



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33047

Entry Year 2023

Acreage: 1,182

County Menominee

Management Area: Green Bay Lake Plain

Revision Date: 2021-06-29

Stand Examiner: Dan Beaudou

Legal Description:

T36N R25W, Sections 28 and 33

Identified Planning Goals:

This compartment is part of the Green Bay Lake Plain Management Area and is located about 15 miles northeast of Stephenson, Michigan. It is a mixture of upland and lowland types. Upland types include aspen, mixed deciduous, red and white pine and mixed conifer forest types. Lowland types include cedar, black spruce, lowland hardwoods, and lowland brush. The Big Cedar River borders part of the east side. Several unnamed tributaries/drainages flow through the compartment. Approximately 133 acres comprising 9 stands are proposed for treatment. Treatment recommendations are: 12.2 acres of red pine plantation crown thinning, 37.6 acres of lowland hardwood before Emerald Ash Borer enters the stands, 49.1 acres of mixed deciduous will be clearcut with retention of a combination of hemlock, cedar, patch and large pine trees, and 34.2 acres will be treated by shelterwood or seed tree leaving cedar, hemlock and pine seed trees. Past treatment of invasive species such as phragmites and autumn olive will continue as identified and funding available.

Soil and topography:

Topography is level to gently rolling. The soils are primarily well-drained sands, loams and mucks/peats. The major soil series include the complexes of Deford-Wainola-Rousseau and Tawas-Deford and series of Rousseau.

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

The compartment is part of a mostly contiguous block of state ownership with a few private holdings mainly along the Big Cedar River. Most private ownership is recreational for hunting, fishing and trapping and only seasonally occupied with access through state-owned land. One parcel has a permanent residence located on the east bank of the river on a portion of the old logging camp known as "Camp B".

Unique Natural Features:

The Big Cedar River flows north to south through the east portion of the compartment.

Archeological, Historical, and Cultural Features:

Site of the former logging camp known as "Camp B" and associated dam site lies in the northeastern portion of the compartment. Part of the site lies on state land and part on private.

Possible foundation of old cabin located on the south side of the tributary mouth half way down stand 65.

Special Management Designations or Considerations:

SCA Removal proposal for the Cultural or Customary Area on stand 65 and part of stand 41. This was apparently proposed last year of entry due to possible old cabin remnants found just south of the unnamed tributary mouth in stand 65. Recommend to remove this SCA with protecting the area of possible cabin from any treatment.

Watershed and Fisheries Considerations:

Compartment 33047: NLMMU – Jennifer Johnson: This compartment contains the Cedar River, a designated Type 4 trout stream, running through the east side. The Cedar River is wider than 50' at this location, so a 100' buffer is recommended. There is also an unnamed tributary that flows in the center of the compartment into the Cedar River, this should also get a 100' buffer.

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 Green Bay Lake Plain Management Area. This area demonstrates a natural propensity to

grow white pine and balsam fir species which are found in the understory of many aspen and maple stands. These mesic conifer species will be encouraged where appropriate. Some lowland deciduous stands will be treated to address forest health concerns. Cedar and hemlock provide important wildlife habitat in this area, but regeneration of both species has been problematic. Management will be aimed at maintaining these stands because they are of modest age. The Big Cedar River riparian corridor continues to be designated a special conservation area, it provides mature wildlife habitat with large diameter trees, abundant snags, cavity trees, and dead woody debris on the forest floor.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 47: Sections 28 & 33, T36N-R25W, Menominee County

No known potential exists for commercial oil & gas production in this part of the state. The nearest active sand/gravel pit (the State-owned Westman Dam Road Pit) is three miles to the southwest. The compartment is predominantly wetlands, and potential for sand & gravel or limestone mining appears limited. There has been some limited mineral exploration in the area in the past. However, potential metallic mineral bearing formations beneath the compartment are thought to be too deep to have significant potential for discovery or economic recovery.

Vehicle Access:

Access into the western portion of the compartment is via the Westman Dam Road and the Schuster Road. The portion east of the Big Cedar River is accessed from County Road 551—River Road. Access from the south is through a locked gated forest road which is used by the Forest Islands ORV Trail. A locked gate at the Schuster Road near the center of section 33 closes the road to non-ORV traffic.

Survey Needs:

There should not be any survey needs for new corner placement this year of entry. May need surveyor if monuments are found tampered with, damaged or missing.

Recreational Facilities and Opportunities:

Forest Island ORV Trail utilizes Schuster Road and an unnamed forest road through the southern portion of section 33. The site of the old state forest Cedar River campground lies on the east bank of the Big Cedar River in the NESE of section 28. Fishing, hunting, trapping, morel picking, sight-seeing, hiking, ORV riding, horseback riding and dispersed camping are popular recreational usage of this compartment.

Fire Protection:

Access is very good throughout most of this compartment and the timber types in the area are generally low risk for fire hazard. Minor component of pine/conifer cover type may pose greater fire potential during droughty periods of the year. Some of the interior more remote areas may present a greater fire hazard.

Additional Compartment Information:

Past treatment of invasive species such as phragmites and autumn olive will continue as identified and funding available.

The following reports from the Inventory are attached:

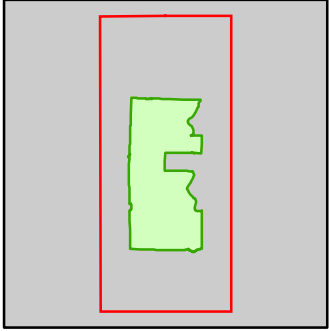
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

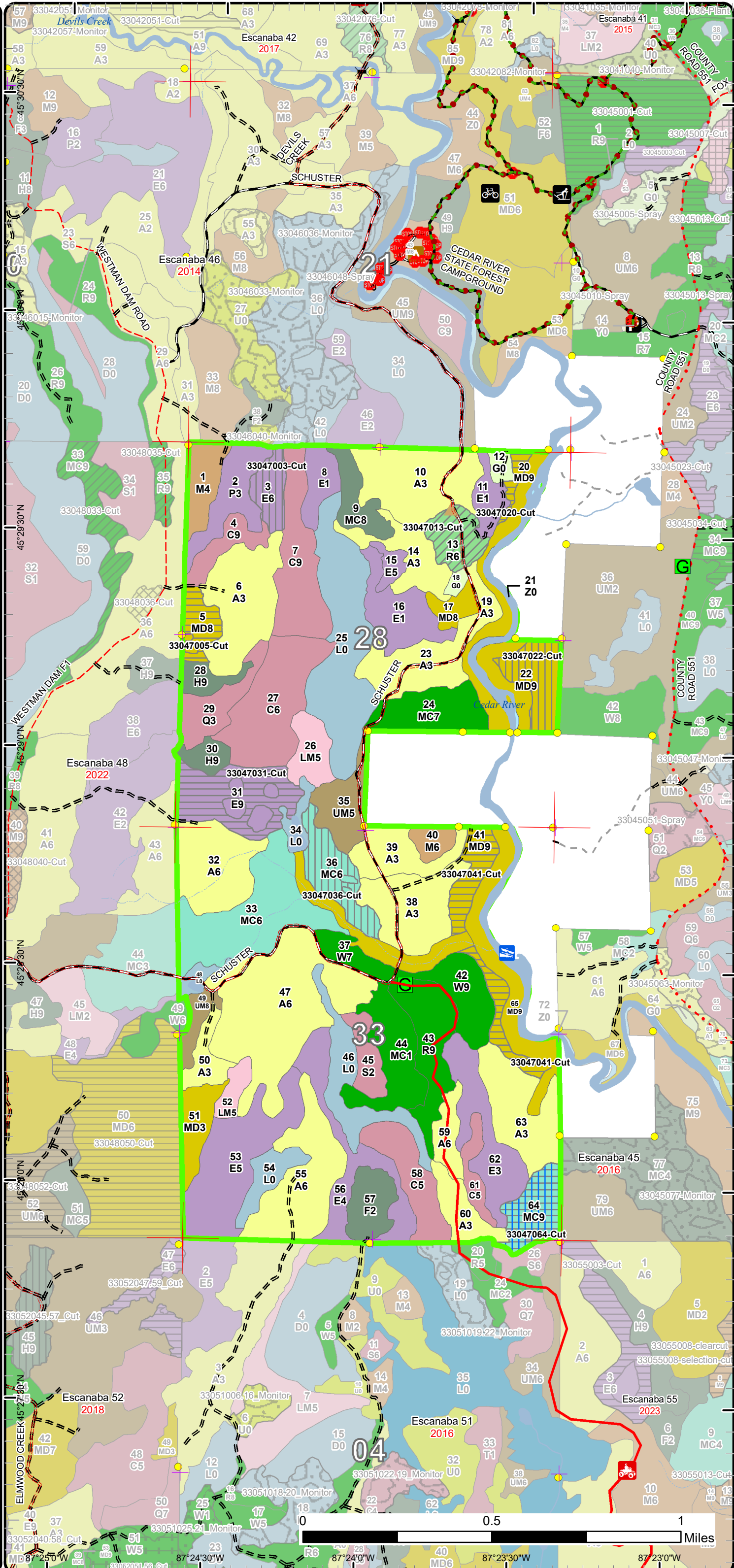
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 47
 T36N R25W Sec. 28, 33
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Green Bay Lake Plain
 YOE: 2023
 Acres: 1182.3 GIS Calculated
 Examiner: Dan Beaudo
 Map Revised: 7/1/2021
 Map Phase: Web-Post

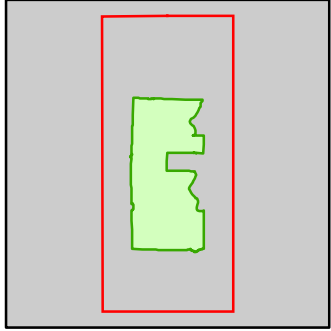


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- 🚲 Bike Trails
- 🎿 Ski Trails
- 🚙 ORV Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Equestrian Trails
- Designated Ski Trails
- Designated Multi-Use Trails
- Designated ATV
- Designated ORV Route
- Intermittent Stream
- Island in Lake or River
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ▲ Berms
- G Gate
- 🚤 Boating Access Site
- 🌉 Bridges
- ▲ Campground
- P Parking Lot
- 🛑 Sign
- ✳ Trailhead
- Compartment Boundary
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 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
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

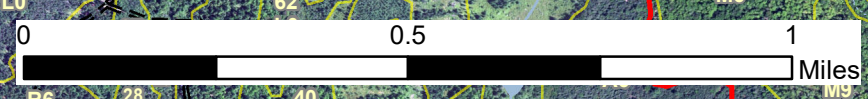
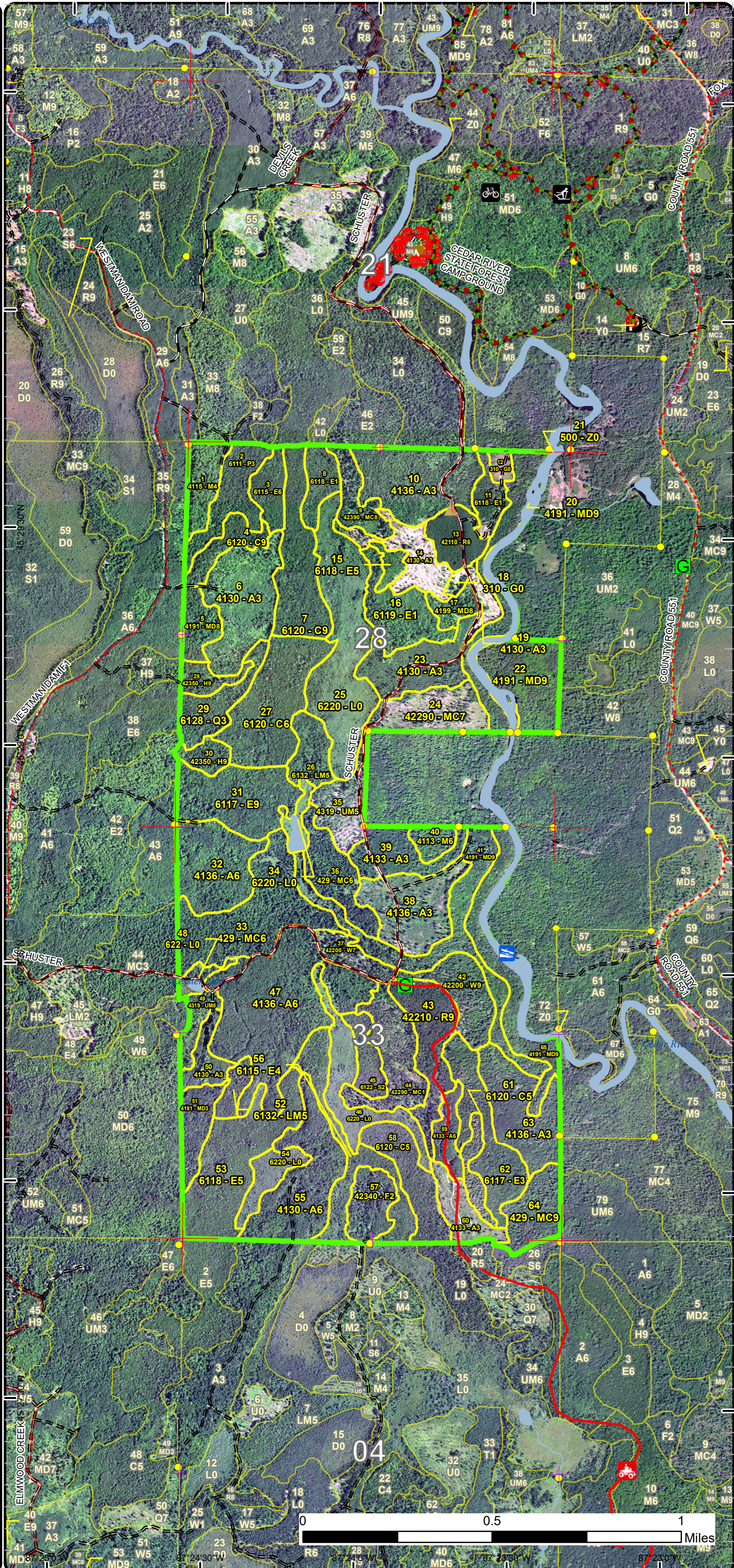


Stand Boundary Map

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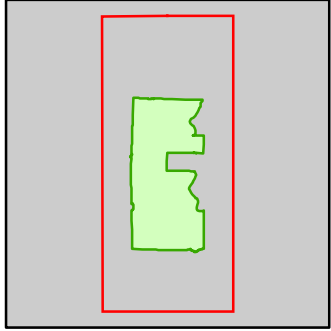


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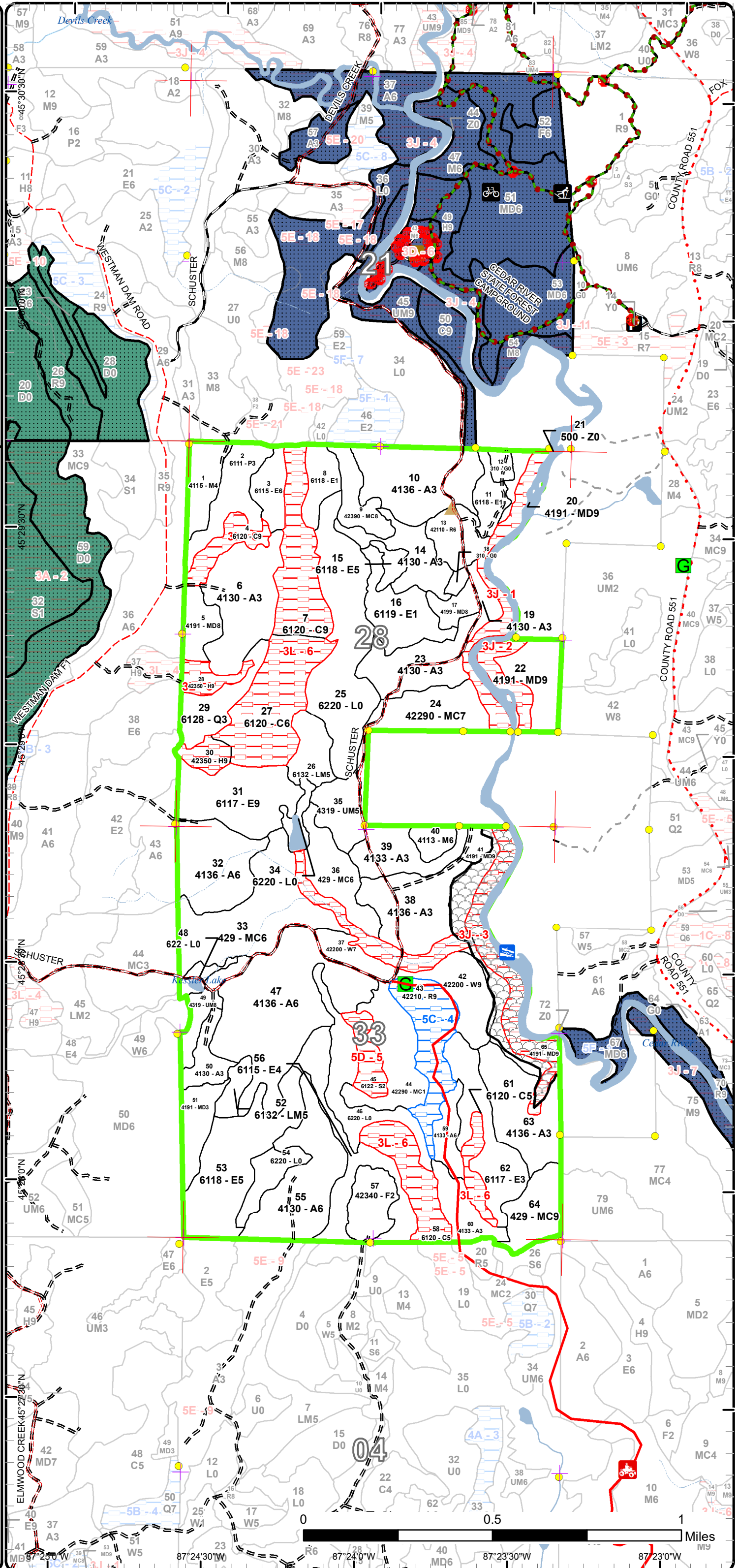


Special Conservation Areas

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 T36N R25W Sec. 28, 33
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Green Bay Lake Plain
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- ✳️ Trailhead
- 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
- 5D: Unproductive Forest Land
- Stand Boundaries
- SCA
- SCA Removal
- Cold Water Streams
- Cold Water Lakes
- Spring or Seep
- 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	61	82	63	113	28	0	0	0	0	0	0	0	0	0	0	0	0	347
Cedar	0	0	0	0	0	0	0	0	0	0	0	20	7	0	75	0	0	0	102
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	12
Herbaceous Openland	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Aspen/Balsam Poplar	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Lowland Conifers	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Lowland Deciduous	0	28	0	26	0	10	0	4	26	9	31	0	0	0	0	0	0	40	174
Lowland Mixed Forest	0	0	0	0	0	0	11	0	0	0	0	6	0	0	0	0	0	0	17
Lowland Shrub	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
Mixed Upland Deciduous	0	0	0	12	0	0	0	6	10	47	0	63	0	0	0	0	0	0	138
Natural Mixed Pines	0	24	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	45
Northern Hardwood	0	0	0	0	0	12	0	0	0	6	0	0	0	0	0	0	0	0	18
Red Pine	0	0	0	12	0	0	0	0	0	24	0	0	0	0	0	0	0	0	36
Upland Conifers	0	0	0	43	18	0	0	0	0	0	0	12	0	0	0	0	0	16	89
Upland Mixed Forest	0	0	0	0	0	0	16	0	0	0	7	0	0	0	0	0	0	0	23
Upland Spruce/Fir	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
White Pine	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	9	26
Total	103	113	82	201	131	50	27	10	36	124	38	110	13	0	81	0	0	65	1184



Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2023

Acres of Harvest

Compartment 47

Total Compartment Acres: 1,182

Commercial Harvest - 130
 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	26	0	0	0	9	0	0	0	0	36
Mixed Upland Deciduous	32	0	0	0	16	0	0	0	0	48
Red Pine	0	0	0	0	0	12	0	0	0	12
Upland Conifers	0	0	0	16	17	0	0	0	0	33
Total	58	0	0	16	43	12	0	0	0	130

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	130	0	0	0	0	0	0	0	0	130
Next Step	0	0	0	0	0	0	117	0	0	117
Total	130	0	0	0	0	0	117	0	0	247



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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Proposed Treatments:

3	33047003-Cut	9.4	6115 - Lowland Ash	Poletimber Well	80	141-170	Harvest	Shelterwood	613 - Lowland Mixed Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all species greater than 3" except retain cedar, hemlock, and some yellow birch. Cut only those cedar needed for operational purposes.</p> <p><u>Specs:</u> Stand has red line from previous inventory cycle treatment that did not get accomplished by the Carry Over timber sale. This is the same treatment language as last Year Of Entry.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Species within the canopy layers.</p> <p><u>Regen:</u></p> <p><u>Other</u> The treatment will remove mature trees that are susceptible to the Emerald Ash Borer as well as other mature species that will provide browse during the harvest and retain cover with the higher density of cedar and hemlock.</p> <p><u>Comment:</u></p> <p>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 /2022</p>											
5	33047005-Cut	9.0	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	72	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all merchantable species except hemlock and mark some clumps of cedar to retain. Also retain 2 retention patches delineated out on treatment layer.</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> Species from the canopy layers.</p> <p><u>Regen:</u></p> <p><u>Other</u> Much of this stand is over mature trees where mortality is setting in on the short lived species. There is forest health concerns with ash and Emerald Ash Borer. Also with spruce/fir and the Spruce Budworm. This treatment will also harvest those species before the pests cause mortality.</p> <p><u>Comment:</u></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></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>											
13	33047013-Cut	12.2	42110 - Planted Red Pine	Poletimber Well	28	201+	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Remove one third of the red pine population by alternating removing one row and leaving two rows. In addition to red pine removal, cut all</p> <p><u>Specs:</u> balsam, spruce and white pine greater than 4".</p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> No regeneration expected due to first thinning in red pine plantation.</p> <p><u>Regen:</u></p> <p><u>Other</u> Crown thinning will help release the residual dominate trees for better health and increased growth. Typically this reduces competition for sunlight on one side of the tree during the first thinning. The balsam and spruce appear like Spruce Budworm started defoliating them. The white pine is mostly deformed stock mixed in with the red pine.</p> <p><u>Comment:</u></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
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20 33047020-Cut	3.2	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	83	111-140	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
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Prescription Cut all trees greater than 3" except hemlock and leave a 3 chain/200' buffer to the Big Cedar River.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Species in the canopy layers.

Regen:

Other Comment: This is an area of mature forest containing ash, balsam, spruce along with other species. Utilize these trees before the Emerald Ash Borer and Spruce Budworm cause mortality.

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.

Site Condition

Proposed Start Date: 10/1 /2022

22 33047022-Cut	16.3	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	86	111-140	Harvest	Shelterwood	4319 - Mixed Upland Forest	Two-Aged	No
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Prescription Cut all merchantable species except leave cedar, hemlock and approximately 30 basal area of large pine. Retain a 3 chain/200' buffer to the Big Cedar River.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Species in the canopy layers.

Regen:

Other Comment: This is a mature stand with species susceptible to forest health concerns with Emerald Ash Borer and Spruce Budworm. The buffer will provide large trees for cavities and other large woody debris needs.

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.

Site Condition

Proposed Start Date: 10/1 /2022



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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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31	33047031-Cut	26.1	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	93	81-110	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Two-Aged	No
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Prescription Specs: Cut all species greater than 3" dbh except hemlock, pine and four retention patch's delineated on the treatment layer.

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

Acceptable Regen: Species in the canopy layers.

Other Comment: This stand has a high percentage of ash in the canopy that will be susceptible to mortality from the Emerald Ash Borer.

This treatment will have many benefits that will allow the stand to regenerate while still keeping areas of cover for wildlife and seed sources. It will provide valuable browse during the harvest and as the stand is regenerating. The mature ash will be removed creating stump and root sprouts that will be of a small diameter and therefore less susceptible to Emerald Ash Borer selection. Lowland conifer seeds will be able to reach the germinating temperature requirement by allowing full sunlight to penetrate to the forest floor. Dense conifer regeneration will produce a barrier of non preferred browse that will help protect some of the cedar seedlings over time as it will take several years for lowland conifers to develop due to starting from seed and poor growing environment.

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.

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.

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.

Site Condition

Proposed Start Date: 10/1 /2022

36	33047036-Cut	17.3	429 - Mixed Upland Conifers	Poletimber Well	35	81-110	Harvest	Shelterwood	429 - Mixed Upland Conifers	Uneven-Aged	No
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Prescription Specs: Thin pine to 30-50 basal area in the large pine portion of the stand, cut other species for operational purposes, and cut all merchantable spruce and balsam. At the time of timber sale preparation, assess the SBW progress in the younger portion of the stand (north and eastern section). If this area has enough merchantable balsam and spruce then treat the whole stand, removing other species for operational purposes and any other forest health concerns.

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

Acceptable Regen: Species in the canopy layers.

Other Comment: Shelterwood harvest to promote pine development and minimize weevil, rust and other forest health issues. 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.

Site Condition

Proposed Start Date: 10/1 /2022



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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
41 33047041-Cut	19.9	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	100	141-170	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all merchantable species except leave hemlock and some large pine. Leave a 3 chain/200' buffer to the Big Cedar River and a 100' buffer to the small creek about half way down the west side of the stand. Determine the location of the potential old cabin site just south of the feeder creek and protect this site from timber harvesting operations.</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 a mature stand with mortality setting in. The buffers will provide large cavity trees and woody debris on the forest floor. The treatment area will regenerate the species creating age class diversity with adjacent stands.</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></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										
64 33047064-Cut	16.1	429 - Mixed Upland Conifers	Sawtimber Well	85	141-170	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Cut all merchantable trees except cedar, hemlock and some large 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 mature stand has areas of mortality with other areas containing advanced regeneration. This will provide a diverse stand with age class diversity and some large pine trees to provide seed and roosting conditions.</p> <p>The seed tree reforestation method leaves healthy, mature trees with a good cone crop in the existing stand to provide seed for regenerating a new stand of trees. Seed trees are typically removed after regeneration is established, especially when seedling levels are significant enough to stand some logging losses. It is not unusual for a forest manager to leave the seed trees for wildlife or aesthetics objectives. However, the primary objective of a seed tree regeneration harvest is to provide a natural seed source.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										

Total Treatment Acreage Proposed: 129.5

Report 4 – Site Conditions

Escanaba Mgt. Unit
Dan Beaudou : Examiner

Compartment: 47
Year of Entry: 2023

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		5C	3J	3L	5D
346	346	0	0	Aspen				
102	0	0	102	Cedar			102	
12	0	0	12	Hemlock			12	
5	5	0	0	Herbaceous Openland				
18	18	0	0	Lowland Aspen/Balsam Poplar				
14	14	0	0	Lowland Conifers				
174	174	0	0	Lowland Deciduous		0		
17	17	0	0	Lowland Mixed Forest				
90	90	0	0	Lowland Shrub				
9	0	0	9	Lowland Spruce/Fir				9
137	67	0	70	Mixed Upland Deciduous		70		
45	45	0	0	Natural Mixed Pines				
18	18	0	0	Northern Hardwood				
36	12	24	0	Red Pine	24	0		
89	89	0	0	Upland Conifers				
22	22	0	0	Upland Mixed Forest				
13	13	0	0	Upland Spruce/Fir				
8	8	0	0	Water		0		
26	26	0	0	White Pine				
1,183	966	24	193	Total Forested Acres	24	70	114	9
	82%	2%	16%	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	3J: Water quality / BMPs (stream, river, or lake)	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
This is the buffer to the Big Cedar River.							

Report 4 – Site Conditions

Escanaba Mgt. Unit
Dan Beaudou : Examiner

Compartment: 47
Year of Entry: 2023

2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This is the buffer to the Big Cedar River.							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	43	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This is the buffer to the Big Cedar River and a feeder creek. There is also historical concerns for a location south of the feeder creek that is what appears to be an old cabin site. Identify the location and protect from timber harvesting operations.							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This stand was treated by crown thinning last inventory cycle with basal area still low. The adjacent stand 44 was final harvested at the same time with some pine seed trees retained. This stand will be available for thinning next inventory cycle.							
5	Unavailable	5D: Unproductive Forest Land	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This is a spruce bog with old, small diameter trees.							
6	Unavailable	3L: Other wildlife concerns	114	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These stand have a high concentration of cedar and/or hemlock making them unavailable for harvest due to Deer Wintering Guidelines.							



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
	Cultural Customary Use	Cultural Use Area	SCA Removal	43
Comments				
Potential historic cabin site				
Escanaba 45 1	Spring Wetlands Riparian Area	Spring Seep	SCA	18
Comments				



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	4115 - Y.Birch, Hemlock NH	Poletimber Poor	12.3	42	1-50	N/A	Stand was treated by the Carry Over (33-001-15) timber sale. Shelterwood harvest leaving a residual canopy of 25-50% with a hemlock patch close to 100%. Trace amounts of other species including basswood, birch, cedar and cherry.																																															
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2	6111 - Lowland Balsam Poplar	Sapling Well	17.6	27	Immature	N/A	Mostly low ground with NE-SW low ridges of high ground. Cedar and hemlock residual from last treatment in 1994 are mostly in clumps. Some cedar and hemlock are scattered individuals. Some blow down. Lots of deer browse of black ash seedlings. Other species observed include: tamarack, hemlock, red and white pine and ash.																																															
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3	6115 - Lowland Ash	Poletimber Well	9.4	80	141-170	N/A	This stand was payment unit 12 of the Carry Over (33-001-15) timber sale but did not get treated. Mostly ash, birch, maple and some aspen over topping cedar. Majority of the cedar in in the sub-canopy layer. Trace amounts of other species such as aspen, balsam, pine, spruce, tamarack and yellow birch.																																															
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4	6120 - Lowland Cedar	Sawtimber Well	9.4	130	171-200	N/A	Some slight upland areas producing better quality trees. Good quality cedar with some areas of mature deciduous over topping the cedar. Many large snags and trees on the ground. Appears to be a well used travel corridor.																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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5 4191 - Mixed Upland Deciduous with Conifer Sawtimber Medium 9.7 72 51-80 N/A

The west side of this stand was treated in 1992 under the Abandoned Privy (33-026-89) timber sale. It had regenerated well with pole size trees and some larger that must have been residual from the harvest. The east side is over mature aspen, balsam and maple with mortality. Possible Spruce Budworm defoliation appearance. Trace amounts of other species such as cherry, tamarack and black spruce.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Log/Pole	12		Balsam Fir	Medium	>20 feet	Sapling
Quaking Aspen	20	Log/Pole/Sap	12	72	Tag Alder	Low	5 - 10 feet	Tall Shrub
Balsam Poplar	15	Log	12		White Spruce	Medium	>20 feet	Sapling
Balsam Fir	15	Pole	8		Quaking Aspen	Medium	>20 feet	Sapling
Green Ash	15	Log/Pole	12		White Pine	Low	>20 feet	Sapling
Black Ash	10	Pole	6		Northern White Cedar	Medium	>20 feet	Pole
Northern White Cedar	10	Log/Pole	10					

6 4130 - Aspen Sapling Well 33.3 13 Immature N/A

This stand was treated over a period of 2006-2008 by the Dan's Back (33-005-03) timber sale. It was clear cut with retaining cedar, hemlock and pine. It has now pretty much filled in with a variation in species size. There is a trace amount of balsam, spruce, hemlock, birch and pine.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Sapling	3	13
Balsam Poplar	25	Sapling	3	13
Northern White Cedar	5	Log	10	
Green Ash	5	Sapling	3	
Black Cherry	5	Sapling	3	

7 6120 - Lowland Cedar Sawtimber Well 28.9 131 201+ N/A

Most of stand is cedar with overstory including ash/paper birch mix. Some areas are heavier to E-type but small areas. Many blow downs. Tamarack is mostly dead and going down. Where overstory has blown over, black ash and balsam fir are regenerating.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Log/Pole	10		Balsam Fir	Low	5 - 10 feet	Sapling
Paper Birch	5	Pole	8		Black Ash	Low	10 - 20 feet	Sapling
Balsam Poplar	5	Log	14					
Green Ash	5	Log/Pole	10					
Northern White Cedar	80	Log/Pole	10	131				

8 6118 - Lowland Deciduous with Cedar Sapling Poor 9.5 42 1-50 N/A

Stand was last treated in 1979 and regenerated poorly/slowly. Lots of tag alder and other lowland shrubs. Red osier dogwood and tag alder and/or other low shrub for ground cover.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	50	Sapling	3	42	Tag Alder	High	5 - 10 feet	Tall Shrub
Northern White Cedar	30	Sapling	4	115	Red Osier Dogwood	Medium	5 - 10 feet	Tall Shrub
Paper Birch	15	Sapling	3					
Balsam Fir	5	Sapling	2	42				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																		
9	42390 - Mixed Non-Pine Upland Conifers	Sawtimber Medium	11.5	105	51-80	N/A	Stand was treated by the Schuster Road Hardwood(33-027-98) timber sale in 1998. Stand was originally part of the adjacent stand to the east that was cut together but this is an upland sandy ridge that contains most of the residual cedar, hemlock and pine from the harvest. Seedling filling in the cut areas.																																																		
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10	4136 - Aspen, Mixed Conifer	Sapling Well	34.7	22	Immature	N/A	Stand was treated by the Schuster Road Hardwood(33-027-98) timber sale in 1998. Open areas of the stand has filled in good. Scattered residual hemlock, cedar, and some large white pine.																																																		
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11	6118 - Lowland Deciduous with Cedar	Sapling Poor	8.1	4	1-50	N/A	Stand was treated by the Schuster Road Hardwood(33-027-98) timber sale in 1998. There is some upland present but mostly lowland. Trees are windblown since the harvest. Low density cedar trees with regeneration of aspen, balsam, some red maple and ash with mix conifer seedlings. Upland has raspberry and blackberry brush, lowland has cattails trace of yellow birch, hemlock, balsam, spruce, and white pine.																																																		
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12	310 - Herbaceous Openland	Nonstocked	3.1		Immature	Managed Opening	Grass opening that is filling in with scotch, red and white pine, spruce, balsam and autumn olive. Spotted knapweed is mixed in with the grasses and raspberry.																																																		
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13	42110 - Planted Red Pine	Poletimber Well	12.2	28	201+	N/A	Good growing red pine stand that is ready for crown release. High stem density with about the top half still having green needles present. There is a trace amount of mature spruce, balsam and poor formed white pine.																																																		
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14	4130 - Aspen	Sapling Well	16.1	4	Immature	N/A	Stand treated in 2016 by the Walking Frog(33-008-13) timber sale. Stand has regenerated filling in with aspen, balm, cherry, some ash and conifers.																																								
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15	6118 - Lowland Deciduous with Cedar	Poletimber Medium	4.0	63	1-50	N/A	The stands adjacent were cut under the Walking Frog(33-008-13) timber sale but this stand was delineated out because it was part of payment unit 4 but was not treated possibly because it was too wet at the time the logger was in there. This stand was a continuation of the lowland stand to the south. Smaller diameter trees with greater concentration of cedar making a good retention area.																																								
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16	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	19.6	3	Immature	N/A	This stand was treated in 2017 by the Walking Frog(33-008-13) timber sale. Scattered hemlock, cedar, and pine were retained. regeneration of ash took place by stump sprouts but majority appear browsed leading to mortality. some stumps with brush around have sapling s 4-8' tall. some red maple and cherry as well																																								
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17	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	6.2	67	51-80	N/A	Stand was selection treated during the fall of 2015 by the Walking Frog (33-008-13) timber sale. Regeneration more pointed toward conifer species not browse desirable. Residual trees contain mostly red maple, green ash and paper birch. There are trace amounts of other species like sugar maple, cherry, black ash and basswood.																																								
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18	310 - Herbaceous Openland	Nonstocked	1.9			No	Part of an old abandoned field. A few scattered conifers are starting to fill in the opening.																																								
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19	4130 - Aspen	Sapling Well	5.1	5	Immature	N/A	Stand was treated in spring of 2016 by the Walking Frog (33-008-13) timber sale. Trace amount of cedar, hemlock, spruce and pine.																																																									
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20	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	21.2	83	111-140	N/A	This is a mature mixed forest stand that is adjacent to the Big Cedar River. Most of this stand is within a 3 chain buffer for the river. There is over mature trees with some dead on the ground. Trace of hemlock, yellow birch, cherry, pine, basswood and beech. The spruce and fir have the appearance of Spruce Budworm defoliation just starting.																																																									
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21	500 - Water	Nonstocked	8.0	0		No	Big Cedar River with three small islands.																																																									
22	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	25.7	86	111-140	N/A	Mature stand with mortality present. Ash swale in middle of the stand that drains north and southwest. The north drain has wash out on old State Forest Campground access road that may be due to a plugged or failed culvert. Winter conditions did not allow for accurate culvert assessment. Trace amounts of balm, cherry, cedar, hemlock, black ash, balsam, spruce and tamarack.																																																									
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23	4130 - Aspen	Sapling Well	22.6	14	Immature	N/A	This stand was treated in 2006 by the Rollercoaster Aspen (33-007-03) timber sale. Good aspen regeneration with residual cedar, hemlock and pine.																																																									
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																	
24	42290 - Natural Mixed Pine	Sawtimber Poor	20.6	83	1-50	N/A	Stand was treated 2015 under Walking Frog (33-008-13) timber sale. Pine seed trees were retained. The stand was then scarified in the fall of 2018 with a dozer mounted root rake. Seedlings are present.																																																	
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25	6220 - Alder/willow	Nonstocked	51.0			No	Large lowland brush area with some scattered trees.																																																	
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26	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	11.2	57	1-50	N/A	This stand was retained from the treatment to the parent stand which included the adjacent stand to south east(stand 35) during a shelterwood treatment in 2017 under the Walking Frog (33-008-13) timber sale. This area is wetter with less density of merchantable trees.																																																	
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27	6120 - Lowland Cedar	Poletimber Well	37.2	131		N/A	A large cedar swamp with mix of other species that overtop the cedar in many areas. This stand has a greater canopy of deciduous trees than the cedar continuation adjacent to the north. The southern portion of this stand was delineated out due to the greater concentration of deciduous trees in that area.																																																	
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28	42350 - Upland Hemlock	Sawtimber Well	6.4	115	171-200	N/A	Stand of mature hemlock on ridge. A mixture of deciduous trees in the lower areas of the stand.																																																	
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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29 6128 - Lowland Coniferous, Mixed Deciduous Sapling Well 14.4 27 Immature N/A Mostly upland but some lowland with black ash and tag alder in lower areas. Nice mix of upland conifer with balm and red maple. Cedar is residual from last treatment in 1994.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Sapling	4	27	Balsam Fir	Low	< 5 feet	Sapling
Balsam Poplar	25	Sapling	4	27	White Spruce	Low	< 5 feet	Sapling
Balsam Fir	25	Sapling	4	27	Tag Alder	Low	< 5 feet	Tall Shrub
White Spruce	10	Sapling	4	27				
Northern White Cedar	5	Pole	8					
White Pine	10	Sapling	4					
Black Spruce	10	Sapling	3					
Black Ash	10	Sapling	3					

30 42350 - Upland Hemlock Sawtimber Well 6.0 136 141-170 N/A This is a upland hemlock area with some large over topping maples.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
White Pine	5	Log	14	91	Balsam Fir	Low	5 - 10 feet	Sapling
Northern White Cedar	10	Log/Pole	10		Black Ash	Low	5 - 10 feet	Sapling
Hemlock	80	Log	14	136				
Red Maple	5	Log	12					

31 6117 - Lowland Deciduous, Mixed Coniferous Sawtimber Well 31.4 93 81-110 N/A This stand has been delineated out from the two stands adjacent on the north side. It has deciduous in the canopy overtopping subcanopy cedars that do not seem to have a functional sheltering effect because of this. The hemlock patch in the south west part of the stand also has deciduous trees over topping them. A harvest will provide winter forage and utilize the ash before the Emerald Ash Borer causes mortality, falling on top of the cedars making it almost impenetrable. Trace amounts of other species including balsam, spruce, tamarack, aspen, balm, cherry, pine

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	15	Pole	8		Balsam Fir	Low	5 - 10 feet	Sapling
Northern White Cedar	15	Pole/Log	8		Northern White Cedar	Medium	10 - 20 feet	Pole
Black Ash	25	Pole	6					
Green Ash	30	Log/Pole	10	93				
Red Maple	10	Log/Pole	10					

32 4136 - Aspen, Mixed Conifer Poletimber Well 28.3 42 51-80 N/A Stand mostly upland but some lowland and swales with ash, tag alder and Michigan holly. Stand has several pockets of hemlock and cedar. Also, scattered individuals of hemlock, cedar, super-canopy white pine/red pine and beech. Other species observed Hemlock log, cedar poles, paper birch saplings and beech saplings/poles.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	25	Pole/Sapling	6		Balsam Fir	Medium	5 - 10 feet	Sapling
Quaking Aspen	40	Pole/Sapling	6	42	Tag Alder	Low	5 - 10 feet	Tall Shrub
Balsam Fir	10	Pole/Sapling	5					
White Spruce	5	Pole/Sapling	5					
White Pine	5	Pole/Sap/Log	6					
Hemlock	10	Log	12					
Northern White Cedar	5	Log	10					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																									
33	429 - Mixed Upland Conifers	Poletimber Well	43.4	26	Immature	N/A	Stand was treated in 1994 by the Kessler Lake (33-007-89) timber sale. Residual large cedar, beech, hemlock and pine trees. Stand has filled in well. Some balsam appear like possible spruce budworm activity just starting. Balsam on the more upland areas have greater diameter but overall just getting into merchantable size.																																																									
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34	6220 - Alder/willow	Nonstocked	5.3		Immature	No	Previous inventory notes mention beaver ponds.																																																									
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35	4319 - Mixed Upland Forest	Poletimber Medium	15.6	57	1-50	N/A	This stand was treated by a shelterwood harvest in 2017 under the Walking Frog (33-008-13) timber sale. The treatment was scheduled as a selection harvest however a chapter 7 was done and changed to a shelter wood harvest. The smaller ash was left and cedar, hemlock, beech and pine and some scattered green marked trees were retained.																																																									
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36	429 - Mixed Upland Conifers	Poletimber Well	18.1	35	81-110	N/A	This stand had two smaller stands added to it last inventory cycle. There is a small red pine dominated portion in the south end of this stand. Then a white pine dominated north of it along the west side of this stand. The north and east part of the stand was treated in 1985 with some residual large conifers. The southern portion of the stand contains a higher density of large pine was shelterwood treated in 2006 by the Obtuse Snapper (33-008-03) timber sale. Both areas are regenerating well to mixed conifer and deciduous species. Spruce Budworm (SBW) has started defoliating the new growth during last year.																																																									
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37	42200 - Natural White Pine	Sawtimber Poor	8.7	84	1-50	N/A	This stand was thinned/shelterwood treated in 2014 on Forest Island Trail (33-028-13-01) timber sale. The stand had been previously treated in 1984, except eastern portion treated in 2006. The open areas of the canopy have filled in by the subcanopy.																																																									
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38	4136 - Aspen, Mixed Conifer	Sapling Well	27.9	7	1-50	N/A	Stand was clearcut in 2014 by the Forest Island Trail (33-028-33) timber sale. The cedar, beech, hemlock, and some pine were retained. A buffer was also retained on the south end of the stand along the creek.																																																																								
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39	4133 - Aspen, Mixed Pine	Sapling Well	16.9	14	Immature	N/A	This stand was treated in 2006 by the Obtuse Snapper (33-008-03) timber sale. All merchantable species were harvested except cedar, hemlock and pine. Stand is regenerating well.																																																																								
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40	4113 - R.Maple, Conifer	Poletimber Well	5.6	89	81-110	N/A	This stand was selection thinned in 2006 by the Obtuse Snapper (33-008-03) timber sale. Some conifer regeneration is present.																																																																								
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41	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	34.7	100	141-170	N/A	This stand has been a mature buffer to the Big Cedar River and a small creek feeding into it. The stand is wider than a 3 chain/200' buffer recommendation during the site condition review for "old growth" designation. Trace amounts of other species such as red pine, black spruce, tamarack, cherry, black ash, and yellow birch.																																																																								
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42	42200 - Natural White Pine	Sawtimber Well	17.4	85	1-50	N/A	Stand was shelterwood treated in 2015-16 by the Forest Island Trail (33-028-13) timber sale. All merchantable trees were harvested and the pine was selection thinned. Regeneration of aspen, maple and mixed conifer species.																																																		
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43	42210 - Natural Red Pine	Sawtimber Well	24.3	89	111-140	N/A	Stand was thinned between 2014 and 2016 by the Forest Island (33-028-13) timber sale. Very high quality red pine poles. The Forest Island ORV trail runs through north and eastern portions of stand. Some seedlings starting to become visible with larger balsam and beech saplings.																																																		
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44	42290 - Natural Mixed Pine	Sapling Poor	23.7	4	Immature	N/A	Stand was treated by a seed tree harvest between 2016 and 2017 on the Forest Island Trail (33-028-13-01) timber sale. Some red pine and white pine were marked to retain as the seed source. The stand was on FTP 33-701 to mechanically scarify the site. A dozer mounted with a root rake completed the scarification during the fall of 2018. The stand was dry, so most of it was scarified. There are young seedlings present.																																																		
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45	6122 - Black Spruce	Sapling Medium	8.9	101	1-50	N/A	Black spruce bog area with small diameter old trees.																																																		
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46	6220 - Alder/willow	Nonstocked	20.3			No	Long narrow lowland brush stand with some scattered trees. Last inventory noted that MNFI identified a osprey nest in north part of stand but Wildlife Division personnel could not locate it.																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
47	4136 - Aspen, Mixed Conifer	Poletimber Well	68.2	37	51-80	N/A	This stand was treated in 1984 by the Salt Block (33-043-83) timber sale. All merchantable trees were harvested except cedar, ash and maple. Lowland has black ash, balm and tag alder. Good regeneration throughout except the real wet areas.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		50	Pole	8	37	Balsam Fir		Medium
Balsam Poplar		10	Pole	8	37	Hazelnut (Beaked)		Low
Balsam Fir		10	Pole	6				
Black Ash		5	Sapling	4				
White Pine		15	Sapling	4				
Paper Birch		5	Sapling/Pole	4				
White Spruce		5	Sapling/Pole	4				
48	622 - Lowland Shrub	Nonstocked	3.9		Immature	No	Lowland brush area containing a small pond called Kessler Lake.	
49	4319 - Mixed Upland Forest	Sawtimber Medium	6.7	95	1-50	N/A	Stand was treated in 2006 by the Obtuse Snapper (33-008-03) timber sale. The north part of the stand was selection thinned with the southern portion all merchantable trees harvested except cedar, hemlock and pine.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		40	Pole	8		Quaking Aspen		High
Paper Birch		5	Pole	8		Balsam Fir		Medium
White Pine		40	Log	15	95			
Red Pine		10	Log	14				
Balsam Fir		5	Pole	6				
50	4130 - Aspen	Sapling Well	8.7	14	Immature	N/A	Stand was treated in 2006 by the Obtuse Snapper (33-008-03) timber sale. All merchantable trees were harvested except cedar, hemlock, pine and some large deciduous trees in the south central portion of the stand. Good regeneration filling in the stand.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		5	Sapling	3				
Quaking Aspen		50	Sapling	3	14			
Balsam Poplar		5	Sapling	3	14			
Balsam Fir		5	Sapling	3				
White Pine		5	Log	16				
Bigtooth Aspen		30	Sapling/Pole	4				
51	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	11.9	24	Immature	N/A	Stand was treated in 1996 by the Kessler Lake Conifer (33-011-93) timber sale. All merchantable species were harvested except cedar, hemlock and one stick balsam and spruce trees. South end of stand is more brushy and wetter.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		25	Sapling	4	24	Balsam Fir		Low
Balsam Poplar		25	Sapling	4	24	White Spruce		Low
Balsam Fir		20	Sapling	4		Tag Alder		Low
Northern White Cedar		5	Pole	8		Red Osier Dogwood		Low
Black Ash		10	Sapling	4				
Red Maple		5	Sapling	4				
White Spruce		5	Sapling	4				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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52 6132 - Mixed Lowland Forest with Cedar Poletimber Medium 5.6 105 81-110 N/A This stand has a higher component of cedar that is in the canopy than the rest of the parent stand to the south.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	5	Sapling/Pole	4		Tag Alder	High	5 - 10 feet	Tall Shrub
Northern White Cedar	50	Pole	6	105	Michigan Holly	High	5 - 10 feet	Tall Shrub
Black Ash	20	Sapling/Pole	4					
Green Ash	15	Pole/Sapling	5					
Black Spruce	5	Pole/Sapling	5					
Red Maple	5	Pole	6					

53 6118 - Lowland Deciduous with Cedar Poletimber Medium 40.4 67 81-110 N/A Most of stand e-type with cedar. More cedar in northern portion of stand. Lots of tag alder and holly in understory throughout.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	5	Sapling/Pole	4		Tag Alder	High	5 - 10 feet	Tall Shrub
Northern White Cedar	35	Pole	6	105	Michigan Holly	High	5 - 10 feet	Tall Shrub
Black Ash	40	Sapling/Pole	4	67				
Green Ash	10	Pole/Sapling	5					
Black Spruce	5	Pole/Sapling	5					
Red Maple	5	Sapling/Pole	4					

54 6220 - Alder/willow Nonstocked 9.4 No Lowland brush with scattered trees producing less than 25% canopy.

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Trace		Pole
Tag Alder	High		Tall Shrub
Michigan Holly	High		Tall Shrub

55 4130 - Aspen Poletimber Well 35.8 37 51-80 N/A Stand was treated in 1983. It was noted as a fir stand but now the aspen is dominant in the canopy. There is a slight lowland swale between the upland area that contain better quality ash species and red maple. There is natural thinning and wind blown trees throughout the stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole	8		Balsam Fir	Low	5 - 10 feet	Sapling
Quaking Aspen	15	Pole	7	37				
Bigtooth Aspen	50	Pole	8	37				
Balsam Fir	10	Pole	6					
Black Ash	5	Pole	6					
Green Ash	10	Pole	8					

56 6115 - Lowland Ash Poletimber Poor 26.1 75 1-50 N/A Mostly scattered trees but occasional pockets of well stocked poles. Heavy to tag alder throughout.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	10	Pole	6		Tag Alder	High	10 - 20 feet	Tall Shrub
Balsam Fir	10	Pole	5		Michigan Holly	Low	5 - 10 feet	Tall Shrub
Northern White Cedar	10	Pole	8					
Black Ash	40	Pole	5	75				
Green Ash	25	Pole/Sapling	6					
Red Maple	5	Pole/Sapling	5					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																															
57	42340 - Upland Spruce/Fir	Sapling Medium	13.2	26	Immature	N/A	Stand was treated in 1994. Still some open areas that have younger seedlings present. Slight upland stand will low areas especially around the perimeter.																																															
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58	6120 - Lowland Cedar	Poletimber Medium	19.5	105	1-50	N/A	Mostly scattered cedar poles and saplings with 1-2 sticks/tree. Many leaners with sweep. Smaller trees in northern portion and bigger trees with more black ash and black spruce in the southern portion. Lots of tag alder and holly throughout stand.																																															
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59	4133 - Aspen, Mixed Pine	Poletimber Well	8.6	36	51-80	N/A	Stand was treated in 1984. A mix of pine in with the dominant aspen.																																															
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60	4133 - Aspen, Mixed Pine	Sapling Well	11.8	7	Immature	N/A	This stand was clearcut in 2014 by the Forest Island Trail (33-028-13) timber sale. There were some pine marked to retain. Regeneration has really taken off. Any dozed areas from the contractor has red pine seedlings.																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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61	6120 - Lowland Cedar	Poletimber Medium	6.9	115	51-80	N/A	Stand was treated by the Bee Stinger (33-044-95) timber sale in 1999. The cedar was retained as well but many have blown over. There also is phragmites present which was proposed to treat last inventory cycle but did not get accomplished. The regeneration of balm, ash, birch and maple is over topping the phragmites so does not seem to have adverse effect on the regeneration. Maybe it will start dying out as the shade from the regeneration increased.
Canopy Species		% Cover	Size Class	DBH	Age		
Balsam Poplar		10	Sapling	3	21		
Northern White Cedar		70	Pole/Log	9	115		
Black Ash		5	Sapling	4			
Paper Birch		10	Sapling	3			
Red Maple		5	Sapling	3			

62	6117 - Lowland Deciduous, Mixed Coniferous	Sapling Well	25.9	21	Immature	N/A	Stand was treated in 1999 by the Bee Stinger (33-044-95) timber sale. Cedar, hemlock, pine, elm, ash under 9 inch dbh, and balsam/yellow birch that had one pulp stick were retained. Some low areas that only contain tag alder, willow and holly are scattered in the stand.
Canopy Species		% Cover	Size Class	DBH	Age		
Red Maple		10	Sapling	3			
Quaking Aspen		10	Sapling	4			
Balsam Poplar		20	Sapling	3	21		
Green Ash		10	Sapling	3			
Northern White Cedar		10	Pole/Log	9	115		
Paper Birch		10	Sapling	3			
Black Ash		10	Sapling	4			
White Pine		5	Log	14			
Hemlock		5	Log	12			

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling

63	4136 - Aspen, Mixed Conifer	Sapling Well	28.2	21	Immature	N/A	Mostly slightly upland with patches of upland and lowland/swales. Scattered white/red pine logs, hemlock logs and cedar poles. Swales of black ash and cedar and tag alder. Other species observed paper birch poles and white pine seedlings/saplings.
Canopy Species		% Cover	Size Class	DBH	Age		
Red Maple		15	Sapling	1	21		
Quaking Aspen		30	Sapling	4	21		
Bigtooth Aspen		10	Sapling	2	21		
Balsam Poplar		15	Sapling	4	21		
Balsam Fir		10	Sapling	4	21		
Northern White Cedar		5	Pole	8			
White Pine		10	Sapling/Pole	4			
Hemlock		5	Log	12			

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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64	429 - Mixed Upland Conifers	Sawtimber Well	16.1	85	141-170	N/A	This stand contains an upland ridge with high density of large pine. It was treated in 1976 producing the younger aged short lived species that are almost at their rotation age. Trace amounts of ash, balm, cedar, cherry and tamarack.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Maple		10	Pole	8		Red Maple		High	10 - 20 feet	Sapling	
Bigtooth Aspen		5	Log/Pole	12		Balsam Fir		High	10 - 20 feet	Sapling	
Balsam Fir		10	Pole	8		White Spruce		Low	5 - 10 feet	Sapling	
Black Spruce		5	Pole	7		White Pine		Low	5 - 10 feet	Sapling	
White Pine		30	Log	14	85						
Red Pine		25	Log	12							
Hemlock		5	Log	12							
Quaking Aspen		10	Log	10	44						

65	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	28.0	100	141-170	N/A	This stand has been a mature buffer to the Big Cedar River and a small creek feeding into it. The stand is wider than a 3 chain/200' buffer recommendation during the site condition review for "old growth" designation. Previous inventories noted an old cabin site: Found old cabin site noted from previous inventory. Took GPS point. Actual location about 60 feet NNE of a point 4 chains south of the mouth of the creek. Definite 4 sides with cellar hole pit in the middle. Cedar, hemlock, aspen, balsam and spruce are growing the banked sides. White pine 24" dbh grows 6 feet north of the site. Cabin oriented nearly N-S, E-W. Old tote road parallels the river about 1/2 chains from river bank and cabin site is about 3 chains west of the tote road.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Maple		40	Log/Pole	10	100	Balsam Fir		Medium	10 - 20 feet	Sapling	
Paper Birch		10	Log/Pole	10		White Spruce		Low	5 - 10 feet	Sapling	
Quaking Aspen		10	Log/Pole	10		White Pine		Low	10 - 20 feet	Sapling	
White Spruce		5	Pole	8							
Northern White Cedar		5	Log/Pole	10							
White Pine		15	Log	16							
Hemlock		10	Log	13							