

**2021-2022 Freehold
Annual Report**

Report prepared by:
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Woodlands



Version 1.0
August 2022

1.0 General

This annual report covers all activities that occurred on AV Group (AVG) Freehold from April 1, 2021 to March 31, 2022.

The AVG Woodlands group did the entirety of the management of the Freehold lands.

2.0 Roads and Watercourses

The following section summarizes road and watercourse crossing activities.

2.1 Construction

Table 1. Summary of roads constructed on AVG Freehold by road type and length during the operating year.

Road Type	Meters Built
Forest (F1-3)	0
Logging (F4)	4,539
Winter (F10)	0

2.2 Area Lost to Roads

Table 2. Area lost to roads on AVG Freehold during the operating year.

Cut block area (ha)	Total length of new roads built (m)	Average ROW width (m)	Area lost to new roads built (ha)	% area lost versus cut blocks
505	4,539	20	9.1	2%

2.3 Maintenance

There were a number of road repair projects completed during the operating season. These are all tracked in the road maintenance application and a copy of completed work is in the annual report folder.

2.4 Watercourse Crossings

There were no temp crossing installed or removed in 2021-22. There was 1 new stream crossings installed and 17 cross drains installed.

3.0 Harvest

Ninety-two percent of the AAC was harvested this operating season. Hardwood AAC was undercut by 10%, softwood was under harvested almost right on. Table 3 shows the individual species AAC's on and cut levels on Freehold. Table 4 shows the total volume harvested volumes by species determined in the management plan. This is compared to the cumulative AAC for that time period to depict the harvest trend for Freehold harvest. Table 5 shows a summary blocks operated, area treated and average block size by prescriptions used.

Table 3. Harvested volumes measured against 2021-2032 management plan levels.

	Hardwood	Softwood	Cedar	Pine	Hemlock	Biomass	Total
AAC (m ³)	50,114	36,658	3,226	750	1,294	0	92,042
Harvest (m ³)	45,345	36,666	2,192	256	304	0	84,763
Harvest versus AAC	90%	100%	51%	34%	23%	0	92%

Table 4. Period Cumulative harvest versus AAC 2021-2032

Species	AAC	Delivered	Variance m3	% of AAC
HW	50,114	45,345	-4,769	90%
SPFJ	36,658	36,666	+8	100%
EC	3,226	2,192	-1,034	51%
WP & RP	750	256	-494	34%
HE	1,294	304	-990	23%

Table 5. Average block size for area harvested on AVN Freehold during the operating year.

Treatment Type	Area (hectares)	Average size (hectares)	# of Blocks
Variable Retention	382	26	15
Tolerant Hardwood Two Age Class	123	41	3
Shelterwood	0	0	0

Table 6, AAC versus harvest group.

	SPRUCE/FIR/JP		Hardwood		Pine		Cedar		Hemlock	
	Allocation (m3)	Actual (m3)	Allocation (m3)	Actual (m3)	Allocation (m3)	Actual (m3)	Allocation (m3)	Actual (m3)	Allocation (m3)	Actual (m3)
2021-22 Gen	31,373	36,064	45,180	44,813	587	256	1,324	1,926	838	304
2021-22 Buf	2,171	602	2,127	532	94	0	1,099	266	167	0
2021-22 CA	1,587	0	1,555	0	69	0	1,902	0	289	0
2021-22 NFH	1,527	incl. Genfor	1,252	incl. Genfor	0	0	0		0	0
	36,658	36,666	50,114	45,345	750	256	4,325	2,192	1,294	304

4.0 Silviculture

4.1 Silviculture Activities

Table 6 provides a high-level summary of all silviculture activities on Freehold over the past operating year versus that of the previous management plan. All records of silviculture operations are updated and maintained in the GIS ‘master forest’ shapefile.

Table 6. Silviculture area by treatment type versus 2021-2032 management plan levels on Freehold during the (2021-2022) operating year.

Silviculture Treatment Type	Area Treated (ha)	Silviculture Target Levels (ha)	2021-2032 area treated (ha)	2021-2032 target levels (ha)
Pre-commercial Thinning	209	200	209	200
Full Planting	0	50	0	50
Scarification	0	50	0	50
Full Plantation Cleaning	0	0	0	0

5.0 Fish and Wildlife

There were no additions or subtractions to the Freehold number this year.

6.0 Public Values

During the 2021-2022 operating season we had less opportunities for public involvement due to COVID. These include; but are not limited to:

- Snowmobile Club in October
- Skiff Lake Camp Committee Spring 2021
- DTI multiple visits.
- SNB annual meeting
- Risk assessment group for herbicide
- Maguadavic lake association
- McAdam City for well site and road usage
- NB ATV federation
- SENB annual meeting
- Northumberland annual meeting
- YSC annual meeting
- Protected Natural Areas committee meeting.

7.0. FSC Monitoring Table

1) Poor Regeneration

a) Regeneration assessment

- i) There were not regeneration issues recorded for the 2021-22 harvest. This is recorded in the 'Regen Assessment' excel workbook.

b) Budworm resistant species planted where possible (Tree improved WS, and JP)

c) Pecking order adjusted in PCT to favor species that will do better with climate change data.

2) Invasive Species

- a) Japanese Larch was planted 30+ years ago in some trials. These trees were sterile when planted, regen assessments conducted in 2021 confirmed they are not seeding or spreading in any other way.

3) Fertilizers

- a) No fertilizers were used on Freehold in 2021

4) Herbicide

- a) Healthy Forest Partnership does over 1,000+ plots per year to zone in to areas where budworm are at a level that need to be treated. All herbicide blocks are visually inspected to ensure they require treatment.
 - i) Budworm will only be treated where L2 counts > 11 per branch are found
 - ii) Herbicide blocks will only be treated when planted trees are overtopped partially or completely by hardwood or non-woody vegetation.
 - iii) HFP did trials on using pheromones over chemicals. For Vegetation management AVG did some manual spacing trials that were not cost effective or ecologically effective.
 - iv) Prohibited pesticides are not used in NB

5) Non-Timber Forest Products

- a) Maple syrup production occurs on a small acreage in the Freehold, in 2021 x 20,400 of sap were boiled to produce maple syrup.

6) Plantation Assessments: Nothing planted in 2020 or 2021 for assessment.

- 7) Free to Grow (year 10 plantation assessments): 2021 had one plantation to assess, 3085092, which is 59.5 ha in size. The block had already been cleaned early because it had poor herbicide results.

ANNEX C:

Aerial Herbicide Tending Project Plan

Block treated	Area	Product used	Date treated	Effectiveness	Comments
318K213	53.24	Glyphosate	September 2021		Poor results from herbicide, many trees still alive, no drift seen

Regeneration site assessments:

No sites with poor regeneration were found. The Regen Assessment excel table keeps records of blocks visited.