



# 2022 Major Timber Processing Facilities in British Columbia

Ministry of Forests





This edition of the *Major Primary Timber Processing Facilities in British Columbia* report summarizes the activity of timber processing facilities operating in 2022. It covers lumber mills, veneer/plywood/oriented strand board/panel mills, pulp/paper mills, chip mills, pellet mills, shake and shingle mills, utility pole/pole/post mills and log home mills. For those firms producing more than one product, each product is listed in the corresponding section of this report. However, information about secondary manufacturing facilities (e.g., remanufacturing or millwork) operating in the province is beyond the scope of this report.

Information contained in this report was gathered through the 2022 and earlier surveys of individual processing facilities. If survey responses were not provided, staff of the Ministry of Forests might use trade publications and corporate annual reports to make estimates. In some cases, Ministry staff provided estimates based on their knowledge of operations and information reported in previous years, as well as production information for selected forest products from Statistics Canada.

This report has been developed by the Economics and Trade Branch with the cooperation of mill representatives and industry associations that provided data and support for the B.C. Mill List survey.

This report is available online at:

<u>https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey</u>

Please note that any comments or corrections could be sent to <u>Mill.Survey@gov.bc.ca</u> or by mail to the following location:

Economics and Trade Branch Ministry of Forests PO Box 9514, STN PROV GOVT 3<sup>rd</sup> Floor, 545 Superior Street Victoria BC V8V 1T7

This report acknowledges that its development and writing was done with respect on the territorial lands of the ləkwəŋən, Songhees and Esquimalt peoples whose historical relationships with the land continue to this day.





## Contents

Foreword	
List of Figures	
List of Tables	3
Key Definitions and Abbreviations	4
Key Definitions	
Abbreviations for Products	4
Introduction	5
Provincial Log Supply and Demand	5
Log Supply	
Log Demand	
Product Recovery from Lumber Mills	7
Fibre Used by Pulp, Pellet, and Panel Mills	
Provincial Chip Supply and Demand	9
Chip Supply and Demand on the Coast	
Chip Supply and Demand in the South	
Chip Supply and Demand in the North	
Provincial Forest Sector Investments	
New Trends in the Forest Sector	
Engineered Wood Products	13
Forest Bioproducts	
Industry Analysis	14
Lumber Industry	14
Industry Overview	
Mill Summary Statistics	
Veneer and Plywood Industry	
Industry Overview	
Mill Summary Statistics	
Pulp and Paper Industry	
Industry Overview	
Mill Summary Statistics	
Pellet Industry	
Industry Overview	
Mill Summary Statistics	
Shake and Shingle Industry	
Industry Overview	
Mill Summary Statistics	
Appendix	
Lumber Mills	
Pulp and Paper Mills	
Veneer, Plywood, OSB, and Other Panel Mills	
Chip Mills	
Pellet Mills	
Pole, Utility Pole, and Post Mills	
Shake and Shingle Mills	
Log Home Mills	59





# List of Figures

Figure 1: Total Primary Log Use – 51 million m <sup>3</sup> - 2022	6
Figure 2: Estimated Product Recovery from Lumber Mills – 2022	8
Figure 3: Fibre Flows Among Primary Timber Processing Facilities in B.C. – 2022	9
Figure 4: Provincial Chip Supply and Demand – 2018 to 2022	10
Figure 5: Coast Lumber Mills (at least 40 Million Board Feet) Capacity, Output, and Log Input	21
Figure 6: Interior Lumber Mills (at Least 40 Million Board Feet) Capacity, Output, and Log Input	21
Figure 7: B.C. Lumber Mills (at Least 40 Million Board Feet) Number of Mills and Average Capacity	22
Figure 8: B.C. Lumber Mills (at Least 40 Million Board Feet) Capacity Utilization	22
Figure 9: B.C. Lumber Mills (at Least 40 Million Board Feet) Lumber Recovery Factor	23
Figure 10: B.C. Veneer Mills Capacity, Output, and Log Input	26
Figure 11: B.C. Veneer Mills - Number of Mills and Average Capacity	26
Figure 12: B.C. Veneer Mills Capacity Utilization	
Figure 13: B.C. Veneer Mills Recovery Factor	
Figure 14: B.C. Pulp Mills Output Capacity and Ownerships	
Figure 15: B.C. Pulp Mills Capacity, Output, and Input	32
Figure 16: B.C. Pulp Mills Capacity Utilization	
Figure 17: B.C. Paper Mills Output Capacity and Ownerships	33
Figure 18: B.C. Paper Mills Capacity and Output	
Figure 19: B.C. Paper Mills Capacity Utilization	34
Figure 20: B.C. Pellet Mills Capacity, Output, and Fibre Input	
Figure 21: B.C. Pellet Mills Capacity Utilization	
Figure 22: Number of Shake and Shingle Mills	39
Figure 23: B.C. Shake and Shingle Mills Capacity, Output, and Log Input	
Figure 24: B.C. Shake and Shingle Mills Capacity Utilization	
Figure 25: Administrative Areas and Natural Resource District Boundaries	41

## List of Tables

Table 1: Estimated B.C. Log Use and Log Availability – 2022	6
Table 2: Estimates of Product Recovery from Lumber Mills – 2022	7
Table 3: B.C. Chip Supply and Demand (000 BDUs) - 2020 to 2022	
Table 4: B.C. Lumber Mill Statistics for Mills with the Estimated Annual Capacity of at Least 40 Million Board Feet	
Table 5: B.C. Veneer Mill Summary Statistics for Mills with Annual Log Consumption of at Least 25,000 Cubic Metres	25
Table 6: B.C. Pulp and Paper Mill Summary Statistics	
Table 7: B.C. Pellet Mill Summary Statistics	36
Table 8: Lumber Mills with Capacity of at Least 40 Million Board Feet - 2022	43
Table 9: Lumber Mills with Capacity of Less than 40 Million Board Feet – 2022	45
Table 10: Pulp and Paper Mills – 2022	48
Table 11: Veneer, Plywood, OSB, and Panel Mills – 2022         Table 12: Chip Mills - 2022	50
Table 12: Chip Mills - 2022	52
Table 13: Pellet Mills – 2022	54
Table 14: Post, Utility Pole, and Pole Mills – 2022	56
Table 15: Shake and Shingle Mills – 2022	58
Table 16: Log Home Mills - 2022	60



## **Key Definitions and Abbreviations**

## Key Definitions

**Major Primary Timber Processing Facilities**: Facilities that process logs or wood residue. They include whole log chipping, lumber, pulp and paper, veneer/plywood/laminated veneer lumber (LVL), oriented strand board (OSB), shake and shingle, pole/utility pole/post, panel, and log home mills. They do not include secondary manufacturing facilities that use lumber as their major input.

**Hog Fuel**: Waste wood material derived from a grinding or milling process. It is normally ground down to specific characteristics for use as a fuel to power equipment used in timber processing facilities or bioenergy plants. It can also be used in other areas such as paddocks, gardens, and pathways.

Hog fuel can be obtained as a residual from a milling process, which can contain a mixture of bark and wood waste. It can also be obtained by grinding undesirable trees, stumps, branches, and wood pieces from industrial/home demolition.

## Abbreviations for Products

СНР	Chip	PLY	Plywood	PPR	Paper
LBR	Lumber	PNL	Panel	SS	Shake and Shingle
LVL	Laminated Veneer Lumber	PST	Fence Post	SID	Siding
OSB	Oriented Strand Board	PLE	Pole	UTI	Utility Pole
PLT	Pellet	PLP	Pulp	VNR	Veneer



# Introduction

This report provides summary statistics derived from the 2022 and earlier mill surveys. Fibre supply and consumption in the province are examined through a series of charts and tables. These statistics are followed by industry analysis for lumber mills, veneer mills, pulp and paper mills, pellet mills, as well as shake and shingle mills. The Appendix to this report provides lists of mills operating in 2022.

Each year, surveys are sent to mill representatives. Based on their responses, mills are classified as a) open with responses, b) presumed open without responses, c) did not operate at all during the year (temporary or indefinite closures), or d) closed (permanently). The statistics in this report are derived from mills in categories a) and b). Mills that announced permanent, full mill closures in 2022 are categorized as a) for the year 2022 if they operated at some point during 2022. The actual impact of these closed mills will be reported in the next report.

Please note that some historical information in this report has been adjusted to reflect the latest information received from mill contacts or regional staff and therefore, may differ from the information published in previous reports.

# **Provincial Log Supply and Demand**

## Log Supply

- Harvesting of Crown, private, and federal lands provides a sustainable level of commercial timber for industrial use. In 2022, the total timber harvest in B.C. was 48 million cubic metres, down 9% from 2021. Crown land represented 84% of the total harvest volume, followed by private land (15.8%), and federal land (0.2%). Regionally, 72% of the harvest was from the Interior, and the rest from the Coast.
- B.C. also imported a small volume of logs from the United States (US). The volume of imported logs increased by 53%, from 73,363 cubic metres in 2021 to 112,823 cubic metres in 2022.

### Log Demand

- Logs harvested in the province are used by various types of major timber processing facilities. Surplus logs are shipped to other jurisdictions.
- As shown in Table 1, the overall log consumption by B.C.'s primary wood processing facilities was 46.7 million cubic metres in 2022, which represents a decrease of 10% (from 52 million cubic metres) in 2021. Of this total, log use for each sector is shown below:
  - Lumber mills were the largest users of logs, accounting for 68% of total log use. 120 lumber mills consumed 31.6 million cubic metres of logs in 2022, a 14% decrease from 2021.
  - Chip and pulp mills consumed more than 5 million cubic metres of logs. Veneer and OSB mills consumed 6 million cubic metres of logs. Together they accounted for 24% of total log use.
  - Shake and shingle mills and other mills consumed over 1.2 million cubic metres of logs, or about 2.7% of total log use.
  - Log exports declined 20% from 3.3 million cubic metres in 2021 to 2.6 million cubic metres in 2022, accounting for 6% of total log use.





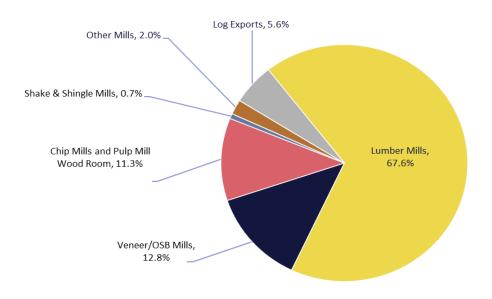
#### Table 1: Estimated B.C. Log Use and Log Availability, 2022

	Number of Mills	Est. Volume Used (000 m³)	Per Cent	Number of Mills	Est. Volume Used (000 m³)	Per Cent	Number of Mills	Est. Volume Used (000 m <sup>3</sup> )	Per Cent
Primary Log Use		Coast			Interior			Province	
Lumber Mills	45	6,389	49.4%	75	25,204	74.6%	120	31,593	67.6%
Veneer/OSB Mills	5	2,093	16.2%	12	3,913	11.6%	17	6,006	12.8%
Chip Mills and Pulp Mill Wood Room	7	1,854	14.3%	12	3,410	10.1%	19	5,264	11.3%
Shake & Shingle Mills	24	302	2.3%	4	22	0.1%	28	324	0.7%
Other Mills	6	74	0.6%	44	868	2.6%	50	942	2.0%
Log Exports	-	2,225	17.2%	-	391	1.2%	-	2,616	5.6%
TOTAL	87	12,937	100%	147	33,808	100%	234	46,745	100%
Log Availability		Coast			Interior			Province	
Total Harvest		13,457			34,219			47,676	
Log Imports		-			-			113	
TOTAL		13,457			34,219			47,789	
Difference		520	3.9%		411	1.2%		1,044	2.2%

Notes:

- 1. Total harvest includes all logs, special forest products, species and grades billed to the Crown, private and federal lands. Waste, reject, and Christmas trees are excluded.
- 2. The log supply exceeded log use by 1 million cubic metres (2.2%) in 2022. This difference could be attributed to several factors, including seasonality inherent in timber harvesting, log inventory changes, different company reporting years, and the estimates made for mills that did not complete the survey.
- 3. Other mills listed include utility pole mills, fence pole mills, post mills, pellet mills, and log home mills.
- 4. The Veneer/OSB mills category includes logs consumed by an OSB mill that recently changed its production line to produce both OSB and siding products.
- 5. Pulp mill wood room is the place where pulp logs are debarked and processed into wood chips to feed the mill.

#### Figure 1: Total Primary Log Use – 47 million cubic metres - 2022



Sources: B.C. Mill List Survey; B.C. Stats; B.C. Ministry of Forests log export statistics for the proportion of exports from the Coast versus Interior.



### Product Recovery from Lumber Mills

As shown in Table 2 and Figure 2, when a log entered a lumber mill, 46% of that log was converted to lumber, 33% to residual chips and 19% to sawdust and shavings. Residual chips are used by pulp and paper mills, as well as pellet mills, whereas sawdust and shavings are used by pellet and panel mills.

#### Table 2: Estimates of Product Recovery from Lumber Mills, 2022

	<b>5</b>	11	<b>6</b>		<b>D</b>
	Formula	Units	Coast	Interior	Province
Number of Mills			45	75	120
Log Input	А	(million m <sup>3</sup> )	6.4	25.2	31.6
Recovery of Lumber from Lumber Mills					
Nominal Lumber Output	В	(billion fbm)	1.5	7.2	8.7
Lumber Recovery Factor	C=B/A	(mfbm/m <sup>3</sup> )	0.234	0.286	0.275
Nominal to Real Conversion Factor*	D	(m³/mfbm)	2.07	1.61	1.67
Real Lumber Output	E=BxD	(million m <sup>3</sup> )	3.1	11.6	14.7
Real Lumber Output as Per Cent of Log Input	F=E/A	(%)	48.5%	46.0%	46.5%
Shrinkage (5% of Lumber Output for Interior Only)	G=Ex5%	(million m <sup>3</sup> )	-	0.6	0.6
Lumber Shrinkage as Per Cent of Log Input	H=G/A	(%)	-	2.3%	1.8%
Recovery of By-Product Chips from Lumber Mills					
By-Product Chip Output	1	(million bdu)	0.80	3.20	4.00
By-Product Chip Recovery Factor	K=(J/A)×1000	(bdu/000 m <sup>3</sup> )	125	127	127
Conversion Factor to Solid Wood Equivalent (SWE)**	L	(m³/bdu)	2.1	2.7	2.6
Converted By-Product Chip Output (SWE)	M=JxL	(million m <sup>3</sup> )	1.7	8.8	10.5
Converted By-Product Chip Output (SWE) as Per Cent of Log Input	N=M/A	(%)	26.6%	34.9%	33.2%
Recovery of Sawdust and Shavings from Lumber Mills					
Estimated Sawdust and Shaving Output***	0	(million bdu)	0.4	1.4	1.8
Conversion Factor to Solid Wood Equivalent (SWE)**	Р	(m³/bdu)	4.6	3.0	7.5
Converted Sawdust and Shaving Output (SWE)	Q=P*O	(million m <sup>3</sup> )	1.6	4.2	5.8
Converted Sawdust and Shaving Output (SWE) as Per Cent of Log Input	R=O/A	(%)	24.9%	16.8%	18.5%

#### Notes:

1.\*Conversion factors are used to convert the nominal lumber output or by-product chips to solid wood equivalent in m<sup>3</sup>.

fb = board foot; mmfbm = million board feet; mfbm = thousand board feet; m<sup>3</sup> = cubic metres; bdu = bone dry unit = 2400 pounds.

Conversion factors used in the analysis are based on Forintek Canada Corp., "Conversion Factors for the Forest Products Industry in Western Canada", Special Publication No. SP-24R, 1985 and "Major Primary Timber Processing Facilities in British Columbia 2007", Appendix 1, page 24. 2.\*\* For mills that reported their 2022 chip, sawdust, and shaving output, Ministry staff calculated a mill-specific SWE conversion factor by dividing the total amount of logs used to produce chips, sawdust and shavings by the chip, sawdust, and shaving output. The total logs used to make chips, sawdust, and shavings are measured as the total log input, net of real lumber output and 5% lumber shrinkage for each Interior lumber mill. For mills that did not report their 2022 chip, sawdust, and shaving output, Ministry staff applied the average conversion factor of 2.75 for lumber mills in the Interior and 2.86 for sawmills on the Coast.

3.\*\*\* Collection of data on sawdust and shaving output began in 2021. For mills that did not respond to survey questions on sawdust and shaving production, their output was estimated. Please note that the estimated sawdust and shaving output may be higher or lower than the actual output.



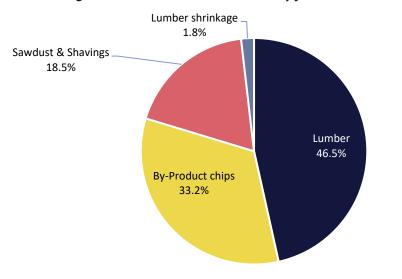


Figure 2: Estimated Product Recovery from Lumber Mills, 2022

## Fibre Used by Pulp, Pellet, Panel, and Chip Mills

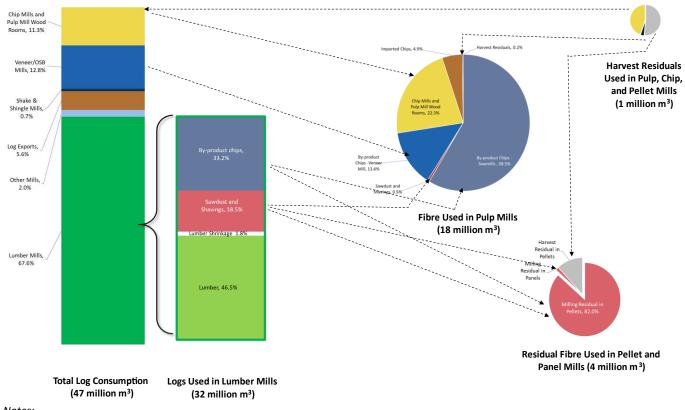
Figure 3 shows how the fibre flows among different subsectors in B.C. Some of the key findings include:

- B.C. pulp mills consumed about 18 million cubic metres of fibre in 2022. Of this total, pulp mills consumed about 13 million cubic metres of residual chips produced by lumber mills and veneer mills, accounting for 72% of their fibre input. Pulp mills also consumed about 4 million cubic metres of whole-log chips produced by chip mills and pulp mills, representing 22% of their total fibre input. While these whole-log chips were more expensive than residual chips, they played an important role in maintaining a consistent fibre supply for pulp mill operations.
- In addition to pulp mills, pellet and panel mills also count on residual fibre which includes milling residuals and harvest residuals.<sup>1</sup> B.C. pellet mills are the largest consumers of residual fibre after pulp mills. They, together with panel mills, consumed about 4 million cubic metres of residual fibre in 2022.

<sup>&</sup>lt;sup>1</sup> Milling residuals include sawdust and shavings, residual chips, and other fibre such as mill yard waste. Harvest residuals refer to non-sawlog fibre removed from cut blocks following harvesting activities and transported directly to mills to make wood products.







#### Notes:

The sawdust and shaving production shown in the above chart is mixed with the production reported by the company and estimated by Ministry staff. For more information on specific estimating methods, please refer to footnote 2 of Table 2. The estimated sawdust and shaving production may be higher or lower than the actual production. Please note that the survey only tracks the volume of sawdust and shavings consumed by pellet, panel, and pulp mills, but not the volume used for other purposes, such as export, or consumption as a fuel source.
 This figure has incorporated retroactive data adjustments made by the pulp industry in November 2022.

## **Provincial Chip Supply and Demand**

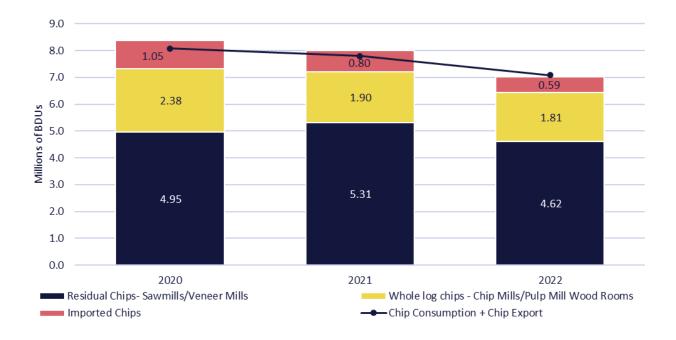
Pulp and paper mills are the largest chip consumers in B.C., transforming low-value wood chips into high-value pulp and paper products. There are three main sources of chip supply: 1) residual chips produced by lumber mills and veneer mills, 2) whole-log chips produced by pulp or chip mills, and 3) chips imported from the US. There can be very wide year-to-year swings in chip supply dynamics.

As shown in Figure 4 and Table 3, the provincial chip supply trended downward from 2020 to 2022. In the supply portfolio, the residual chip supply decreased by 13% due to lumber mill curtailments. In addition, whole-log and imported chip supplies decreased by 5% and 25%, respectively in 2022 over 2021.

Overall chip demand, including pulp and paper mill chip consumption and chip exports, was down 9% in 2022 compared to 2021. Specifically, pulp and paper mills consumed over 7 million Bone Dry Units (BDUs) of chips, down 9% from 2021. Chip exports reached 206,000 BDUs in 2022, down 44% from 2021.



Figure 4: Provincial Chip Supply and Demand, 2020 to 2022



*Source: 2022 B.C. Mill List Database and B.C. Stats Note: This figure has incorporated retroactive data adjustments made by the pulp industry in November 2022.* 

Table 3 and the discussion below provide more details on chip supply and demand at the regional level for 2020-2022:
Table 3: B.C. Chip Supply and Demand (000 BDUs), 2020 to 2022

Sources of Chips	2020	2021	2022
Residual Chip Production	4,953	5,308	4,618
Whole Log Chip Production	2,379	1,899	1,811
Total Chip Production	7,331	7,207	6,429
Total Chip Consumption	8,074	7,800	7,085
Production and Consumption Gap	-743	-592	-656
Provincial Chip Trade			
Chip Import	1,050	795	593
Chip Export	0.3	0.4	0.2
Net Import	1,049	795	593
Provincial Chip Balance	307	202	-63

Sources: 2022 B.C. Mill List Database and B.C. Stats.

Notes:

- 1. The historical data shown in the table above may have been adjusted to include additional information that was not available at the time of the initial data release.
- 2. This table has incorporated retroactive data adjustments made by the pulp industry in November 2022.

## Chip Supply and Demand on the Coast

- The Coastal chip supply consisted of residual chips, whole-log chips, and imported chips from the US. In 2022, residual chips accounted for 45% of the Coastal chip supply, followed by whole-log chips (32%), and imported chips (23%). Compared to 2021, the overall supply of chips decreased by 8% in 2022, primarily due to a reduction in the supply of residual chips.
- The Coastal chip demand originated from Paper Excellence's four pulp mills in Crofton, Port Alberni, Powell River and Port Mellon, and Harmac Pacific in Nanaimo. The overall demand for chips decreased by 10% in 2022 relative to 2021.
- From 2020 to 2022, the regional supply of chips could not keep up with regional demand. The difference was made up with imported chips. With the potential reduction of allowable annual cut (AAC) and further lumber mill closures, chip supply constraints for Coastal pulp mills are likely to continue. These mills will rely more on whole-log chipping and imported chips.

## Chip Supply and Demand in the South

- In the Southern Interior, residual chips accounted for 74% of the regional chip supply, followed by whole-log chips (25%) and imported chips (1%) in 2022. Compared to 2021, the overall supply of chips in the South decreased by 9%, driven by the decline of residual chip supply.
- The chip demand in this region originated from Paper Excellence's Skookumchuck Pulp, Mercer's Celgar, West Fraser's Quesnel River Pulp, and Cariboo Pulp and Paper. A small amount of chips was exported from the Southeast to the US. The overall chip demand in the South was about 4% lower in 2022 than in 2021.
- From 2020 to 2022, the regional chip supply could not meet regional demand. Strong demand for wood chips from Coastal pulp mills resulted in competition for residual chips in this area. A shortage of chips relative to regional demand was seen in 2022.

## Chip Supply and Demand in the North

- In the Northern Interior, residual chips accounted for 81% of the regional chip supply in 2022 and whole-log chips made up the rest. Compared to 2021, overall chip production decreased by 15%, mainly caused by a series of temporary lumber mill curtailments in the region.
- The demand for chips in the North originated from Canfor pulp mills (three in Prince George and one in Taylor), and one Paper Excellence pulp mill in Mackenzie. The overall regional chip demand decreased by 16% in 2022 relative to 2021, due to pulp mill curtailments due to COVID-19 and lumber mill closures in the region.
- From 2020 to 2022, the regional chip supply could not meet regional demand. The 2022 chip shortage was worsened by limited whole-log chip supply, which initially helped offset reduced residual chips in 2021. AAC reductions, lumber mill curtailments/closures, and competition from industries like pellet mills have directly contributed to the shortage, intensifying pressure on the regional chip supply.



## **Provincial Forest Sector Investments**

Forest companies continue to invest in the wood manufacturing sector to diversify their products and increase their long-term competitiveness. A growing number of B.C. forest companies have invested in upgrading their facilities to manufacture advanced forest products, which represent innovative opportunities for manufacturers in the province. According to Statistics Canada, Capital and repair expenditures in wood product and paper manufacturing in B.C. were \$1.15 billion in 2022, up 8% compared to 2021.

Some key events related to forest manufacturing investments in B.C. in 2022 are summarized below:

- In September 2022, San Group announced the investment of \$23 million in the value-added division at Port Alberni and its newly acquired (April 2022) Acorn sawmill in Delta.
- In August 2022, Pacific Woodtech assumed ownership of the Golden mill from LP Building Solutions. The \$210 million acquisition included veneer, laminated veneer lumber, and plywood facilities in Golden, as well as operations in Red Bluff, California, and Wilmington, North Carolina.
- In August 2022, Drax announced the acquisition of the Princeton Standard Corp. pellet plant in B.C. The mill produces 90,000 tonnes of wood pellets annually, employs 32 people, and becomes their eighth plant in B.C.
- In July 2022, Western Forest Products announced the investment of \$29 million in B.C. operations: \$12.3 million at the Saltair sawmill in Ladysmith, \$7.9 million at the Duke Point facility in Nanaimo, and \$8.3 million in other capital investments in B.C.
- In June 2022, Kruger purchased Domtar's Kamloops pulp mill when Domtar had to divest itself of the mill before being acquired by Paper Excellence. The purchase price was \$300 million.
- In March 2022, Peak Renewables acquired Paper Excellence's previously closed (2015) Chetwynd Pulp Mill.
- In February 2022, Peak Renewables entered into an agreement to purchase Canfor's Mackenzie site, plant, and equipment for \$70 million.
- In February 2022, Canfor Vanderhoof reduced capacity to 80% but also announced it would invest \$14 million on the remaining production lines.



## **New Trends in the Forest Sector**

### Engineered Wood Products

Engineered wood products (EWPs) are made from connecting existing solid and composite wood-based products to form products with improved properties for both structural and non-structural construction purposes. EWPs for structural purposes are often referred to as mass timber.

Mass timber construction utilizes EWPs that usually involve lamination and/or compression of multiple layers of smaller pieces of wood to create larger panels. The process creates a very strong panel that meets the safety and strength requirements needed to build tall wood structures. Common mass timber products include cross laminated timber (CLT), glue laminated timber (glulam), and dowel laminated timber (DLT). According to Statistics Canada, the value of veneer, plywood, and engineered wood product sales increased by 4% from \$3.1 billion in 2021, to \$3.2 billion in 2022. There were more than 600 mid-rise wooden buildings at various stages of completion across Canada in 2022.

### Forest Bioproducts

The growing forest bioeconomy is creating new economic opportunities for B.C.'s pulp and paper industry.

In the bioeconomy, renewable and sustainably sourced biomass resources such as trees, agricultural crops, and organic residuals from harvesting and timber processing are used to provide a range of consumer and industrial products.

B.C. pulp and paper producers are looking at the potential growth of the new industry. Potential products range from food additives and textiles to construction materials, auto parts, bioplastics, biochemicals, and fuel for vehicles and planes.

The future development of new innovative products and applications to replace existing products is expected to help the forest sector adapt to changing market needs, improve financial performance, demonstrate its commitment to environmental performance, and create more jobs.



## **Industry Analysis**

## Lumber Industry

#### Industry Overview

Lumber is made from logs of different species and qualities that are processed in lumber mills into dimensional lumber or specialty products. Lumber is usually classified into two main groups: rough and finished. Rough lumber is used mainly in construction applications or is an intermediate processing stage for other mills to further process. Finished lumber adds value to rough lumber and is produced in various grades and dimensions. The lumber industry plays an important role in the B.C. economy. In 2022, the lumber mill sector represented 27% of the total GDP generated by the forest sector. Lumber mill sales totaled \$8 billion, accounting for 53% of total wood product manufacturing sales.

B.C. is a significant lumber producer, generating 19.8 million cubic metres (8.4 billion board feet) in 2022, mainly from the Interior region.

B.C. is the largest softwood lumber exporter in Canada, accounting for 47% of total Canadian softwood lumber export value in 2022. B.C. exported 16.5 million cubic metres (7 billion board feet) of softwood lumber to world markets in 2022, down 2.4 million cubic metres from 2021. Also, the total value of exports decreased by 4%, from \$8.9 billion in 2021 to \$7.3 billion in 2022. Of the total export volume, 61% was destined for the US, followed by China (18%) and Japan (9%).

In 2022, the lumber industry in B.C. faced a steady decline in prices after high prices in the first quarter of the year. Prices averaged approximately US \$1,288 per thousand board feet in the first quarter gradually declining to US \$393 per thousand board feet by year-end<sup>2</sup>. These price shifts were influenced by changes in interest and mortgage rates, leading to reduced residential construction and housing starts across North America. Consequently, lumber producers experienced lower profit margins as the year progressed.

### Mill Summary Statistics

The following section presents summary statistics from 2001 onward for major lumber mills with an annual capacity of at least 40 million board feet per year:

#### Number of Mills, Capacity, Output, and Input

- In 2022, there were 60 lumber mills in B.C. with an annual capacity of at least 40 million board feet per year. 18 of them were on the Coast and 42 of them were in the Interior.
- The top six producers were Canfor, West Fraser, Tolko, Interfor, Western Forest Products, and Dunkley Lumber. Regionally, Western Forest Products was the largest Coastal producer, accounting for 36% of Coastal lumber mill output capacity. Canfor was the largest producer in the Interior, representing 26% of the Interior lumber mill capacity.

<sup>&</sup>lt;sup>2</sup> Source: 2022 Weekly Price Reports Issued by the Ministry of Forests



- As shown in Table 4, provincial lumber mill capacity decreased 1% in 2022 over 2021<sup>3</sup>. Several major lumber facilities (Canfor's Vanderhoof mill, West Fraser's Lejac and Williams Lake mills, and Gorman Bros's West Kelowna mill) were permanently closed in B.C. in 2022. These closures, caused by market weakness, fibre supply constraints, and business reconfiguration, reduced provincial lumber mill capacity by over 0.1 million board feet.
- Total input is down 18% and output is down 17% in 2022 compared to 2021, as a result of permanent and temporary mill curtailments. At the time of writing, all temporarily curtailed mills were back to their normal operations.

#### Commodity vs. Specialty Lumber mills

- Commodity lumber mills are defined as primary timber processing facilities that produce dimension lumber, which is
  typically two inches thick and of various lengths and widths. Specialty lumber mills are defined as primary wood
  processing facilities that produce wood products for special purposes and do not fall into dimensional lumber
  categories.
- The B.C. lumber industry produces a broad range of products, from commodity wood products to specialty wood products. Most lumber mills in the Interior focus on commodity lumber production, while on the Coast, a large number of lumber mills produce specialty wood products.

#### Average Capacity, Capacity Utilization, and Lumber Recovery Factor

- Average capacity is a key indicator to measure a lumber mill's size. As shown in Table 4, the average annual capacity of Interior lumber mills was 210 million board feet, almost double the size of Coastal lumber mills (106 million board feet).
- One key indicator to assess mill performance is capacity utilization. It is measured by output as a percent of mill capacity. As shown in Table 4, capacity utilization rates for lumber mills on the Coast are lower than lumber mills in the Interior. Most Interior lumber mills produce commodity lumber, which requires large-scale operations to increase their production and reduce unit costs. Those mills generally operate on a two-shift or higher basis, resulting in higher capacity utilization rates. Unlike Interior lumber mills, many Coastal lumber mills are specialty mills that make products based on the unique supply of logs and demand for their products. These mills have a wide variety of shift configurations, resulting in lower capacity utilization rates. The provincial capacity utilization rate decreased 12%, from 91% in 2021 to 79% in 2022.
- Another key indicator to assess mill efficiency is the lumber recovery factor (LRF), which is measured by lumber output as a share of log input. The LRF for the Interior is higher than the Coast due to the difference in species, the age of log inputs, more technological advances, and greater uniformity of products from Interior mills compared to Coastal mills. Computer-optimized log and lumber scanning technology helped lumber mills reduce fibre and value losses and therefore improved the LRF for Interior mills from 1990 to 2003. However, this upward trend ended as mills switched to processing beetle-damaged logs from 2004 to 2013. Since 2014, the Interior LRF has seen an upward trend due to the reduction in the amount of beetle-damaged logs as inputs and the closure of less efficient mills.

<sup>&</sup>lt;sup>3</sup> -Mills that have announced permanent closures during 2022 were categorized as active mills for the survey year. The actual impact of mills permanently closed in 2022 will be captured in the next report.





#### Table 4: B.C. Lumber Mill Statistics for Mills with an Estimated Annual Capacity of at Least 40 Million Board Feet

COAST	Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Mills		21	20	17	17	18	17	18	18	17	17	17	18	18
Total Capacity	billion board feet per year	2.3	2.3	2.1	2.1	2.1	2.0	2.1	2.0	1.9	1.9	2.0	1.9	1.9
Total Output	billion board feet per year	1.4	1.4	1.4	1.4	1.7	1.6	1.7	1.5	1.5	1.1	1.1	1.5	1.3
Total Input	million cubic metres per year	5.9	6.2	6.3	6.3	7.2	6.9	7.4	6.6	6.4	4.9	5.0	6.5	5.7
Average Capacity	million board feet per mill per year	110	115	124	124	117	118	117	111	112	112	118	106	106
Capacity Utilization	output divided by capacity	61%	61%	67%	67%	81%	80%	81%	75%	79%	58%	55%	79%	68%
Lumber Recovery Factor	'000 board feet per cubic metre	0.237	0.226	0.222	0.222	0.236	0.232	0.230	0.227	0.234	0.224	0.220	0.231	0.228
INTERIOR	Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Mills		52	56	54	52	53	52	51	51	50	52	45	43	42
Total Capacity	billion board feet per year	10.4	11.1	10.9	10.6	10.8	10.4	10.6	10.5	10.3	10.2	9.2	8.9	8.8
Total Output	billion board feet per year	9.5	10.5	10.8	11.2	10.9	11.2	11.5	11.4	10.8	9.1	8.5	8.3	7.1
Total Input	million cubic metres per year	34.1	37.0	38.6	39.9	39.3	39.4	40.7	39.4	37.9	31.7	29.3	29.5	24.9
Average Capacity	million board feet per mill per year	200	198	202	204	204	200	208	206	206	196	204	207	210
Capacity Utilization	output divided by capacity	91%	95%	99%	106%	101%	108%	108%	109%	105%	89%	92%	93%	81%
Lumber Recovery Factor	'000 board feet per cubic metre	0.279	0.284	0.280	0.281									0.285

PROVINCE	Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Mills		73	76	71	69	71	69	69	69	67	69	62	61	60
Total Capacity	billion board feet per year	12.7	13.4	13.0	12.7	12.9	12.4	12.7	12.5	12.2	12.1	11.2	10.8	10.7
Total Output	billion board feet per year	10.9	11.9	12.2	12.6	12.6	12.8	13.2	12.9	12.3	10.2	9.6	9.8	8.4
Total Input	million cubic metres per year	40.0	43.2	44.9	46.2	46.5	46.3	48.1	46.0	44.3	36.6	34.3	36.0	30.6
Average Capacity	million board feet per mill per year	174	176	183	184	182	180	184	181	182	175	181	177	178
Capacity Utilization	output divided by capacity	86%	89%	94%	99%	98%	103%	104%	103%	101%	84%	86%	91%	79%
Lumber Recovery Factor	'000 board feet per cubic metre	0.273	0.275	0.272	0.273	0.271	0.276	0.274	0.280	0.278	0.279	0.280	0.272	0.275

Source: Major Primary Timber Processing Facilities in British Columbia, Ministry database, various years.

#### Notes:

- 1. The above lists only include lumber mills with a minimum estimated annual capacity of 40 million board feet per year.
- 2. Output capacity is estimated based on two 8-hour shifts per day and 240 days per year.
- 3. The above data may not match table 1. Table 1 includes mills with annual capacity under 40 million board feet per year.



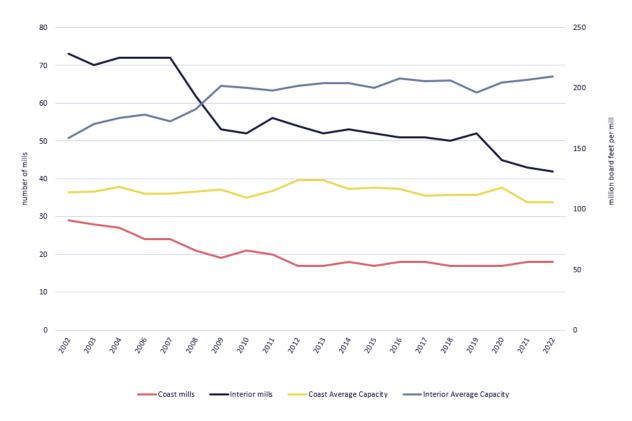


Figure 5: Coast Lumber Mills (at least 40 million board feet) – Capacity, Output, and Log Input

Figure 6: Interior Lumber Mills (at Least 40 million board feet) – Capacity, Output, and Log Input







*Figure 7: B.C. Lumber Mills (at Least 40 million board feet) – Number of Mills and Average Capacity* 

Figure 8: B.C. Lumber Mills (at Least 40 million board feet) – Capacity Utilization







Figure 9: B.C. Lumber Mills (at Least 40 Million Board Feet) – Lumber Recovery Factor



## Veneer/OSB/Siding and Plywood Industry

#### Industry Overview

Veneer is produced as a thin sheet of wood of uniform thickness by peeling or slicing logs, requiring higher grade logs with no branches. Veneer can be used in making plywood or other engineered wood products such as laminated veneer lumber (LVL). Plywood is produced by gluing and compressing together three or more sheets of veneer, with the grain of alternate sheets usually laid crosswise.<sup>4</sup> Plywood is used primarily as a load-bearing component of platform-frame-constructed buildings such as single-family and multi-family housing. It is also used in wall sheathing, flooring, and roofing applications. Oriented Strand Board (OSB) is a popular engineered wood product made by compressing and bonding wood strands with adhesive. It's known for its strength, durability, and affordability, making it widely used in construction for roofs, walls, and floors, as well as in furniture and packaging industries.

In 2022, this industry, together with engineered wood product manufacturing, generated \$850 million of GDP. Total sales of veneer/OSB/siding, plywood, and engineered wood products were \$3.2 billion in 2022, up 4% over 2021. According to Statistics Canada, B.C. exported 192 million square metres of veneer and 296,000 cubic metres of plywood to global markets in 2022. Most of those products were made from Douglas fir<sup>5</sup>. While the supply of veneer and plywood remained stable from 2020 to 2022, demand in the industry fluctuated during 2022. Increases in interest and mortgage rates in major markets led to a decrease in new residential construction, consequently reducing demand for plywood. The imbalance between supply and demand pushed prices lower, with the price of plywood dropping from about \$1,028 per thousand square feet in February to \$680 per thousand square feet in December 2022.

#### Mill Summary Statistics

The following section presents summary statistics from 2000 onward. It excludes veneer mills that used less than 25,000 cubic metres of logs per year:

#### Number of Mills, Output, Input, Capacity Utilization, and Product Recovery

In 2022, there were 15 veneer/OSB/siding mills operating in B.C. Three of them were on the Coast and twelve in the Interior. Of these, seven veneer mills had on-site plywood operations. The total production was 3.8 billion square feet on a 3/8" basis in 2022, the same as in 2021. Total log input was 6 million cubic metres in 2022, up 2% from 2021. The higher share of production coming from newer, more efficient mills operating on a 3-shift basis has resulted in more than 100% capacity utilization over the past 10 years. Figure 13 shows an upward trend in the average recovery factor.

<sup>&</sup>lt;sup>4</sup> Source: Statistics Canada: https://strategis.ic.gc.ca/app/scr/sbms/sbb/cis/definition.html?code=32121&lang=eng

<sup>&</sup>lt;sup>5</sup> Both veneer and plywood may include hardwood and bamboo.



#### Table 5: B.C. Veneer/OSB/Siding Mill Summary Statistics for Mills with an Annual Log Consumption of at Least 25,000 Cubic Metres

	Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Mills		13	14	14	14	14	14	15	15	15	15	14	15	15
Total Capacity	(billion square feet 3/8" basis)	3.5	3.7	3.4	3.4	3.5	3.3	3.5	3.7	3.4	3.3	2.6	3.4	3.3
Total Output	(billion square feet 3/8" basis)	3.0	3.2	3.2	3.5	3.6	3.7	4.2	4.2	4.1	3.8	3.1	3.8	3.8
Total Log Input	(million cubic metres)	5.1	5.3	5.0	5.4	5.7	6.1	6.9	6.8	6.5	6.1	4.9	5.9	6.0
Average Capacity	(million square feet per mill)	268	264	244	246	248	236	234	244	230	223	184	227	221
Average Log Input	(thousand cubic metres per mill)	390	378	359	387	406	434	457	452	436	403	348	392	401
Capacity Utilization	(output divided by capacity)	87%	88%	93%	102%	104%	113%	119%	116%	120%	115%	120%	113%	115%
Recovery Factor	(square feet per cubic metre log input)	597	614	632	649	636	616	606	624	631	634	637	653	634

Source: Major Primary Timber Processing Facilities in British Columbia, Ministry database, various years. Notes:

1. Output capacity is estimated based on two 8-hour shifts per day and 240 days per year.

2. Small mills using an average of less than 25,000 cubic metres of logs per year are excluded in these statistics.





Figure 10: B.C. Veneer/OSB/Siding Mills – Capacity, Output, and Log Input

Figure 11: B.C. Veneer/OSB/Siding Mills – Number of Mills and Average Capacity

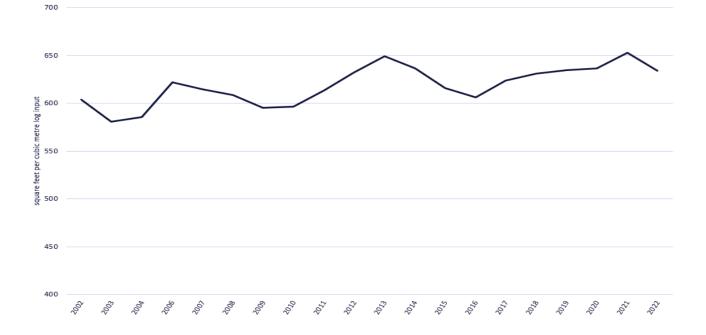














## Pulp and Paper Industry

#### Industry Overview

Pulp and paper mills produce various products, including newsprint, household tissues, dissolving pulp for rayon production, and green energy. In B.C., the main pulp products are bleached softwood kraft pulp (BSK) and Chemi-thermo-mechanical pulp (CTMP). The main paper product in B.C. is newsprint.

The pulp and paper industry is a major economic contributor to B.C.'s economy. According to Statistics Canada, the pulp and paper sector generated sales of \$5 billion, accounting for 26% of total forest sector manufacturing sales in 2022.<sup>6</sup>

B.C. was also Canada's largest pulp exporter, accounting for 41% of the country's total pulp exports. In 2022, B.C. exported 3.4 million tonnes of pulp and paper products<sup>7</sup> valued at \$4.4 billion. The total value of pulp exports was \$3.6 billion in 2022, up 10% from 2021 and the total value of paper exports was \$0.8 billion in 2022, up 18% from 2021. China accounted for 58% of total exports by value, followed by the US (15%), and Japan (6%).

Unlike the decrease in lumber prices, average pulp and paper prices spike in 2022 and get upward trend. The average price for Northern Bleached Softwood Kraft (NBSK) products was US \$934 per tonne in 2022, up 10% from 2021. The average price for newsprint was US\$779 per tonne in 2022, up 25% from last year. The higher prices were mainly attributed to increased export prices for pulp, limited pulp output, and rising variable costs for lumber mills.

#### **Mill Summary Statistics**

#### Number of Mills, Capacity, Output, and Capacity Utilization

#### Pulp Mills

- In 2022, there were 13 pulp mills operating in B.C. with four mills on the Coast, and nine mills in the Interior.
- Paper Excellence was the largest pulp producer in B.C., representing 45% of total pulp capacity. Canfor and Mercer<sup>8</sup> were the second-and third-largest pulp producers, accounting for 16% and 13% of total capacity.
- As shown in Figure 14, about 33% of provincial capacity was on the Coast, 30% was in the Northern Interior, and 37% was in the Southern Interior.
- In 2022, Paper Excellence, Canfor, and Mercer all announced temporary mill curtailments in response to the
  pandemic and soft market conditions. Although total capacity remained the same as last year, total pulp production
  decreased by 11%, from 4.4 million tonnes in 2021 to 3.9 million tonnes in 2022. The pulp mill capacity utilization
  rate dropped to a 10-year low of 85% in 2022, mainly driven by mill curtailments.
- Hog fuel consumption decreased by 26% from 3.9 million cubic metres in 2021 to 2.9 million cubic metres in 2022.9

<sup>8</sup> Partial ownership was included in the calculation of pulp company's capacity share.

<sup>&</sup>lt;sup>6</sup> Source: 2022 Economic State of British Columbia's Forest Sector

<sup>&</sup>lt;sup>7</sup> Paper export volume includes all paper and paper waste commodities in tonnes and kilograms and excludes all products where the quantity is reported as N/A.

<sup>&</sup>lt;sup>9</sup> Historical hog fuel consumption information incorporates retroactive data adjustments made by the pulp industry in November 2022.



#### Paper Mills

- In 2022, there were four paper mills operating in B.C., all of them operating at pulp mill sites.
- In 2022, about 90% of provincial capacity was on the Coast and 10% was in the Northern Interior. The largest paper producer was Paper Excellence (85%), followed by Canfor (10%) and Kruger (5%).
- In 2022, Paper Excellence announced several temporary paper mill curtailments because of soft market conditions, labour disputes, and fibre supply constraints. Total paper mill capacity decreased by 15%, from 0.82 million tonnes in 2021 to 0.71 million tonnes in 2022.
- As illustrated in Figure 19, capacity utilization has stayed above 85% from 2021 onward. In 2022, the capacity utilization rate was 89%, suggesting that paper mills operated with less than three shifts per day.



#### Table 6: B.C. Pulp and Paper Mill Summary Statistics

Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	18	18	18	16	16	17	15	15	15	15	15	14	13
(million tonnes)	5.96	6.02	5.87	5.66	5.65	5.85	5.21	5.17	5.26	5.24	5.15	4.83	4.58
(million tonnes)	5.49	5.76	5.80	5.50	5.63	5.69	5.20	5.18	5.05	4.84	4.38	4.43	3.91
(million bone dry units)	8.29	10.14	9.65	9.29	9.45	9.44	8.95	9.05	8.68	8.55	8.07	7.80	7.08
(thousand tonnes)	331	334	326	354	353	344	348	345	350	349	343	345	352
(thousand bone dry units)	461	563	536	581	590	555	596	603	579	570	538	557	545
	92%	96%	99%	97%	100%	97%	100%	100%	96%	92%	85%	92%	85%
Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	6	6	6	5	6	6	5	5	5	5	5	5	4
(million tonnes)	1.52	1.52	1.57	1.38	1.61	1.49	1.26	1.24	1.14	1.14	1.09	0.97	0.80
(million tonnes)	1.49	1.48	1.49	1.30	1.48	1.29	1.15	1.15	1.14	0.99	0.59	0.82	0.71
(thousand tonnes)	253	253	261	275	268	248	252	249	228	227	217	193	200
	98%	98%	95%	94%	92%	87%	91%	92%	100%	88%	54%	85%	89%
	(million tonnes) (million tonnes) (million bone dry units) (thousand tonnes) (thousand bone dry units) Units (million tonnes) (million tonnes)	18         (million tonnes)       5.96         (million tonnes)       5.49         (million bone dry units)       8.29         (thousand tonnes)       331         (thousand bone dry units)       461         92%       92%         Units       2010         6       (million tonnes)       1.52         (million tonnes)       1.49         (thousand tonnes)       253	18       18         (million tonnes)       5.96       6.02         (million tonnes)       5.49       5.76         (million bone dry units)       8.29       10.14         (thousand tonnes)       331       334         (thousand bone dry units)       461       563         92%       96%         2010         2010       2011         6       6         (million tonnes)       1.52       1.52         (million tonnes)       1.49       1.48         (thousand tonnes)       253       253	18         18         18           (million tonnes)         5.96         6.02         5.87           (million tonnes)         5.49         5.76         5.80           (million bone dry units)         8.29         10.14         9.65           (thousand tonnes)         331         334         326           (thousand bone dry units)         461         563         536           92%         96%         99%         99%           Units         2010         2011         2012           6         6         6         6         6           (million tonnes)         1.52         1.52         1.57         1.57           (million tonnes)         1.49         1.48         1.49         261           (thousand tonnes)         253         253         261	18         18         18         16           (million tonnes)         5.96         6.02         5.87         5.66           (million tonnes)         5.49         5.76         5.80         5.50           (million tonnes)         8.29         10.14         9.65         9.29           (thousand tonnes)         331         334         326         354           (thousand bone dry units)         461         563         536         581           92%         96%         99%         97%           Image: State St	18         18         18         16         16           (million tonnes)         5.96         6.02         5.87         5.66         5.65           (million tonnes)         5.49         5.76         5.80         5.50         5.63           (million bone dry units)         8.29         10.14         9.65         9.29         9.45           (thousand tonnes)         331         334         326         354         353           (thousand bone dry units)         461         563         536         581         590           92%         96%         99%         97%         100%           Units         2010         2011         2012         2013         2014           6         6         6         5         6         6         5         6           (million tonnes)         1.52         1.52         1.57         1.38         1.61           (million tonnes)         1.49         1.48         1.49         1.30         1.48           (thousand tonnes)         253         253         261         275         268	I8         I8         I8         I6         I6         I7           (million tonnes)         5.96         6.02         5.87         5.66         5.65         5.85           (million tonnes)         5.49         5.76         5.80         5.50         5.63         5.69           (million bone dry units)         8.29         10.14         9.65         9.29         9.45         9.44           (thousand tonnes)         331         334         326         354         353         344           (thousand bone dry units)         461         563         536         581         590         555           92%         96%         99%         97%         100%         97%           Units         2010         2011         2012         2013         2014         2015           6         6         6         5         6 <td>18181816161715(million tonnes)<math>5.96</math><math>6.02</math><math>5.87</math><math>5.66</math><math>5.65</math><math>5.85</math><math>5.21</math>(million tonnes)<math>5.49</math><math>5.76</math><math>5.80</math><math>5.50</math><math>5.63</math><math>5.69</math><math>5.20</math>(million bone dry units)<math>8.29</math><math>10.14</math><math>9.65</math><math>9.29</math><math>9.45</math><math>9.44</math><math>8.95</math>(thousand tonnes)<math>331</math><math>334</math><math>326</math><math>354</math><math>353</math><math>344</math><math>348</math>(thousand bone dry units)<math>461</math><math>563</math><math>536</math><math>581</math><math>590</math><math>555</math><math>596</math><math>22\%</math><math>96\%</math><math>99\%</math><math>97\%</math><math>100\%</math><math>97\%</math><math>100\%</math><math>22010</math><math>2011</math><math>2012</math><math>2013</math><math>2014</math><math>2015</math><math>2016</math><math>0</math><math>6</math><math>6</math><math>5</math><math>6</math><math>6</math><math>5</math><math>(million tonnes)</math><math>1.52</math><math>1.52</math><math>1.57</math><math>1.38</math><math>1.61</math><math>1.49</math><math>1.26</math><math>(million tonnes)</math><math>1.49</math><math>1.48</math><math>1.49</math><math>1.30</math><math>1.48</math><math>1.29</math><math>1.15</math><math>(thousand tonnes)</math><math>253</math><math>253</math><math>261</math><math>275</math><math>268</math><math>248</math><math>252</math></td> <td>Image: Image: Image:</td> <td>Image: Image: Image:</td> <td>Image: Image: Image:</td> <td>Image: Normal state         Image: Image</td> <td>Image: Instant of the state of the</td>	18181816161715(million tonnes) $5.96$ $6.02$ $5.87$ $5.66$ $5.65$ $5.85$ $5.21$ (million tonnes) $5.49$ $5.76$ $5.80$ $5.50$ $5.63$ $5.69$ $5.20$ (million bone dry units) $8.29$ $10.14$ $9.65$ $9.29$ $9.45$ $9.44$ $8.95$ (thousand tonnes) $331$ $334$ $326$ $354$ $353$ $344$ $348$ (thousand bone dry units) $461$ $563$ $536$ $581$ $590$ $555$ $596$ $22\%$ $96\%$ $99\%$ $97\%$ $100\%$ $97\%$ $100\%$ $22010$ $2011$ $2012$ $2013$ $2014$ $2015$ $2016$ $0$ $6$ $6$ $5$ $6$ $6$ $5$ $(million tonnes)$ $1.52$ $1.52$ $1.57$ $1.38$ $1.61$ $1.49$ $1.26$ $(million tonnes)$ $1.49$ $1.48$ $1.49$ $1.30$ $1.48$ $1.29$ $1.15$ $(thousand tonnes)$ $253$ $253$ $261$ $275$ $268$ $248$ $252$	Image:	Image:	Image:	Image: Normal state         Image: Image	Image: Instant of the state of the

Source: Major Primary Timber Processing Facilities in British Columbia, Ministry database, various years.

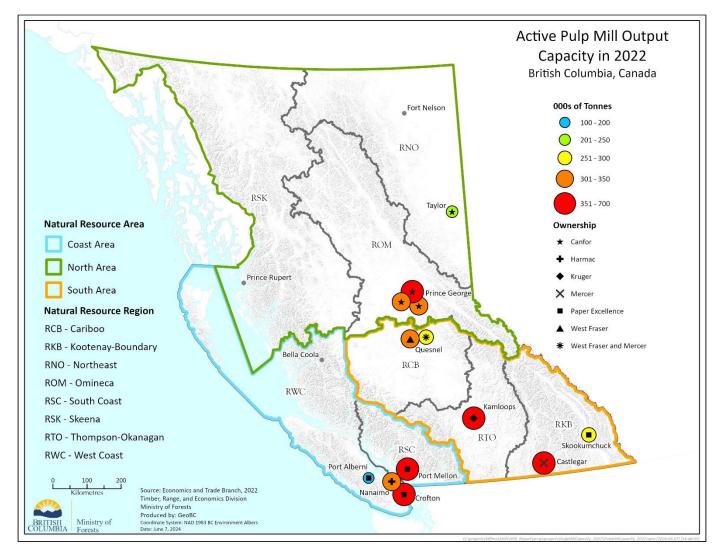
Notes:

1. Output capacity is estimated based on three 8-hour shifts per day and 345 days per year.

2. This table has incorporated retroactive data adjustments made by the pulp industry in November 2022.



Figure 14: B.C. Pulp Mills – Output Capacity and Ownership





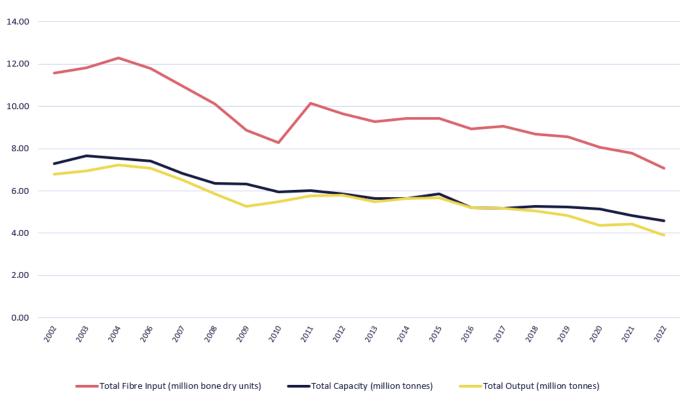


Figure 15: B.C. Pulp Mills – Capacity, Output, and Input

Figure 16: B.C. Pulp Mills – Capacity Utilization

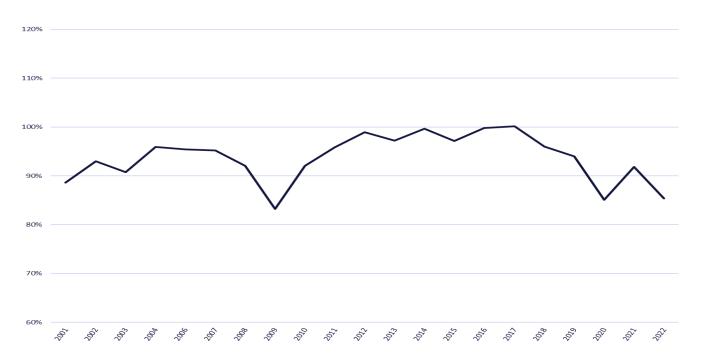
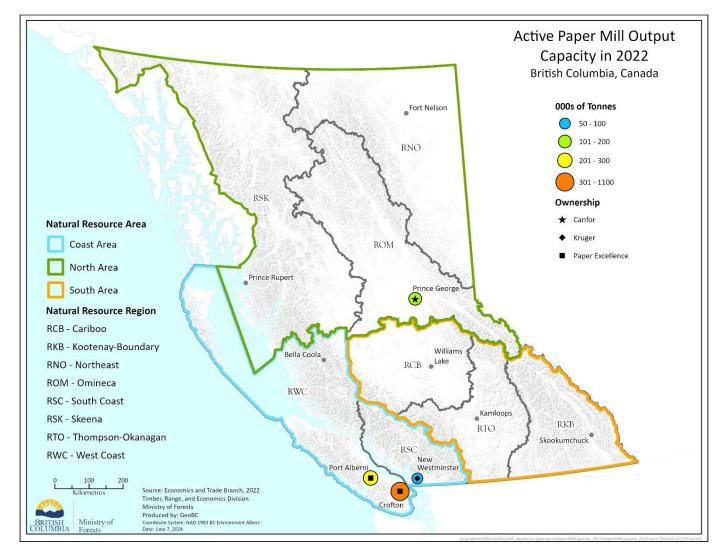


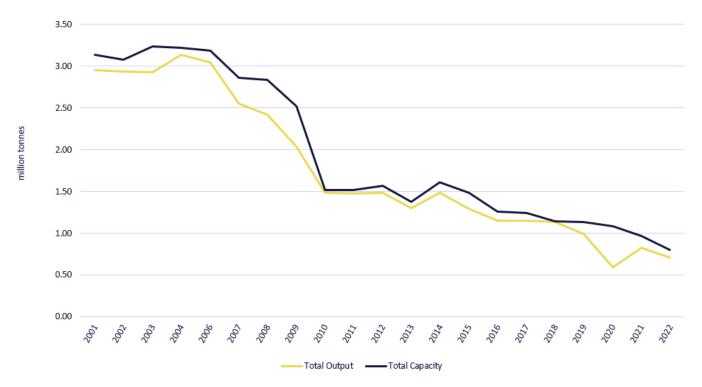


Figure 17: B.C. Paper Mills – Output Capacity and Ownership

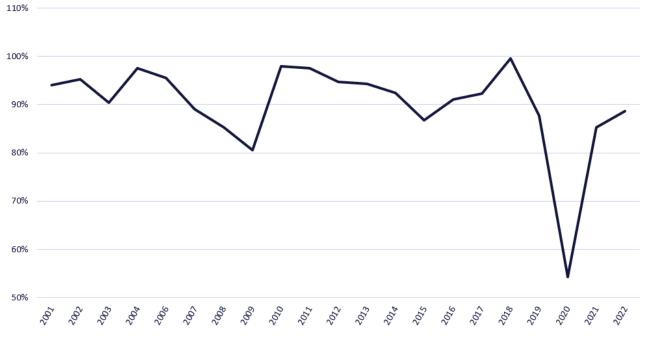












Capacity Utilization





## Pellet Industry

#### Industry Overview

Wood pellets are a manufactured biomass fuel made from wood that is condensed into pellets under heat and pressure. Wood is dried to remove the excess water, and then compressed into pellets that are of high density and suitable for bulk transport and bulk firing in conventional solid fuel burners.

The world market for pellets is rapidly growing. It is primarily driven by demand for renewable fuels to replace fossil fuels in both power boilers and space heating. In 2022, Canadian pellet exports pivoted from the United Kingdom to Japan. This is a long-expected change that optimizes western Canadian export logistics and the evolution of long-term supply agreements. This growth in the pellet market has created manufacturing opportunities for B.C. when there is necessary infrastructure and access to ocean terminals.

B.C. is currently one of the most important suppliers of wood pellets in the world. According to Statistics Canada, the value of pellet exports more than doubled from 1.3 million tonnes estimated at \$201 million in 2015 to 2.5 million tonnes estimated at \$470 million in 2022. Japan (52%) was the top destination by weight, followed by UK (29%) and other countries (18%)<sup>10</sup>. According to Statistics Canada, the average price of pellet products was \$0.18 per kilogram in 2022, up from \$0.15 per kilogram in 2021.

### **Mill Summary Statistics**

#### Number of Mills, Capacity, Average Capacity, Output, Input, and Utilization

- In 2022, there were 14 pellet mills in B.C. The largest producer was Drax Group with eight pellet mills operating in the Interior, representing 68% of provincial capacity.<sup>11</sup> Other major producers included Pacific BioEnergy, Sinclar Group, and Canfor.
- Pellet mills in B.C. are larger than those in other Canadian jurisdictions. In 2022, the average annual capacity of B.C. pellet mills was 155,000 tonnes, more than triple that of eastern Canada (average capacity of 50,000 tonnes).
- While long-term demand is expected to remain strong, short-term disruptions can affect the market for pellet producers. With the decreased supply of milling residuals because of mill curtailments and other mill disruptions such as mill fires, total pellet output decreased by 5% in 2022. The average capacity utilization decreased by 9% to 89% in 2022 (Figure 21).
- The feedstock for pellet mills comes from milling residuals,<sup>12</sup> harvest residuals,<sup>13</sup> and logs that were damaged by insects or disease, cracked, twisted or otherwise unsuitable to make lumber. The pellet sector ensures B.C. forest resources are fully utilized by reducing waste at lumber mills and reducing emissions that would occur if fibre remained in the bush and was burned in a slash pile. As shown in Table 7, total fibre input to pellet plants decreased slightly from 1.95 million BDUs in 2021 to 1.66 million BDUs in 2022.

<sup>&</sup>lt;sup>10</sup> Source: 2022 Economic State of the B.C. Forest Sector

<sup>&</sup>lt;sup>11</sup> Partial ownership was included in the calculation of the pellet company's capacity share.

<sup>&</sup>lt;sup>12</sup> Milling residuals include sawdust and shavings, residual chips, and other fibre such as mill yard waste.

<sup>&</sup>lt;sup>13</sup> Harvest residuals include non-sawlog fibre removed from cut blocks following harvesting activities and transported directly to mills to make wood products.



#### Table 7: B.C. Pellet Mill Summary Statistics

	Units	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Mills		11	11	11	11	12	14	14	13	13	13	13	14	14
Total Capacity	(million tonnes)	1.31	1.99	1.67	1.69	1.77	2.05	2.22	2.13	2.17	2.31	2.11	2.09	2.17
Total Output	(million tonnes)	1.11	1.36	1.64	1.68	1.65	1.80	2.06	2.08	2.12	2.09	1.98	2.04	1.94
Total Input	(million bone dry units)	1.13	1.28	1.37	1.58	1.62	1.73	1.92	1.95	1.87	1.93	1.96	1.95	1.66
Average Capacity	(thousand tonnes)	119	181	152	154	148	146	159	164	167	178	162	149	155
Capacity Utilization	(output divided by capacity)	85%	68%	98%	99%	93%	88%	93%	98%	98%	90%	94%	98%	89%
Recovery Factor	(Tonnes of output per tonne of bone dry input)	0.98	1.06	1.20	1.06	1.02	1.04	1.07	1.07	1.13	1.08	1.01	1.05	1.17

*Source: Major Primary Timber Processing Facilities in British Columbia, Ministry database, various years. Notes:* 

1. Output capacity is estimated based on three 8-hour shifts per day and 345 days per year.

2. For some pellet mills, their reported output may be higher than their reported input due to inventory.





Figure 20: B.C. Pellet Mills – Capacity, Output, and Fibre Input

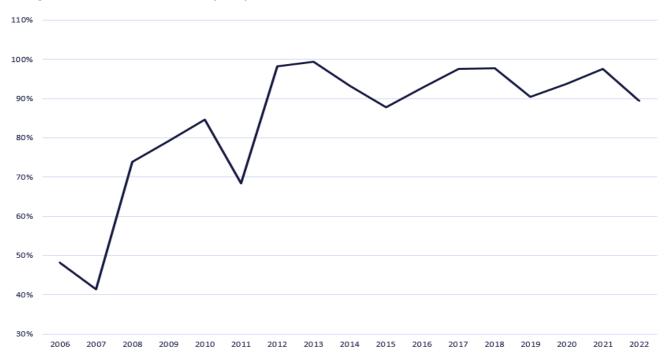


Figure 21: B.C. Pellet Mills – Capacity Utilization



## Shake and Shingle Industry

#### Industry Overview

The wood shake and shingle industry includes mills that produce premium residential roofing and siding products. In B.C., Western redcedar is the material of choice because it offers several unique features, including ease of installation, low maintenance, durability, and earthy colours. While both shakes and shingles can be used for roofs and walls, shakes tend to be used more for roofs because they are usually thicker than shingles. The main roofing product types include hand-split and re-sawn shakes as well as taper-sawn shakes. Various sidewall shingle products are also produced in B.C.<sup>14</sup> The usual commercial unit of measurement for shake and shingles is a "square," the quantity required to cover 100 square feet of surface area.

Although the shake and shingle industry is relatively small, it generates significant sales revenue for the B.C. economy. According to Statistics Canada, total manufacturing sales for shake and shingle products were \$534 million in 2022. The province exported \$323 million of shake and shingle products to global markets. The US was the largest market (93%), with the next largest market being the UK (2%). Within the US, Massachusetts was the largest market, followed by Connecticut, New York, and Oregon.<sup>15</sup>

Strong residential construction and increased repair and remodelling activities also led to higher demand and higher prices for shake and shingle products in 2022. According to Statistics Canada, the shake price rose from \$30 per square metre in 2021 to \$39 per square metre in 2022. The shingle price increased from \$25 per square metre in 2021 to \$29 per square metre in 2022.

#### **Mill Summary Statistics**

#### Number of Mills, Capacity, Input, Output, and Utilization

- As shown in Figure 22, the number of shake and shingle mills decreased from 51 in 2000 to 28 in 2022.
- While shake and shingle mills were in all parts of the province where Western redcedar was found, most production was located on the Coast. In 2022, 24 shake and shingle producers operated on the Coast, accounting for 98% of provincial capacity. Four producers operated in the Interior, accounting for 2% of total capacity. In 2022, the top three producers were Imperial Shake Co., Waldun Forest Products Ltd., and Best Quality Cedar Products Ltd., which collectively accounted for 37% of total capacity. 89% of shake and shingle mills in B.C. were small private companies with less than 50 employees.
- Shake and shingle mills relied on large-diameter logs to make products. Some of them used old-growth/matured logs, while others used second-growth logs as their inputs. Given the declining harvest of cedar logs in the province, most shake and shingle mills operated less than one shift per day, resulting in decreased capacity utilization.

<sup>&</sup>lt;sup>14</sup> Source: The B.C. Cedar Shake and Shingle Bureau

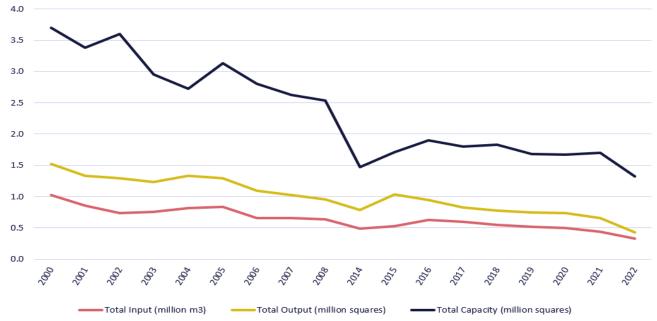
<sup>&</sup>lt;sup>15</sup> Source: <u>https://www.ic.gc.ca/app/scr/tdst/tdo/crtr.html?&productType=HS6&lang=eng</u>



Figure 22: Number of Shake and Shingle Mills

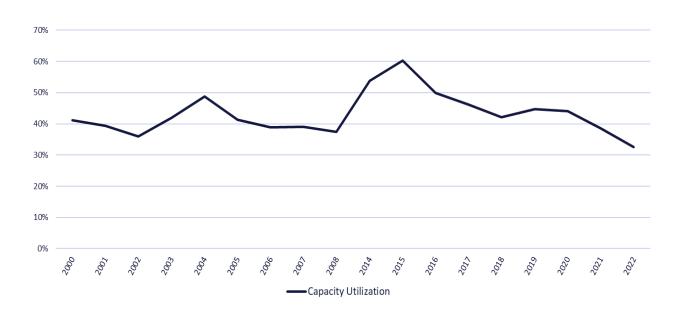








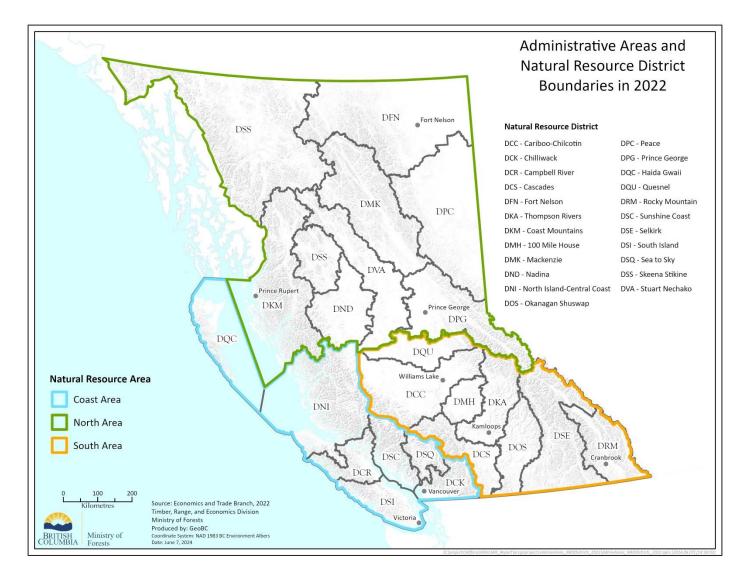






# Appendix









#### Lumber Mills

Lumber mills are presented in two separate tables, one for those with an estimated annual capacity of at least 40 million board feet of lumber, and one for those with lower annual capacity.

The annual capacity reported in the following tables is estimated based on the same standard operating assumptions for each mill (i.e., number and length of shifts and days per year as described below). The actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Therefore, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The estimated annual capacity is based on a standardized operation of 240 days per year, two 8-hour shifts per day. Actual mill operation may vary from this schedule.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 3. The List of Lumber Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-indus



Table 8: Lumber Mills with an Annual Capacity of at Least 40 Million Board Feet, 2022

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (Million board feet)
283	Acorn Forest Products Ltd.	Delta	Coast	Chilliwack	120
498	Aspen Planers Ltd.	Merritt	South	Cascades	216
213	Babine Forest Products Limited (Hampton Lumber)	Burns Lake	North	Nadina	217
127	Canadian Forest Products Ltd.	Chetwynd	North	Peace	219
93	Canadian Forest Products Ltd.	Wynndel	South	Selkirk	67
140	Canadian Forest Products Ltd.	Engen	North	Vanderhoof	445
166	Canadian Forest Products Ltd.	Prince George	North	Prince George	338
160	Canadian Forest Products Ltd.	Bear Lake	North	Prince George	282
82	Canadian Forest Products Ltd.	Elko	South	Rocky Mountain	216
90	Canadian Forest Products Ltd.	Radium Hot Springs	South	Rocky Mountain	204
193	Canadian Forest Products Ltd.	Houston	North	Nadina	436
122	Canfor and Pacific BioEnergy	Fort St John	North	Peace	288
150	Carrier Lumber Ltd.	Prince George	North	Prince George	276
129	Conifex Timber Inc.	Mackenzie	North	Mackenzie	192
326	Delta Cedar Sawmill LP	Delta	Coast	Chilliwack	50
158	Dunkley Lumber Ltd.	Hixon	North	Prince George	528
66	Gilbert Smith Forest Product Ltd.	Barriere	South	Thompson Rivers	77
537	Goldwood Industries Ltd.	Richmond	Coast	Chilliwack	51
14	Gorman (Gorman Brothers Lumber Ltd.)	Westbank	South	Okanagan Shuswap	127
45	Gorman Borthers (Downie Timber Ltd.)	Revelstoke	South	Selkirk	112
1005	Halo Sawmill Mfg LP	Pitt Meadows	Coast	Chilliwack	59
181	Hampton Lumber (Decker Lake Forest Products)	Burns Lake	North	Nadina	48
70	Interfor	Adams Lake	South	Thompson Rivers	349
62	Interfor	Castlegar	South	Selkirk	230
30	Interfor	Grand Forks	South	Selkirk	168
88	J. H. Huscroft Ltd.	Erickson	South	Selkirk	46
50	Kalesnikoff Lumber Co. Ltd.	Castlegar	South	Selkirk	125
1000	Ledcor Forest Products Partnership	Chilliwack	Coast	Chilliwack	71
144	Nechako Lumber Co.	Vanderhoof	North	Vanderhoof	202
618	North Enderby Timber Ltd.	Enderby	South	Okanagan Shuswap	61
1084	Pacheedaht Mill	Port Renfrew	Coast	South Island	163
626	Porcupine Wood Products Ltd.	Salmo	South	Selkirk	55
361	Riverside Forest Products	Surrey	Coast	Chilliwack	84
183	ROC Holdings Ltd.	Terrace	North	Coast Mountain	138
454	S & R Sawmills Ltd.	Surrey	Coast	Chilliwack	223
750	Sigurdson Forest Products Ltd.	Williams Lake	South	Cariboo Chilcotin	72
137	Sinclar Group (Apollo Forest Products Ltd.)	Fort St James	North	Fort St. James	125





		0		0	
100	Teal-Jones Group (J.S. Jones)	Surrey	Coast	Chilliwack	182
539	Teal-Jones Group (Stag Timber Ltd.)	Surrey	Coast	Chilliwack	47
396	Terminal Forest Products Ltd.	Vancouver	Coast	Chilliwack	50
540	Terminal Forest Products Ltd.	Richmond	Coast	Chilliwack	108
68	Tolko Industries Ltd.	Armstrong	South	Okanagan Shuswap	213
20	Tolko Industries Ltd.	Lavington	South	Okanagan Shuswap	244
103	Tolko Industries Ltd. (Lakeview)	Williams Lake	South	Cariboo Chilcotin	223
107	Tolko Industries Ltd. (Soda Creek)	Williams Lake	South	Cariboo Chilcotin	182
31	Vaagen Fibre Canada	Midway	South	Selkirk	144
552	West Fraser Mills Ltd.	Chetwynd	North	Peace	270
191	West Fraser Mills Ltd.	Smithers	North	Skeena Stikine	269
95	West Fraser Mills Ltd.	100 Mile House	South	100 Mile House	168
532	West Fraser Mills Ltd.	LeJac	North	Vanderhoof	224
113	West Fraser Mills Ltd.	Quesnel	South	Quesnel	439
114	West Fraser Mills Ltd.	Williams Lake	South	Cariboo Chilcotin	146
376	Western Forest Products	Ladysmith	Coast	South Island	107
442	Western Forest Products	Ladysmith	Coast	South Island	169
393	Western Forest Products	Chemainus	Coast	South Island	65
320	Western Forest Products	Cowichan Bay	Coast	South Island	132
546	Western Forest Products	Duke Point	Coast	South Island	101
528	Western Forest Products	Port Alberni	Coast	South Island	120
29	Weyerhaeuser Company Ltd.	Princeton	South	Cascades	230



 Table 9: Lumber Mills with an Annual Capacity of Less than 40 Million Board Feet, 2022

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (Million board feet)
199	1378447 B.C. Ltd.	Athalmer	South	Rocky Mountain	1.9
9	A J Forest Products Ltd.	Brackendale	Coast	Sea to Sky	26.4
8	Andersen Pacific Forest Products Ltd.	Ruskin	Coast	Chilliwack	22.6
643	Bear Lumber Ltd.	Cranbrook	South	Rocky Mountain	3.8
1109	Black Sheep Timbers	Hagensborg	Coast	North Island - Central Coast	0.5
1095	Canadian Timber Frames	Golden	South	Selkirk	1.4
117	Continental Pole Ltd.	Pemberton	Coast	Sea to Sky	0.7
377	Coulson Manufacturing Ltd. (2017)	Port Alberni	Coast	South Island	33.6
1051	COWICHAN LAKE TIMBER	Lake Cowichan	Coast	South Island	2.2
989	Deacoff Bros. Enterprises Ltd.	Kelowna	South	Okanagan Shuswap	0.8
1048	E Schuk contracting Ltd.	Tatla Lake	South	Cariboo Chilcotin	0.4
1056	Eaglecrest Enterprises Ltd.	Port Clements	Coast	Haida Gwaii	1.4
717	Edgegrain	Campbell River	Coast	Campbell River	1.4
714	Franklin Forest Products Ltd.	Port Alberni	Coast	South Island	19.2
1004	Fu So Enterprises Ltd.	Surrey	Coast	Chilliwack	2.4
86	Galloway Lumber Co. Ltd.	Galloway	South	Rocky Mountain	24.4
32	Gibbs Custom Sawmill	McBride	North	Prince George	0.5
957	Gold Island Forest Products Ltd.	Slocan	South	Selkirk	16.8
567	Green D Forest Products Ltd.	Merville	Coast	Campbell River	0.1
1016	Greenslide Cattle Co Ltd.	Revelstoke	South	Selkirk	1.0
5	Haida Gwaii Forest Products Joint Venture	Port Clements	Coast	Haida Gwaii	14.4
133	Hampton Lumber (Fort St. James Forest Products)	Fort St James	North	Fort St. James	15.3
1006	Harrop Procter Forest Products	Nelson	South	Selkirk	1.1
1098	HUNKY DORY SAWMILL	Houston	North	Nadina	0.2
990	Hyde Sawmill Ltd.	Sicamous	South	Okanagan Shuswap	6.1
1014	Jeff Palumbo Contracting	Golden	South	Selkirk	0.3
512	Jemico Enterprises Ltd.	Chemainus	Coast	South Island	10.5
47	Joe Kozek Sawmills Ltd.	Revelstoke	South	Selkirk	9.6
184	Kitwanga Forest Products	Kitwanga	North	Skeena Stikine	37.9
1085	L&Y Forest Products Ltd.	Duncan	Coast	South Island	0.5
1007	Lake Drive Lumber	Terrace	North	Coast Mountain	1.4
702	Linde Bros Lumber Ltd.	Williams Lake	South	Cariboo Chilcotin	1.4
399	Lois Lumber Ltd.	Powell River	Coast	Sunshine Coast	4.8
712	Long Hoh Enterprises Canada Ltd.	Qualicum Beach	Coast	South Island	33.6
1067	Lower North Thompson Community Forest Society	Barriere	South	Thompson Rivers	0.5
1052	Ludwig Lumber Ltd.	Black Creek	Coast	Campbell River	1.2
197	McDonald Ranch & Lumber Ltd.	Grasmere	South	Rocky Mountain	6.7
974	Murray Kane Site 6LW	Clinton	South	100 Mile House	0.2
1105	Nickolaus Stockklauser	Burns Lake	North	Nadina	1.4





1076	North Pacific Timber Corporation	Queen Charlotte	Coast	Haida Gwaii	1.0
1010	Pacific Timber	Burns Lake	North	Nadina	11.5
917	Pacific Timber -Sheraton Sawmill	Burns Lake	North	Nadina	12.0
711	Port Hardy Merchandising Ltd.	Port Hardy	Coast	North Island - Central Coast	4.8
582	Quadra Island Forest Products Ltd.	Quadra Island	Coast	Campbell River	2.9
698	R. Durfeld Log Construction Ltd.	Williams Lake	South	Cariboo Chilcotin	1.4
905	Rainforest Sawmill	Black Creek	Coast	Campbell River	0.7
1115	Richard Thompson	Okanagan Falls	South	Okanagan Shuswap	0.5
271	Rouck Brothers Sawmill Ltd.	Lumby	South	Okanagan Shuswap	3.8
907	Saratoga Speedway Mills	Campbell River	Coast	Campbell River	0.7
480	Schapol Logging Ltd.	Enderby	South	Okanagan Shuswap	23.8
23	Shannon Lumber Ltd.	Chilliwack	Coast	Chilliwack	9.6
654	SpikeTop Cedar Ltd.	Port Hardy	Coast	North Island - Central Coast	0.5
1069	Straight Edge Milling Ltd.	Chilliwack	Coast	Chilliwack	5.3
24	Suncoast Industries Inc.	Sechelt	Coast	Sunshine Coast	15.4
1023	Take to Heart Specialty Wood Products	Revelstoke	South	Selkirk	0.8
96	Thomson Bros. Lumber Co. Ltd.	Courtenay	Coast	Campbell River	2.4
173	Valemount Industrial Park LP	Valemount	North	Prince George	3.8
1092	Vertical West Timber Ltd.	Salmon Arm	South	Okanagan Shuswap	0.2
1063	Timberspan Wood Products. Inc.	Prince George	North	Prince George	3.8
979	Woodco Industries Ltd.	Barriere	South	Thompson Rivers	21.6



## Pulp and Paper Mills

Pulp and paper mills are listed in this section. For integrated mills, pulp capacity includes pulp that is used internally to produce paper, and pulp that is shipped from the mill site as market pulp.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Therefore, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. Estimated annual capacity is based on a standardized operation of 345 operating days per year, 24 hours per day. Actual operations may vary from this schedule.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 3. The List of Pulp and Paper Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/fore



# Table 10: Pulp and Paper Mills, 2022

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Estimated Annual Capacity (Thousand tonnes)
960	Canadian Forest Products Ltd. (Intercontinental Pulp)	Prince George	PLP	North	Prince George	308
960	Canadian Forest Products Ltd. (Intercontinental Pulp)	Prince George	PLP	North	Prince George	313
503	Canadian Forest Products Ltd. (Northwood Pulp Mill)	Prince George	PLP	North	Prince George	496
500	Canadian Forest Products Ltd. (Prince George Pulp and Paper)	Prince George	PLP	North	Prince George	311
335	Canadian Forest Products Ltd. (Taylor Pulp Mill)	Taylor	PLP	North	Peace	231
488	Harmac Pacific (Nanaimo Forest Products)	Cedar	PLP	Coast	South Island	345
2	Kruger	Kamloops	PLP	South	Thompson Rivers	393
501	Mercer (Mercer Celgar Limited Partnership)	Castlegar	PLP	South	Selkirk	415
487	Paper Excellence Group	Port Alberni	PLP	Coast	South Island	137
483	Paper Excellence Group	Crofton	PLP	Coast	South Island	685
484	Paper Excellence Group (Howe Sound)	Port Mellon	PLP	Coast	Sunshine Coast	351
1	Paper Excellence Group (Skookumchuk Pulp Mill)	Skookumchuck	PLP	South	Rocky Mountain	278
497	West Fraser and Mercer (Cariboo Pulp & Paper)	Quesnel	PLP	South	Quesnel	288
553	West Fraser Mills Ltd. (Quesnel River Pulp Company)	Quesnel	PLP	South	Quesnel	334
500	Canadian Forest Products Ltd. (Prince George Pulp and Paper)	Prince George	PPR	North	Prince George	156
491	Kruger Products Inc.	New Westminster	PPR	Coast	Chilliwack	64
483	Paper Excellence Group	Crofton	PPR	Coast	South Island	314
487	Paper Excellence Group	Port Alberni	PPR	Coast	South Island	269



# Veneer, Plywood, OSB, and Other Panel Mills

Mills producing veneer, plywood, OSB and other types of panels are listed in this section. For mills that produce both market veneer and plywood, veneer capacity includes market veneer and the veneer that is used within the mill to manufacture plywood. Panel mills that use wood residuals to produce panels or that do not have log-processing capability are also listed in this report.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Therefore, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The estimated annual capacity of veneer mills and plywood mills is based on a standardized operation of 240 days per year, two 8-hour shifts per day. For OSB and other panel mills, the estimated annual capacity is based on a standardized operation of 345 days per year, three 8-hour shifts per day. Actual operations may vary from these schedules.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 3. The List of Veneer, Plywood, OSB and Panel Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/fore



## Table 11: Veneer, Plywood, OSB, and Panel Mills, 2022

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Estimated Annual Capacity (million sq. ft, 3/8" basis)
650	Louisiana Pacific Canada Ltd.	Dawson Creek	OSB	North	Peace	310
942	Peace Valley OSB	Fort St John	OSB	North	Peace	828
84	Pacific Woodtec	Golden	PLY	South	Selkirk	104
105	West Fraser Mills Ltd.	Williams Lake	PLY	South	Cariboo Chilcotin	179
1042	Thompson River Veneer Products Ltd.	Kamloops	PLY	South	Thompson Rivers	108
112	West Fraser Mills Ltd.	Quesnel	PLY	South	Quesnel	210
109	Aspen Planers Ltd.	Savona	PLY	South	Thompson Rivers	121
478	Richmond Plywood Corporation Limited	Richmond	PLY	Coast	Chilliwack	137
394	Tolko Industries Ltd.	Heffley Creek	PLY	South	Thompson Rivers	184
12	Gorman Brothers (Canoe Forest Products Ltd.)	Canoe	PLY	South	Okanagan Shuswap	138
68	Tolko Industries Ltd.	Armstrong	PLY	South	Okanagan Shuswap	251
113	West Fraser Mills Ltd.	Quesnel	PNL	South	Quesnel	223
650	Louisiana Pacific Canada Ltd.	Dawson Creek	SID	North	Peace	284
51	Atco Wood Products	Fruitvale	VNR	South	Selkirk	119
112	West Fraser Mills Ltd.	Quesnel	VNR	South	Quesnel	142
105	West Fraser Mills Ltd.	Williams Lake	VNR	South	Cariboo Chilcotin	144
84	Pacific Woodtec	Golden	VNR	South	Selkirk	108
394	Tolko Industries Ltd.	Heffley Creek	VNR	South	Thompson Rivers	180
115	Aspen Planers Ltd.	Lillooet	VNR	South	Cascades	134
1044	Harwood Lumber Ltd.	Maple Ridge	VNR	Coast	Chilliwack	1
508	CIPA Lumber Co. Ltd.	Annacis Island	VNR	Coast	Chilliwack	216
478	Richmond Plywood Corporation Limited	Richmond	VNR	Coast	Chilliwack	93
34	B C Veneer Products Ltd.	Surrey	VNR	Coast	Chilliwack	2
12	Gorman Brothers (Canoe Forest Products Ltd.)	Canoe	VNR	South	Okanagan Shuswap	144
68	Tolko Industries Ltd.	Armstrong	VNR	South	Okanagan Shuswap	187
35	Tolko Industries Ltd.	Lumby	VNR	South	Okanagan Shuswap	199
244	Coastland Wood Industries Ltd.	Nanaimo	VNR	Coast	South Island	213

Notes:

1. Small mills using less than 25,000 cubic metres of logs per year were also included in the above list.



## **Chip Mills**

Only mills that produce wood chips as a primary product are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Therefore, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The estimated annual capacity is based on a standardized operation of 240 days per year, two 8-hour shifts per day. Actual operations may vary from this schedule.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 3. The List of Chip Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industr



## Table 12: Chip Mills, 2022

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (Thousand BDUs)
1094	Arrow Chip Plant	Fort St James	North	Fort St. James	95
10	B.C. Custom Timber Products Ltd.	Vanderhoof	North	Vanderhoof	165
1002	B.C. EcoChips Ltd.	Okanagan Falls	South	Okanagan Shuswap	82
166	Canadian Forest Products Ltd.	Prince George	North	Prince George	417
1	Canadian Forest Products Ltd.	Skookumchuck	South	Rocky Mountain	120
924	Chips Ahoy Fibre Supply Ltd.	Mission	Coast	Chilliwack	168
1082	Coastland Wood Industries	Nanaimo	Coast	South Island	323
345	DCT Chambers Trucking Ltd.	Chemanius	Coast	South Island	323
356	East Fraser Fibre Co Ltd.	Mackenzie	North	Mackenzie	217
1000	Ledcor Forest Products Partnership	Chilliwack	Coast	Chilliwack	109
952	Rivercity Fibre Ltd.	Kamloops	South	Thompson Rivers	194
183	ROC Holdings Ltd.	Terrace	North	Coast Mountain	186
18	Terminal Forest Products Ltd.	Langdale	Coast	Sunshine Coast	34
394	Tolko Industries Ltd.	Heffley Creek	South	Thompson Rivers	96
68	Tolko Industries Ltd.	Armstrong	South	Okanagan Shuswap	45
409	West Coast Chip Mill	Vancouver	Coast	Chilliwack	262
113	West Fraser Mills Ltd.	Quesnel	South	Quesnel	190



#### Pellet Mills

Mills producing wood pellets for bioenergy are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Therefore, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The estimated annual capacity of pellet mills is based on a standardized operation of 345 days per year, three 8-hour shifts per day. Actual operations may vary from these schedules.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- The List of Pellet Mills is available as an Excel spreadsheet online at <u>https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey.</u>



## Table 13: Pellet Mills, 2022

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (Thousand tonnes)
127	Canfor Energy North Limited Partnership	Chetwynd	North	Peace	117
122	Canfor Energy North Limited Partnership	Fort St John	North	Peace	83
929	Drax	Armstrong	South	Okanagan Shuswap	66
980	Drax	Burns Lake	North	Nadina	378
976	Drax	Strathnaver	North	Prince George	186
948	Drax	Williams Lake	South	Cariboo Chilcotin	165
933	Drax (Princeton Standard Pellet Corporation)	Princeton	South	Cascades	85
947	Drax and Canfor (Houston Pellet Limited Partnership)	Houston	North	Nadina	213
1049	Drax and Tolko (Lavington Pellet Limited Partnership)	Lavington	South	Okanagan Shuswap	284
1074	Drax and West Fraser (Smithers Pellet Limited Partnership)	Smithers	North	Skeena Stikine	104
930	Pacific BioEnergy	Prince George	North	Prince George	285
932	Sinclar Group (Premium Pellet Ltd.)	Vanderhoof	North	Vanderhoof	124
183	Skeena Bioenergy Pellet Mill	Terrace	North	Coast Mountain	78



## Pole, Utility Pole, and Post Mills

Mills producing poles, utility poles, and posts are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than the estimated capacity if a mill runs on a different operating schedule than assumed here. Thus, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The estimated annual capacity is based on a standardized operation of 240 days per year, one 8-hour shift per day, although actual mill operations may vary from this schedule.
- 2. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 3. The List of Pole and Post Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/fores



## Table 14: Post, Utility Pole, and Pole Mills, 2022

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Estimated An Capacity (tho pieces)	
400	Asses Disease its	N d a unitat	DIF	Cauth	Casaa		N1/A
498 250	Aspen Planers Ltd. Nicola Post and Rail Ltd.	Merritt	PLE	South	Cascad		N/A
					Selkirk		N/A
677	Pacific Inland Pole & Piling Co. Ltd.	Nakusp	PLE	South			N/A
498	Aspen Planers Ltd. Box Lake Lumber Products Ltd.	Merritt	PST	South	Cascac Selkirk		480
390 997	Cedar 3 Products	Nakusp McBride	PST PST	North			480
	Nicola Post and Rail Ltd.	Merritt	PST	South	Cascad	George	720
250 1102	Ootsa Lake Cattle Company	Burns Lake	PST	North	Nadina		96
232	Princeton Wood Preservers Ltd.	Princeton	PST	South	Cascad		360
1113	TM Fibre Corp.	Cranbrook	PST	South			213
		Cranbrook				Mountain	
1114	Canwel Fibre Corp. Bell Lumber & Pole ULC Canada		PST	South	,	Mountain	480
188		Rossland		South	Selkirk		-
659	Brisco Wood Preservers Ltd.	Brisco	UTI	South		Mountain	24
556	Chinook Forest Products Ltd.	Courtenay	UTI	Coast	·	ell River	N/A
117	Continental Pole Ltd.	Pemberton	UTI	Coast	Sea to		12
181	Hampton Lumber	Burns Lake	UTI	North	Nadina		9
999	Otter Point Timber Ltd.	Ladysmith	UTI	Coast	South		20
48	Stella Jones Inc.	Revelstoke	UTI	South	Selkirk		48
222	Stella-Jones Inc.	Haney	UTI	Coast	Chilliw		42
648	Stella-Jones Inc.	Galloway	UTI	South	Rocky	Mountain	46



## Shake and Shingle Mills

Mills producing shake and shingles are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumptions for each mill (number and length of shifts and days per year as described below). Actual mill production can be higher or lower than estimated capacity if a mill runs on a different operating schedule than assumed here. Thus, while capacity provides guidance on mill output, it is not a measure of the actual production level of the mill. For more information, please contact Mill.Survey@gov.bc.ca.

- 1. The measurement unit is thousand roofing squares (thousand squares). A roofing square is approximately 100 square feet.
- 2. Estimated annual capacity is based on a standardized operation of 240 days per year, two 8-hour shifts per day. Actual mill operations may vary from this schedule.
- 3. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 4. The List of Shake and Shingle Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/f



# Table 15: Shake and Shingle Mills, 2022

Mill Number	Company	Location of Mill	Administrative Areas	Natural Resource District	Estimated Annual Capacity (Thousand squares)
1026	A.K. Cedar Products Ltd.	Abbotsford	Coast	Chilliwack	3.8
688	Best Quality Cedar Products Ltd.	Maple Ridge	Coast	Chilliwack	192.0
706	Bill Little Contracting Ltd.	Campbell River	Coast	Campbell River	2.9
449	Campbell River Shake and Shingle Co Ltd.	Campbell River	Coast	Campbell River	22.8
1028	Cape Scott Cedar Products Ltd.	Holberg	Coast	North Island - Central Coast	22.1
1029	Cedar Valley Holdings Ltd.	Valemount	North	Prince George	4.8
1033	Coleman Road Shingle Ltd. (Pacific Cedar)	Port Alberni	Coast	South Island	7.7
315	Comox Valley Shakes (2019) Ltd.	Campbell River	Coast	Campbell River	30.2
638	Confederate Shake & Shingle Ltd.	Youbou	Coast	South Island	19.2
69	Copper Mountain Cedar Products	Terrace	North	Coast Mountain	2.9
1062	G & R Cedar (2009) Ltd.	Chilliwack	Coast	Chilliwack	33.6
587	G & R Cedar Ltd.	Matsqui	Coast	Chilliwack	36.0
1030	Golden Ears Shingle Ltd.	Mission	Coast	Chilliwack	16.8
72	Imperial Shake Co Ltd.	Maple Ridge	Coast	Chilliwack	144.0
1071	Island Cedar Products	Matsqui	Coast	Chilliwack	78.7
321	J & D Shake and Cedar Mill Ltd.	Duncan	Coast	South Island	72.0
583	Madewell Cedar Inc.	Mission	Coast	Chilliwack	103.2
1034	Pacific Chalet Ltd.	Powell River	Coast	Sunshine Coast	1.0
460	Port McNeill Shake & Shingles (2007) Ltd.	Port McNeill	Coast	North Island - Central Coast	12.0
266	Premium Cedar Products Ltd.	Ruskin	Coast	Chilliwack	82.9
1036	Riverside Shingle Products	Errington	Coast	South Island	16.8
455	S & W Forest Products	Ruskin	Coast	Chilliwack	96.0
1061	Star Lumber Canada Ltd.	Mission	Coast	Chilliwack	81.6
902	Taylor Contracting Ltd.	Zeballos	Coast	Campbell River	11.5
585	Teal Cedar Products (1977) Ltd.	Revelstoke	South	Selkirk	6.7
722	Titan Ridge Forest Products	Port McNeill	Coast	North Island - Central Coast	43.2
691	W. Boyes Shake and Shingle Ltd.	150 Mile House	South	Cariboo Chilcotin	14.4
464	Waldun Forest Products Ltd.	Ruskin	Coast	Chilliwack	160.8



## Log Home Mills

Mills producing log homes are listed in this section. No capacity information is collected through the Mill List survey.

- 1. Administrative areas and natural resource districts were applied (see Figure 25 for details).
- 2. The List of Log Home Mills is available as an Excel spreadsheet online at <a href="https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information/major-timber-processing-facilities-survey">https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/forest-ind



# Table 16: Log Home Mills, 2022

Mill Number	Company	Location of Mill	Administrative Areas	Natural Resource District
694	1351472 B.C, Ltd. (doing business as Canada's Log People)	100 Mile House	South	100 Mile House
1117	Alpha Log & Timber	Tappen	South	Okanagan Shuswap
190	Artisan Log and Timber Homes	Ruskin	Coast	Chilliwack
697	Calija Log & Timber Homes Ltd.	93 Mile	South	100 Mile House
522	Chinook Log Homes Ltd.	Bear Flats, Montney	North	Peace
117	Continental Pole Ltd.	Pemberton	Coast	Sea to Sky
733	DBD LOG HOMES	Lone Butte	South	100 Mile House
700	Durfeld Log & Timber	Whistler	Coast	Sea to Sky
46	Hamill Creek Timber Homes (2010) Ltd.	Meadow Creek	South	Selkirk
1116	Kore Log Homes	Tappen	South	Okanagan Shuswap
216	Lake Country Log Homes (2009) Ltd.	Malakwa	South	Okanagan Shuswap
218	Maurer Construction Ltd.	Penticton	South	Okanagan Shuswap
230	Nicola LogWorks Limited	Merritt	South	Cascades
474	Pioneer Log Homes of B.C.	Williams Lake	South	Cariboo Chilcotin
1100	Red Dog Logging Ltd.	Burns Lake	North	Nadina
57	Roundwood Log homes	Prince George	North	Prince George
693	Sitka Log Homes Inc.	100 Mile House	South	100 Mile House
58	Sperlich Log Construction Inc.	Enderby	South	Okanagan Shuswap
1022	Stonehouse Woodworks	Golden	South	Selkirk
602	T.L. Timber Ltd.	Cawston	South	Okanagan Shuswap
59	Tall Timber Log Builders	Popkum	Coast	Chilliwack
63	West Coast Log and Timber Homes	Gibsons	Coast	Sunshine Coast