
 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
Lowland Deciduous	19	0	0	0	0	0	0	0	0	19
Mixed Upland Deciduous	18	0	0	0	0	0	0	0	0	18
Northern Hardwood	0	142	0	0	0	0	0	0	0	142
Total	38	142	0	0	0	0	0	0	0	180

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	180	0	0	0	0	0	0	0	0	180
Next Step	0	0	0	0	0	0	180	0	0	180
Total	180	0	0	0	0	0	180	0	0	359



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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Proposed Treatments:

1	33031001-Cut	5.9	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	120	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Cut all trees greater than 3" dbh except cedar, cut oak greater than 6" dbh and leave some scattered large oak and pine seed trees.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Species in the canopy layers.</p> <p><u>Other Comment:</u> This is an over mature stand that has several dead trees standing and laying on the ground. Clearcutting will allow full sunlight to hit the forest floor and improve germination conditions.</p> <p>Clearcutting is the solution to forest types whose seedlings or sprouts require full sunlight. Seeds and buds respond well to the warmed ground. The abundance of light produces excellent growth, some of the fastest we have. Species such as aspen, paper birch and jack pine require full sunlight</p> <p>.The "catch" with clearcutting is appreciating how nature did clearcutting before there were people to wield chainsaws and harvest processors. Wildfire, wind, insect outbreaks and floods were common ways nature employed to level large tracts of Michigan forest in order to allow sun-loving forests to regenerate.</p> <p>With our tremendous dependency upon forests, the losses from these natural events are typically regarded as negative and something to avoid, if possible. Clearcutting is an economical and ecologically viable way to reduce the negative effects of natural catastrophes at the same time accommodating the ecological requirements of these kinds of forest types.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>											
6	33031006-Cut	12.5	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	112	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Cut all trees greater than 3" dbh except cut oak greater than 6" dbh and leave some scattered large oak and pine for seed.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Species in the canopy layers.</p> <p><u>Other Comment:</u> This is an over mature stand with dead and dying trees. Final harvest will release the large amount of suppressed oak regeneration.</p> <p>Clearcutting is the solution to forest types whose seedlings or sprouts require full sunlight. Seeds and buds respond well to the warmed ground. The abundance of light produces excellent growth, some of the fastest we have. Species such as aspen, paper birch and jack pine require full sunlight.</p> <p>The "catch" with clearcutting is appreciating how nature did clearcutting before there were people to wield chainsaws and harvest processors. Wildfire, wind, insect outbreaks and floods were common ways nature employed to level large tracts of Michigan forest in order to allow sun-loving forests to regenerate.</p> <p>With our tremendous dependency upon forests, the losses from these natural events are typically regarded as negative and something to avoid, if possible. Clearcutting is an economical and ecologically viable way to reduce the negative effects of natural catastrophes at the same time accommodating the ecological requirements of these kinds of forest types.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
15 33031015-Cut	19.4	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	85	111-140	Harvest	Clearcut with Retention	611 - Lowland Deciduous Forest	Even-Aged	No
<p><u>Prescription Specs:</u> Cut all merchantable trees except leave some larger oak for mast and a mix of large trees for seed, roost and cavity. Also leave cedar and hemlock if present.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Acceptable Regen:</u> Species in the canopy layers.</p> <p><u>Other Comment:</u> The ash will be targeted by the Emerald Ash Borer that is in the vicinity. Due to forest health recommendations the stand should be final harvested before mortality sets in. The small ash sprouts will have a greater survivability since they will be smaller than the size selection by the EAB beetles. Residual scattered oak will provide mast for seed and wildlife.</p> <p>Clearcutting is the solution to forest types whose seedlings or sprouts require full sunlight. Seeds and buds respond well to the warmed ground. The abundance of light produces excellent growth, some of the fastest we have. Species such as aspen, paper birch and jack pine require full sunlight.</p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2022</p>										
16 33031016-Cut	93.6	4119 - Mixed Northern Hardwoods	Sawtimber Well	134	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No
<p><u>Prescription Specs:</u> Selection thin stand to a residual basal area range of 70. Maintain a higher composition of Central Hardwood species, legacy trees and cavity prone trees within this stand. Concentrate on lowering the species population that have current forest health issues, such as ash due to the local presence of Emerald Ash Borer.</p> <p>Use the debarking spec and consider adding winter or dry summer operating spec to minimize operation if swales are wet.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Acceptable Regen:</u> Species in the canopy layers.</p> <p><u>Other Comment:</u> Selection harvesting may be the most misunderstood system and is certainly the most complex. When stands of trees become overly dense, forest health risks increase. Removing the higher-risk trees and leaving the trees with higher potential improves the quality and character of the forest. The partially-opened canopy allows enough light to accelerate individual tree health and vigor, and allows seedlings to grow. The young trees eventually replace the older trees as the older trees either die or are harvested.</p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2022</p>										
17 33031017-Cut	48.1	4119 - Mixed Northern Hardwoods	Sawtimber Well	134	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No
<p><u>Prescription Specs:</u> Selection thin stand to a residual basal area range of 90. Maintain a higher composition of Central Hardwood species, legacy trees and cavity prone trees within this stand. Concentrate on lowering the species population that have current forest health issues, such as ash due to local presence of Emerald Ash Borer. Within the 100' Riparian Management Zone(RMZ), maintain a maximum of 10% soil disturbance and residual basal area of 90 or greater.</p> <p>Use the debarking spec and consider adding winter or dry summer operating spec to minimize operation if swales are wet.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Acceptable Regen:</u> Species in the canopy layers.</p> <p><u>Other Comment:</u> Selection harvesting may be the most misunderstood system and is certainly the most complex. When stands of trees become overly dense, forest health risks increase. Removing the higher-risk trees and leaving the trees with higher potential improves the quality and character of the forest. The partially-opened canopy allows enough light to accelerate individual tree health and vigor, and allows seedlings to grow. The young trees eventually replace the older trees as the older trees either die or are harvested.</p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2022</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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Total Treatment Acreage Proposed: 179.5

Report 4 – Site Conditions

Escanaba Mgt. Unit
Dan Beaudou : Examiner

Compartment: 31
Year of Entry: 2023

Availability for Management

Total Acres	Acres Available	<i>Acres Avail With Condition</i>	Acres Not Available	Dominant Site Conditions	5B
127	127	0	0	Aspen	
20	20	0	0	Cedar	
25	25	0	0	Lowland Deciduous	
123	123	0	0	Lowland Spruce/Fir	
18	18	0	0	Mixed Upland Deciduous	
151	151	0	0	Northern Hardwood	
43	28	14	0	Red Pine	14
31	31	0	0	Tamarack	
34	34	0	0	Water	
45	45	0	0	White Pine	
616	601	14		Total Forested Acres	14
	98%	2%	0%	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	5B: Maintain for regeneration purposes	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand was recently shelterwood thinned. Conduct thinning next inventory cycle.							



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
Bear Point	Habitat Area	Habitat Corridor	SCA	156
Comments				
Cental Hardwood species throughout stand				

Mgt. Unit

Compartment:

Year of Entry



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
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																															
1	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	5.9	120	51-80	N/A	Low narrow slight upland area compared to surrounding tag alder/tamarack swamp. This is an over mature stand that has several dead oak trees. There is some oak regeneration present. Final harvest to restart the stand.																																															
<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Red Maple</td> <td>30</td> <td>Pole/Log</td> <td>8</td> <td>93</td> </tr> <tr> <td>Red Oak</td> <td>5</td> <td>Log/Pole</td> <td>12</td> <td>93</td> </tr> <tr> <td>Paper Birch</td> <td>5</td> <td>Pole</td> <td>8</td> <td></td> </tr> <tr> <td>Northern Pin Oak</td> <td>35</td> <td>Log/Pole</td> <td>12</td> <td>120</td> </tr> </tbody> </table>		Canopy Species	% Cover	Size Class	DBH	Age	Red Maple	30	Pole/Log	8	93	Red Oak	5	Log/Pole	12	93	Paper Birch	5	Pole	8		Northern Pin Oak	35	Log/Pole	12	120	<table border="1"> <thead> <tr> <th>Sub-Canopy Species</th> <th>Density</th> <th>Avg. Height</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>Northern Pin Oak</td> <td>Low</td> <td>5 - 10 feet</td> <td>Sapling</td> </tr> <tr> <td>Tag Alder</td> <td>Low</td> <td>5 - 10 feet</td> <td>Tall Shrub</td> </tr> <tr> <td>Hazelnut (Beaked)</td> <td>Low</td> <td>< 5 feet</td> <td>Tall Shrub</td> </tr> </tbody> </table>		Sub-Canopy Species	Density	Avg. Height	Size	Northern Pin Oak	Low	5 - 10 feet	Sapling	Tag Alder	Low	5 - 10 feet	Tall Shrub	Hazelnut (Beaked)	Low	< 5 feet	Tall Shrub										
Canopy Species	% Cover	Size Class	DBH	Age																																																		
Red Maple	30	Pole/Log	8	93																																																		
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2	4131 - Aspen, Oak	Poletimber Well	28.6	30	Immature	N/A	Stand was treated in the fall of 1990 by the Bear Mountain (33-010-89) timber sale. Some large scattered oak, pine and a trace of ash, cherry, hemlock, and beech.																																															
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6	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	12.5	112	81-110	N/A	This stand is a slight upland island of maple/oak/pine surrounded by tamarack/tag alder swamp. Lots of dead and down trees mostly oak with some red maple and white pine. High amount of oak regeneration in the sub-canopy that will be released by harvesting the canopy. Trace amounts of species such as birch, sugar maple, black spruce and cedar.																																										
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7	6121 - Tamarack	Sapling Medium	30.5	14	Immature	N/A	This stand was treated in 2006 by the Husky's Lesson (33-026-03) timber sale. Tamarack seedlings of variable size are becoming more noticeable. The treatment retained cedar, tamarack and black spruce seed trees. The oak is on small upland areas scattered in the stand. There is also a variety of lowland shrub species present.																																										
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8	6120 - Lowland Cedar	Poletimber Medium	20.3	94	1-50	N/A	This stand was treated in 2006 by the Husky's Lesson (33-026-03) timber sale. Cedar, oak and some tamarack seed trees were retained. Tamarack seedlings of variable height. Red maple, birch, black spruce and balsam more along northern edge with upland. There are a few low sandy islands with pin/red oak and paper birch seedlings.																																										
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9	6122 - Black Spruce	Poletimber Poor	122.7	65	1-50	N/A	This is an unproductive site almost a spruce bog. Older small black spruce and tamarack with some areas more open with shrubs and wet.																																										
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10	42110 - Planted Red Pine	Poletimber Well	28.1	38	81-110	N/A	Stand was thinned in 2015 by the Rising Water (33-026-13) timber sale. A residual basal area of 90 red pine was retained. Good quality red pine plantation with some open areas. There is also numerous stump sprouted oak clumps throughout the stand. Trace amount of cherry and white pine.																																										
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
11	4131 - Aspen, Oak	Sapling Well	86.9	6	Immature	N/A	Stand was clearcut in 2015 by the Rising Water (33-026-13) timber sale. All species were cut; except hemlock, beech, and some pine and oak were marked to retain. Also, 5 retention patches were retained, totaling 5.2 acres. The retention contributes log and pole size oak, pine, aspen, and red maple to the canopy layer in trace amounts. Good regeneration at this time. The oak regeneration really is noticeable in the winter when their previous year leaves are still attached.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	10	Sapling	1	6	Hazelnut (Beaked)	Medium		< 5 feet	Tall Shrub
Quaking Aspen	30	Sapling	1	6					
Bigtooth Aspen	10	Sapling	1						
Northern Pin Oak	30	Sapling	1	6					
Red Oak	10	Sapling	1	6					
Black Cherry	5	Sapling	1						
White Pine	5	Sapling	1						
12	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	5.6	68	51-80	N/A	This stand is a long, narrow lowland drainage area with a mixture of trees and shrubs.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	40	Pole/Log	8	68	Tag Alder	Medium		5 - 10 feet	Tall Shrub
Black Ash	40	Pole	6						
Bur Oak	10	Pole/Log	8						
Green Ash	10	Pole	8						
13	42200 - Natural White Pine	Sawtimber Well	44.5	81	81-110	N/A	In 1990 this stand was thinned, and than in 1993 all of the dead oak was harvested from the stand. The stand was than thinned in 2015 by the Rising Water (33-026-13) timber sale. The pine was marked to cut, and all other merchantable species were cut; except the oak, beech, and hemlock. There was a residual of 80 basal area retained.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Northern Pin Oak	10	Log	10		Red Maple	Low		10 - 20 feet	Sapling
White Pine	75	Log	16	81	Red Oak	Low		5 - 10 feet	Sapling
Red Pine	15	Log	14		Northern Pin Oak	Low		10 - 20 feet	Sapling
					Witch Hazel	Low		5 - 10 feet	Tall Shrub
					Quaking Aspen	Low		< 5 feet	Sapling
14	4131 - Aspen, Oak	Sapling Well	11.6	6	Immature	N/A	Stand was clearcut in 2015 by the Rising Water (33-026-13) timber sale. All trees were cut; except some pine and oak were marked to retain. There is a trace amount of red pine and white oak. Regeneration is filling in and doing well.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Oak	5	Sapling	1	6	White Pine	Low		< 5 feet	Seeding
Red Maple	10	Sapling	1	6					
Quaking Aspen	60	Sapling	1	6					
White Pine	5	Log	14						
Northern Pin Oak	15	Sapling	1						
Black Cherry	5	Sapling	1						
15	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	19.4	85	111-140	N/A	This is a lowland area with some upland "ridges" present. It has a greater concentration of black ash than the stand to the south. It will be susceptible to the Emerald Ash Borer that is in the vicinity. The western end of this stand is 450 feet from the Menominee River. Trace amount of species such as pine, sugar maple, balsam, spruce, balm and cherry.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	50	Log/Pole	10	85	Tag Alder	High		5 - 10 feet	Tall Shrub
Black Ash	30	Pole	8	99					
Bur Oak	10	Log	14						
Green Ash	10	Pole	8						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
16	4119 - Mixed Northern Hardwoods	Sawtimber Well	93.6	134	111-140	N/A	This is a mature stand that contains some species at the northern edge of their range such as hickory and butternut. There are occasional E-W lowland swales with ash, holly and tag alder. Sugar maple and pine is mostly in the northern portion of the stand. Other species found include red oak, white pine, hackberry, butternut and ironwood. Large mature trees with many dead on ground. Some ash regeneration in patches. Also a different shrub with thorns previous inventory states prickly ash.																																																					
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17	4119 - Mixed Northern Hardwoods	Sawtimber Well	48.1	134	111-140	N/A	This stand is more characteristic of a central hardwood stand that is a 300' wide buffer along the Menominee River. There is a greater extent of flooding in the swale areas when the river is high.																																																					
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