



# Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33029

Entry Year 2021

Acreage: 1,212

County Menominee

Management Area: Menominee End Moraine

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**Revision Date:** 2019-07-02

**Stand Examiner:** Dan Beaudou

**Legal Description:**

T34N R28W Sections 5, 6, 7 and 8.

**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 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. Of the 155.4 acres recommended for treatment, 27.9 acres of aspen clearcut, 45.8 acres of white pine thinning, 25.6 acres red pine plantation crown thinning, 13.1 acres containing spruce budworm, 18.4 acres mixed forest clearcut with retention and 24.6 acres lowland conifer shelterwood. 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:**

The topography is mostly gently rolling to level. The soils are primarily well drained to excessively well-drained sands and poorly-drained deep muck and peat. The major soil series are Onaway, Rubicon, Lupton, Tawas and Rousseau. The Menominee River flows along the southern boundary of the compartment and the state of Michigan owns approximately 3/8 mile of river frontage.

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

This compartment is part of a block of state land that is about 12 miles west and south of Stephenson, Michigan. State-owned land and several private parcels lie north, west and east of this compartment. The southern boundary is the Menominee River and Wisconsin. Several private in-holdings are used primarily for recreation and cross state-owned land to access their property. There are no permanent residents within the compartment.

**Unique Natural Features:**

This compartment borders the Menominee River. Burke Creek flows through the eastern portion of the compartment and into the Menominee River.

**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, etc.) that typically are found more southerly. This area has been site conditioned this year of entry as buffer to the Menominee River.

**Watershed and Fisheries Considerations:**

In the eastern portion of the compartment, Burke Creek and two tributaries flow from north to south to the Menominee River. The Menominee River is the southern boundary. Burke Creek, a cold transitional Type 1 Trout Stream is located in this compartment. A 300' buffer is recommended for riparian areas susceptible to aspen regeneration. For areas not susceptible to aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices. BMPs should be followed for any standing vernal pools or wetland areas.

**Wildlife Habitat Considerations:**

This compartment contains mixed upland forest of aspen, oak, and pine in the north and grades into northern lowland hardwood forest in the south near the Menominee River. Maintenance of vegetative diversity will be a key consideration in harvest treatments. Depending upon the cover type, various tree species (such as oak, hemlock, cedar, pine, and spruce) will be maintained in harvest units.

## **Mineral Resource and Development Concerns and/or Restrictions**

The nearest active aggregate production is located more than four miles to the northeast. There may be some sand & gravel potential within the compartment on the sparse uplands. Active metallic mineral leasing, and recent mineral exploration, associated with the Back Forty project is located roughly three miles to the north. Aquila Resources have successfully obtained most of the required mine permits from the state and may be positioned to begin mining as soon as 2020. The potential for similar sulfide deposits beneath the compartment is unknown, but there is no history of mineral leasing within the compartment. There is no known potential for economic hydrocarbon production in the UP.

Surface sediments consist of end moraines of medium and coarse-textured till and lacustrine (lake) sand & gravel. The glacial drift thickness varies between 10 and 50 feet. The Cambrian Munising Formation underlies the glacial drift. The Munising may have been used as a building stone previously and it overlaps Precambrian aged rocks, which may have metallic and nonmetallic mineral potential.

## **Vehicle Access:**

Sturgeon Landing Road, a gravel county road, enters the compartment at the west boundary. The Snakey Lake Road, a good dirt state forest road, accesses the southern portion of the compartment. Several 2-track roads originating at the Sturgeon Landing Road access the western and northern portions of the compartment

## **Survey Needs:**

Potentially, eight survey corners will need to be requested for establishment.

## **Recreational Facilities and Opportunities:**

There are no developed recreation facilities within the compartment. Popular recreation includes hunting, fishing, trapping, 4-wheeling and snowmobiling.

## **Fire Protection:**

The compartment has good access on gravel county and dirt roads. For the recommended treatments, no heavy slash areas are anticipated. A thirty acre pine plantation lies in section 6 and several pine types are scattered within the compartment but do not present high fire potential.

## **Additional Compartment Information:**

A well and out building trespass was resolved with the adjacent private landowner south of Snakey Lake Road.

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: 29

County: Menominee

Unit: Escanaba

Mgmt Area: Menominee End Moraine

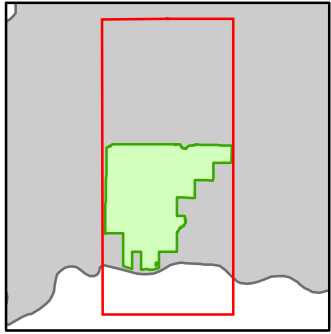
YOE: 2021

Acres: 1,212 GIS Calculated

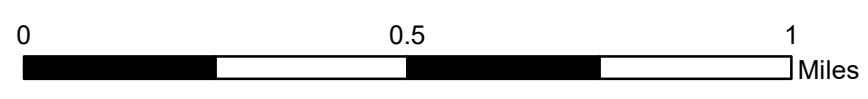
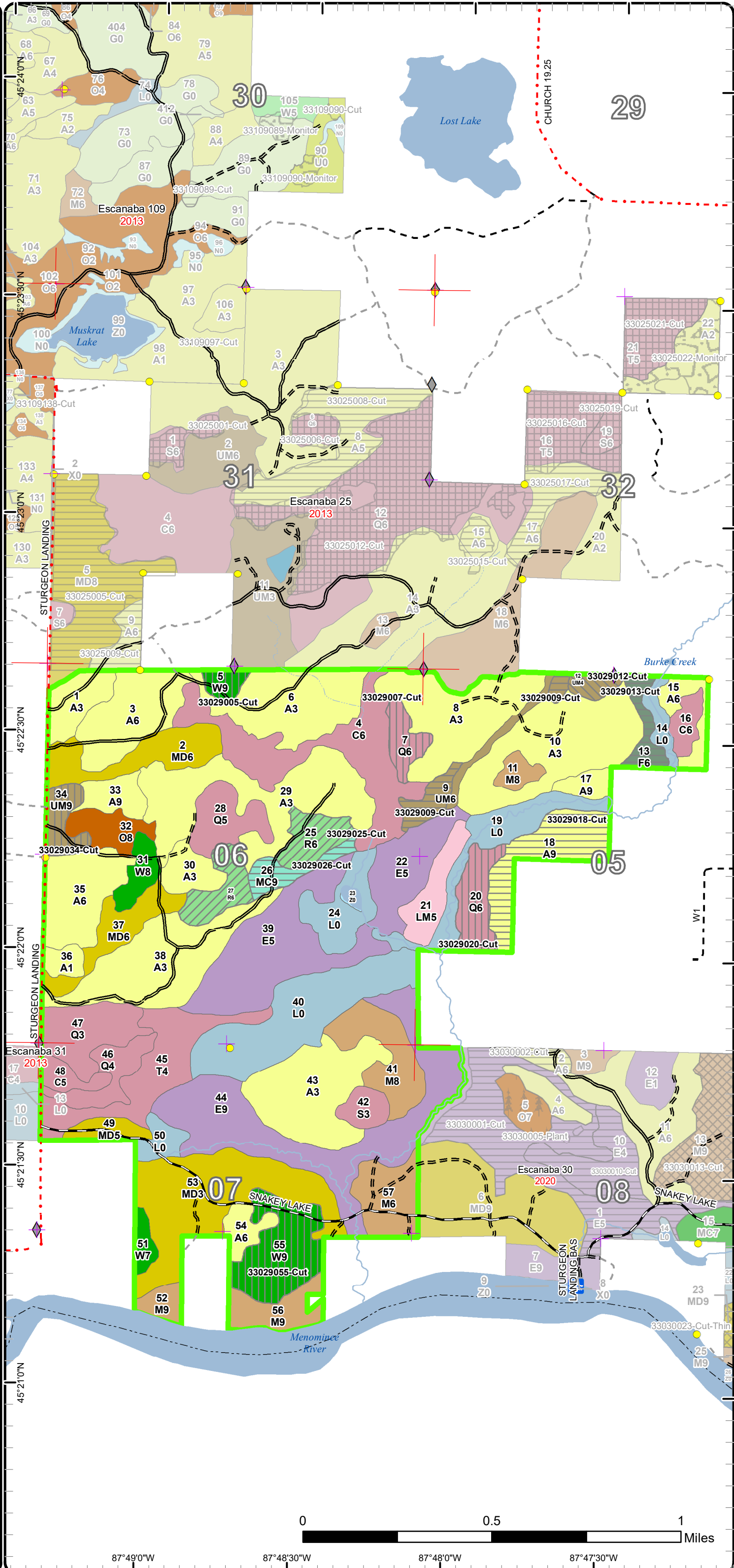
Examiner: Dan Beaudou

Map Revised: 10/30/2019

Map Phase: Post-Review



- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- Private - Dirt / Gravel Road
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Boating Access Site
- Compartment Boundary
- Other Harvest - See Comments
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 500 - Water
- 622 - Lowland Shrub



87°49'0"W      87°48'30"W      87°48'0"W      87°47'30"W

# Stand Boundary Map

Compartment: 29

County: Menominee

Unit: Escanaba

Mgmt Area: Menominee End Moraine

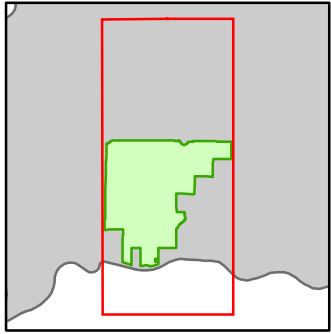
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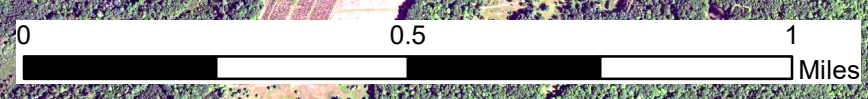
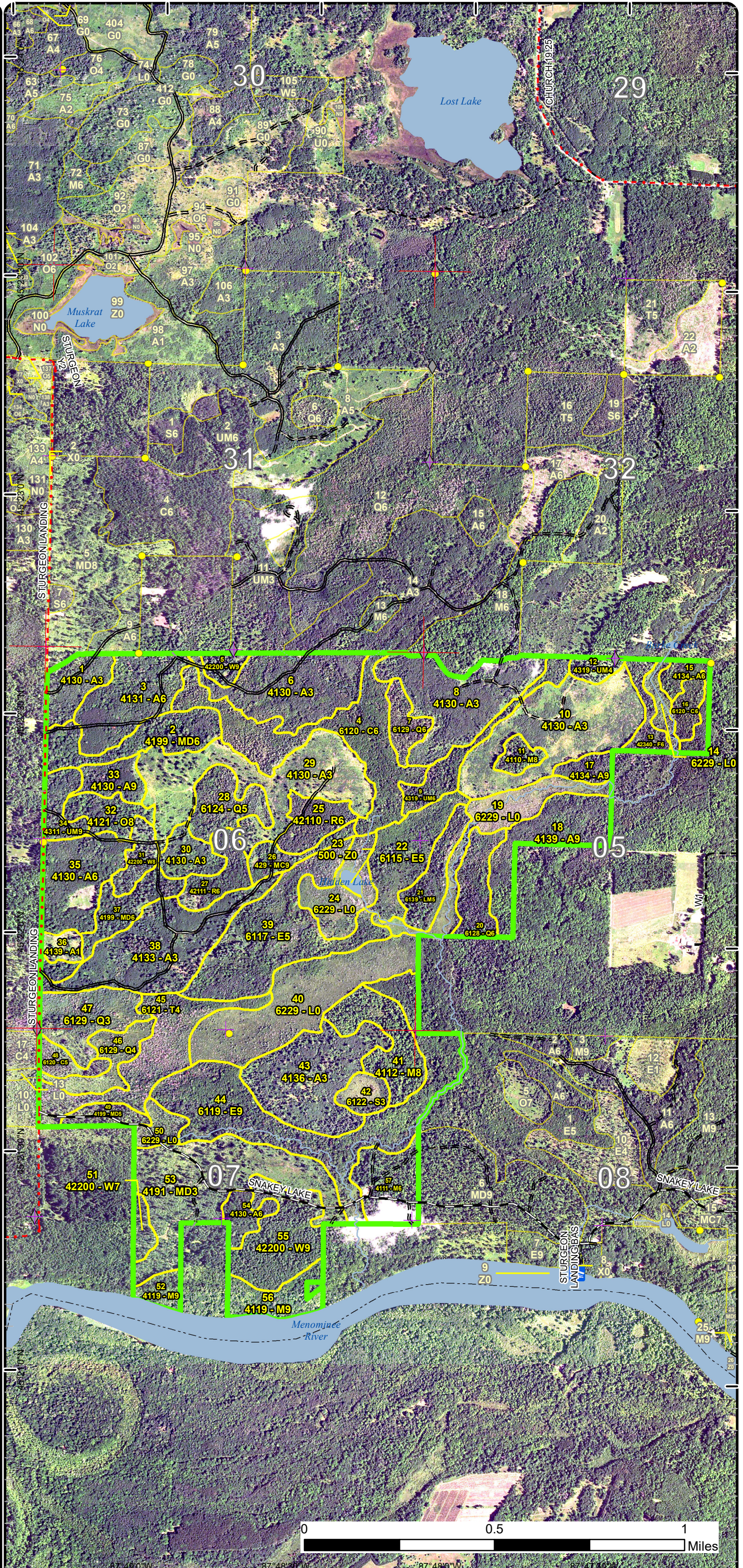
Examiner: Dan Beaudou

Map Revised: 10/30/2019

Map Phase: Post-Review



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87°48'0"W      87°48'30"W      87°49'0"W      87°49'30"W

# Special Conservation Areas

Compartment: 29

County: Menominee

Unit: Escanaba

Mgmt Area: Menominee End

Moraine

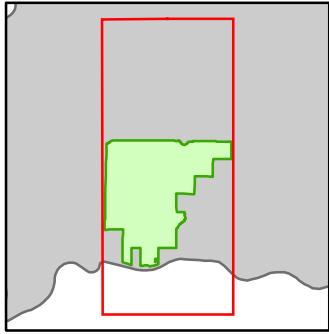
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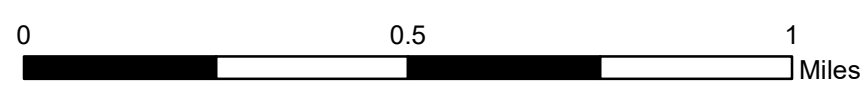
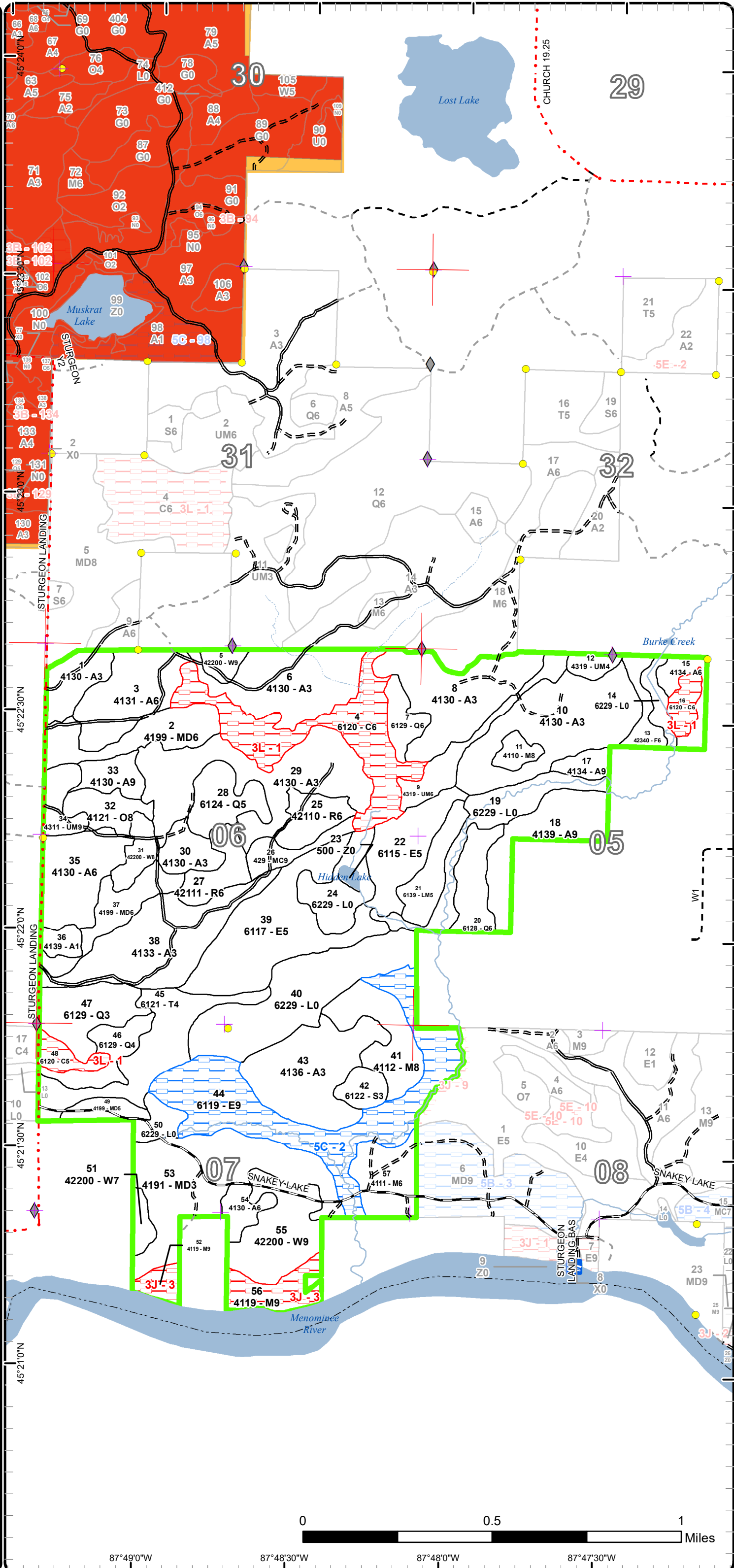
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- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Boating Access Site
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- Cold Water Lakes
- Non-Dedicated Natural Areas and National Natural Landmarks



87°49'0"W      87°48'30"W      87°48'0"W      87°47'30"W

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	116	159	47	69	16	0	0	28	0	0	0	0	0	0	0	0	0	435
Cedar	0	0	0	0	0	0	0	0	0	0	0	7	58	0	0	0	0	0	65
Lowland Conifers	0	0	23	0	0	0	14	0	17	0	0	25	0	0	0	0	0	0	79
Lowland Deciduous	0	0	54	0	0	0	0	0	25	75	0	0	0	0	0	0	0	0	154
Lowland Mixed Forest	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	14
Lowland Shrub	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
Lowland Spruce/Fir	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	60	0	0	24	0	0	0	25	0	0	0	0	0	0	0	0	0	109
Northern Hardwood	0	0	0	0	0	0	0	0	0	29	21	0	20	0	0	0	0	0	70
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12
Red Pine	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Tamarack	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	35
Upland Conifers	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	0	0	0	0	0	5	0	15	0	0	0	0	10	0	0	0	0	0	30
Upland Spruce/Fir	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	0	0	0	0	0	9	36	0	0	0	0	0	0	5	49
<b>Total</b>	<b>111</b>	<b>176</b>	<b>243</b>	<b>47</b>	<b>119</b>	<b>30</b>	<b>49</b>	<b>23</b>	<b>110</b>	<b>113</b>	<b>57</b>	<b>32</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>1213</b>



## Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2021

Acres of Harvest

Compartment 29

Total Compartment Acres: 1,212

Commercial Harvest - 155  
 Harvests with Site Condition - 0  
 Next Step Harvest - 10  
 Habitat Cut - 10

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	28	0	0	0	0	0	0	0	0	28
Lowland Conifers	0	0	0	0	25	0	0	0	0	25
Red Pine	0	0	0	0	0	26	0	0	0	26
Upland Conifers	9	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	10	0	0	0	10	0	0	0	5	25
Upland Spruce/Fir	8	0	0	0	0	0	0	0	0	8
White Pine	0	0	0	0	36	0	0	0	0	36
<b>Total</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>155</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	155	0	0	0	0	0	0	0	0	155
Next Step	10	0	0	0	0	0	115	0	0	125
<b>Total</b>	<b>165</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>280</b>



Stand	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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**Approved Treatments:**

5	33029005-Cut	5.1	42200 - Natural White Pine	Sawtimber Well	108	111-140	Harvest	Shelterwood	42201 - Natural White Pine, Mixed Deciduous	Uneven-Aged	No
<p><u>Prescription</u> Shelterwood harvest to open the canopy for seed germination. Thin stand down to 30-50 basal area. This will open up the canopy enough for seed production/germination but shade developing seedlings to prevent pine weevil damage at the early stages of seedling development.</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</u> Pine, oak and maple.</p> <p><u>Regen:</u></p> <p><u>Other</u> The shelterwood system lies somewhere in between the visual extremes of clearcutting and selection management. The parent forest is removed in several stages, with each stage successively establishing optimum environmental conditions for tree regeneration and then nursing the regeneration along to a point where the remaining parent forest can be harvested. Red oaks and white pine stands will often benefit from shelterwood harvesting.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>											
7	33029007-Cut	8.9	6129 - Mixed Coniferous Lowland Forest	Poetimber Well	102	Unspecified	Harvest	Shelterwood	612 - Lowland Coniferous Forest	Two-Aged	No
<p><u>Prescription</u> Cut all merchantable trees except cedar and hemlock. Only cut cedar for operational purposes during harvesting. Residual trees will produce a shelterwood effect where cedar concentrations are higher.</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</u> Spruce, tamarack, balsam</p> <p><u>Regen:</u></p> <p><u>Other</u> This mixed conifer stand has reached maturity in tamarack and spruce which are exhibiting mortality. Harvesting will start germination of seed that require sun to produce higher temperature for germination requirements.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>											
9	33029009-Cut	9.7	4319 - Mixed Upland Forest	Poetimber Well	68	111-140	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Two-Aged	No
<p><u>Prescription</u> Cut all merchantable trees leaving buffer to drainage as the retention. Do not cut hemlock. Mature stand with mortality and down trees.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Harvest, Clearcut with Retention</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Aspen, ash, balm, spruce, balsam, maple</p> <p><u>Regen:</u></p> <p><u>Other</u> 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>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</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
12 33029012-Cut	4.9	4319 - Mixed Upland Forest	Poletimber Poor	47	1-50	Harvest	Other - Specify	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all merchantable balsam fir and spruce. Noticeable defoliation on trees by Spruce Budworm.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> maple, spruce, fir, pine</p> <p><u>Regen:</u></p> <p><u>Other</u> Spruce Budworm defoliates new growth on spruce and balsam fir trees. Needles do not grow back causing mortality to the tree after multiple</p> <p><u>Comment:</u> years of defoliation. This will utilize the trees before mortality sets in.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
13 33029013-Cut	8.2	42340 - Upland Spruce/Fir	Poletimber Well	67	Unspecified	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Cut all merchantable trees except pine, cedar and hemlock. This will promote species that are shade intolerant. Spruce Budworm defoliation</p> <p><u>Specs:</u> noticed in most of the spruce and fir.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Aspen, balm, balsam fir, spruce, tamarack</p> <p><u>Regen:</u></p> <p><u>Other</u> Clearcutting is the solution to forest types whose seedlings or sprouts require full sunlight. Seeds and buds respond well to the warmed</p> <p><u>Comment:</u> 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></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
18 33029018-Cut	27.9	4139 - Aspen, Mixed Deciduous	Sawtimber Well	73	Unspecified	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Uneven-Aged	No
<p><u>Prescription</u> Cut all merchantable trees except hemlock, sugar maple, oak, beech and white pine. Leave some basswood in the sugar maple patches to</p> <p><u>Specs:</u> produce 70 basal area.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Aspen, balsam, basswood, maple, birch, spruce, tamarack</p> <p><u>Regen:</u></p> <p><u>Other</u> This is a mixed stand with some species that are shade intolerant. The sugar maple patches are too small for mapping criteria but would</p> <p><u>Comment:</u> create diversity within the stand. The harvest will create a mix of clearcut areas and selection harvest areas.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</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
<b>20 33029020-Cut</b>	15.7	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	103	Unspecified	Harvest	Shelterwood	612 - Lowland Coniferous Forest	Uneven-Aged	No
<p><u>Prescription Specs:</u> Cut all merchantable trees except cedar, hemlock and some scattered seed trees. Short lived species have reached their maturity and are dying out.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Acceptable Regen:</u> ash, balm, balsam, maple, spruce, tamarack</p> <p><u>Other Comment:</u> The shelterwood system lies somewhere in between the visual extremes of clearcutting and selection management. The parent forest is removed in several stages, with each stage successively establishing optimum environmental conditions for tree regeneration and then nursing the regeneration along to a point where the remaining parent forest can be harvested. Spruce and white pine stands will often benefit from shelterwood harvesting.</p> <p><u>Site Condition</u> Proposed Start Date: 10/1 /2020</p>										
<b>25 33029025-Cut</b>	12.6	42110 - Planted Red Pine	Poletimber Well	35	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription Specs:</u> Thin red pine plantation to first thinning recommendations. Rows seem narrow for current harvesting equipment. May need to modify from a row removal and leaving two rows.</p> <p><u>Next Step Treatments:</u></p> <p><u>Acceptable Regen:</u> No regeneration expectation with first thinning of red pine plantation.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u> Proposed Start Date: 10/1 /2020</p>										
<b>26 33029026-Cut</b>	8.7	429 - Mixed Upland Conifers	Sawtimber Well	47	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription Specs:</u> Cut all merchantable trees except leave some mast oak and mix of pine. This will promote aspen, birch, oak and red maple regeneration while supplying mast and conifer seed sources.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Acceptable Regen:</u> aspen, maple, balsam, spruce, pine</p> <p><u>Other Comment:</u> 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> Proposed Start Date: 10/1 /2020</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
<b>27 33029027-Cut</b>	13.0	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	35	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Thin red pine plantation to first thinning recommendations. Rows seem narrow for current harvesting equipment. May need to modify from a row removal and leaving two rows.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> No regeneration expectations for first thinning in red pine plantation.</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
<b>34 33029034-Cut</b>	10.0	4311 - Pine, Aspen Mix	Sawtimber Well	112	141-170	Harvest	Shelterwood	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all merchantable aspen, red maple, and thin pine to retain 30 basal area. Maintain a mix of red and white pine.</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</u> aspen, pine, oak, maple</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u> The shelterwood system lies somewhere in between the visual extremes of clearcutting and selection management. The parent forest is removed in several stages, with each stage successively establishing optimum environmental conditions for tree regeneration and then nursing the regeneration along to a point where the remaining parent forest can be harvested. Red oaks and white pine stands will often benefit from shelterwood harvesting.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
<b>55 33029055-Cut</b>	30.7	42200 - Natural White Pine	Sawtimber Well	91	111-140	Harvest	Shelterwood	4220 - Natural White Pine	Uneven-Aged	No
<p><u>Prescription</u> Thin pine to 30-50 basal area. Cut all merchantable maple and birch. Leave some birch seed trees and all oak.</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</u> pine, oak, birch, aspen, maple</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u> The shelterwood system lies somewhere in between the visual extremes of clearcutting and selection management. The parent forest is removed in several stages, with each stage successively establishing optimum environmental conditions for tree regeneration and then nursing the regeneration along to a point where the remaining parent forest can be harvested. Red oaks and white pine stands will often benefit from shelterwood harvesting.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										

**Total Treatment Acreage Proposed: 155.4**

## Report 4 – Site Conditions

Escanaba Mgt. Unit  
Dan Beaudou : Examiner

Compartment: 29  
Year of Entry: 2021

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5C	3J	3L
		With Condition	Not Available				
435	435	0	0	Aspen			
64	0	0	64	Cedar			64
78	78	0	0	Lowland Conifers			
155	79	75	0	Lowland Deciduous	75		
14	14	0	0	Lowland Mixed Forest			
109	109	0	0	Lowland Shrub			
7	7	0	0	Lowland Spruce/Fir			
109	109	0	0	Mixed Upland Deciduous			
71	50	0	21	Northern Hardwood		21	
12	12	0	0	Oak			
26	26	0	0	Red Pine			
35	35	0	0	Tamarack			
9	9	0	0	Upland Conifers			
30	30	0	0	Upland Mixed Forest			
8	8	0	0	Upland Spruce/Fir			
2	2	0	0	Water			
49	49	0	0	White Pine			
1,212	1,051	75	85	Total Forested Acres	75	21	64
	87%	6%	7%	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	3L: Other wildlife concerns	64	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
High amount of northern white cedar. Lack of treatment due to Deer Winter Range Guidelines.							

Report 4 – Site Conditions

Escanaba Mgt. Unit  
Dan Beaudou : Examiner

Compartment: 29  
Year of Entry: 2021

2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	75	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Delay for age/stand type class diversity. Ash concentration and quality is low. Large harvest to east of stand continuation. Consider treating 2031 year of entry.							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	21	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Menominee River buffer. This stand is in the flood plain.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



## Report 5 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments

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**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	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
1	4130 - Aspen	Sapling Well	13.9	17	Immature	N/A	Stand was clearcut under contract 33-021-01-01 during late summer of 2001. Some scattered pine and oak were retained. Good aspen and oak regeneration with some open areas filling in.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Northern Pin Oak		15	Sapling	3		Hazelnut (Spp.)		High	5 - 10 feet	Tall Shrub
Quaking Aspen		40	Sapling	3	17	Cherry (spp.)		Medium	Variable	Sapling
Bigtooth Aspen		40	Sapling	3		Oak (spp.)		Low	Variable	Sapling
2	4199 - Other Mixed Upland Deciduous	Poletimber Well	23.9	31	51-80	N/A	Stand was cup in 1987 under contract 33-010-86 retaining large pine and oak. Last year of entry the regen was noted as patchy but has filled in good since with a variety of species. Trace of cherry in the stand.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Northern Pin Oak		40	Sapling/Pole/Log	4	31	Oak (spp.)		Low	Variable	Sapling
Quaking Aspen		15	Pole	6		Hazelnut (Spp.)		High	5 - 10 feet	Tall Shrub
White Pine		15	XLog	24	112					
Bigtooth Aspen		20	Pole	6						
3	4131 - Aspen, Oak	Poletimber Well	31.0	31	Immature	N/A	Stand was cut in 1987 under contract 33-010-86. Mixed stand with most aspen and some retained large oak and pine. Trace amounts of ash and birch.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Northern Pin Oak		20	Sapling/Pole	3		Hazelnut (Spp.)		Medium	5 - 10 feet	Tall Shrub
Quaking Aspen		40	Pole/Sapling	5	31	Oak (spp.)		Low	5 - 10 feet	Sapling
Bigtooth Aspen		30	Pole/Sapling	6						
4	6120 - Lowland Cedar	Poletimber Well	50.7	118	Unspecified	N/A	A small creek runs south through the stand. Mixed cedar and ash stand. Trace of balm, red maple and tamarack.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Black Spruce		10	Pole	6		Balsam Fir		Low	5 - 10 feet	Sapling
Northern White Cedar		50	Pole/Log	8	118	Black Spruce		Low	5 - 10 feet	Sapling
Black Ash		30	Pole	6						
5	42200 - Natural White Pine	Sawtimber Well	5.1	108	111-140	N/A	This stand was treated in 1992 under contract 33-034-91-01. Pine and oak were retained. Large diameter pine stand with trace of red maple. Pine is mature and higher density with few seedlings present.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
White Pine		75	Log/XLog	16	108	White Spruce		Low	Variable	Sapling
Red Pine		20	Log/XLog	14						
6	4130 - Aspen	Sapling Well	39.3	26	Unspecified	N/A	Some areas are heavy to tag alder. North part of stand is high ground along road but stand is wetter to the south and middle. Stand was clearcut in 1992.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Quaking Aspen		40	Sapling	4	26	White Spruce		Low	5 - 10 feet	Sapling
Bigtooth Aspen		35	Pole/Sapling	5		Tag Alder		Low	5 - 10 feet	Tall Shrub
Balsam Poplar		10	Sapling	4						





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																										
7	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	8.9	102	Unspecified	N/A	Good dense stand of black spruce and cedar. Spruce has higher concentration in the north end. Higher percentage of the cedar in the mid to southern end. Mature spruce and tamarack showing mortality. Larger dbh north end. Trace amounts of red maple, balm and balsam.																																										
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8	4130 - Aspen	Sapling Well	42.6	17	Immature	N/A	Stand was cut in 2002 under contract 33-030-01-01. The southern most tip of this stand (about 2-3 acres) is tamarack and black spruce regen from an S6 stand on low ground that was harvested at the same time as rest of stand. Aspen has filled in since last inventory producing a canopy greater than 75% closure. Regeneration looks good with some small balsam patches looking like the start of defoliation from SBW. Trace amounts of balm, tamarack, black and white spruce.																																										
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9	4319 - Mixed Upland Forest	Poletimber Well	15.2	68	111-140	N/A	The long narrow part of the stand is a buffer area for a small drainage between the uplands. Treatable timber would be in the southern part of the stand and maybe some in the northern but will be able to determine when snow free condition exist to see if a drainage channel exists. Aspen in south part of stand has conks. Trace amounts of balm, aspen and green ash.																																										
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10	4130 - Aspen	Sapling Well	53.5	5	Immature	N/A	Stand was cut in 2013 under contract 33-027-11-01. Good overall regeneration with some open areas. The lowland is not filling in with balm as fast as the upland aspen. Trace amounts of scattered oak and white pine.																																										
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11	4110 - Sugar Maple Association	Sawtimber Medium	5.3	87	51-80	N/A	Stand was thinned in 2013 under contract 33-023-11-01. Pole and log sized stand with no noticeable northern hardwood species regeneration, just aspen. Trace amounts of balsam, spruce, beech, paper birch and oak.																																										
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12	4319 - Mixed Upland Forest	Poletimber Poor	4.9	47	1-50	N/A	Sparsely treed stand with large balsam and spruce containing Spruce Budworm defoliating on last years growth.																																										
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13	42340 - Upland Spruce/Fir	Poletimber Well	8.2	67	Unspecified	N/A	Lowland areas are at the north and south ends of the stand. Spruce Budworm defoliated last years growth. Some tamarack mortality could be Easter Larch Beetle. Trace amounts of cherry, bigtooth aspen, white pine and cedar.																																							
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14	6229 - Mixed lowland shrub	Nonstocked	6.1	0	Unspecified	No	Some scattered lowland conifers mixed in the tag alder. Burke Creek flowing through this stand.																																							
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15	4134 - Aspen, Spruce/Fir	Poletimber Well	9.1	39	Unspecified	N/A	Lowland portions in north part of stand has the ash. South end is more spruce and tamarack. Fir and spruce mortality. Trace amounts of oak, cedar and white pine.																																							
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16	6120 - Lowland Cedar	Poletimber Well	6.8	117	Unspecified	N/A	Mixed lowland stand with no sub-canopy giving it the park like look. No animal track seen as traversed length of stand. Large mature spruce and tamarack. Less cedar southern end.																																							
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17	4134 - Aspen, Spruce/Fir	Sawtimber Well	5.8	47	Unspecified	N/A	Retain this stand for age class diversity. Trace amount of oak																																							
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18	4139 - Aspen, Mixed Deciduous	Sawtimber Well	27.9	73	Unspecified	N/A	Stand was noted over mature last year of entry. Aspen and balsam with mortality. Two small patches of upland hardwood mixed in this stand. Trace amounts of white pine, black spruce, cedar and beech.																																							
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
19	6229 - Mixed lowland shrub	Nonstocked	25.4	0	Unspecified	No	Lowland brush containing Burke Creek. Some mixed conifer and ash with mortality.
		<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>	
		Tag Alder		Medium	5 - 10 feet	Tall Shrub	
		Tamarack		Trace	Variable	Pole	
20	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	15.7	103	Unspecified	N/A	Mixed stand with cedar tending to be in concentrated areas. Mortality in tamarack and spruce.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Balsam Fir		10	Pole	6		Balsam Fir	
Northern White Cedar		30	Log/Pole	10	103	Tag Alder	
Black Spruce		15	Log/Pole	12		Tamarack	
Tamarack		15	Log/Pole	10			
Black Ash		10	Sapling/Pole	4			
Balsam Poplar		10	Pole	8			
21	6139 - Mixed Lowland Forest	Poletimber Medium	14.5	72	Unspecified	N/A	Mortality within this stand mostly due to maturity. Upland area south end of stand
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Quaking Aspen		30	Log	12	72	Balsam Fir	
Balsam Fir		15	Pole/Log	8		Tag Alder	
Northern White Cedar		10	Pole	8		Black Spruce	
Tamarack		15	Pole/Log	8		Tamarack	
Black Spruce		10	Pole	8			
Paper Birch		10	Log/Pole	10			
22	6115 - Lowland Ash	Poletimber Medium	25.1	73	1-50	N/A	This is a mixed lowland stand that has a small upland island along the west stand line. There is a trace amount of oak on this upland patch. Hold till next inventory cycle.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Black Ash		45	Pole	6	73	Tag Alder	
Green Ash		20	Pole	8			
Red Maple		10	Log/Pole	12			
23	500 - Water	Nonstocked	1.5	0	Unspecified	No	"Hidden Lake"
24	6229 - Mixed lowland shrub	Nonstocked	18.0	0	Unspecified	No	Lowland brush with dead cedar, tamarack and spruce surrounding Hidden Lake.
		<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>	
		Tag Alder		High	5 - 10 feet	Tall Shrub	
		Black Ash		Trace	Variable	Pole	
		Red Maple		Trace	Variable	Pole	
25	42110 - Planted Red Pine	Poletimber Well	12.6	35	141-170	N/A	Area was clearcut under contract 009-81A. Sprayed with velpar in July 1983 and planted in spring of 1984. Trees contain 3 merchantable sticks. Basal area varies 120-200. Ready for first thinning to maintain maximum green needle. Trace amounts of balsam, spruce, maple and oak.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Pine		100	Pole	8	35	Balsam Fir	
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						5 - 10 feet	
						Sapling	



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26	429 - Mixed Upland Conifers	Sawtimber Well	8.7	47	51-80	N/A	Mixed mature stand on the transition. Trace of paper birch.																																																				
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27	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	13.0	35	111-140	N/A	Oak wilt was found in the stand during 2015 oak wilt surveillance. 1.6 acres was treated with vibratory plow and timber harvest under contract 33-022-16-01. Red pine remains within this treated area.																																																				
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28	6124 - Lowland Spruce-Fir	Poletimber Medium	16.8	77	Unspecified	N/A	East side of stand more open and wetter. Transition to upland has larger trees with trace amounts of red maple, paper birch, pin oak and aspen. Surrounded on 3 side by young stand that was harvested in 2013. Hold this stand for another cycle.																																																				
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29	4130 - Aspen	Sapling Well	57.4	5	Immature	N/A	Stand was cut end of summer 2013 on contract 33-033-11-10. Good regeneration that is 10-15' tall and most areas are thick with overall canopy closure greater than 75%. Some scattered large oak with some oak regeneration as well. Lower areas have trace of balm and other lowland species.																																																				
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30	4130 - Aspen	Sapling Well	10.4	15	Immature	N/A	Stand was cut in 2004 under contract 33-024-01-01. Some large pine and oak were retained. Thick aspen regeneration with some maple, beech and oak. Trace amount of oak with moderate hazel.																																																				
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31	42200 - Natural White Pine	Sawtimber Medium	8.5	87	81-110	N/A	The pine was thinned, oak retained and rest of species harvested in 2013 under contract 33-033-11-01. Canopy is still open with pine looking healthy and varied densities of 80-150 basal area. Aspen and oak regeneration sprouting up.																																																				
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<b>32</b>	4121 - Oak, Aspen	Sawtimber Medium	11.6	108	51-80	N/A	Higher % of oak than aspen in the canopy. Mature stand with oak and aspen regeneration from historical harvest. This stand promotes age class diversity.																																							
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<b>33</b>	4130 - Aspen	Sawtimber Well	9.9	47	Unspecified	N/A	Almost mature aspen stand with mixed pine and oak. Adjacent stand was harvested in 2013. Hold this stand to promote age class diversity.																																							
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<b>34</b>	4311 - Pine, Aspen Mix	Sawtimber Well	10.0	112	141-170	N/A	Mixed stand with the majority of canopy being pine. Some of the aspen is over mature with conks. Trace amounts of cherry and birch.																																							
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<b>35</b>	4130 - Aspen	Poletimber Well	28.6	31	Immature	N/A	Stand was cut in the late 80's with a small oak wilt patch treated in 2016 under contract 33-022-16-01. Aspen in good density with scattered large oak and pine retained during the earlier harvest. Trace amounts of beech, sugar maple and red pine.																																							
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<b>36</b>	4139 - Aspen, Mixed Deciduous	Sapling Poor	5.2	3	Immature	N/A	Oak wilt epicenters that were treated in 2016 under contract 33-022-16-01 retaining pine. Diverse variety of saplings responding to the harvest.																																							
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**37** 4199 - Other Mixed Upland Deciduous Poletimber Well 17.6 77 51-80 N/A

Stand was treated in 1987-88 under contract 33-010-85-1 for dead oak salvage. Live oak and pine were retained. About half the stand is oak right now but is keyed out as mixed deciduous. Diverse stand that had an oak wilt epicenter treated which is now stand 36.

Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Quaking Aspen		10	Pole	6	31				Hazelnut (Spp.)		Medium	5 - 10 feet	Tall Shrub		
Bigtooth Aspen		10	Pole	8					Oak (spp.)		Low	10 - 20 feet	Sapling		
Northern Pin Oak		25	Log	14	77				Aspen (spp.)		Medium	10 - 20 feet	Sapling		
White Oak		10	Log	14											
White Pine		15	Log	14											
Red Maple		15	Pole	6											
Red Oak		15	Log	14											

**38** 4133 - Aspen, Mixed Pine Sapling Well 48.6 17 Immature N/A

Stand was cut in 2002 under contract 33-024-01-01. Oak, cherry, beech and some pine were retained during the harvest. Good regeneration with thick aspen. Trace of cherry, beech and jack pine.

Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Quaking Aspen		25	Sapling	4	17				Pin Oak (Southern)		Low	5 - 10 feet	Sapling		
Bigtooth Aspen		30	Sapling	4	17				Beech		Low	5 - 10 feet	Sapling		
Red Maple		10	Sapling	3					Aspen (spp.)		Low	5 - 10 feet	Sapling		
Northern Pin Oak		10	Log	12					White Pine		Low	5 - 10 feet	Sapling		
Red Pine		15	Log	16											
White Pine		10	Log/XLog	16											

**39** 6117 - Lowland Deciduous, Mixed Coniferous Poletimber Medium 54.4 16 Immature N/A

Part of this stand was cut in 2003 under contract 33-024-01-01. A more open stand with large pine tree patches along west line. Lowland species along the south east line. Trace of cedar, beech and cherry.

Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Quaking Aspen		25	Sapling/Pole	4	16				Tag Alder		Medium	5 - 10 feet	Tall Shrub		
Red Maple		25	Pole/Sapling	5											
White Pine		10	Log	16											
Tamarack		10	Sapling/Pole	4											

**40** 6229 - Mixed lowland shrub Nonstocked 52.4 0 Unspecified No

Large lowland non-productive area with tamarack mortality.

Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	Trace	Variable	Sapling
Black Ash	Trace	Variable	Sapling
Tamarack	Trace	Variable	Sapling
Northern White Cedar	Trace	Variable	Sapling
Tag Alder	High	5 - 10 feet	Tall Shrub
Willow spp.	Low	5 - 10 feet	Tall Shrub

**41** 4112 - Maple, Beech, Cherry Association Sawtimber Medium 24.2 83 51-80 N/A

Stand was thinned in 2005 under contract 33-032-01-01. Variable regeneration that has been browsed off. Canopy closer to the 50% with sub-canopy containing regeneration of aspen, maple and ash saplings. Trace amounts of paper birch and ash in the canopy.

Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Maple		80	Log/Pole	12	83				Red Maple		Low	10 - 20 feet	Sapling		
Red Oak		10	Log	12					Ash (spp.)		Low	10 - 20 feet	Sapling		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																									
42	6122 - Black Spruce	Sapling Well	7.4	14	Immature	N/A	Stand was cut in 2005 under contract 33-032-01-01. Some scattered seed trees were retained. Good seed germination and regeneration of lowland conifers that are 5-15' tall now.																																									
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43	4136 - Aspen, Mixed Conifer	Sapling Well	43.8	14	Immature	N/A	Stand was cut in 2005 under contract 33-032-01-01. Cedar, oak, and mix of seed trees were retained being the larger diameter species. Some small open areas making the canopy closer to 75% closure. Aspen regeneration is dense with large pine and oak seed trees scattered throughout the stand. Trace amounts of cherry, birch, maple and red pine.																																									
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44	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	75.1	85	111-140	N/A	This stand contains Burke Creek from the north east and a smaller drainage creek from the west. More ash on the west end and red maple more on east end. Trace of paper birch and white pine. East and north east part of stand is more upland. Stand is between two upland areas that have been recently harvested and a harvest treatment currently is on the continuation of this stand east of Burke Creek in adjacent compartment 30. Hold this stand for one more inventory cycle to provide age class diversity.																																									
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45	6121 - Tamarack	Poletimber Poor	35.1	55	1-50	N/A	Low volume stand with most of large tamarack dead. Variable diameter to the tamarack as seed germination takes place. Trace of paper birch. Large low wet area.																																									
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46	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	13.5	55	Unspecified	N/A	Wet boggy area with mix conifer and trace amounts of stunted red maple, paper birch and black ash. Not a productive site.																																									
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47	6129 - Mixed Coniferous Lowland Forest	Sapling Well	23.0	15	Immature	N/A	Stand was cut between 1997 and 2000 under contract 33-021-96-01. Tamarack and black spruce germinated well with some white pine as well. Wetter areas are heavier to tag alder. West side more tamarack with east side more of a mix. There is a small upland portion of the stand west of center containing trace amount of oak along with the other species.																																									
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<b>48</b>	6120 - Lowland Cedar	Poletimber Medium	6.8	108	Unspecified	N/A	Stand was cut in 2000 under contract 33-021-96-01 leaving cedar and some other seed trees. Cedar trees have about half the foliage on them allowing more sun to the ground. Regeneration of tamarack, black spruce and some birch.																																							
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<b>49</b>	4199 - Other Mixed Upland Deciduous	Poletimber Medium	7.0	73	51-80	N/A	Slight upland with poor quality trees. Mortality in the paper birch. Trace of tamarack and ash.																																							
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<b>50</b>	6229 - Mixed lowland shrub	Nonstocked	7.0	0	Unspecified	No	Lowland drainage area from private flowing to Burke Creek. Mix lowland brush and some tree species.																																							
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<b>51</b>	42200 - Natural White Pine	Sawtimber Poor	4.9	91	1-50	N/A	This stand had a selection cut in July of 2013 on contract 027-11-01. The pine was thinned and all other species greater than 3 inches were cut, except the oak was retained. About 20 BA large white pine with thick aspen and white pine regeneration.																																							
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<b>52</b>	4119 - Mixed Northern Hardwoods	Sawtimber Well	6.2	93	111-140	N/A	Stand is upland but in the flood plain of the Menominee River. North edge of stand rises 10-15' in elevation. Not much for understory must be due to the seasonal flooding.																																							
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<b>53</b>	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	60.0	6	Immature	N/A	Stand was cut fall of 2012 under contract 33-027-11-01. Good regeneration of white pine, red maple, aspen, cherry and oak. Red maple sprouts more on east side and aspen more on west and southern sides. Some large pine and oak were retained in the harvest providing seed/mast.																																							
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<b>54</b>	4130 - Aspen	Poletimber Well	7.8	22	Immature	N/A	Stand was cut in 1996 leaving pine and oak. Variable dbh in bigtooth aspen 3-10". Quaking aspen more uniform larger diameter. South part of stand overall smaller diameter.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Sugar Maple		10	Pole/Log	11		White Pine		
Bigtooth Aspen		75	Pole	6	22	Hazelnut (Spp.)		
White Pine		10	XLog/Log	20		Density		
						Avg. Height		
						Size		
<b>55</b>	42200 - Natural White Pine	Sawtimber Well	30.7	91	111-140	N/A	There was a thinning in this stand the winter of 1996-97. Larger white pine forest with some mortality. Trace of aspen. Basal area 120-150.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
White Pine		80	XLog/Log	18	91	Hazelnut (Spp.)		
						Density		
						Avg. Height		
						Size		
<b>56</b>	4119 - Mixed Northern Hardwoods	Sawtimber Well	15.0	93	111-140	N/A	Some of this is part of seasonal flooding area for the Menominee River. Some higher elevation spots within the stand and along north line of stand is elevation transition of 10-15'. Large trees with not much for underbrush. Trace amounts of sugar maple, red pine, aspen.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>			
Red Maple		60	Log	16	93			
Basswood		10	Log	14				
Black Ash		10	Pole	8				
<b>57</b>	4111 - S.Maple, Hard Mast Association	Poletimber Well	20.0	112	51-80	N/A	Stand was thinned in 2011 under contract 33-024-10-01. Trace amounts of red pine and red maple. Good regeneration of white pine and patches of aspen in the stand. West edge is where most of the pine is located.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Sugar Maple		65	Log/Pole	10	112	Quaking Aspen		
Red Maple		10	Log/Pole	10		Hazelnut (Spp.)		
Red Oak		15	Log	16		White Pine		
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