Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33070
Entry Year 2024
Acreage: 1,924
County Menominee
Management Area: North Menominee Moraines

Stand Examiner: Dustin Salter

Legal Description:

T40N R26W Sections 23, 24, 25, 26, 35, and 36.

Identified Planning Goals:

The high deer population in this area, has caused a significant change in the future forest. The deer have heavily browsed and killed the majority of the hardwood stump sprouts following the harvests from the last entry. The areas with heavy mortality are converting to ironwood and spruce/fir. The spruce budworm is also still active in the area. A high percentage of the balsam fir has already died out and most of the spruce is heavily defoliated. The spruce budworm has been active in this area for over ten years. There is evidence of emerald ash borer within the compartment. All of merchantable ash should be harvested, prior to it all dying. The eastern larch beetle is also present and has caused a significant amount of tamarack mortality.

Soil and topography:

Topography is level with some gently rolling hills and some steep terrain. Soils include well-drained sandy loams and poorly drained black muck and peat over bedrock/limestone and sandy loam. Prominent soil series are Lupton-Cathro, Loxley-Dawson, Onaway sandy loam, Lupton-Tawas, and Summerville-Cunard.

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

This compartment is located in the northern portion of Menominee County within a small block of state land. This block of state forest land is about four miles wide and three miles long. There are a number of private in-holdings within this block. A large percentage of the private forest land around this block of state land is owned by corporate forest landowners. The primary uses for the private land are timber production and recreation. The state forest lands primary use is recreation.

Unique Natural Features:

None Known.

Archeological, Historical, and Cultural Features:

None Known.

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

This compartment contains Forty-Seven Mile Creek. There have been angler reports of steelhead migrating all the way up this system. Fish Division is deploying temperature loggers at multiple locations to help inform management decisions. In the meantime, a 100’ buffer is recommended all waterbodies within this compartment, including the unnamed pond located in the southern portion; buffers are recommended to protect these areas in accordance with BMPs.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial oil & gas production in this part of the state. The nearest active aggregate pits are less than two miles to the southeast. Additional potential for sand & gravel exists within the compartment on the upland drumlins. Bedrock is near the surface in places in this area, and there could be some limestone potential. Some exploration for iron ore occurred in the mid-1940s just one mile to the north. Any potential iron formations beneath the compartment are believed to be quite deep and not economical to mine. No known potential exists for metallic or critical minerals beneath the compartment, but more information is needed for the subsurface here. There is no current mineral leasing in or around the compartment. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, the surface owner must provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development.

Vehicle Access:

The primary access into the compartment is from the 47 Mile Creek Road. The 47 Mile Creek Road runs through the western portion of the compartment and there are two-track roads that split off and head into different parts of the compartment. There are a limited number of roads within the compartment, due to the large amount of lowland stands throughout it.

Survey Needs:

Two registered corners will need to set, to prepare the timber sales.

Recreational Facilities and Opportunities:

There are no developed facilities within this compartment. The primary uses are hunting, four-wheeling, and snowmobiling. There is a designated snowmobile trail that runs to the north of the compartment and down through the far western portion of the compartment. The trail uses some of the two-track roads in the area.

Fire Protection:

This area has a very low probability of supporting a large forest fire. The landscape is very broken up with low wet ground and ridges of northern hardwood. The 47 Mile Creek provides an adequate water source in a couple of locations within the compartment.

Additional Compartment Information:

The following reports from the Inventory are attached:

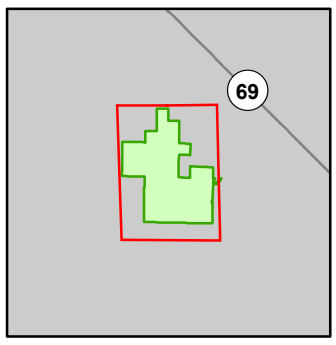
- **Total Acres by Cover Type and Age Class**
- **Cover Type by Harvest Method**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**
- **Stand Details (Forested and Nonforested)**
- **Dedicated and Proposed Special Conservation Areas**
- **Site Condition 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: 70
T40N-R26W Sec. 23-26,35-36
County: Menominee
Unit: Escanaba
Mgmt Area: North Menominee Moraines
YOE: 2024
Acres: 1924.1 GIS Calculated
Examiner: Dustin Salter
Map Revised: 6/27/2022
Map Phase: Web-Post



N

DEPARTMENT OF NATURAL RESOURCES · DNR · MICHIGAN

- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
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- Private - Dirt / Gravel Road
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- Compartment Boundary
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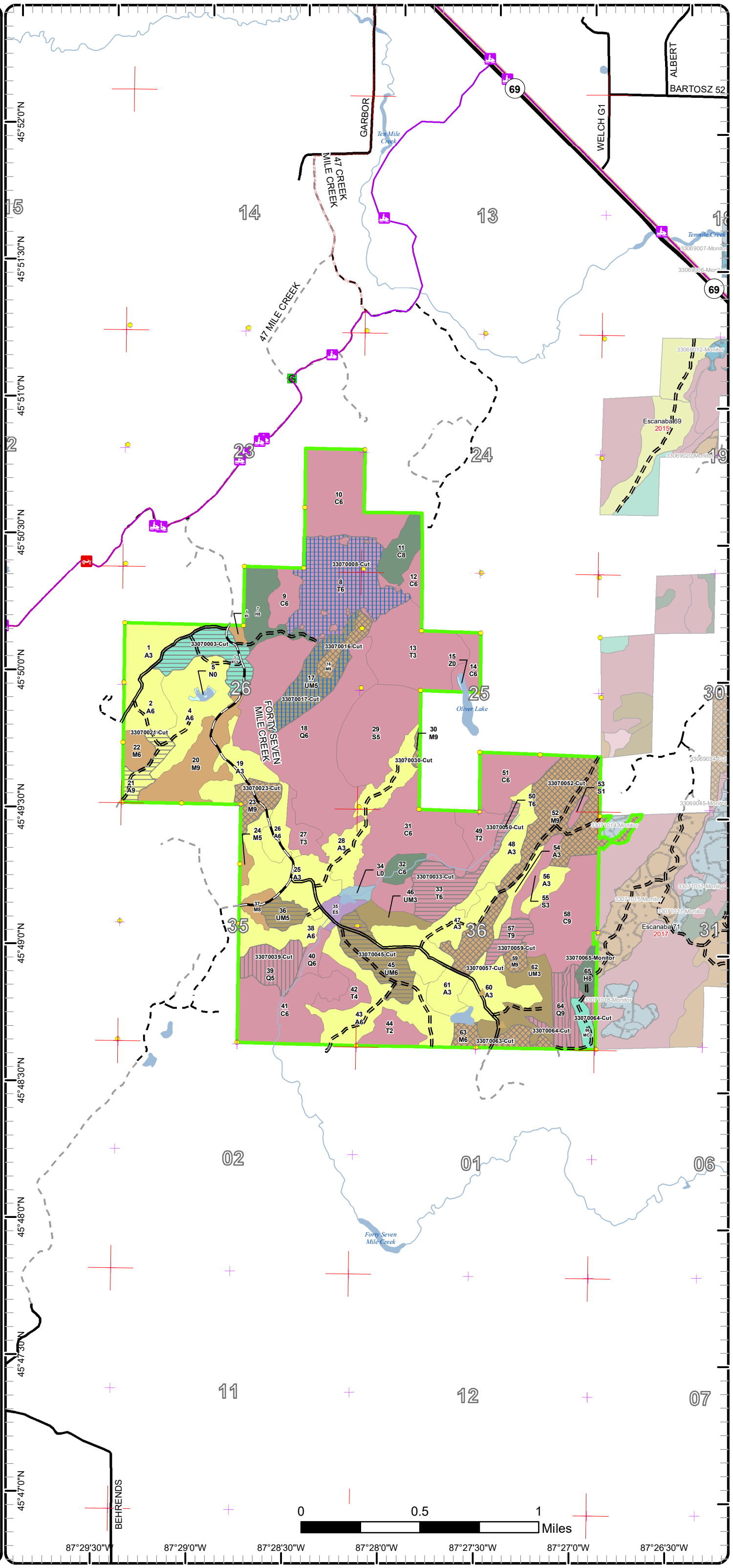
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Regeneration Survey
- Shelter Wood (w/Reserves)
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



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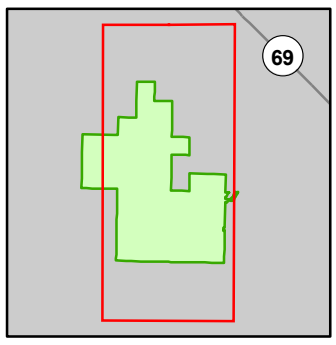

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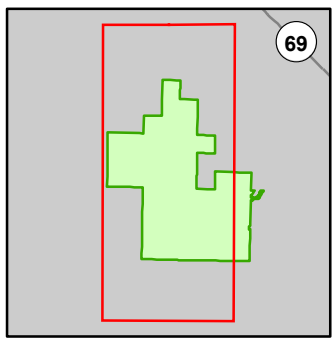

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Stand Boundary Map

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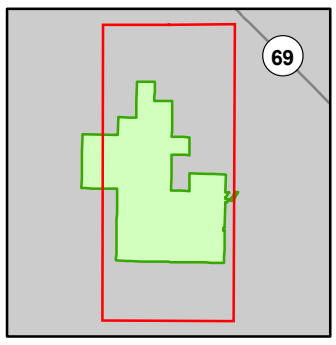

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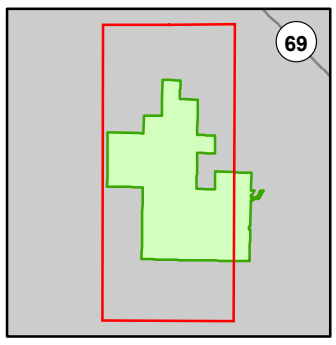

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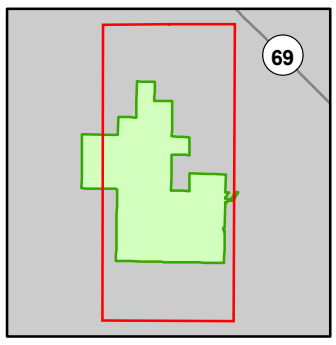

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- Unavailable
- 3J: Water quality / BMPs (stream, river, or lake)
- 5D: Unproductive Forest Land
- 5E: Long-Term Retention
- Stand Boundaries
- High Priority Trout Stream Buffer

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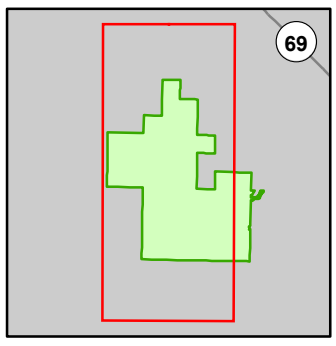

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47 MILE CREEK
FORTY SEVEN MILE CREEK
FORTY SEVEN MILE CREEK
Oliver Lake
Forty Seven Mile Creek

23 24 26 25 35 36 02 01

1 4130 - A3
2 4136 - A6
3 429 - MC6
4 4136 - A6
5 6239 - N0
6 4110 - M6
7 42350 - H8
8 6121 - T6
9 6120 - C6
10 6120 - C6
11 42360 - C8
12 6120 - C6
13 6121 - T3
14 6120 - C6
15 500 - Z0
16 4115 - M9
17 4319 - UM5
18 6129 - Q6
19 4130 - A3
20 4110 - M9
21 4134 - A9
22 4110 - M6
23 4110 - M9
24 4110 - M5
25 4136 - A3
26 4130 - A6
27 6121 - T3
28 4130 - A3
29 6122 - S5
30 4119 - M9
31 6120 - C6
32 42360 - C6
33 6121 - T6
34 6229 - L0
35 6117 - E5
36 4319 - UM5
37 4110 - M8
38 4130 - A6
39 6129 - Q5
40 6128 - Q6
41 6120 - C6
42 6121 - T4
43 4136 - A6
44 6121 - T2
45 4319 - UM6
46 4319 - UM3
47 4130 - A3
48 4136 - A3
49 6121 - T2
50 6121 - T6
51 6120 - C6
52 4110 - M9
54 4139 - A3
55 6122 - S3
56 4130 - A3
57 6121 - T9
58 6120 - C9
59 4119 - M9
60 4136 - A3
61 4130 - A3
62 4319 - UM3
63 4110 - M6
64 6128 - Q9

5E - 2
3J - 3
3J - 1
5D - 4

45°51'0"N
45°50'30"N
45°50'0"N
45°49'30"N
45°49'0"N
45°48'30"N
45°48'0"N

87°29'0"W
87°28'30"W
87°28'0"W
87°27'30"W

0 0.5 1 Miles

Report 1 – Total Acres by Cover Type and Age Class

Escanaba Mgt. Unit **Compartment 70** **Year of Entry 2024**

Dustin Salter : Examiner

Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	136	140	45	131	23	16	0	0	0	0	0	0	0	0	0	0	0	**490**
Cedar	0	0	0	0	0	0	0	0	0	0	0	377	13	0	0	0	0	0	**390**
Hemlock	0	0	0	0	0	0	0	0	0	0	0	29	9	0	0	0	0	0	**37**
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	62	165	0	0	0	0	0	**227**
Lowland Deciduous	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	**8**
Lowland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Lowland Spruce/Fir	0	15	0	0	0	0	0	0	0	0	68	0	0	0	0	0	0	0	**83**
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Northern Hardwood	0	0	0	0	12	3	0	0	0	17	198	0	0	0	0	0	0	0	**229**
Tamarack	0	0	54	0	14	0	0	0	0	161	0	49	0	0	0	0	0	0	**278**
Upland Conifers	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	35	**43**
Upland Mixed Forest	0	0	0	34	49	12	0	0	0	0	0	0	0	0	0	0	0	36	**131**
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**8**	**151**	**194**	**87**	**206**	**38**	**16**	**0**	**0**	**186**	**266**	**517**	**187**	**0**	**0**	**0**	**0**	**71**	**1924**

Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2024

Acres of Harvest

Compartment 70

Total Compartment Acres: 1,924

Commercial Harvest - 475

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		16	0	0	0	0	0	0	0	0	**16**
Lowland Conifers		0	0	0	0	50	0	0	0	0	**50**
Northern Hardwood		0	155	0	0	0	0	0	0	0	**155**
Tamarack		49	0	0	87	0	0	0	0	0	**136**
Upland Conifers		35	0	0	0	0	0	0	0	0	**35**
Upland Mixed Forest		48	0	0	36	0	0	0	0	0	**84**
	Total	**148**	**155**	**0**	**123**	**50**	**0**	**0**	**0**	**0**	**475**

Proposed and Next Step Treatments by Method

		Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current		475	0	0	0	0	0	9	0	0	**484**
Next Step		0	0	0	0	0	0	475	0	0	**475**
	Total	**475**	**0**	**0**	**0**	**0**	**0**	**484**	**0**	**0**	**959**

Proposed Treatments:

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
3	33070003-Cut	34.6	429 - Mixed Upland Conifers	Poletimber Well	36	51-80	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH; except mark some pine to retain for a seed source and diversity.

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

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

Other Comment: Mixed aspen and spruce/fir stand with mature pine mixed in. The spruce budworm has caused heavy defoliation of the spruce/fir, with some mortality occurring. The stand needs to be harvested before a significant amount of the volume is lost. This stand will regenerate with aspen, once the canopy is opened up. Pine and spruce/fir will also seed in following the harvest.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
16	33070016-Cut	11.3	4115 - Y.Birch, Hemlock NH	Sawtimber Well	90	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin stand down to 70 basal area. The dense pockets of hemlock will not be lowered to that level, due to the high percentage of hemlock. Also, cut all ironwood and spruce/fir greater than four (4) inches at DBH. Retain some wolfy and scale free beech throughout the stand.

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

Acceptable Regen: Maple, birch, basswood, beech, and ash.

Other Comment: Variable quality hardwood stand with some dense pockets of hemlock, primarily on the north end. The stand is ready to be thinned. The maple stems have lots of defect, due to previous porcupine damage. There is also a high percentage of ash in the stand. This percentage needs to be lowered, with the emerald ash borer in the adjacent stand. Most of the ash will die, if not harvested soon. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
17	33070017-Cut	35.8	4319 - Mixed Upland Forest	Poletimber Medium	65	51-80	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH; except retain the pine and hemlock. In addition, mark some cherry and cedar to retain.

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

Acceptable Regen: Aspen, balm, maple, pine, ash, spruce/fir and hemlock.

Other Comment: Multi aged stand, with older hemlock, pine, and cedar. Over mature hardwoods and spruce/fir, with younger balm. All species are very poor quality and should be harvested. The spruce/fir is dying out of the stand due to the spruce budworm. About 40% of the balsam fir has already died out. Emerald ash borer is present in the stand, so the ash needs to be harvested as well. The other species are also low quality and are ready to be harvested. By clearcutting this stand, the balm and hardwoods will sprout. And once the canopy is gone the sun will warm up the forest floor allowing the conifer seed to germinate and grow.

WLD Comments: This stand is in conditional range and has a canopy composition of 3% cedar. WLD and FRD agreed to retain some cedar but it is understood that some cedar will be harvested.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
21	33070021-Cut	15.7	4134 - Aspen, Spruce/Fir	Sawtimber Well	50	51-80	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH; except retain all hemlock and mark some pine seed trees to retain.

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

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

Other Comment: Poor quality aspen/hardwood stand. Trace amount of ash, balm, birch, beech and red maple. Clearcutting the stand will allow the aspen and hardwood to sprout regenerating the stand. The conifer seed on the forest floor will also germinate, once the canopy is removed.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
23	33070023-Cut	17.4	4110 - Sugar Maple Association	Sawtimber Well	86	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin stand down to 70 to 80 basal area, removing the majority of the ash.

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

Acceptable Regen: Maple, basswood, ash, and beech.

Other Comment: Good quality hardwood stand, that is in need of a thinning. The emerald ash borer is present in the stand. There is no mortality yet, but there is plenty of fleck on the trees, from wood peckers feeding on the larvae. If the ash is not harvested soon, much of it will die out in a couple of years. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems. The stand was previously thinned in 2009 on contract 026-04-01.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
30	33070030-Cut	2.5	4119 - Mixed Northern Hardwoods	Sawtimber Well	98	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin this stand down to 70 to 80 basal area. Retain some wolfy and scale free beech throughout the stand.

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

Acceptable Regen: Maple, basswood, ash, beech, and birch.

Other Comment: Small northern hardwood stand, that is ready to be thinned. The birch is dying out of the stand. The thinning will remove the low quality and mature trees. This will improve the growth of the residual stems.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
33	33070033-Cut	31.5	6121 - Tamarack	Poletimber Well	106	51-80	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Two-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH, except cedar. Only that cedar needed to operate in the stand, will be harvested.

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

Acceptable Regen: Tamarack, spruce, balsam fir, pine, birch, and cedar.

Other Comment: Mature tamarack stand, except on the northern end there is a dense area of black spruce. Most of the stand doesn't have much cedar, except along the southern and eastern edges. Most of the cedar in the stand is low quality, except along the transition zones. This stand will be clearcut, except for the cedar. By removing the overstory, the sunlight will reach the forest floor helping the conifer seed to germinate. The residual cedar will continue to provide seed after the stand is harvested.

WLD Comments: This stand is in conditional range and has a canopy composition of 20% cedar. To the north of this stand is a larger cedar stand that contains higher quality cedar that offers better cover. WLD and FRD agreed to only cut cedar necessary for operability, it is understood that some cedar will be harvested.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
36	33070036-Cut	11.8	4319 - Mixed Upland Forest	Poletimber Medium	44	51-80	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH, except pine. In addition, mark to retain some black cherry.

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

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

Other Comment: Two aged stand. Younger aspen with older spruce/fir, that is being heavily defoliated by the spruce budworm. About one third of the balsam fir has already died. The stand needs to be harvested, to prevent anymore mortality. Clearcutting this stand will allow the aspen to sprout and the conifer seed on the forest floor will also germinate, once the canopy is removed.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
39	33070039-Cut	25.6	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	107	81-110	Harvest	Shelterwood with Retention	612 - Lowland Coniferous Forest	Two-Aged	No

Prescription Specs: Cut all trees greater than three inches at DBH, except mark to retain 20 to 30 basal area of primarily cedar. Also, retain any dense pockets of pure cedar. These dense pockets are too small to delineate out.

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

Acceptable Regen: Tamarack, cedar, spruce/fir, pine, birch, and balm.

Other Comment: Mature mixed lowland conifer stand. The tamarack is being killed by the eastern larch beetle. This stand needs to be harvested prior to all of the tamarack dying out of the stand. A small portion of this stand was cut in the winter of 2007-2008 on contract 022-04-01. All species were cut except cedar and some seed trees. The remainder of the stand was turned back un-completed. In the area that was harvested, tamarack and cedar has regenerated very well. There are some cedar seedlings almost two feet tall. This would be a good chance to continue experimenting with getting cedar regeneration. In the area harvested, there was about 20 basal area of cedar retained along with some tamarack seed trees. Continue this type of harvest throughout the rest of the stand, to regenerate cedar and other lowland conifers.

WLD Comments: This stand is in conditional range and has a canopy composition of 40% cedar. To the south of this stand is a larger cedar stand that contains higher quality cedar that offers better cover. WLD and FRD agreed to retain some cedar within patches and part of the 20-30ba or retention. The rest of the cedar will be harvested. There is evidence of cedar regeneration adjacent to this stand within harvest area.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
45	33070045-Cut	36.3	4319 - Mixed Upland Forest	Poletimber Well	31	51-80	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH, except pine. In addition, mark to retain some black cherry.

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

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

Other Comment: Two aged aspen and spruce/fir stand. The spruce/fir is mature and is dying out of the stand, due to the spruce budworm. About a third of the balsam fir has already died out of the stand. The stand should be harvested to limit the amount of mortality. Clearcutting the stand will allow the aspen to sprout regenerating the stand. The conifer seed on the forest floor will also germinate, once the canopy is removed.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
50	33070050-Cut	5.0	6121 - Tamarack	Poletimber Well	104	51-80	Harvest	Clearcut	6121 - Tamarack	Even-Aged	No

Prescription Specs: Cut all trees greater than three inches (3) at DBH. No retention will be retained due to the small stand size.

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

Acceptable Regen: Tamarack, cedar, spruce, birch, and balm.

Other Comment: Mature tamarack stand, that is ready to be harvested. The eastern larch beetle has already caused some tamarack mortality along the edges of the stand. By removing the overstory, the sunlight will reach the forest floor helping the conifer seed to germinate. Due to the very high deer population, it will be difficult to regenerate cedar in this stand.

WLD Comments: This stand is in conditional range and has a canopy composition of 15% cedar. To the west of this stand is a larger cedar stand that contains higher quality cedar that offers better cover. WLD and FRD agreed to cut the cedar within this stand to be able to salvage the tamarack and also allow optimal conditions for tamarack regeneration.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
52	33070052-Cut	99.8	4110 - Sugar Maple Association	Sawtimber Well	92	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin stand down to 70 to 80 basal area. Also, cut all merchantable ash, balsam fir, spruce, aspen, and ironwood. Retain some wolfy and scale free beech throughout the stand.

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

Acceptable Regen: Maple, basswood, ash, birch, and beech.

Other Comment: Good quality hardwood stand, that is ready to be thinned. This stand was last thinned in 2005-06 on contract 030-04-01. The emerald ash borer is present and has caused some ash mortality. The beech scale is also present, but no beech mortality has occurred yet. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
57	33070057-Cut	12.8	6121 - Tamarack	Sawtimber Well	104	141-170	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches at DBH. Some small dense patches of cedar in the transition zones will be retained for a seed source and for diversity.

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

Acceptable Regen: Tamarack, spruce, cedar, pine, birch, and balm.

Other Comment: Mature high quality tamarack and black spruce stand, that is ready to be harvested. Most of the cedar is low quality within the stand, except along the transition zones. The eastern larch beetle is causing some tamarack mortality around the perimeter of the stand. If the tamarack is not harvested soon, most of it will die in the next few years. By removing the overstory, the sunlight will reach the forest floor allowing the conifer seed to germinate. Recent harvests in these lowland conifer stands have regenerated well, including cedar. Due to the very high deer population, it will be difficult to regenerate cedar in this stand.

WLD Comments: This stand is in conditional range and has a canopy composition of 25% cedar. To the east of this stand is a larger cedar stand that contains higher quality cedar that offers better cover. WLD and FRD agreed to cut the cedar within this stand to be able to salvage the tamarack and also allow optimal conditions for tamarack regeneration. It was also agreed upon that there would be retention left on the edge of stand for a seed source.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
59	33070059-Cut	5.9	4119 - Mixed Northern Hardwoods	Sawtimber Well	92	141-170	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin stand down to 70 basal area.

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

Acceptable Regen: Maple, basswood, birch, hemlock, and pine.

Other Comment: Moderate to low quality hardwood stand, that is ready to be thinned. This stand was last thinned in 2006 on contract 025-04-01. The thinning will remove the low quality and mature trees. This will improve the growth of the residual stems.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
63	33070063-Cut	18.4	4110 - Sugar Maple Association	Poletimber Well	92	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	No

Prescription Specs: Thin stand down to 70 to 80 basal area.

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

Acceptable Regen: Maple, basswood, birch, ash, beech, and pine.

Other Comment: High quality sugar maple stand, that is ready to be thinned. This stand was last thinned in 2006 on contract 025-04-01. The thinning will remove the lower quality and mature stems, improving the growth of the residual trees.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
64	33070064-Cut	24.0	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	104	141-170	Harvest	Shelterwood	613 - Lowland Mixed Forest	Two-Aged	No

Prescription Specs: Cut all trees greater than three (3) inches, except cedar. Only cut those cedar needed to operate in the stand. A narrow buffer will be retained along the small creek that flows through the stand.

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

Acceptable Regen: Spruce, tamarack, birch, balm, cedar, and ash.

Other Comment: High quality mixed lowland stand, with cedar, white birch, black spruce, and balm. All of the shorter lived species are mature and ready to be harvested. Some of the species are already dying out of the stand. There is a small creek that flows through the center of the stand, this will have a narrow buffer retained along it. The open areas of the stand, following the harvest will regenerate with balm, spruce, birch, and cedar.

WLD Comments: This stand is in conditional range and has a canopy composition of 38% cedar. To the north of this stand is a larger cedar stand that contains higher quality cedar that offers better cover. WLD and FRD agreed to only cut the cedar within this for operability. It is understood that cedar will be harvested within this stand to be able to harvest the other species.

Site Condition

Proposed Start Date: 10/1 /2023

Approved Treatments:

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
8	33070008-Cut	86.8	6121 - Tamarack	Poletimber Well	82	51-80	Harvest	Seed Tree with Retention	6121 - Tamarack	Two-Aged	No

Prescription Specs: Seed Tree Harvest - Cut all trees; except leave seed tree clumps scattered throughout the stand.

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

Acceptable Regen: Tamarack, spruce, cedar, and lowland hardwoods.

Other Comment: This sale was on contract 024-14-01, but it was not harvested. Set the sale back up as part of the 2019 POW.

Site Condition

Proposed Start Date: 11/15/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
65	33070065-Monitor	8.6	42350 - Upland Hemlock	Sawtimber Medium	119	51-80	Monitoring	Natural Regen (Re-Inventory)	4319 - Mixed Upland Forest	Two-Aged	No

Prescription Specs: Regen survey.

Next Step Treatments:

Acceptable Regen: Pine, maple, birch, spruce/fir, aspen, and balm.

Other Comment: Percent to Treat = 100%

Site Condition

Proposed Start Date: 5 /3 /2022

Total Treatment Acreage Proposed: 483.8

Report 4 – Site Conditions

Escanaba Mgt. Unit

Dustin Salter : Examiner

Compartment: 70

Year of Entry: 2024

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions 3J	5D	5E
491	491	*0*	0	**Aspen**			
391	391	*0*	0	**Cedar**			
37	37	*0*	0	**Hemlock**			
226	50	*0*	177	**Lowland Conifers**	12	165	
8	0	*0*	8	**Lowland Deciduous**	8		
5	5	*0*	0	**Lowland Shrub**			
83	15	*0*	68	**Lowland Spruce/Fir**		68	
2	2	*0*	0	**Marsh**			
229	229	*0*	0	**Northern Hardwood**			
278	204	*0*	74	**Tamarack**		70	5
43	43	*0*	0	**Upland Conifers**			
131	131	*0*	0	**Upland Mixed Forest**			
1	1	*0*	0	**Water**			
1,925	1,597		327	Total Forested Acres	20	303	5
	83%		17%	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)**	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: 47 Mile Creek flows through the stand.						
2	**Unavailable**	**5E: Long-Term Retention**	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

3	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	8	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
47 Mile Creek flows through the stand.

4	**Unavailable**	**5D: Unproductive Forest Land**	303	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

7	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	3	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified

Comments:
A creek flows through the stand, this area is the buffer along it and it also provides a travel corridor for wildlife.

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

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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
1	4130 - Aspen	Sapling Well	33.2	15	Immature	N/A	Stand was c.c. in 2007 on contract 026-04-01. Regenerating very well.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	10	Sapling	4	
Red Maple	3	Sapling	3	15
Balsam Fir	3	Sapling/Pole	4	35
White Spruce	2	Sapling/Pole	4	35
White Pine	2	Log	14	108
Black Cherry	3	Sapling	3	15
Sugar Maple	5	Pole/Sapling	6	
Quaking Aspen	72	Sapling	3	15

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

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
2	4136 - Aspen, Mixed Conifer	Poletimber Well	24.2	27	Immature	N/A	dense stand wit sbw in the spruce fir but smaller dbh and quantity ti treat

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	5	Sapling/Pole	4	27
White Pine	15	Log/Pole	12	108
Balsam Fir	5	Sapling/Pole	4	27
White Ash	5	Sapling/Pole	4	
Bigtooth Aspen	10	Pole	6	27
Balsam Poplar	5	Sapling/Pole	4	
Quaking Aspen	55	Pole/Sapling	6	27

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	10 - 20 feet	Sapling
Red Maple	Low	< 5 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
3	429 - Mixed Upland Conifers	Poletimber Well	34.6	36	51-80	N/A	Mixed aspen and spruce/fir stand with mature pine mixed in. The spruce budworm has caused heavy defoliation of the spruce/fir, with some mortality occurring. The stand needs to be harvested before a significant amount of the volume is lost. This stand will regenerate with aspen, once the canopy is opened up. Pine and spruce/fir will also seed in following the harvest.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	15	Log/Pole/Sap	15	108
Black Cherry	2	Pole/Sapling	5	65
Quaking Aspen	35	Pole/Log/Sap	7	36
White Spruce	15	Pole/Sap/Log	8	65
Red Pine	3	Log/Pole	14	108
Balsam Fir	30	Pole/Sap/Log	8	65

Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	Low	10 - 20 feet	Sapling
Ironwood	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
4	4136 - Aspen, Mixed Conifer	Poletimber Well	50.4	36	51-80	N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	2	Log	14	108
White Pine	10	Log	14	108
Quaking Aspen	60	Pole	6	36
Bigtooth Aspen	11	Pole	8	
White Spruce	5	Pole	8	36
Balsam Fir	10	Pole	8	36
Sugar Maple	2	Pole	7	90

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

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
5	6239 - Mixed Emergent Wetland	Nonstocked	2.4		Unspecified	No	water pools with mostly tall grass and some shrubs
6	4110 - Sugar Maple Association	Poletimber Well	2.7	46	1-50	N/A	Decent quality sugar maple poles, with an abundance of white pine regen in the understory.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	2	Log	16	86
White Ash	8	Pole	8	86
Sugar Maple	90	Pole/Log	8	46

Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	Low	< 5 feet	Sapling
Ironwood	High	< 5 feet	Sapling
Red Pine	Low	< 5 feet	Sapling
Aspen (spp.)	Low	10 - 20 feet	Sapling
Balsam Fir	Medium	< 5 feet	Sapling
White Pine	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
7	42350 - Upland Hemlock	Sawtimber Medium	28.5	108	51-80	N/A	Stand was cut in 2014 on contract 024-14-01. All cedar and hemlock was retained. There was also some pine, spruce, and beech marked to retain. About half of the stand still has a very dense overstory, due to the retention of the hemlock and cedar. The open areas are filling in with aspen, balm, red maple, pine, and spruce regeneration.

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	5	Log	12	108
White Pine	10	XLog/Log	18	108
Hemlock	65	Log/XLog	16	108
Northern White Cedar	20	Log/Pole	10	108

Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	Low	< 5 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Quaking Aspen	Low	10 - 20 feet	Sapling
Balsam Poplar	Low	10 - 20 feet	Sapling
Red Maple	Low	< 5 feet	Sapling
Blackberry/Raspberry	High	< 5 feet	Tall Shrub
Balsam Fir	Low	< 5 feet	Sapling
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
8	6121 - Tamarack	Poletimber Well	90.9	82	51-80	N/A	Mature tamarack stand. This stand was on contract 024-14-01 to be seed tree cut, but it was not harvested and it was turned back. This sale is now on contract 33-038-19 to be seed tree cut. One of the four payment units was cut in 2019. The sale expires on 6/30/23.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	15	Pole/Log/Sap	8	112
Tamarack	78	Pole/Log/Sap	8	82
Paper Birch	2	Pole/Sap/Log	8	82
Black Spruce	5	Pole/Sap/Log	8	82

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
9	6120 - Lowland Cedar	Poletimber Well	15.9	104	81-110	N/A	Mixed cedar and lowland conifer stand.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	10	Pole/Log/Sap	9	104
Northern White Cedar	60	Pole/Log/Sap	9	104
Tamarack	25	Pole/Log/Sap	9	104
Paper Birch	5	Pole/Log	8	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
10	6120 - Lowland Cedar	Poletimber Well	71.2	104	51-80	N/A	Very low quality stand. All species have small diameters and are stunted for their age. Possibly delineate out some small patches of tamarack to cut next entry.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	55	Pole/Sapling	7	104
Black Spruce	10	Pole/Sapling	7	104
Tamarack	35	Pole/Sapling	6	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
11	42360 - Upland Cedar	Sawtimber Medium	20.2	108	Unspecified	N/A	This is an upland cedar stand that had the majority of the shorter lived species harvested in 2007. The more open areas within this stand will fill in with balsam fir, white spruce, and balm.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	2	XLog/Log	20	
Northern White Cedar	98	Log/Pole	12	108

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

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
12	6120 - Lowland Cedar	Poletimber Well	9.2	108	Unspecified	N/A	Very poor quality cedar stand.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	2	Log	10	
Black Spruce	2	Pole	7	
Northern White Cedar	88	Pole/Sapling	6	108
Tamarack	4	Pole	7	
Red Maple	2	Log/Pole	10	
White Pine	2	Log	14	

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
13	6121 - Tamarack	Sapling Well	69.7	82	1-50	N/A	This portion of a larger swamp tamarack stand has smaller diameter with minimal in the merchantable size class. The cedar dbh is slightly larger than the tamarack and black spruce. There are areas of cedar regeneration reaching 6' throughout this stand.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	25	Pole/Sapling	5	112
Black Spruce	5	Sapling	4	82
Tamarack	70	Sapling	4	82

Sub-Canopy Species	Density	Avg. Height	Size
Sphagnum Moss	High	Unspecified	Non-Wood
Labrador Tea	Low	< 5 feet	Tall Shrub
Black Spruce	Low	< 5 feet	Sapling
Northern White Cedar	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
14	6120 - Lowland Cedar	Poletimber Well	13.2	112	81-110	N/A	There is a drainage that flows along the west side of the stand into Oliver Lake. Slight higher elevation than stand to the west. The trees have bigger diameters and mostly good quality cedar. Upland cedar in northeast portion along the private property and has red maple topping the cedar.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	85	Pole	8	112
Tamarack	10	Pole	6	82
Black Spruce	5	Pole	7	82

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub
Balsam Fir	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
15	500 - Water	Nonstocked	1.3		Unspecified	No	North end of Oliver Lake. This portion of the lake is full, it was dry in 2011.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
16	4115 - Y.Birch, Hemlock NH	Sawtimber Well	11.3	90	111-140	N/A	Variable quality hardwood stand with some dense pockets of hemlock, primarily on the north end. The stand is ready to be thinned. The maple stems have lots of defect, due to previous porcupine damage. There is also a high percentage of ash in the stand. This percentage needs to be lowered, with the emerald ash borer in the adjacent stand. Most of the ash will die, if not harvested soon. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems.

Canopy Species	% Cover	Size Class	DBH	Age
White Ash	20	Log/Pole	10	90
Red Maple	10	Log/Pole/Sap	14	90
Hemlock	25	Log/Pole	14	108
Balsam Fir	2	Pole/Sap/Log	8	
Ironwood	6	Pole/Sapling	7	90
Beech	2	Pole/Log/Sap	9	90
Northern White Cedar	5	Log/Pole	13	108
Sugar Maple	30	Log/Pole/Sap	11	90

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
17	4319 - Mixed Upland Forest	Poletimber Medium	35.8	65	51-80	N/A	Multi aged stand, with older hemlock, pine, and cedar. Over mature hardwoods and spruce/fir, with younger balm. All species are very poor quality and should be harvested. The spruce/fir is dying out of the stand due to the spruce budworm. About 40% of the balsam fir has already died out. Emerald ash borer is present in the stand, so the ash needs to be harvested as well. The other species are also low quality and are ready to be harvested. By clearcutting this stand, the balm and hardwoods will sprout. And once the canopy is gone the sun will warm up the forest floor allowing the conifer seed to germinate and grow.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole/Log/Sap	9	90
Black Cherry	2	Pole/Sapling	5	28
Balsam Fir	30	Pole/Sap/Log	7	65
Balsam Poplar	25	Sapling/Pole	4	28
White Ash	5	Pole/Sap/Log	7	65
White Spruce	2	Pole/Sapling	7	65
Northern White Cedar	3	Log/Pole	14	108
White Pine	10	Log/Pole/Sap	15	108
Red Pine	3	Log/Pole/Sap	14	108
Hemlock	5	Log/Pole	14	108

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
18	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	165.0	112	51-80	N/A	Overall low quality conifer stand, with denser areas of each species. The majority of the stems have small diameters and heights.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	10	Pole/Sapling	5	112
Tamarack	45	Pole/Sapling	6	82
Black Spruce	45	Pole/Sapling	6	112

Sub-Canopy Species	Density	Avg. Height	Size
Black Spruce	Low	5 - 10 feet	Sapling
Tamarack	Low	5 - 10 feet	Sapling
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
19	4130 - Aspen	Sapling Well	27.0	15	Immature	N/A	Stand was clear cut in 2007 on contract 026-04-01.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	3	Sapling	2	
Ironwood	5	Sapling/Pole	3	
White Spruce	2	Sapling	3	
Black Cherry	2	Sapling	2	
Quaking Aspen	78	Sapling	3	15
White Ash	10	Sapling/Pole	3	40

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	10 - 20 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
20	4110 - Sugar Maple Association	Sawtimber Well	46.8	96	51-80	N/A	Stand was thinned in 2014 on contract 025-14-01. There was 72 residual BA. All aspen, balm, and balsam fir were cut. Good quality hardwood stand.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	60	Log/Pole	10	96
White Ash	14	Log/Pole	10	
Paper Birch	2	Pole	9	
Basswood	20	Log/Pole	10	
Hemlock	2	XLog	18	
Ironwood	2	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
21	4134 - Aspen, Spruce/Fir	Sawtimber Well	15.7	50	51-80	N/A	Poor quality aspen/hardwood stand. Trace amount of ash, balm, birch, beech and red maple.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Log	16	108
Hemlock	5	XLog	18	108
White Spruce	10	Log	10	
Bigtooth Aspen	5	Log	12	
Sugar Maple	10	Pole	6	
Black Cherry	5	Pole/Sapling	6	
Balsam Fir	10	Pole	8	
Quaking Aspen	50	Log	12	50

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling
White Ash	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
22	4110 - Sugar Maple Association	Poletimber Well	11.8	32	Immature	N/A	The maple pole portion of the adjacent mature aspen stand was delineated out to form this stand. Some mature aspen but the majority is small maple. Trace amounts of ash, balm, balsam, cherry, ironwood, pine, and spruce

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	75	Pole	6	32
Red Maple	5	Sapling	4	
Quaking Aspen	5	Log	12	50
Basswood	5	Pole	6	
Hemlock	5	XLog	20	108
Paper Birch	5	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
White Ash	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
23	4110 - Sugar Maple Association	Sawtimber Well	17.4	86	111-140	N/A	Good quality hardwood stand, that is in need of a thinning. The emerald ash borer is present in the stand. There is no mortality yet, but there is plenty of fleck on the trees, from wood peckers feeding on the larvae. If the ash is not harvested soon, much of it will die out in a couple of years. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems. The stand was previously thinned in 2009 on contract 026-04-01.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	2	Pole	9	
Balsam Fir	2	Pole	7	
White Ash	20	Pole	9	
Basswood	10	Pole/Log	9	
Sugar Maple	66	Pole	9	86

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
24	4110 - Sugar Maple Association	Poletimber Medium	4.7	96	51-80	N/A	Stand was thinned in 2016 on contract 025-14-01. Good quality sugar maple stand.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	90	Pole	9	96
Basswood	10	Log	10	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
25	4136 - Aspen, Mixed Conifer	Sapling Well	51.9	7	Immature	N/A	Stand was clearcut in 2015 on contract 025-14-01. The cedar, hemlock, and pine was retained. trace birch cherry maple and balm

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	75	Sapling	2	7
Balsam Fir	15	Sapling	2	
White Pine	5	XLog	22	
Black Cherry	5	Sapling	2	

26	4130 - Aspen	Poletimber Well	16.4	34	1-50	N/A	Aspen with conifer understory. trace of ash balm birch maple and red pine

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	5	Sapling/Pole	2	
White Pine	5	Log/XLog	15	108
Bigtooth Aspen	10	Pole	8	
Quaking Aspen	80	Pole/Sapling	6	34

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	5 - 10 feet	Sapling
Ironwood	Low	10 - 20 feet	Sapling
White Pine	Medium	Variable	Sapling

27	6121 - Tamarack	Sapling Well	13.6	34	1-50	N/A	Fully stocked lowland tamarack stand, with an upland ridge with red pine and aspen.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Pole/Sapling	5	34
Black Spruce	10	Sapling/Pole	4	34
Balsam Fir	5	Sapling/Pole	4	34
Red Pine	10	Sapling/Pole	4	34
Tamarack	65	Sapling/Pole	4	34
White Pine	5	Sapling/Pole	4	34

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	Variable	Tall Shrub

28	4130 - Aspen	Sapling Well	42.4	4	Immature	N/A	Stand was clearcut on contract 33-042-17 in 2018. The hemlock and cedar was retained, along with a retention patch of denser hemlock and hardwood on the east end. The stand is regenerating well with aspen. This treatment was added as part of the 2016 SBW review.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	15	Sapling	1	
Bigtooth Aspen	25	Sapling	1	4
Quaking Aspen	45	Sapling	1	4
Northern White Cedar	5	Log	10	
Red Maple	5	Sapling	1	
Hemlock	5	Log	14	112

29	6122 - Black Spruce	Poletimber Medium	68.0	96	1-50	N/A	This stand is slightly better than a treed bog. This stand might never have enough merchantable volume to manage.

Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	5	Pole/Sapling	5	82
Black Spruce	95	Pole/Sapling	5	96

Sub-Canopy Species	Density	Avg. Height	Size
Tamarack	Low	5 - 10 feet	Sapling
Black Spruce	Medium	5 - 10 feet	Sapling
Labrador Tea	High	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
30	4119 - Mixed Northern Hardwoods	Sawtimber Well	2.5	98	111-140	N/A	Small northern hardwood stand, that is ready to be thinned. The birch is dying out of the stand. The thinning will remove the low quality and mature trees. This will improve the growth of the residual stems.

Canopy Species	% Cover	Size Class	DBH	Age
Hemlock	10	Log	14	112
Sugar Maple	45	Log	14	98
Red Maple	25	Pole	8	
Northern White Cedar	5	Log	10	
Paper Birch	15	Log	10	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
31	6120 - Lowland Cedar	Poletimber Well	87.1	106	81-110	N/A	Mature lowland conifer stand, with denser areas of each species. The 47 Mile Creek flows through the southern half of the stand.

Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	25	Pole/Log/Sap	9	106
Paper Birch	5	Pole/Log/Sap	8	106
Northern White Cedar	55	Pole/Log/Sap	8	106
Black Spruce	15	Pole/Log/Sap	9	106

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
32	42360 - Upland Cedar	Poletimber Well	9.8	106	141-170	N/A	Fully stocked good quality cedar stand. The majority of the stand is upland. The 47 Mile Creek flows through this stand.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	5	Pole/Log	8	106
Northern White Cedar	75	Pole/Log/Sap	8	106
Black Spruce	10	Pole/Log/Sap	8	106
Tamarack	10	Pole/Log/Sap	9	106

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
33	6121 - Tamarack	Poletimber Well	31.5	106	51-80	N/A	Mature tamarack stand, except on the northern end there is a dense area of black spruce. Most of the stand doesn't have much cedar, except along the southern and eastern edges. Most of the cedar in the stand is low quality, except along the transition zones. This stand will be clearcut, except for the cedar. By removing the overstory, the sunlight will reach the forest floor helping the conifer seed to germinate. The residual cedar will continue to provide seed after the stand is harvested.

Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	65	Pole/Sap/Log	8	106
Paper Birch	3	Pole/Log	9	106
Black Spruce	12	Pole/Log/Sap	9	106
Northern White Cedar	20	Pole/Log/Sap	8	106

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
34	6229 - Mixed lowland shrub	Nonstocked	4.7		Unspecified	No	Lowland brush stand.

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Low	>20 feet	Pole

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
35	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	8.1	89	1-50	N/A	Low quality lowland hardwood stand, with the 47 Mile Creek flowing through it.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Poplar	15	Pole/Sapling	6	58
Northern White Cedar	10	Pole	8	89
Balsam Fir	15	Pole/Sapling	6	58
Black Spruce	5	Log/Pole	10	89
Paper Birch	10	Pole/Sap/Log	8	89
Black Ash	35	Pole/Sap/Log	8	89
Quaking Aspen	10	Pole/Sapling	6	58

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	4319 - Mixed Upland Forest	Poletimber Medium	11.8	44	51-80	N/A	Two aged stand. Younger aspen with older spruce/fir, that is being heavily defoliated by the spruce budworm. About one third of the balsam fir has already died. The stand needs to be harvested, to prevent anymore mortality. Clearcutting this stand will allow the aspen to sprout and the conifer seed on the forest floor will also germinate, once the canopy is removed.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	30	Pole/Sap/Log	8	63
White Pine	3	Log/Pole/Sap	14	89
Black Cherry	2	Pole/Sapling	5	44
White Spruce	15	Pole/Sap/Log	8	63
Quaking Aspen	50	Pole/Sap/Log	8	44

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
37	4110 - Sugar Maple Association	Sawtimber Medium	7.8	96	51-80	N/A	Stand was thinned in 2016 on contract 025-14-01. All of the aspen, balm, and balsam fir was cut. There was 76 BA of residual. Decent quality sugar maple stand, that contains some rolling terrain.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	5	Log	10	
Basswood	10	Log/Pole	12	
Sugar Maple	85	Log/Pole	10	96

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	5 - 10 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
38	4130 - Aspen	Poletimber Well	23.0	44	51-80	N/A	Lower quality aspen stand, with some older spruce/fir and pine. The spruce budworm has caused a significant amount of spruce/fir defoliation, with some mortality occurring.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Pole/Sapling	5	
Balsam Poplar	10	Pole	6	
White Pine	5	Pole/Sapling	5	
Quaking Aspen	75	Pole	8	44

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	5 - 10 feet	Sapling
Balsam Fir	Medium	Variable	Sapling
Black Cherry	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
39	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	25.6	107	81-110	N/A	Mature mixed lowland conifer stand. The tamarack is being killed by the eastern larch beetle. This stand needs to be harvested prior to all of the tamarack dying out of the stand. A small portion of this stand was cut in the winter of 2007-2008 on contract 022-04-01. All species were cut except cedar and some seed trees. The remainder of the stand was turned back un-completed. In the area that was harvested, tamarack and cedar has regenerated very well. There are some cedar seedlings almost two feet tall. This would be a good chance to continue experimenting with getting cedar regeneration. In the area harvested, there was about 20 basal area of cedar retained along with some tamarack seed trees. Continue this type of harvest throughout the rest of the stand, to regenerate cedar and other lowland conifers.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	13	Pole/Log/Sap	9	107
Tamarack	40	Pole/Log/Sap	9	107
Paper Birch	5	Pole/Log/Sap	8	107
Black Ash	2	Pole/Sapling	7	107
Northern White Cedar	40	Pole/Log/Sap	8	107

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Poplar	Low	10 - 20 feet	Sapling
Willow spp.	Low	10 - 20 feet	Sapling
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
40	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	8.6	104	81-110	N/A	Mixed lowland hardwood and cedar stand. The stand is in need of a harvest, but the 47 Mile Creek flows through the center of the stand and this stand provides a buffer along the creek.

Canopy Species	% Cover	Size Class	DBH	Age
Black Ash	25	Pole/Log/Sap	8	104
Tamarack	15	Log/Pole/Sap	10	104
Black Spruce	5	Pole/Log/Sap	9	104
Northern White Cedar	40	Pole/Log	9	104
Paper Birch	15	Pole/Log	9	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
41	6120 - Lowland Cedar	Poletimber Well	64.0	104	111-140	N/A	Poor quality cedar and lowland conifer stand. The 47 Mile Creek flows through the center of the stand.

Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	10	Pole/Sap/Log	8	104
Black Ash	5	Pole/Sapling	7	104
Northern White Cedar	80	Pole/Sap/Log	7	104
Black Spruce	5	Pole/Sap/Log	8	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
42	6121 - Tamarack	Poletimber Poor	16.2	16	1-50	N/A	Stand was clearcut in the winter of 2006-07 on contract 022-04-01. All of the cedar was retained along with some seed trees. There was about 20 basal area of cedar retained, but about half of the cedar has already died out. Tamarack and cedar is regenerating very well in this stand. The cedar seedlings range from 4" to 18" in height.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	20	Pole/Sapling	7	137
Tamarack	65	Sapling	1	16
Black Spruce	8	Sapling	1	16
Balsam Fir	2	Sapling	1	16
Balsam Poplar	5	Sapling	2	16

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub
Dogwood (spp.)	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
43	4136 - Aspen, Mixed Conifer	Poletimber Well	64.4	31	51-80	N/A	Moderate quality aspen stand, with some isolated pockets of older pine, hemlock and cedar.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Sapling/Pole	3	31
White Pine	2	Log/Pole/Sap	15	106
Northern White Cedar	2	Pole/Log	9	106
White Spruce	4	Sapling/Pole	3	31
Quaking Aspen	78	Pole/Sapling	5	31
Hemlock	2	Log/Pole	10	106
White Ash	2	Sapling	3	31

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	10 - 20 feet	Sapling
Blackberry/Raspberry	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
44	6121 - Tamarack	Sapling Medium	17.3	15	1-50	N/A	This stand was clearcut in the winter of 2006-07 on contract 022-04-01. All species were cut, except cedar and some seed trees. There was 30 to 50 basal area of cedar retained, but about half of the cedar has already died out. Tamarack and cedar are regenerating very well in this stand. The cedar seedlings range from 4" to 12" in height.

Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	70	Sapling/Pole	1	15
Balsam Fir	2	Sapling	1	15
Northern White Cedar	20	Pole/Log	7	137
Black Spruce	8	Sapling	1	15

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	Variable	Tall Shrub
Willow spp.	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
45	4319 - Mixed Upland Forest	Poletimber Well	36.3	31	51-80	N/A	Two aged aspen and spruce/fir stand. The spruce/fir is mature and is dying out of the stand, due to the spruce budworm. About a third of the balsam fir has already died out of the stand. The stand should be harvested to limit the amount of mortality. Clearcutting the stand will allow the aspen to sprout regenerating the stand. The conifer seed on the forest floor will also germinate, once the canopy is removed.

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	20	Pole/Sap/Log	8	61
Black Cherry	3	Pole/Sapling	6	31
White Pine	2	Log/Pole/Sap	11	89
Balsam Fir	30	Pole/Sap/Log	8	61
Quaking Aspen	45	Pole/Sapling	6	31

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	10 - 20 feet	Sapling
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
46	4319 - Mixed Upland Forest	Sapling Well	13.0	31	Immature	N/A	Mixed upland aspen and lowland tamarack and balm. Both ends of the stand are upland aspen and the central part of the stand is lower with more tamarack and balm.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	45	Sapling/Pole	4	31
Balsam Poplar	10	Sapling/Pole	3	31
White Spruce	8	Sapling/Pole	2	31
White Ash	2	Sapling/Pole	3	31
Balsam Fir	15	Sapling/Pole	3	31
Tamarack	20	Sapling/Pole	3	31

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	5 - 10 feet	Tall Shrub
Black Cherry	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
47	4130 - Aspen	Sapling Well	41.6	7	Immature	N/A	Fully stocked aspen stand. The stand was clearcut in 2015 on contract 025-14-01. The cedar, hemlock, and pine was retained. The deer have heavily browsed and killed the majority of the hardwood stump sprouts from the harvest.

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	3	Sapling	1	7
Black Cherry	15	Sapling	1	7
Red Maple	2	Sapling	1	7
Bigtooth Aspen	45	Sapling	2	7
White Ash	3	Sapling	1	7
Quaking Aspen	25	Sapling	2	7
Beech	2	Sapling	1	7
Balsam Fir	5	Sapling	1	7

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
48	4136 - Aspen, Mixed Conifer	Sapling Well	27.4	16	Immature	N/A	Fully stocked good quality aspen stand. The stand was clearcut in 2006 and 2008 on contract 030-04-01. The deer have heavily browsed and killed the majority of hardwood stump sprouts following the harvest. There were areas without regeneration, due to the browsing, but they are now filling in with tamarack and balsam fir.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	10	Sapling	2	16
Balsam Fir	10	Sapling	1	16
White Ash	2	Sapling	1	16
Ironwood	6	Sapling	1	16
Beech	2	Sapling	1	16
Quaking Aspen	15	Sapling	2	16
Bigtooth Aspen	45	Sapling	2	16
Tamarack	10	Sapling	2	16

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
49	6121 - Tamarack	Sapling Medium	20.2	15	1-50	N/A	Stand is regenerating well with tamarack. There are also some cedar seedlings scattered throughout as well. This stand was clearcut between 2006 and 2008 on contract 030-04-01. There are some residual cedar and also some tamarack seed trees.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	5	Sapling	1	15
Balsam Poplar	5	Sapling	1	15
Tamarack	75	Sapling/Pole	1	15
Northern White Cedar	15	Pole/Log/Sap	7	106

Sub-Canopy Species	Density	Avg. Height	Size
Willow spp.	Low	5 - 10 feet	Sapling
Tag Alder	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
50	6121 - Tamarack	Poletimber Well	5.0	104	51-80	N/A	Mature tamarack stand, that is ready to be harvested. The eastern larch beetle has already caused some tamarack mortality along the edges of the stand. By removing the overstory, the sunlight will reach the forest floor helping the conifer seed to germinate.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	5	Pole/Log	9	104
Black Spruce	5	Pole/Sap/Log	8	104
Northern White Cedar	15	Pole/Log	8	104
Tamarack	75	Pole/Log/Sap	8	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	High	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
51	6120 - Lowland Cedar	Poletimber Well	35.5	106	51-80	N/A	Very poor quality cedar stand, except along the transition zones with stands 48 and 52.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	2	Pole/Log	9	106
Northern White Cedar	80	Pole/Log	9	106
Tamarack	18	Pole/Sap/Log	8	106

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	High	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
52	4110 - Sugar Maple Association	Sawtimber Well	99.8	92	111-140	N/A	Good quality hardwood stand, that is ready to be thinned. This stand was last thinned in 2005-06 on contract 030-04-01. The emerald ash borer is present and has caused some ash mortality. The beech scale is also present, but no beech mortality has occurred yet. The thinning will remove the ash, along with the low quality and mature trees. This will improve the growth of the residual stems.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	5	Log/Pole	10	92
Beech	5	Log/Pole/Sap	11	92
White Pine	2	Log/XLog/Pole	16	92
Red Maple	6	Log/Pole	10	92
Hemlock	2	Log/Pole	12	92
Basswood	15	Log/Pole	14	92
White Ash	15	Log/Pole/Sap	12	92
Sugar Maple	50	Log/Pole	12	92

Sub-Canopy Species	Density	Avg. Height	Size
Bigtooth Aspen	Low	>20 feet	Sapling
White Spruce	Low	5 - 10 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
53	6122 - Black Spruce	Sapling Poor	2.9	8	Immature	N/A	This stand is regenerating with a mix of conifer species. Over time the stand will continue to fill in. The majority of the hardwood stump sprouts from the harvest, have been heavily browsed and killed by deer. The stand was clearcut in 2014 on contract 035-09-01.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	55	Sapling	1	8
Balsam Fir	25	Sapling	1	8
Balsam Poplar	13	Sapling	1	8
Northern White Cedar	5	Pole/Log	9	106
White Pine	2	Sapling	1	8

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub
Willow spp.	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
54	4139 - Aspen, Mixed Deciduous	Sapling Well	9.6	17	1-50	N/A	Fully stocked stand, heavy to aspen. This stand was clearcut in 2005 on contract 030-04-01. Some mature ash, maple, cedar, spruce, and basswood were retained.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	5	Sapling	2	17
Northern White Cedar	5	Log/Pole	10	106
Ironwood	7	Sapling	1	17
Black Cherry	10	Sapling	2	17
White Ash	10	Sapling	1	17
Quaking Aspen	45	Sapling	2	17
Balsam Fir	5	Sapling/Pole	2	
White Spruce	3	Sapling	2	17
Balsam Poplar	10	Sapling	2	17

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub
Tag Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
55	6122 - Black Spruce	Sapling Well	11.9	8	Immature	N/A	This stand is regenerating with a mix of conifer species, including cedar. Over time the stand will continue to fill in. The majority of the hardwood stump sprouts from the harvest, have been heavily browsed and killed by deer. The stand was clearcut in 2014 on contract 035-09-01.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	50	Sapling	1	8
Northern White Cedar	5	Log/Pole	10	106
White Pine	5	Sapling	1	8
Black Spruce	10	Log	12	106
Balsam Fir	5	Sapling	1	8
Tamarack	15	Sapling	1	8
Balsam Poplar	10	Sapling	1	8

Sub-Canopy Species	Density	Avg. Height	Size
Willow spp.	Low	5 - 10 feet	Sapling
Northern White Cedar	Low	< 5 feet	Sapling
Tag Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
56	4130 - Aspen	Sapling Well	11.1	17	Immature	N/A	Fully stocked good quality aspen stand. This stand was clearcut in 2005 on contract 030-04-01.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Sapling	1	17
Beech	5	Sapling	1	17
White Ash	5	Sapling	1	17
Black Cherry	15	Sapling	2	17
Bigtooth Aspen	65	Sapling	2	17

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
57	6121 - Tamarack	Sawtimber Well	12.8	104	141-170	N/A	Mature high quality tamarack and black spruce stand, that is ready to be harvested. Most of the cedar is low quality within the stand, except along the transition zones. The eastern larch beetle is causing some tamarack mortality around the perimeter of the stand. If the tamarack is not harvested soon, most of it will die in the next few years. By removing the overstory, the sunlight will reach the forest floor allowing the conifer seed to germinate. Recent harvests in these lowland conifer stands have regenerated well, including cedar.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	25	Pole/Log/Sap	7	104
Tamarack	55	Log/Pole/Sap	10	104
Paper Birch	5	Pole/Log	9	104
Black Spruce	15	Log/Pole/Sap	10	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
58	6120 - Lowland Cedar	Sawtimber Well	64.6	104	141-170	N/A	Good quality cedar stand, with some mature birch, spruce, and balm mixed in. There is a small creek that flows through the center of this stand, the percentage of birch is higher near the creek.

Canopy Species	% Cover	Size Class	DBH	Age
Black Ash	5	Pole/Log	8	104
Balsam Poplar	10	Log/Pole	12	104
Black Spruce	5	Log/Pole/Sap	11	104
Northern White Cedar	60	Log/Pole	12	104
Paper Birch	20	Log/Pole	10	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
59	4119 - Mixed Northern Hardwoods	Sawtimber Well	5.9	92	141-170	N/A	Moderate to low quality hardwood stand, that is ready to be thinned. This stand was last thinned in 2006 on contract 025-04-01. The thinning will remove the low quality and mature trees. This will improve the growth of the residual stems.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Log	16	92
Hemlock	15	Log/XLog	14	92
Sugar Maple	50	Log/Pole	10	92
Basswood	10	Log/Pole	12	92
Red Maple	20	Log/Pole	10	92

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling
White Spruce	Medium	< 5 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Ironwood	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
60	4136 - Aspen, Mixed Conifer	Sapling Well	31.9	16	Immature	N/A	Fully stocked aspen, balm, and black cherry stand, with a mix of upland conifers. Stand was clearcut in 2006 on contract 025-04-01. The cedar, hemlock, and pine was retained, but most have died or blown over. Deer browsed and killed the majority of the hardwood stump sprouts following the harvest.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Sapling	1	16
Balsam Poplar	15	Sapling	2	16
Black Cherry	15	Sapling	2	16
White Spruce	5	Sapling	1	16
White Pine	5	Sapling	1	16
Quaking Aspen	50	Sapling	2	16

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
61	4130 - Aspen	Sapling Well	20.3	29	51-80	N/A	Fully stocked aspen stand, with some older spruce/fir mixed in.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Pole/Sapling	5	29
Balsam Poplar	10	Pole/Sapling	5	29
White Spruce	5	Pole/Sapling	6	45
Ironwood	5	Sapling/Pole	4	29
Black Cherry	5	Sapling/Pole	3	29
White Ash	5	Sapling/Pole	3	29
Balsam Fir	10	Pole/Sapling	6	45

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
62	4319 - Mixed Upland Forest	Sapling Well	33.9	23	1-50	N/A	Two aged stand, with mature cedar, hemlock, and pine over a fully stocked understory of aspen, balm, and spruce/fir. The spruce budworm is defoliating the spruce/fir, but there isn't enough volume to harvest at this time. The deer have heavily browsed and killed the majority of the hardwood stump sprouts following the harvest.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Poplar	20	Sapling/Pole	3	23
Northern White Cedar	5	Log/Pole	12	104
White Spruce	10	Sapling/Pole	3	23
Hemlock	15	Log/Pole	13	104
Balsam Fir	15	Sapling/Pole	3	23
Sugar Maple	2	Pole/Log	8	104
White Pine	2	Log/XLog	16	104
Quaking Aspen	20	Sapling/Pole	3	23
White Pine	3	Sapling	1	23
Black Cherry	8	Sapling	2	23

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	5 - 10 feet	Sapling
White Ash	Low	5 - 10 feet	Sapling
Blackberry/Raspberry	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
63	4110 - Sugar Maple Association	Poletimber Well	18.4	92	111-140	N/A	High quality sugar maple stand, that is ready to be thinned. This stand was last thinned in 2006 on contract 025-04-01. The thinning will remove the lower quality and mature stems, improving the growth of the residual trees.

Canopy Species	% Cover	Size Class	DBH	Age
White Ash	2	Log/Pole/Sap	10	92
White Pine	2	Log/XLog	17	92
Hemlock	3	Log/Pole	13	92
Basswood	13	Log/Pole	14	92
Sugar Maple	80	Log/Pole	11	92

Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	Low	< 5 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Balsam Fir	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
64	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	27.2	104	141-170	N/A	High quality mixed lowland stand, with cedar, white birch, black spruce, and balm. All of the shorter lived species are mature and ready to be harvested. Some of the species are already dying out of the stand. There is a small creek that flows through the center of the stand, this will have a narrow buffer retained along it. The open areas of the stand, following the harvest will regenerate with balm, spruce, birch, and cedar.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Poplar	15	Log/Pole	12	104
Black Spruce	20	Log/Pole/Sap	12	104
Northern White Cedar	38	Log/Pole	12	104
Black Ash	5	Pole/Sap/Log	8	104
Paper Birch	20	Log/Pole	11	104

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
65	42350 - Upland Hemlock	Sawtimber Medium	8.7	119	51-80	N/A	Stand was cut in 2021 on contract 33-011-17, with a sale in comp 71. All cedar and hemlock was retained, along with some pine seed trees. The residual basal area varies from 0 to 150, but averages 70. All of the hardwood stump sprouts have been browsed and killed by deer. The stand will regenerate with pine and spruce/fir over time. This stand was previously thinned on contract 022-97-01 with a larger sale in comp 71.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	15	Log/Pole	12	119
White Pine	15	Log/XLog/Pole	17	119
Hemlock	70	Log/Pole/XLog	14	119

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	< 5 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
66	429 - Mixed Upland Conifers	Sapling Well	8.2	27	1-50	N/A	Mixed low quality aspen, balm, and spruce/fir stand. There are some residual mature hemlock, cedar, and white pine. The spruce/fir is uneven aged and has some spruce budworm defoliation, but there isn't enough volume to harvest at this time. This stand was cut on contract 045-94-01.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Sapling/Pole/Log	4	27
Hemlock	10	Log/Pole	14	109
Sugar Maple	5	Pole/Sap/Log	8	70
Balsam Fir	20	Sapling/Pole	4	27
Balsam Poplar	10	Sapling/Pole	3	27
Black Cherry	5	Sapling/Pole	3	27
Northern White Cedar	10	Log/Pole	12	109
Quaking Aspen	20	Sapling/Pole	3	27
White Spruce	15	Sapling/Pole	4	27

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	5 - 10 feet	Sapling
Blackberry/Raspberry	Low	5 - 10 feet	Tall Shrub