



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33006

Entry Year 2020

Acreage: 607

County Menominee

Management Area: Nathan-Banat Moraines

Revision Date: 2018-06-08

Stand Examiner: Dustin Salter

Legal Description:

T37N R27W Sections 31, 32, and 33

Identified Planning Goals:

This compartment is comprised primarily of aspen and lowland conifer and ash covertypes. The aspen covertype is well balanced across all age classes. There are a couple of the mature aspen stands that will be harvested this entry period. A couple of upland hardwood stands will also be treated. A few of the mature lowland ash and conifer stands will also be treated. Within these stands the tamarack is dying out, due to the eastern larch beetle. The tamarack needs to be salvaged while there is still an opportunity. The majority of the tamarack will be dead within a few years if it isn't harvested now. The lowland ash stands should also be harvested prior to the arrival of the emerald ash borer. The spruce budworm has killed off most of the balsam fir in the area and the white spruce is in very poor condition.

Soil and topography:

The topography is level with some rolling hills and a few steep ridges. The soils are primarily well drained loams and poorly drained mucks and peats over limestone bedrock. The major soil series are Lupton, Cathro, Tawas, Emmet, Longrie, and Summerville.

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

This compartment is part of a block of state land that is about 7 miles in length and 3 miles wide. There is additional state land about a mile to the west. But, the ownership pattern in this area is very broken up. There is some farmland to the west of this block of land, but most of the private land is used for recreational activities. There are some residences and camps in close proximity to this block of state land.

Unique Natural Features:

None within the compartment, but this compartment is adjacent to the Carney Fen Natural Area.

Archeological, Historical, and Cultural Features:

None Known

Special Management Designations or Considerations:

None Known, but adjacent to the Carney Fen Natural Area.

Watershed and Fisheries Considerations:

There are no navigable water bodies within the compartment.

Wildlife Habitat Considerations:

- Compartment is comprised of just 3 forest cover types: aspen (38%), cedar (26%), and lowland hardwoods (16%).
- The compartment (369 acres) is adjacent to the 2,485-acre Carney Fen Natural Area—a tract of land that demonstrates a high diversity of showy orchid species. This Natural Area acreage, which is bisected by the Shakey River.
- Treatments during this year of entry are focused on lowland hardwood cover types, and are associated with forest health concerns. Some upland hardwood and aspen stands will be thinned or final harvest, creating a young regenerating forest providing numerous benefits to wildlife.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are not located in the area. There appears to be some sand & gravel potential on the upland drumlins. Bedrock is near the surface here, but there is not significant potential for crushed stone. No economic oil and gas production has been found in the UP. There is no history of mineral leasing within the compartment, but there are active state metallic mineral two miles to the west. These leases appear to coincide with a mapped magnetic anomaly. A similar anomaly overlaps the southern portion of the compartment and may have metallic mineral potential.

Vehicle Access:

Access into the majority of the compartment is poor. Access into the center of the compartment is off of a two-track road which comes in off of Pokovich Lane. There are a number of old logging roads and access trails that lead off this main two-track, but most of them can only be driven with an ORV. Some of these trails have been blocked, but are currently being used by locals on ORV's. The access into the east side of the compartment is by way of old logging roads and access roads, which branch off of the Wiregrass Lake Road. These roads are growing in, so most of them can only be driven with an ORV.

Survey Needs:

A few registered corners will need to be set to prepare timber sales.

Recreational Facilities and Opportunities:

There are no developed recreation facilities within the compartment. Hunting, trapping, mushroom picking, and orving are the primary recreational activities in this area.

Fire Protection:

This area has had a significant die off of spruce and balsam fir from the spruce budworm. In some of the upland stands there are large build-ups of dead spruce/fir. These areas could have crown fires, but the upland stands are surrounded by lowland cover types, so the fires would not become very large. There are no reliable water sources within the compartment, there are a couple of small creeks, but during dry periods not much water flow through them. The best water source is the Shakey River, where it crosses under County Road 577.

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

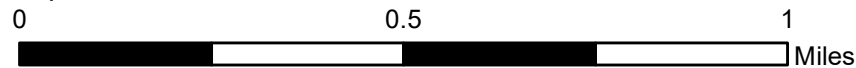
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

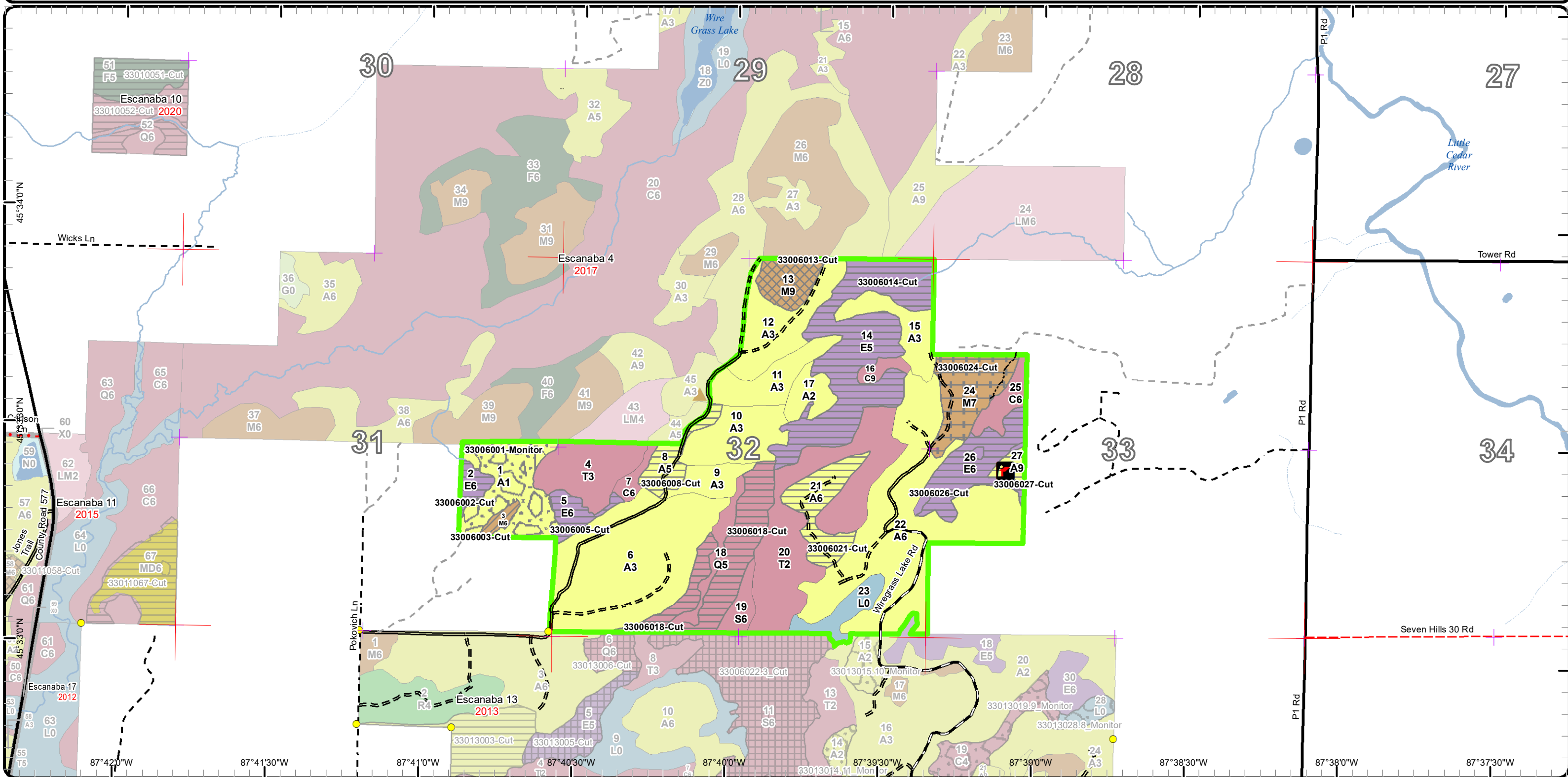
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 6
 T37N - R27W Sec. 31-33
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Nathan-Banat
 Moraines
 YOE: 2020
 Acres: 607 GIS Calculated
 Examiner: Dustin Salter
 Map Revised: 6/27/2018
 Map Phase: Web - Post



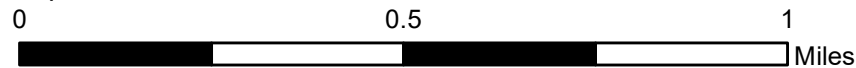
- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Thinning (Crown, Low, Systematic)
- Regeneration Survey
- 411 - Northern Hardwood
- 413 - Aspen Types
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 622 - Lowland Shrub



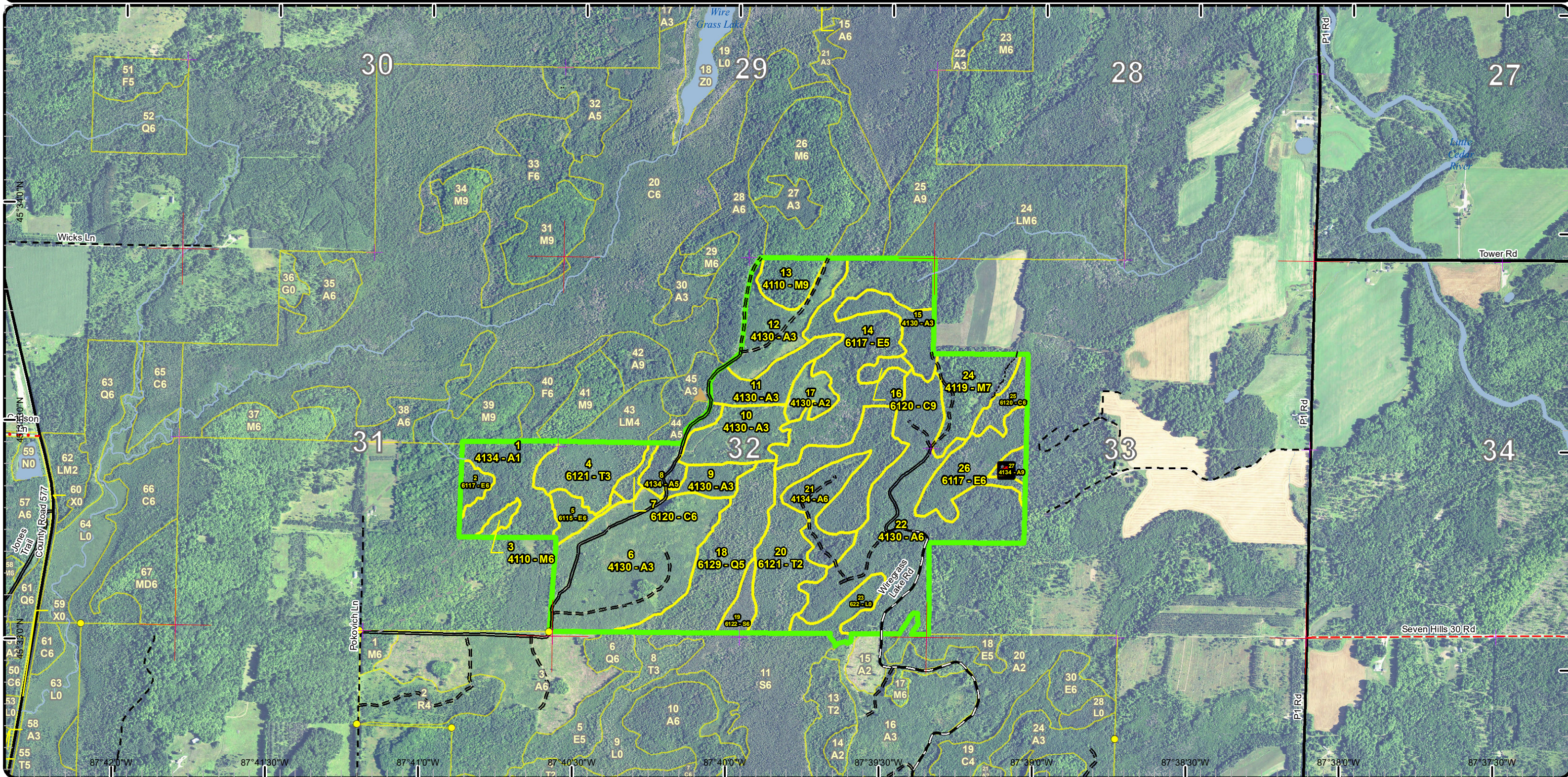
45°34'0"N, 45°33'0"N, 45°32'0"N, 45°31'0"N, 45°30'0"N, 87°42'0"W, 87°41'30"W, 87°41'0"W, 87°40'30"W, 87°40'0"W, 87°39'30"W, 87°39'0"W, 87°38'30"W, 87°38'0"W, 87°37'30"W

Stand Boundary Map

Compartment: 6
 T37N - R27W Sec. 31-33
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Nathan-Banat
 Moraines
 YOE: 2020
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 Examiner: Dustin Salter
 Map Revised: 6/27/2018
 Map Phase: Web - Post

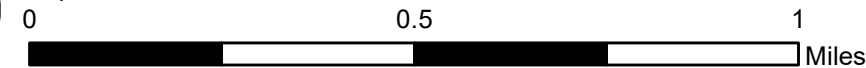


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
- 413 - Aspen Types
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 622 - Lowland Shrub

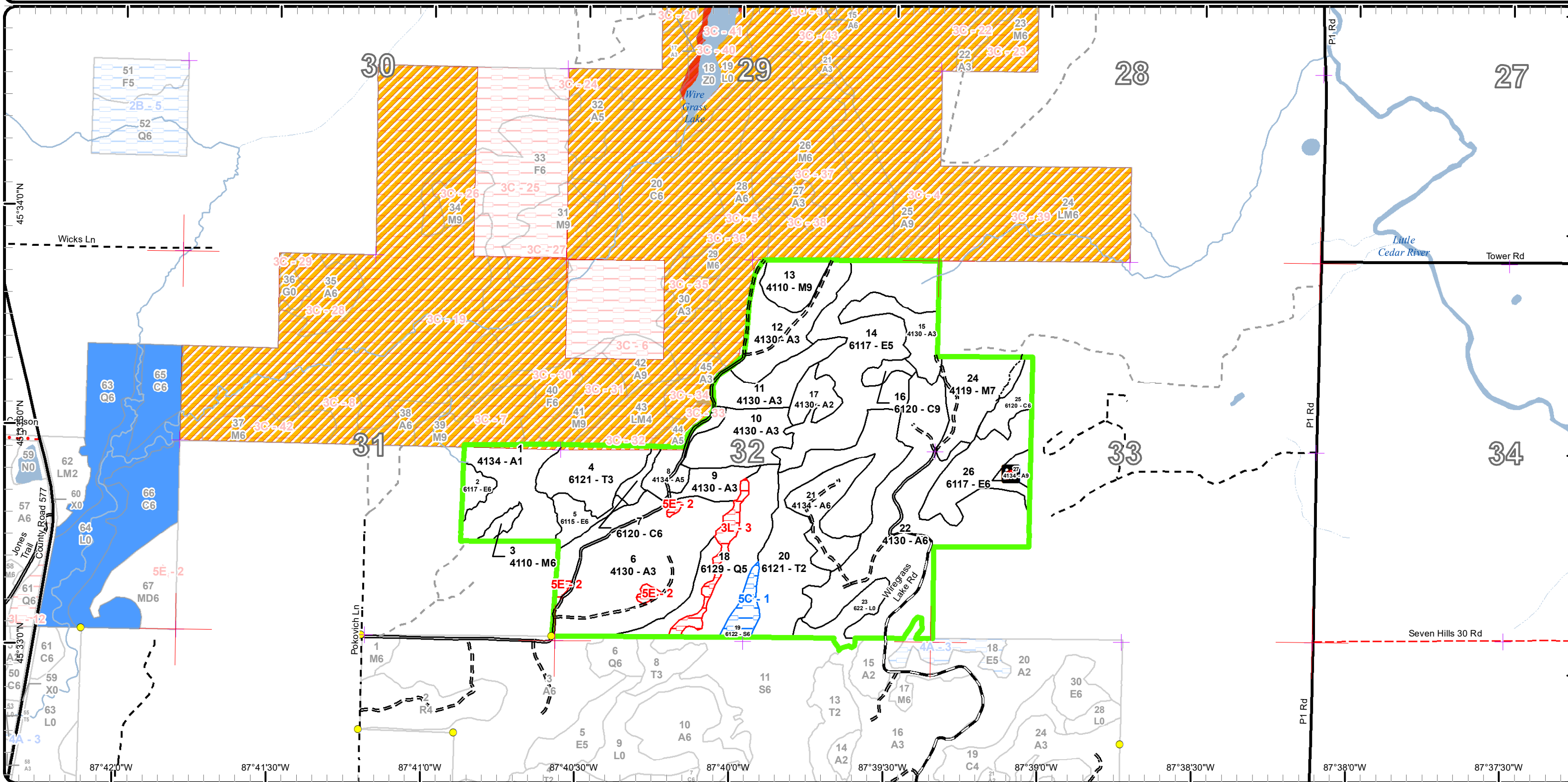


Special Conservation Areas & Site Conditions Map

Compartment: 6
 T37N - R27W Sec. 31-33
 County: Menominee
 Unit: Escanaba
 Mgmt Area: Nathan-Banat
 Moraines
 YOE: 2020
 Acres: 607 GIS Calculated
 Examiner: Dustin Salter
 Map Revised: 6/27/2018
 Map Phase: Web - Post



- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Natural Areas Legally Dedicated
- Riparian Area



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	140	62	0	110	10	0	0	4	0	0	0	0	0	0	0	0	0	325
Cedar	0	0	0	0	0	0	0	0	0	0	4	0	0	11	0	0	0	0	15
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	40
Lowland Deciduous	0	0	0	0	0	5	0	0	0	68	23	0	0	0	0	0	0	0	96
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
Northern Hardwood	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	36
Tamarack	0	0	0	23	56	0	0	0	0	0	0	0	0	0	0	0	0	0	79
Total	10	140	62	23	166	15	0	0	4	104	73	0	0	11	0	0	0	0	607



Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 6

Total Compartment Acres: 607

Commercial Harvest - 259
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	31	0	0	65	0	0	0	0	0	96
Lowland Conifers	32	0	0	0	0	0	0	0	0	32
Lowland Deciduous	95	0	0	0	0	0	0	0	0	95
Northern Hardwood	0	11	0	0	0	3	22	0	0	36
Total	158	11	0	65	0	3	22	0	0	259

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	259	0	0	0	0	0	30	0	0	289
Next Step	0	0	0	0	0	0	234	0	0	234
Total	259	0	0	0	0	0	264	0	0	524



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	33006001- Monitor	29.9	4134 - Aspen, Spruce/Fir	Sapling Poor	1	Immatur re	Monitoring	Natural Regen (Re-Inventory)	413 - Aspen	Even-Aged	Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Regen survey.											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> Aspen, maple, and spruce/fir.											
<u>Regen:</u>											
<u>Other</u> Percent to Treat = 100%											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 06/05/2018											
2	33006002-Cut	4.7	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	45	1-50	Harvest	Clearcut	6111 - Lowland Balsam Poplar	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut all trees greater than 3 inches. No retention is being retained due to small stand size and threat of emerald ash borer.											
<u>Specs:</u>											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Balm, spruce/fir, and ash.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2019											
3	33006003-Cut	2.7	4110 - Sugar Maple Association	Poletimber Well	82	111- 140	Harvest	Low Thinning	411 - Northern Hardwood	Uneven- Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin the stand down to 80 to 90 basal area, improving the quality of the remaining stems.											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> No regeneration is expected.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2019											
5	33006005-Cut	7.2	6115 - Lowland Ash	Poletimber Well	89	51-80	Harvest	Clearcut with Retention	6128 - Lowland Coniferous, Mixed Deciduous	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut all trees greater than 3 inches; except retain all cedar.											
<u>Specs:</u>											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Tamarack, spruce, balm, birch, and ash.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2019											



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
8	33006008-Cut	9.7	4134 - Aspen, Spruce/Fir	Poletimber Medium	41	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches. No retention is being left due to the presence of the spruce budworm and the small stand size.
Specs:

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

Acceptable Aspen, maple, and spruce/fir.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2019

13	33006013-Cut	11.4	4110 - Sugar Maple Association	Sawtimber Well	87	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Thin stand down to 70 to 80 BA, focusing on reducing the amount of ash within the stand.
Specs:

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

Acceptable Sugar maple, basswood, red maple, and ash.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2019

14	33006014-Cut	61.4	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	89	51-80	Harvest	Clearcut with Retention	6139 - Mixed Lowland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches; except retain all cedar and spruce less than 7 inches at DBH.
Specs:

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

Acceptable Tamarack, spruce/fir, aspen, balsam, maple, birch, and ash.
Regen:

Other The cedar is mostly in clumps, so there will be little impact on regeneration and should be more wind firm to prevent blow down after the stand is opened up.
Comment:

Proposed Start Date: 10/01/2019

18	33006018-Cut	32.3	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	97	51-80	Harvest	Clearcut with Retention	6129 - Mixed Coniferous Lowland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches; except retain a strip down through the center of the stand, where the cedar is denser. This area has been removed from the treatment already.
Specs:

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

Acceptable Tamarack, spruce/fir, balsam, aspen, maple, and ash.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2019



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
21	33006021-Cut	17.4	4134 - Aspen, Spruce/Fir	Poletimber Well	36	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches. No retention will be left due to small stand size and the presence of the spruce budworm.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, maple, and spruce/fir.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

24	33006024-Cut	22.2	4119 - Mixed Northern Hardwoods	Sawtimber Poor	87	1-50	Harvest	Overstory Removal	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches; except retain the dense patch of hardwoods on the north end of the stand. Also, retain all beech for mast. And all

Specs: cedar will be retained.

Next Step

Treatments:

Acceptable Aspen, northern hardwoods, and spruce/fir.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

26	33006026-Cut	21.4	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	92	81-110	Harvest	Clearcut	6139 - Mixed Lowland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches; except retain the three dense patches of cedar within the stand. These patches have been delineated out already.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Tamarack, spruce/fir, balm, aspen, birch, and ash.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

27	33006027-Cut	3.6	4134 - Aspen, Spruce/Fir	Sawtimber Well	70	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees greater than 3 inches. No retention is being left due to small stand size and age of aspen.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen and spruce/fir.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

Total Treatment Acreage Proposed: 223.9

Report 4 – Site Conditions

Escanaba Mgt. Unit
Dustin Salter : Examiner

Compartment: 6
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		5C	3C	3L	5E
324	322	0	3	Aspen		0		3
15	15	0	0	Cedar				
40	32	0	8	Lowland Conifers			8	
96	96	0	0	Lowland Deciduous				
9	9	0	0	Lowland Shrub				
6	0	6	0	Lowland Spruce/Fir	6			
36	36	0	0	Northern Hardwood				
79	79	0	0	Tamarack				
607	590	6	10	Total Forested Acres	6	0	8	3
	97%	1%	2%	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	Dominant Site Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: The remainder of the stand in the compartment to the south is already on contract to be harvested, delay harvesting this stand until the other portion of the stand is harvested.</p>								
2	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Three long term retention patches.</p>								
3	Unavailable	3L: Other wildlife concerns	8	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Wildlife wanted to retain a strip of the stand that was heavier with cedar.</p>								

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



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	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
HCVA	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4134 - Aspen, Spruce/Fir	Sapling Poor	29.9	1	Immature	Stand was clearcut in 2018 on contract 33-025-17. This stand was identified for treatment following the Spruce Budworm review. Stand should regenerate well to aspen.
2	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	4.7	45	1-50	Moderate quality balm stand with some older low quality ash mixed in. This stand should be harvested now to remove the ash prior to the arrival of emerald ash borer and while stand 3 is being harvested. This will minimize the use of the access road through the Carney Fen. The spruce budworm has heavily defoliated the spruce.
3	4110 - Sugar Maple Association	Poletimber Well	2.7	82	111-140	Moderate quality hardwood stand, that is ready for its first thinning.
4	6121 - Tamarack	Sapling Well	22.9	22	Immature	Stand was cut between 1993 and 1997 on contract 026-90-01. The cedar and spruce was retained. The stand has very dense tamarack regeneration throughout, with some dense patches of mature cedar along the east and west sides. Quite a bit of the cedar has blown over.
5	6115 - Lowland Ash	Poletimber Well	7.2	89	51-80	Mature low to moderate quality black ash stand. The northern third has tamarack regeneration throughout and there is also black spruce seedlings scattered throughout the stand. This stand should be harvested before the emerald ash borer arrives. The stand can be harvested now and converted to a mix of balm and lowland conifer.
6	4130 - Aspen	Sapling Well	75.5	6	Immature	This stand was clearcut in 2011 and 2013 on contract 032-10-01. Half of the stand was cut in 2011 and the other half in 2013. There were 3 retention patches retained within the stand. The stand has regenerated with good quality aspen regeneration. The majority of the hardwood stump sprouts have been heavily browsed by deer and killed.
7	6120 - Lowland Cedar	Poletimber Well	3.6	97	111-140	Moderate quality cedar stand with some pockets of spruce and tamarack mixed in.
8	4134 - Aspen, Spruce/Fir	Poletimber Medium	9.7	41	51-80	Moderate quality aspen stand with a significant component of balsam fir and spruce. The fir/spruce has been heavily defoliated by the spruce budworm, with about a third of it already dead. This stand needs to be harvested to salvage as much volume as possible and to regenerate the aspen.
9	4130 - Aspen	Sapling Well	8.8	17	Immature	Stand was clearcut in 2001 on contract 026-00-01. Very good quality aspen stand.
10	4130 - Aspen	Sapling Well	21.9	10	Immature	Stand was clearcut in 2008 on contract 023-06-01. Good quality aspen regeneration with some residual ash poles and cedar. Most of the cedar that was retained, has blown over.
11	4130 - Aspen	Sapling Well	16.7	17	Immature	Stand was clearcut in 2001 on contract 026-00-01. Good quality aspen regeneration, with some residual balsam fir and ash poles.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
12	4130 - Aspen	Sapling Well	25.2	6	Immature	Stand was clearcut in 2011 on contract 032-10-01. Some basswood, ash, maple, and cherry were also marked to retain. The majority of the hardwood retained has blown over. High quality aspen regeneration with some scattered mature hardwood stems. The hardwood stump sprouts have been heavily browsed by deer and the majority have been killed. The east edge of the stand is lower and is filling in with conifers.
13	4110 - Sugar Maple Association	Sawtimber Well	11.4	87	111-140	High quality hardwood stand that was thinned in 1999 on contract 024-97-01. The stand has grown enough to be ready for another thinning.
14	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	61.4	89	51-80	Low to moderate quality black ash stand, with pockets of dense high quality tamarack and some lowland brush pockets. About half of the tamarack that was within the stand has already died from the eastern larch beetle and rest is in decline from it. There are a couple of small upland knobs along the north edge of the stand. This stand needs to be harvested before the emerald ash borer arrives and also to salvage as much of the tamarack as possible. It is also important to open the stand up while the tamarack seed is still viable. The majority of this stand should regenerate to a mix of tamarack and lowland hardwoods.
15	4130 - Aspen	Sapling Well	14.4	17	Immature	Stand was clearcut in 2001 on contract 029-00-01. Good quality aspen regeneration, with some residual balsam fir, spruce and ash poles.
16	6120 - Lowland Cedar	Sawtimber Well	3.5	121	141-170	Mature good quality cedar stand, with a significant amount of cedar blown down. The eastern larch beetle has killed about half of the tamarack that was within the stand. Stand provides good winter deer cover.
17	4130 - Aspen	Sapling Medium	8.5	6	Immature	Stand was clearcut in 2011 on contract 032-10-01. Below average aspen regeneration. The deer have heavily browsed and killed the majority of the hardwood stump sprouts and a good portion of the aspen sprouts. The open areas are filling in with conifers. There is an old camp site within the stand, that was buffered.
18	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	39.8	97	51-80	Mature lowland conifer stand that varies greatly in the quality and volume throughout the stand. A narrow band of this stand on the west side was cut in 1995 on contract 001-94-01, but there was a lot of residual trees left. The eastern larch beetle has caused a significant amount of tamarack mortality and decline. The spruce budworm has caused defoliation and mortality on the spruce and fir. This stand needs to be harvested while there is still a viable tamarack and spruce seed source.
19	6122 - Black Spruce	Poletimber Well	6.2	97	51-80	Mature moderate to low quality black spruce stand. About a third of the spruce is sub-merchantable, but the trees have stopped growing a couple of decades ago. There is enough volume to harvest this stand, allowing it to regenerate under drier/improved conditions, but the harvest will be delayed while the adjacent lowland conifer/hardwood stand is harvested.
20	6121 - Tamarack	Sapling Medium	56.2	30	1-50	Young stand of tamarack, ranging from 20 to 40 years old, with some scattered clumps/patches of older softwood and some patches of lowland brush.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4134 - Aspen, Spruce/Fir	Poletimber Well	17.4	36	51-80	Moderate quality aspen stand, with a high percentage of balsam fir and spruce mixed in. The majority of the spruce/fir is residual from the last harvest and ranges from 30 to 60 years old. The spruce/fir has been heavily defoliated by the spruce budworm. This stand should be harvested to salvage as much volume as possible. The stand will regenerate to aspen.
22	4130 - Aspen	Poletimber Well	92.8	34	1-50	Stand was cut between 1982 and 1986 on contracts 49-79 and 45-85-01. Good quality aspen stand with some pockets of older spruce/fir. These older pockets are large enough to delineate out or to try and salvage. The spruce/fir are being heavily defoliated by the spruce budworm.
24	4119 - Mixed Northern Hardwoods	Sawtimber Poor	22.2	87	1-50	This stand had all trees greater than 8 inches cut in 2001 under contract 029-00-01. This harvest created a two-aged stand, with mature low quality hardwoods over high quality aspen regeneration. There are also a few dense patches of spruce/fir that have been heavily defoliated by the spruce budworm. The overstory needs to be removed to release the aspen regeneration and also to expand it.
25	6120 - Lowland Cedar	Poletimber Well	7.9	121	111-140	Moderate to low quality cedar stand. The better quality cedar is in the northern part of the stand. Quite a bit of the cedar has blown over.
26	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	23.1	92	81-110	Moderate quality ash stand, with dense high quality pockets of tamarack. Approximately half of the tamarack is already dead from the eastern larch beetle and the rest is in decline. This stands needs to be harvested prior to the arrival of the emerald ash borer and before the tamarack is all dead and a viable seed source is lost.
27	4134 - Aspen, Spruce/Fir	Sawtimber Well	3.6	70	51-80	Over mature aspen and balsam fir stand. The spruce budworm is defoliating the balsam fir. Harvest the stand while the aspen is vigorous enough to sprout.



Stand	Cover Type	Acres	Managed Site	General Comments:
23	622 - Lowland Shrub	9.5	No	Lowland brush stand with scattered ash and tamarack poles.