Major Primary Timber Processing Facilities in British Columbia

2017

BRITISH COLUMBIA
Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Major Primary Timber Processing Facilities In British Columbia

2017

Forest Policy and Indigenous Relations Division
Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Victoria, B.C.

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Foreword

This edition of the *Major Primary Timber Processing Facilities in British Columbia* summarizes the activity of timber processing mills that operated during 2017. It covers sawmills, veneer and panel plants, pulp and paper mills, chip mills, pellet mills, shake and shingle, and pole and post mills. Some do not have primary log processing capabilities and process residual fibre from other mills. For mills that produced more than one product (e.g. lumber and veneer), each operation is listed in the respective section of the report. This report does not include re-manufacturing plants.

Most of the information contained in this report was gathered through 2017 and earlier surveys of individual processing mills. If survey responses were not provided, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development staff might use trade publications and corporate annual reports to make estimations. In some cases, ministry staff provided estimates based on their knowledge of the operation and information reported in previous years along with production information for selected forest products from Statistics Canada.

This report is available free of charge online at:

http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

Please note that all remaining errors are the responsibility of the Economic Services Branch. Any comments or errors could be sent to the contact information at the website or by mail to the following location:

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Abbreviations for Products

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

Introduction

This report presents summary statistics derived from the 2017 and earlier mill surveys, and selected analyses of these statistics. Fibre supply and log use in the province are examined through a series of tables and pie charts. These are followed by time series statistics for lumber, veneer mills, pulp and paper, and pellet mills. The final sections provide a list of the primary mills operating in the province in 2017.

Each year, surveys are sent to mill operators. Based on responses, mills are classified as a) open with the response, b) presumed open without response, c) did not operate at all during the year (temporary or indefinite closure) or d) closed (permanently). Statistics in this report are derived from mills in category a) and b). Mills that have announced permanent closure during 2017 are recorded as category a) for 2017.

Some historical data have been adjusted in this report to reflect revised information received from mill representatives for the 2017 Mill List report, meaning some historical data presented in this report might not be consistent with the data published in previous reports.

Primary Log Use and Wood Fibre Supply in British Columbia, 2017

Primary Log Use

Figure 1 shows that the estimated primary log use was 65.1 million cubic metres in 2017, which was 2.7 million cubic metres lower than reported in 2016:

- Lumber mills accounted for 72% of the total primary log use in 2017, down 1% from 2016. There were 126 lumber mills operating in 2017, a decrease of 13 mills from 2016. This decrease was due to one major lumber mill closure and 12 small mill closures in 2016. [1]
- The percentage of log consumption volume milled by pulp mill wood rooms decreased from 1.2% in 2016 to 0.4% in 2017 and that of chip mills increased from 4.9% in 2016 to 6% in 2017.
- The provincial log export slightly decreased from 9.2% in 2016 to 9.0% in 2017.

Wood Fibre Supply

- Total harvest volume in 2017 was about 64.2 million cubic metres, a decrease of 2.3% from 2016. Interior companies harvested 74% of the provincial total and coastal companies harvested the rest.
- The harvest mix on the Coast was hemlock (34%), Douglas fir (31%), red cedar (18%), balsam (9%) and others (6.5%). In the Interior, lodgepole pine (33%) and spruce (32%) dominated the harvest species.[2]

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[1] In Dec 2016, Tolko permanently closed its Merritt lumber mill reducing provincial lumber capacity by 186 million board feet. 12 small lumber mills changed their status from b) presumed open without response to d) closed (permanently). This information was verified by regional scaling officers in 2018.

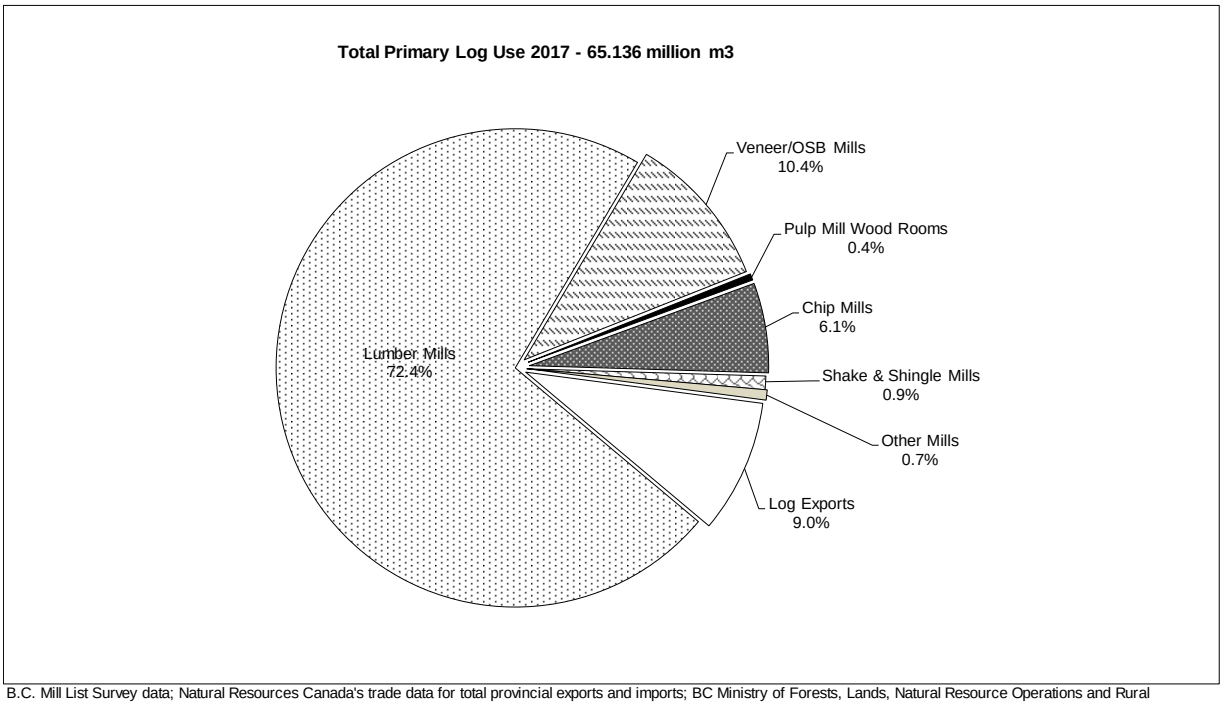
[2] Source: *2017 Economic State of the B.C. Forest Sector* report

- Total log import volume was small. About 28,000 cubic metres of logs were imported to the Province in 2017.

Figure 1: Estimated British Columbia Primary Log Use - 2017

	Coast			Interior			Province		
	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 m³)	Per Cent
Primary Log Use									
Lumber Mills	45	7,113	43.0%	81	40,065	82.4%	126	47,178	72.4%
Veneer/OSB Mills	5	2,174	13.1%	12	4,625	9.5%	17	6,799	10.4%
Pulp Mill Wood Rooms	1	141	0.9%	2	139	0.3%	3	280	0.4%
Chip Mills	10	1,598	9.7%	11	2,355	4.8%	21	3,953	6.1%
Shake & Shingle Mills	31	562	3.4%	5	36	0.1%	36	598	0.9%
Other Mills	11	87	0.5%	35	363	0.7%	46	450	0.7%
Log Exports		4,864	29.4%		1,014	2.1%		5,878	9.0%
TOTAL	103	16,539	100%	146	48,597	100%	249	**65,136**	100%
Log Availability									
Total Harvest		16,607			47,571			64,178	
Log Imports								28	
TOTAL		16,607			47,571			**64,206**	
Difference		68	*0.4%*		-1,026	*-2.2%*		-930	*-1.4%*

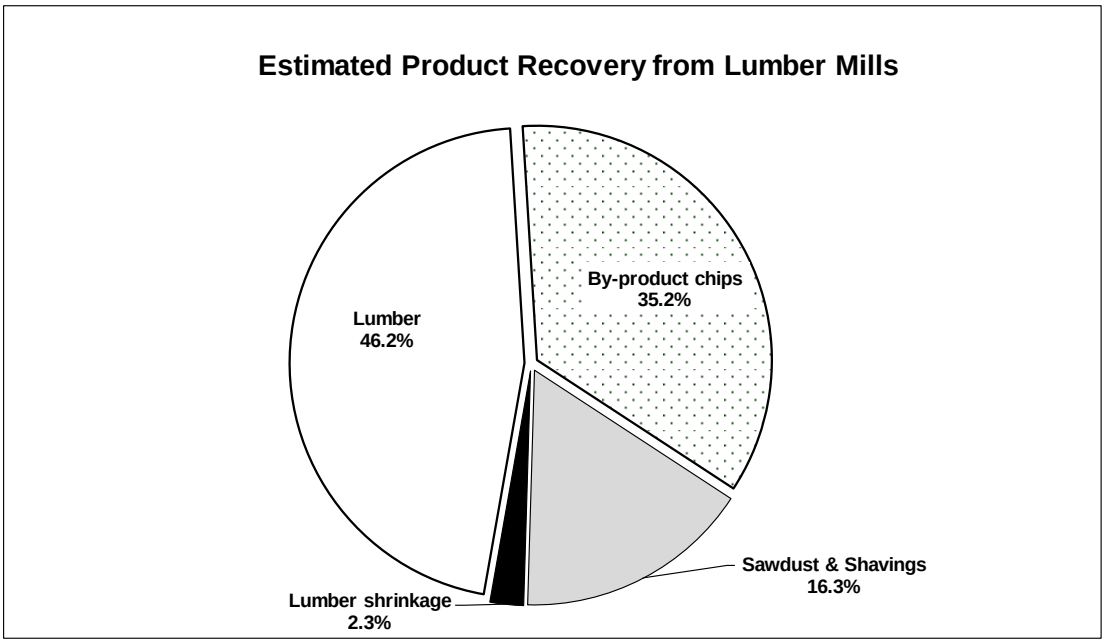
*Total harvest includes all logs, special forest products, species and grades billed to crown, private and federal land. Waste, reject and Xmas trees were excluded.



B.C. Mill List Survey data; Natural Resources Canada's trade data for total provincial exports and imports; BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development log export statistics for the proportion of exports from the Coast versus Interior.
Note: Statistics above do not include mills that were closed or did not operate in 2017.

Figure 2: Estimates of Product Recovery from Lumber Mills - 2017

	Units	Coast	Interior	Province
Number of Mills		45	81	126
Log Input	(million m^3)	7.10	40.10	47.18
Lumber Output				
Lumber Output (nominal measure)	(mmfbm)	1.60	11.50	13.10
Lumber Recovery Factor	(mfbm/m^3)	0.225	0.287	0.278
Conversion Factor *	(m^3/mfbm)	2.07	1.61	1.67
= Actual Volume of Lumber Produced	(million m^3)	3.31	18.52	21.83
As Per Cent of Log Input	(%)	46.6%	46.2%	46.3%
Lumber Shrinkage				
Shrinkage (5% of lumber production)	(million m^3)	0.17	0.93	1.09
As Per Cent of Log Input	(%)	2.3%	2.3%	2.3%
By Product Chip Output (from Lumber Mills)				
By Product Chip Output	(million bdu)	1.00	5.00	6.00
By Product Chip Recovery Factor	(bdu/'000 m^3)	141	125	127
Conversion Factor*	(m^3/bdu)	2.86	2.75	2.77
= Volume of Chips Produced	(million m^3)	2.86	13.75	16.61
As Per Cent of Log Input	(%)	40.3%	34.3%	35.2%
Sawdust and Shavings - Estimated Volume	(million m^3)	0.76	6.91	7.67
As Per Cent of Log Input	(%)	10.7%	17.2%	16.3%



Notes:

* Conversion factors are used to convert lumber output or by-product chips in nominal measure to solid wood equivalent.

mmfbm = million board feet; mfbm = thousand board feet; m^3 = 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. [3]

[3]The provincial estimated lumber output in Figure 2 is within 2.5% of Statistics Canada's sawmilling output for B.C.

Product Recovery from Lumber Mills

Figure 2 estimates product recovery from lumber mills. It shows that 46.3% of the volume of wood entering lumber mills was converted to lumber, 35.2% was converted to chips primarily used as input to pulp mills, and an estimated 16.3% was sawdust and shavings available for bio-energy (i.e. fuel for kilns, pellet/panel manufacturing, and electrical energy production).

Fibre Used by Pulp, Pellet and Panel Mills

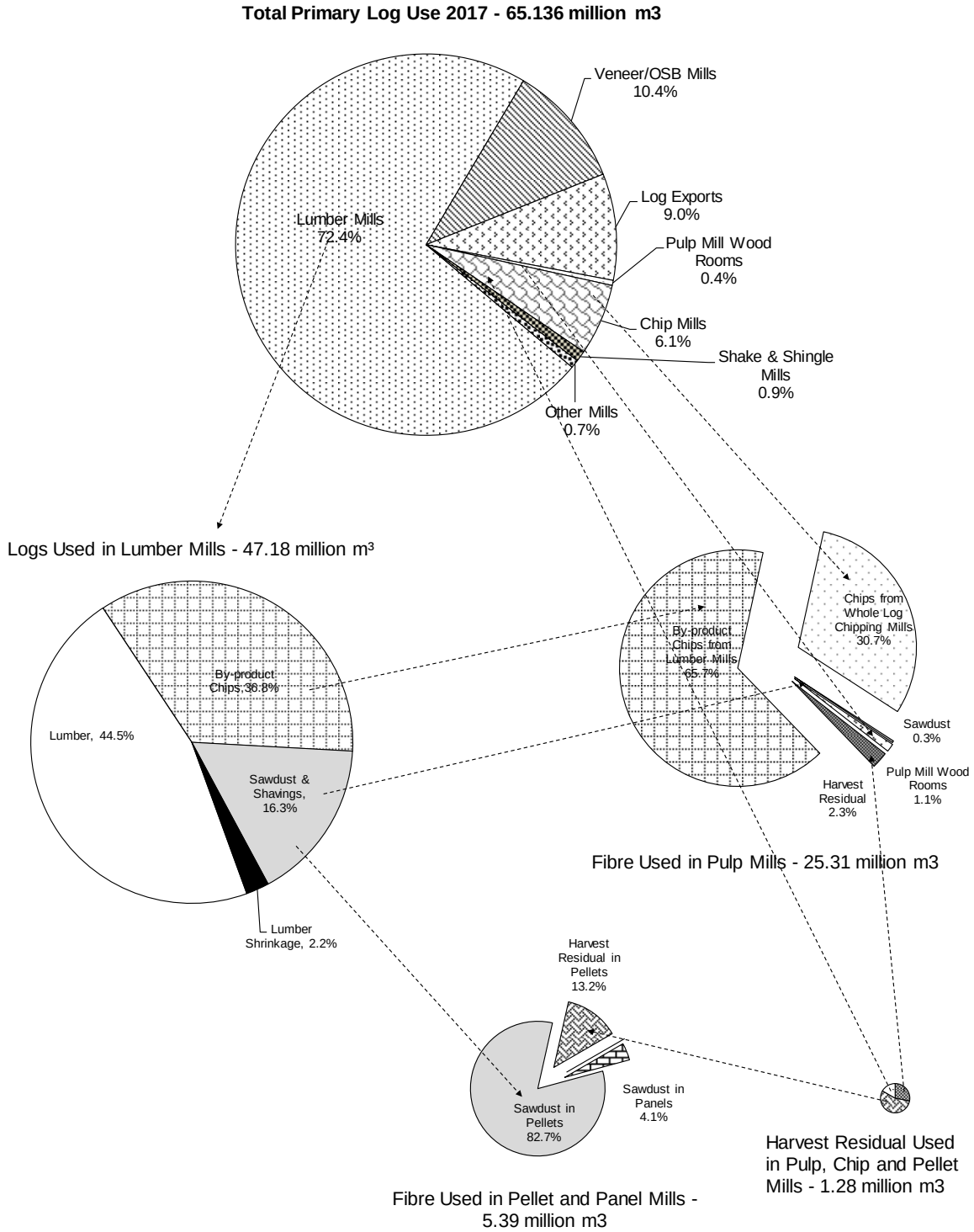
Figure 3 combines information from Figure 1 and Figure 2 with a chart showing the sources of fibre used by pulp, pellet and panel mills:

- Pulp mills used an estimated 25.3 million cubic metres in solid wood equivalents, representing a decrease of 3.8% from 2016. Residual chips from sawmills contributed 65.7% of pulp mill inputs, while whole log chipping provided 30.7% of the fibre. Pulp mill fibre inputs derived from harvest residuals[4] decreased from 3.4% in 2016 to 2.3% in 2017.
- Pellet and panel mills used an estimated 5.39 million cubic metres in solid wood equivalents, representing an increase of 1.2% from 2016.
- Harvest residuals refer to fibre removed from the cut block following harvesting activities and not transported to primary processing facilities (i.e. not a sawlog or a traditionally defined pulp log). In 2017, pulp, pellet and chip mills consumed 1.28 million cubic meters in solid wood equivalents of harvest residuals, representing an increase of 11.3% from 2016. The current technology has produced new uses for harvest residuals. In 2017, the largest consumers were pellet mills, followed by pulp and chip mills.
- The harvest residual data is important for the B.C. government to determine the effectiveness of policy changes and inform any necessary adjustments to achieve greater utilization of post-harvest residual fibre. Improving utilization will generate more value from the forest resource, increase employment and domestic manufacturing, reduce carbon emissions and improve air quality through reduced slash burning.[5]

[4] The Ministry started collecting the harvest residual data through adding harvest residual consumption questions to the mill list survey in 2015. This new data element may be underestimated because the residual fibre volume consumed by some major timber facilities might not be reported or inaccurately reported to the survey.

[5] Source: Forest Tenures Branch of the FLNRORD

Figure 3: Estimated British Columbia Log and Fibre Use - 2017



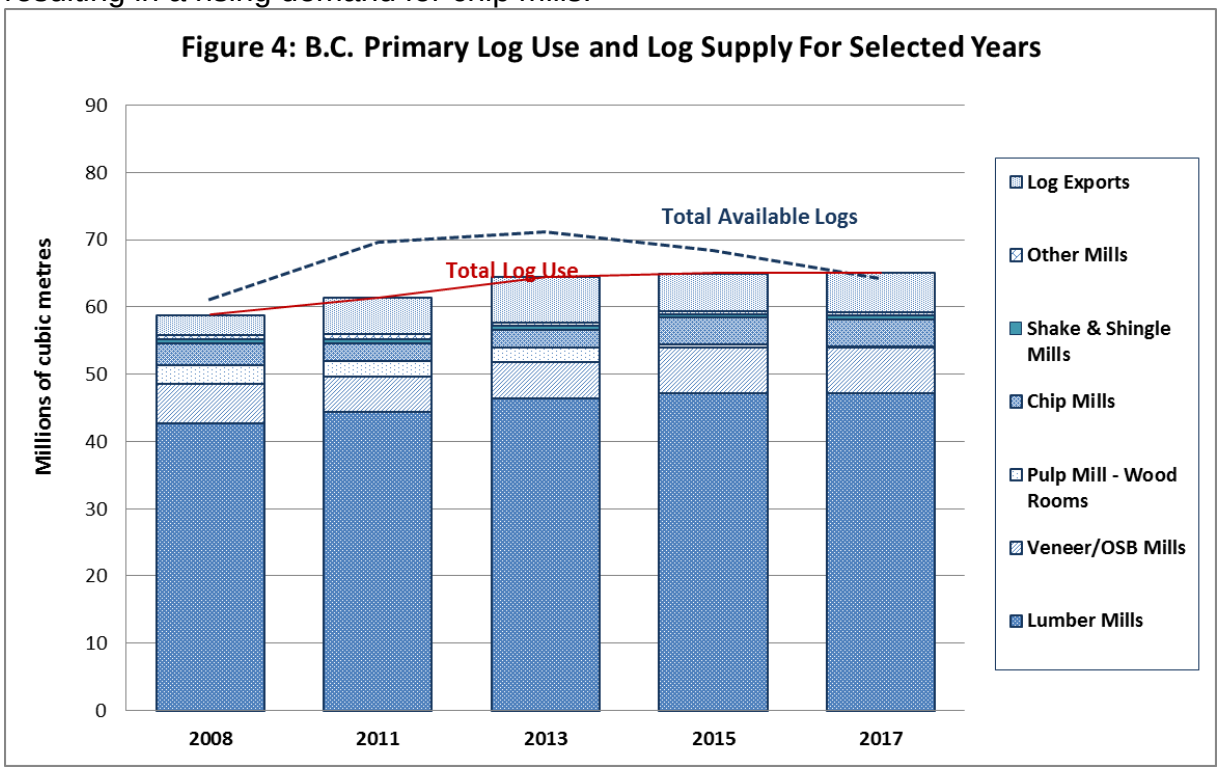
*B.C. is a net importer of chips. Some imported chips may be consumed by some pulp mills.

Provincial Log Supply and Demand

As shown in Figures 1 and 4, the primary provincial log use volume estimated in this report exceeded the harvest volume by 1.3 million cubic metres (2%) in 2017. This difference could be attributed to a number of factors, including the seasonality inherent in timber harvesting, log inventory changes, different company reporting years, or the estimates made for mills that did not complete the survey.

Figure 4 shows that the total log use has steadily increased over the past 10 years. However, the movements are mixed within sectors:

- The log consumption of lumber and veneer/OSB mills has increased from 2013 onwards, which responds to the U.S. housing market recovery after 2012; and
- Pulp mills are looking for whole log chips to maintain a consistent chip supply, resulting in a rising demand for chip mills.



Note: The Ministry did not survey small lumber mills in 2009 and did not publish mill list reports in 2010 and 2012. Ministry staff selected the above years with published reports and consistent sample sizes to ensure the data accuracy and consistency over the years.
**The Ministry did not survey shake and shingle mills in 2009-2013. Log use volume for shake and shingle mills in 2011 and 2013 was estimated based on the best available information.

Provincial Chip Supply and Demand

Wood chips are an important input for pulp and paper mills in B.C. Figure 4.1 identifies that the primary sources of chip supply are residual chips produced by sawmills/veneer mills, whole log chips produced in pulp mills/chip mills and imported chips from the U.S.

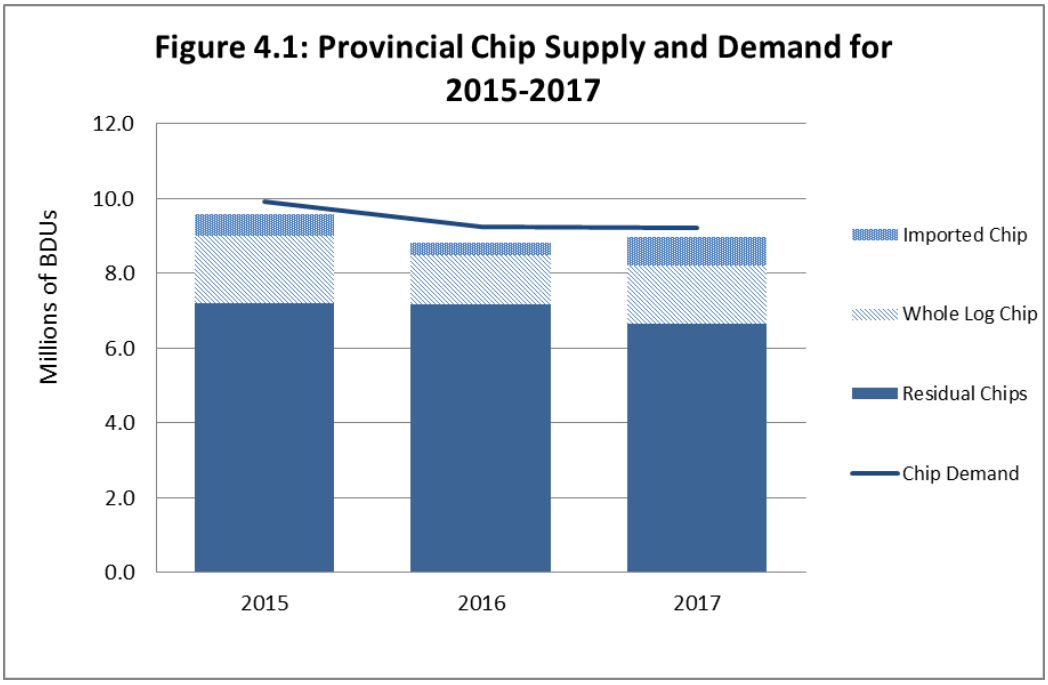


Table 1 summarizes provincial chip production and consumption by the ministry administrative areas (Coast, North, and South) between 2015 and 2017:

- In 2017, the residual chip supply decreased from 2016, while the combined whole log chips produced by pulp and chip mills increased to fulfill the fibre supply gap on the Coast and in the Interior;
- In 2017, pulp mills in the South started showing chip supply shortage due to sawmill closures;
- In 2017, pulp mills in B.C. increased their purchases of chips from the U.S. The imported chip volume increased from 328,000 BDUs in 2016 to 738,000 BDUs in 2017; and
- Coastal pulp mills faced the largest chip supply shortage among the three areas, affected by the following factors:
    - Continued sawmill closures in the South and on the Coast reduced the residual chip supply to the Coast;
    - Some Interior mills that used to ship chips to the Coast shifted to supplying chips to the Interior:
        - In 2016, Fibreco switched from shipping chips to pellets, which reduced the flow of chips by rail from the Interior to the Coast;

- Interior forest companies were affected by mountain pine beetles, wildfires, and challenging winter operating conditions, which resulted in less supply of residual chips from the Interior to the Coast;

- More second-growth coastal logging leads to a lower yield of pulp logs, resulting in a higher cost for pulp logs; and
- The allowable annual cut (AAC) for the Interior is forecasted to decrease by 20% by 2027.[6] This potential AAC reduction is likely to reduce residual chip supply from the Interior to the Coast.

Table 1: B.C. Chip Production and Consumption by Natural Resource Areas (000 BDUs)

Sources of Chips	***Year***		
Residual Chip Production	**2015**	**2016**	**2017**
Coast	1,486	1,371	1,352
North	2,612	2,743	2,619
South	3,101	3,072	2,690
Whole Log Chip Production			
Coast	809	575	673
North	521	316	479
South	489	407	414
Total Provincial Chip Production			
Coast	2,296	1,946	2,025
North	3,133	3,058	3,097
South	3,590	3,480	3,104
Total Chip Consumption			
Coast	3,318	2,959	2,961
North	3,089	2,922	2,815
South	3,519	3,362	3,434
Production and Consumption Gap			
Coast	*-1,022*	*-1,013*	*-936*
North	44	136	282
South	71	118	*-330*
Imported Chips	580	328	738
Provincial Chip Balance	***-327***	***-431***	***-246***
Reporting Errors	*-3%*	*-5%*	*-3%*

Source: B.C. Mill List Database
Notes: Data shown in the above table may not be in line with the data published in previous mill list reports due to data adjustments made based on the information received in 2018.

[6] Source: The AAC forecast is provided by the Forest Analysis and Inventory Branch of the FLNRORD

Time Series Data

1) Lumber Mills

In 2017, B.C. sawmills' sales (primarily lumber and chips) were CA$7.3 billion, representing a 12% increase from 2016[7] or 60% of total wood product manufacturing sales in the Province. The largest markets for B.C. softwood lumber exports were the U.S., China and Japan.

Sources: West Fraser and Canfor Websites

The following section provides summary statistics from 1990 onwards for lumber mills with capacity greater than or equal to 40 million board feet per year.

Number of Lumber Mills

- Table 2 and Figure 7 show that there were 18 major lumber mills operating on the Coast and 51 in the Interior for a total of 69 mills in the Province in 2017.
- Tolko permanently closed its Merritt sawmill, resulting in a reduction of lumber capacity of 186 million board feet. [8]

Major Lumber Mill Capacity,[9] Output, and Input

- Figure 5 demonstrates that the Coastal lumber capacity began to decrease in the early 2000's, and has remained fairly steady from 2009 onwards. Coast lumber log input and production decreased by about 12% in 2017 over 2016.
- Figure 6 shows that Interior lumber capacity rose temporarily during the early 2000's; along with the mountain pine beetle salvage efforts and the strong U.S. lumber demand prior to the recession. Since the sharp decline in production in the recession (2007-2009), production has increased, but has not reached the pre-recession highs when salvage of beetle killed wood was at its peak.

[7] This increase was mainly driven by the improved prices not increased volume.

[8] There is one year lag for this report to capture the impact of permanent mill closures. Mills permanently curtailed in 2017 are treated as active mills in 2017. The mill closure news was cited from the 2016 Mill Status Report and the Mill List Database.

[9] For lumber mills, capacity is measured assuming mills run two 8-hour shifts, 240 days per year. Actual production can be higher or lower than capacity depending on actual mill production schedules.

Average Capacity, Capacity Utilization, and Lumber Recovery Factor

- As the number of mills declined in both the Coast and Interior, the average sizes of the mills have increased. Both mill numbers and average capacity have been stable since 2009.
- Capacity utilization on the Coast is much lower than the Interior, reflecting more mills running on one or two shifts than in the interior where mills run two or three shifts when markets are good. In 2017, Interior lumber mills operated, on average, at 9% over two-shift capacity, while coastal lumber mills operated on average, at 25% below capacity.
- The Interior's lumber recovery factor has improved because the volume of beetle-killed wood has declined since 2015.

Table 2: British Columbia Lumber Mill Summary Statistics for mills with estimated annual capacity of at least 40 million board feet

		1990…	1995…	2000...	2005…	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change 1990-2017
COAST															
Number of Mills		43	39	37	29	19	21	20	17	17	18	17	18	18	-58%
Total Capacity	billion board feet per year	4.2	3.9	4.1	3.4	2.2	2.3	2.3	2.1	2.1	2.1	2.0	2.1	2.0	-53%
Total Output	billion board feet per year	3.8	3.4	3.1	2.6	1.2	1.4	1.4	1.4	1.4	1.7	1.6	1.7	1.5	-60%
Total Input	million cubic metres per year	17.1	15.1	13.9	11.2	4.9	5.9	6.2	6.3	6.3	7.2	6.9	7.4	6.6	-61%
Average Capacity	million board feet per mill per year	99	100	111	117	116	110	115	124	124	117	118	117	111	13%
Capacity Utilization	output divided by capacity	89%	87%	76%	76%	55%	61%	61%	67%	67%	81%	80%	81%	75%	-15%
Lumber Recovery Factor	'000 board feet per cubic metre	0.220	0.225	0.223	0.232	0.245	0.237	0.226	0.222	0.222	0.236	0.232	0.230	0.227	3%
INTERIOR															
Number of Mills		88	82	76	71	53	52	56	54	52	53	52	51	51	-42%
Total Capacity	billion board feet per year	10.7	10.3	10.7	12.8	10.7	10.4	11.1	10.9	10.6	10.8	10.4	10.6	10.5	-2%
Total Output	billion board feet per year	10.0	10.0	10.5	14.1	7.9	9.5	10.5	10.8	11.2	10.9	11.2	11.5	11.4	14%
Total Input	million cubic metres per year	42.2	40.8	39.9	50.2	28.2	34.1	37.0	38.6	39.9	39.3	39.4	40.7	39.4	-7%
Average Capacity	million board feet per mill per year	121	126	141	180	202	200	198	202	204	204	200	208	206	70%
Capacity Utilization	output divided by capacity	93%	97%	98%	110%	74%	91%	95%	99%	106%	101%	108%	108%	109%	16%
Lumber Recovery Factor	'000 board feet per cubic metre	0.236	0.245	0.263	0.281	0.280	0.279	0.284	0.280	0.281	0.277	0.284	0.283	0.289	22%
PROVINCE															
Number of Mills		131	121	113	100	72	73	76	71	69	71	69	69	69	-47%
Total Capacity	billion board feet per year	14.9	14.2	14.8	16.2	12.9	12.7	13.4	13.0	12.7	12.9	12.4	12.7	12.5	-16%
Total Output	billion board feet per year	13.7	13.4	13.6	16.7	9.1	10.9	11.9	12.2	12.6	12.6	12.8	13.2	12.9	-6%
Total Input	million cubic metres per year	59.2	55.9	53.8	61.4	33.1	40.0	43.2	44.9	46.2	46.5	46.3	48.1	46.0	-22%
Average Capacity	million board feet per mill per year	114	117	131	162	179	174	176	183	184	182	180	184	181	59%
Capacity Utilization	output divided by capacity	92%	94%	92%	103%	71%	86%	89%	94%	99%	98%	103%	104%	103%	12%
Lumber Recovery Factor	'000 board feet per cubic metre	0.232	0.240	0.253	0.272	0.275	0.273	0.275	0.272	0.273	0.271	0.276	0.274	0.280	21%

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

Notes:

Includes only those lumber mills with a minimum estimated annual capacity of 40 million board feet per year.

Capacity estimated assuming two 8-hour shifts, 240 days per year.

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

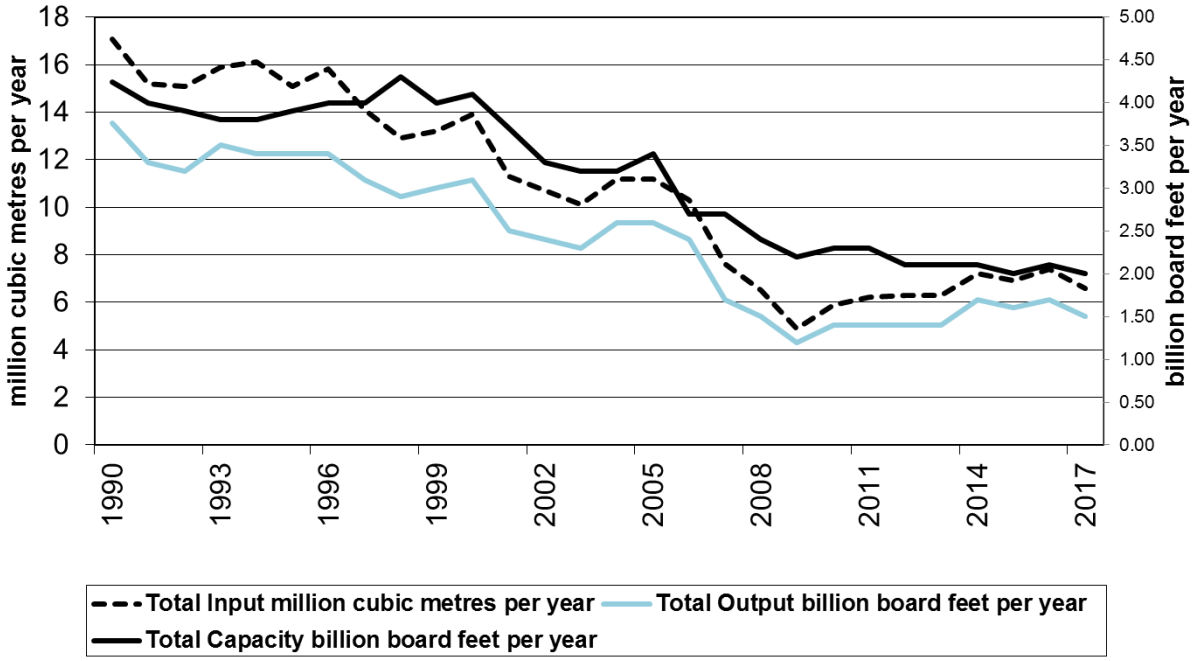


Figure 6: B.C. Lumber Mills (at least 40 million board feet)
Interior Capacity, Output and Log Input

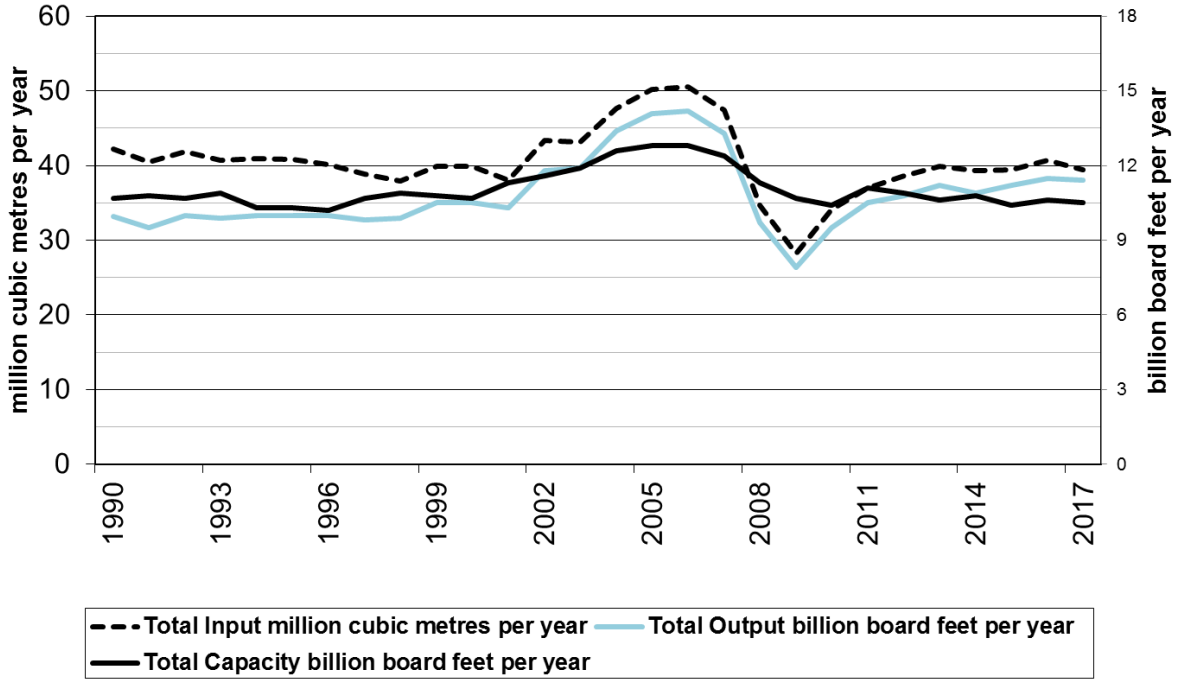


Figure 7: B.C. Lumber Mills (at least 40 million board feet)
Number of Mills and Average Capacity

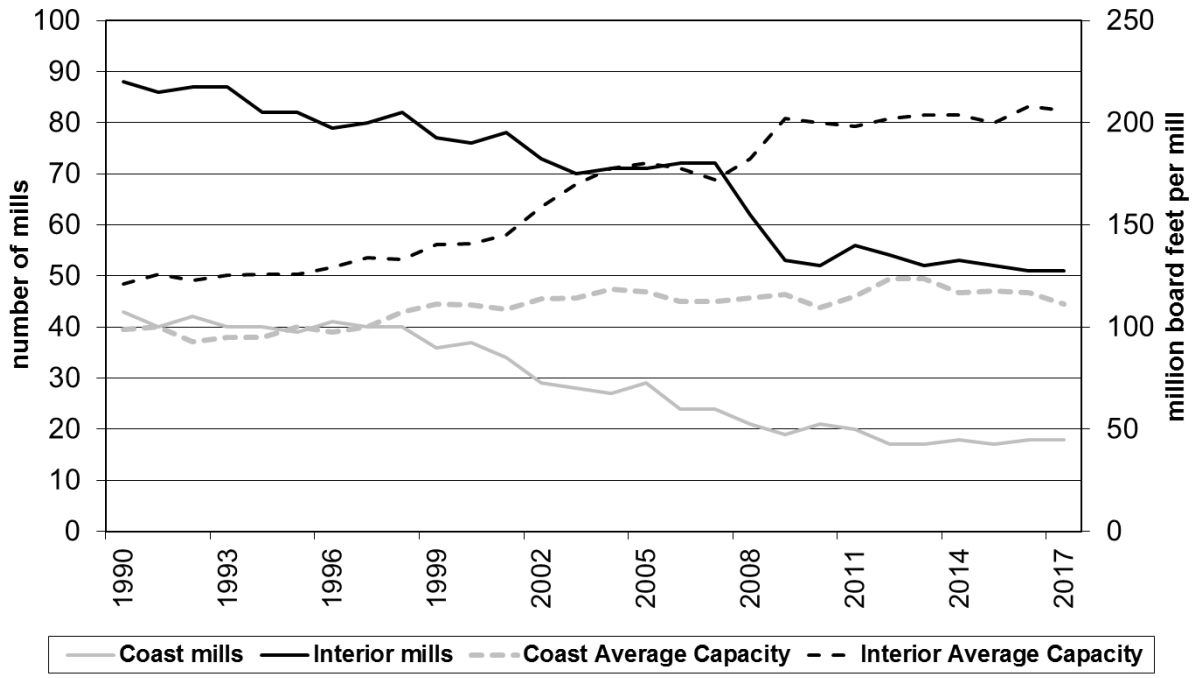


Figure 8: B.C. Lumber Mills (at least 40 million board feet)
Capacity Utilization

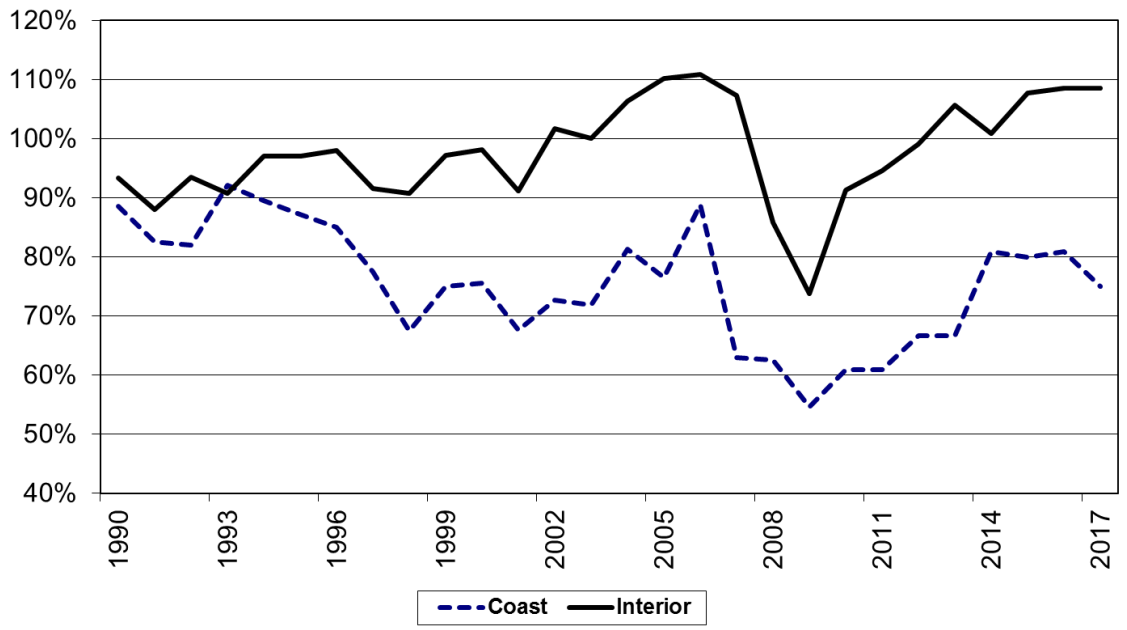
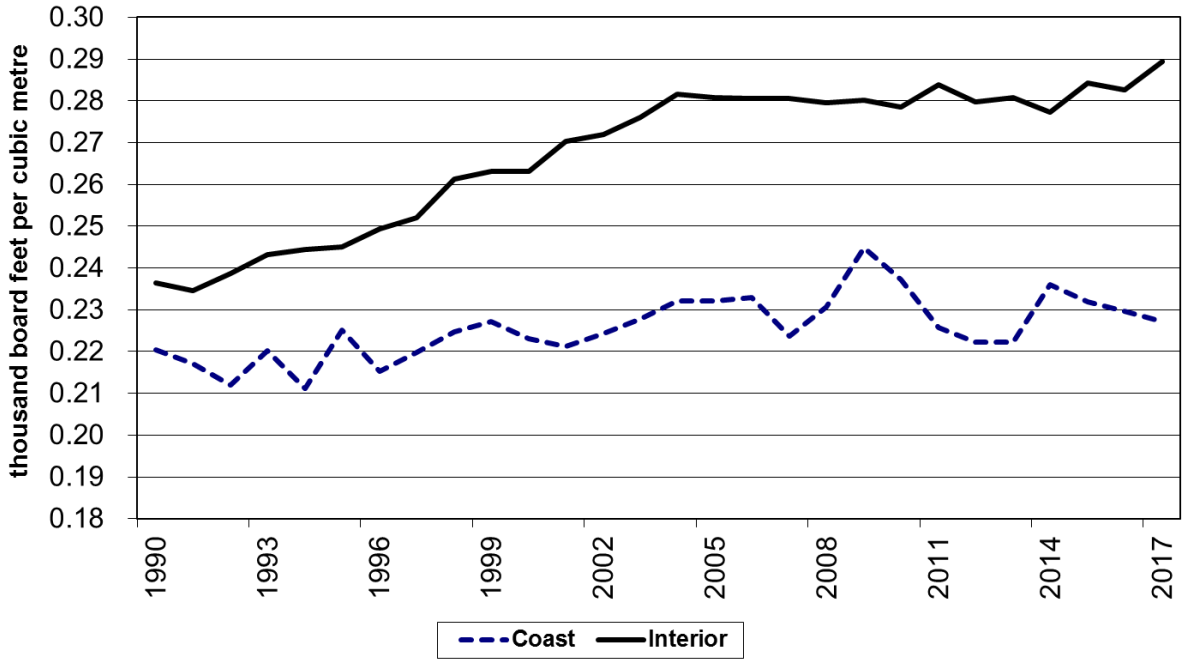


Figure 9: B.C. Lumber Mills (at least 40 million board feet)
Lumber Recovery Factor



2) Veneer and Plywood Mills

Veneer is produced as a thin sheet of wood of uniform thickness by peeling or slicing logs, requiring higher grade logs with no branches. Plywood is produced by gluing and compressing together three or more sheets of veneer, with the grain of alternate sheets usually laid crosswise.[10] Veneer is also used in other engineered wood products such as laminated veneer lumber (LVL).

Source: Coastland Wood Products Company Website

Number of Mills

- As shown in Table 3, there were 12 veneer mills operating in the province in 2017.[11]
- Three veneer mills were on the Coast and nine mills were in the southern Interior. The veneer produced on the Coast is mainly exported to the U.S. to make plywood and LVL.
- Seven veneer mills in B.C. operated plywood mills on the same sites.

Mill Input

- As shown in Figure 10, total log input to veneer mills started decreasing in 2006 till 2010 and increasing from 2012 onwards. In 2017, veneer mills consumed 4.8 million cubic metres of logs, representing a 33% growth from 2012.

Capacity Utilization, and Veneer Recovery

- Figure 12 illustrates a steady upward trend for capacity utilization from 2009 onwards driven by the US housing market recovery. With the growing demand in the last five years, veneer mills operated exceeding over 40% of their capacity. In 2017, the capacity utilization rate continued at its current high level of about 150%, reflecting an average operating level of three-shift per day.
- Figure 13 presents the recovery factor. There was a significant increase in 2012/13, which was attributed to mill facility upgrades and supply of high-quality logs to the veneer mills.[12]

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[10] Source: Statistics Canada: https://strategis.ic.gc.ca/app/scr/sbms/sbb/cis/definition.html?code=32121&lang=eng
[11] Small mills using an average of less than 25,000 cubic metres of logs per year were not included in these statistics.
[12] This statement has been verified by veneer mill representatives.

Table 3: British Columbia Veneer Mill Summary Statistics

		1990…	1995…	2000…	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change 1990-2017
Number of Mills		20	17	16	17	16	15	13	12	10	11	11	11	11	11	12	12	-40%
Total Capacity	(billion square feet 3/8" basis)	2.1	2.1	2.0	2.6	2.5	2.3	2.0	1.9	1.8	2.0	1.7	1.7	1.7	1.7	1.9	1.9	-10%
Total Output	(billion square feet 3/8" basis)	2.3	2.4	2.6	3.7	3.3	2.9	2.3	1.9	2.0	2.2	2.2	2.4	2.4	2.5	2.8	2.9	26%
Total Log Input	(million cubic metres)	4.4	4.1	4.4	6.3	5.7	5.1	4.0	3.4	3.6	3.8	3.6	3.8	3.9	4.1	4.9	4.8	9%
Average Capacity	(million square feet per mill)	105	124	125	153	156	153	154	158	180	182	155	155	155	155	158	158	51%
Average Log Input	(thousand cubic metres per mill)	220	241	275	371	356	340	308	283	360	345	327	345	355	373	408	400	82%
Capacity Utilization	(output divided by capacity)	110%	114%	130%	142%	132%	126%	115%	100%	111%	110%	129%	141%	141%	147%	147%	153%	39%
Recovery Factor	(square feet per cubic metre log input)	523	585	591	587	579	569	575	559	556	579	611	632	615	610	571	604	16%

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

Notes:

Output Capacity is estimated based on two 8 hour shifts, 240 days per year.

Small mills using an average of less than 25,000 cubic metres of logs per year are not included in these statistics.

Figure 10: B.C. Veneer Mills
Capacity, Output and Log Input*

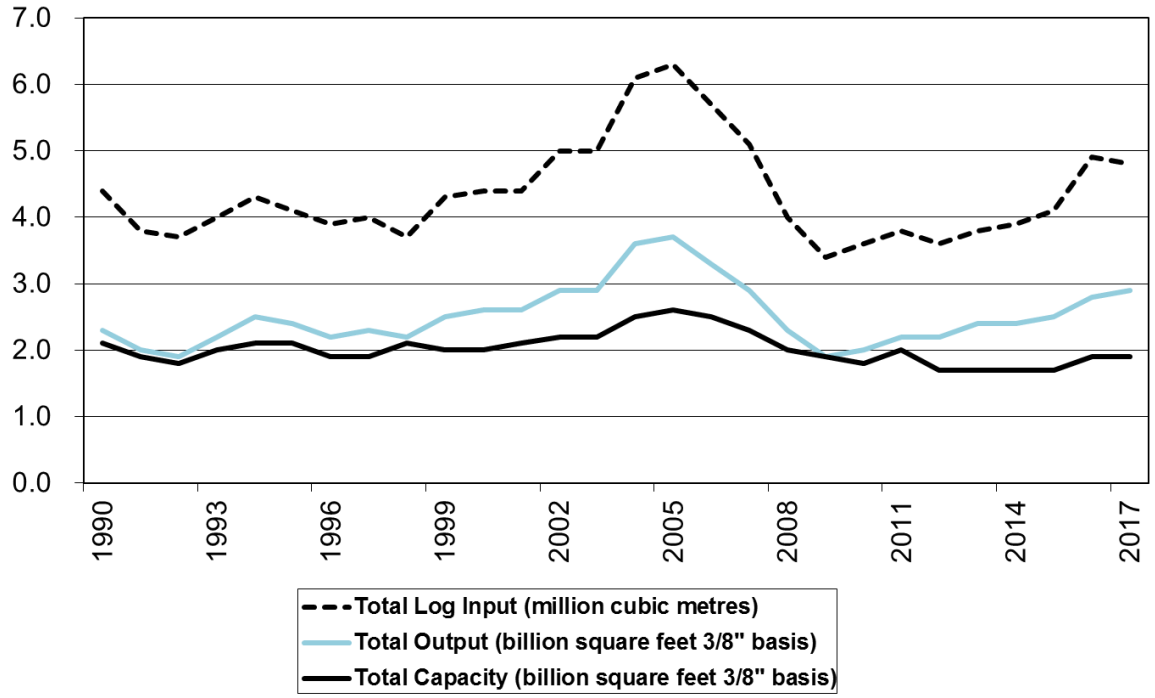


Figure 11: B.C. Veneer Mills
Number of Mills and Average Capacity

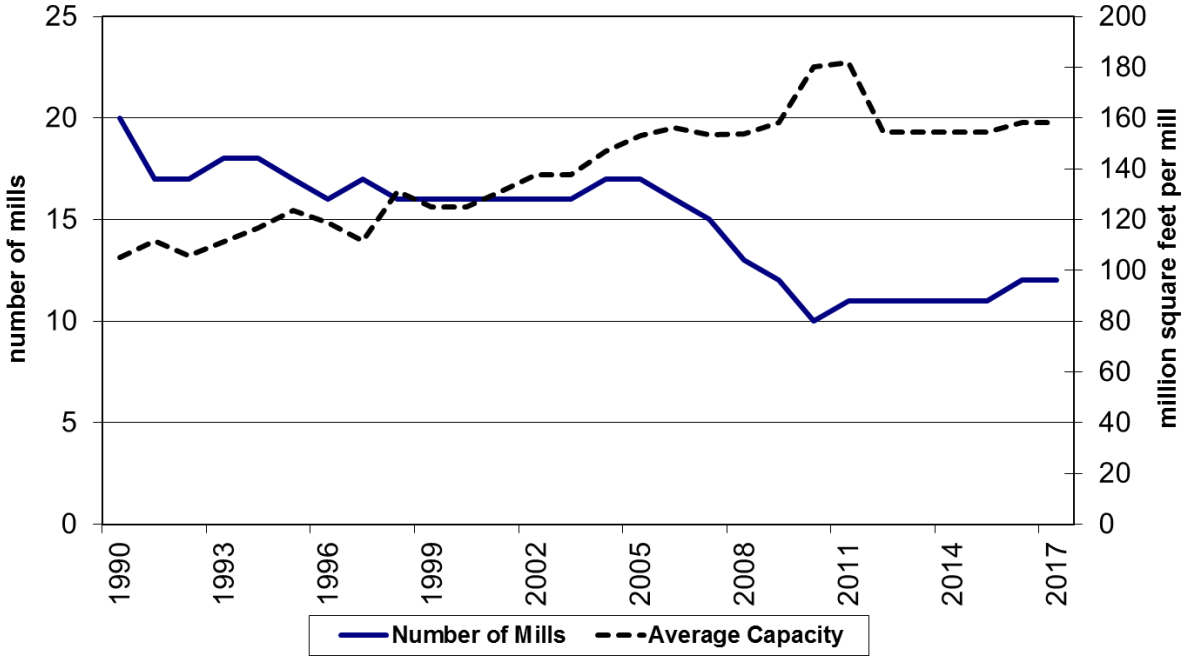


Figure 12: B.C. Veneer Mills
Capacity Utilization

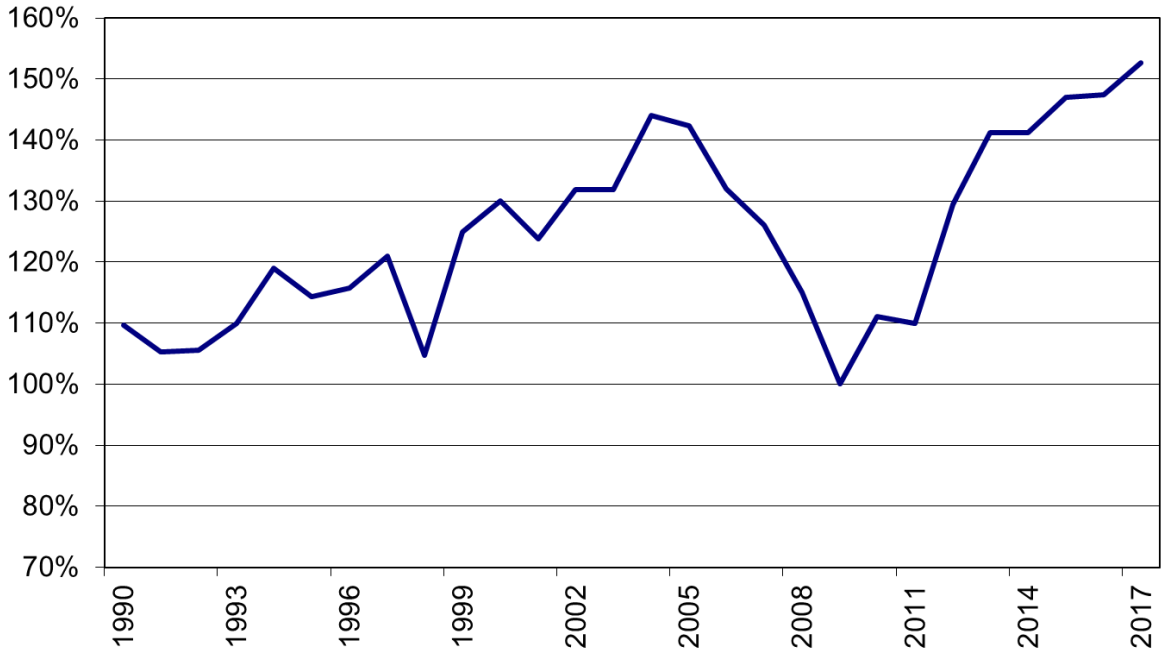
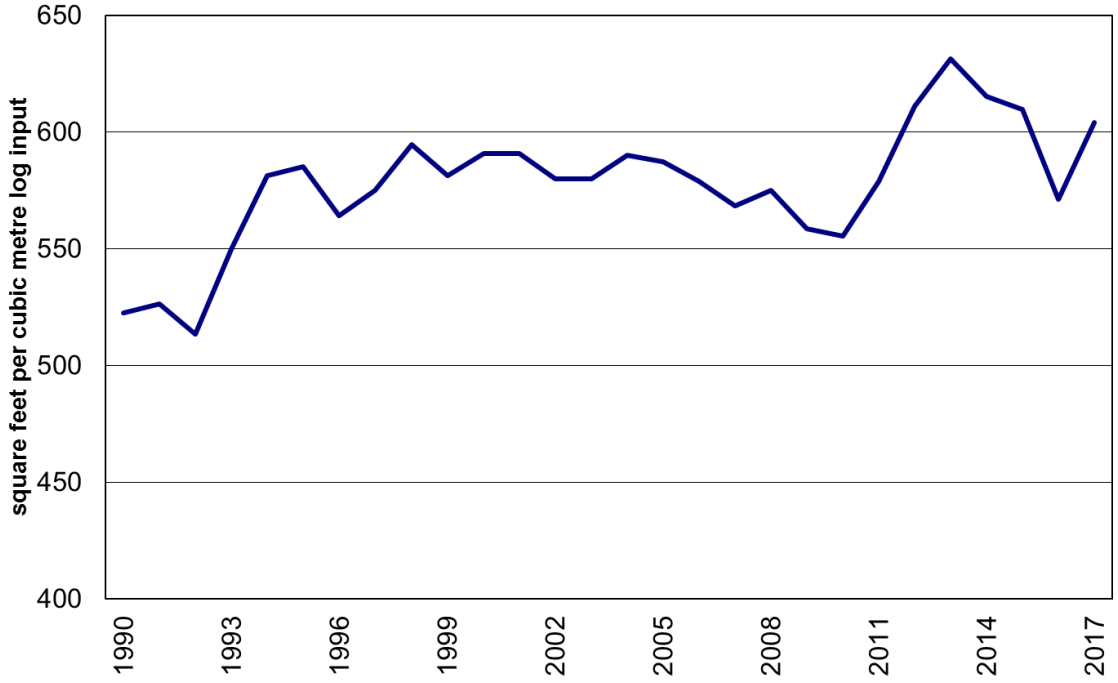


Figure 13: B.C. Veneer Mills
Recovery Factor



3) Pulp and Paper Mills

Pulp is used primarily as a raw material for paper and paperboard products, packaging as well as personal hygiene products and rayon. The main B.C. pulp products are bleached softwood kraft pulp and Chemi-thermo-mechanical pulp (CTMP). Most of the paper produced in B.C.is newsprint.

Source: Catalyst company website

In 2017, B.C. pulp mills had sales of CA$2.9 billion, which accounted for 59% of total pulp and paper manufacturing sales in the Province.[13] B.C. total pulp export value was CA$3 billion. China held a predominant share of total pulp exports (61%), followed by the U.S. (10%), Japan (8%) and other destinations (22%). Bleached softwood kraft pulp dominated B.C.'s pulp exports.[14]

In 2017, paper and paperboard sales were up 1.4% and converted paper was up 13%.[15] Exports of finished paper products were CA$904 million.

Number of Mills

- Table 4 shows that 15 pulp mills and five paper mills operated in 2017. Five of the 15 pulp mills were on the Coast and 10 were in the Interior.
- In 2016, Catalyst's Powell River mill permanently shut down one of its idled magazine paper machines, resulting in 31,000 tonnes provincial annual paper capacity losses.[16]

[13] Pulp is a subcategory of the Paper Manufacturing NAICS code. Data source: Statistics Canada
[14] Source: Statistics Canada
[15] Source: Statistics Canada and the *2017 Economic State of the B.C. Forest Sector* report. Converted paper includes products created from purchased paper and paperboard.
[16] There is one year lag for this report to capture the impact of permanent mill closure. Mills permanently curtailed in 2017 were treated as "Open" mills in 2017. The mill closure information is cited from the 2016 Mill Status Report and the 2017 B.C. Mill List Database.

Mill Capacity, Input, Output and Harvest Residuals

Pulp Mills

- Figure 13.1 identifies the capacity and location of each active pulp mill in the Province. Pulp mills in the ministry's South Coast and West Coast natural resource regions accounted for 35% of the provincial total capacity. Pulp mills in the Omineca and Cariboo natural resource regions accounted for 40% of the provincial total capacity.
- The provincial pulp mill capacity has dropped by 25% since 2009 due to production curtailments. The input and output have been slowly recovering from the economic downturn.
- From 2016 to 2017, the production of pulp mill chips had doubled, from 49,000 BDUs to 101,000 BDUs. In 2017, 11 pulp mills reported chip production on site vs. six mills in 2016.
- Hog fuel is a fibre by-product of the sawmill process that includes bark and wood waste. It is typically ground up to produce a fuel for biomass consumers.
  In 2017, the reported hog fuel consumption by pulp mills was about 5.4 million cubic metres in solid wood equivalents.[17]

Paper Mills

- Figure 16 illustrates that total capacity and output of paper mills continued to fall over the past five years, largely due to declining demand for newsprint. Some paper mills have begun to diversify to paper grades other than newsprint.
- As illustrated in Figure 17, paper mill capacity utilization has remained above 85% from 2010 onwards. The capacity utilization for all paper mills slightly rose from 87% in 2015 to 92% in 2017.

[17] The Ministry started monitoring the hog fuel consumption by pulp mills in 2017. Some pulp mills may not report their consumption or inaccurately report their hog fuel consumption.

Figure 13.1: Active Pulp Mill Output Capacity in 2017

British Columbia, Canada

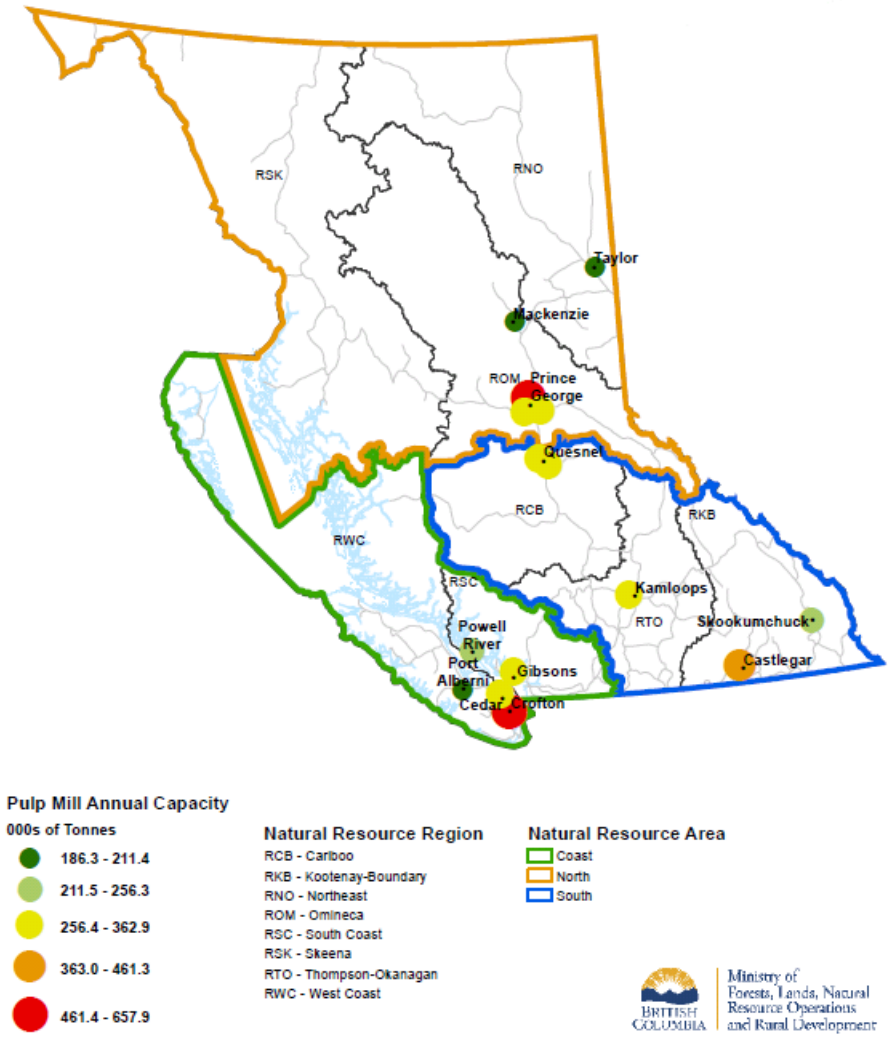


Table 4: British Columbia Pulp and Paper Mill Summary Statistics

		1991…	1995…	2000...	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change 1991-2017
Number of Pulp Mills		24	24	23	22	21	21	19	19	18	18	18	16	16	17	15	15	-38%
Total Capacity	(million tonnes)	8.42	8.21	7.84	7.42	7.42	6.84	6.36	6.33	5.96	6.02	5.87	5.66	5.64	5.85	5.21	5.17	-39%
Total Output	(million tonnes)	6.68	7.30	7.56	7.09	7.08	6.51	5.85	0.18	5.49	5.76	5.80	5.50	5.63	5.69	5.20	5.18	-23%
Total Fibre Input	(million bone dry units)	11.76	12.75	13.44	12.36	11.79	10.96	10.12	8.87	8.29	10.13	9.65	9.34	9.73	9.93	9.24	9.21	-22%
Average Capacity	(thousand tonnes)	351	342	341	337	353	326	335	333	331	334	326	354	352	344	348	345	-2%
Average Fibre Input	(thousand bone dry units)	490	531	584	562	562	522	532	467	461	563	536	584	608	584	616	614	25%
Capacity Utilization		79%	89%	96%	96%	95%	95%	92%	83%	92%	96%	99%	97%	100%	97%	100%	100%	26%
Number of Paper Mills		12	11	11	11	11	9	9	8	6	6	6	5	6	6	5	5	-58%
Total Capacity	(million tonnes)	3.47	3.06	3.27	2.98	3.19	2.86	2.84	2.52	1.52	1.52	1.57	1.38	1.61	1.49	1.26	1.24	-64%
Total Output	(million tonnes)	2.74	2.75	3.17	3.02	3.04	2.55	2.42	2.03	1.49	1.48	1.49	1.30	1.48	1.29	1.15	1.15	-58%
Average Capacity	(thousand tonnes)	289	278	297	271	290	318	315	315	253	253	261	275	268	248	252	249	-14%
Capacity Utilization		79%	90%	97%	101%	95%	89%	85%	81%	98%	98%	95%	94%	92%	87%	91%	92%	17%

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

Notes:

Estimated annual capacity is based on a standardized operation of 345 operating days per year, one 24-hour shift per day. Actual operations may vary from this schedule.

Pulp mills included in these statistics are those that use wood fibre input.

Historical data for some pulp mills have been adjusted to reflect new information received in 2018.

Figure 14: B.C. Pulp Mills Capacity, Output and Input

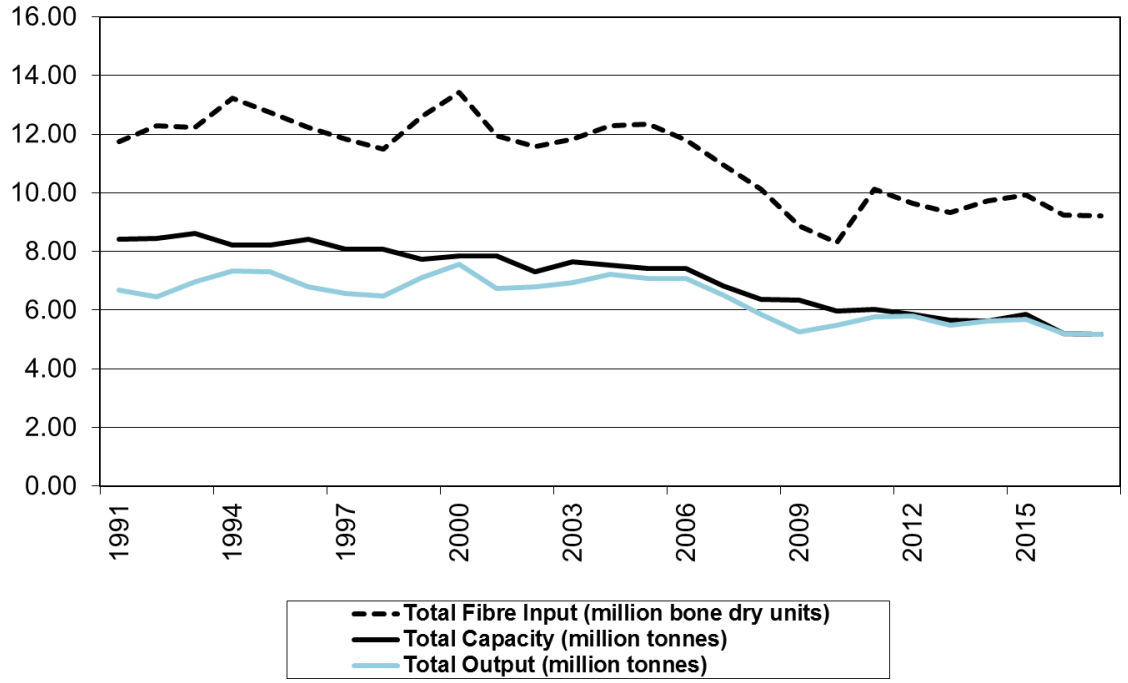


Figure 15: B.C. Pulp Mills Capacity Utilization

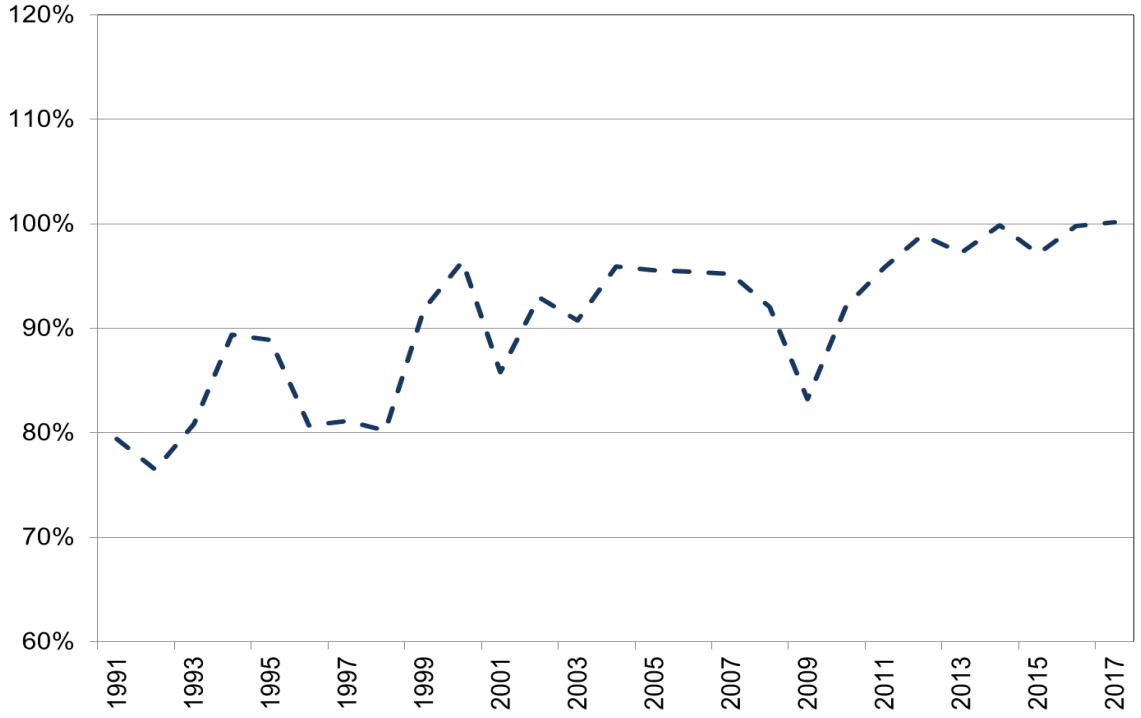


Figure 16: B.C. Paper Mills
Capacity and Output

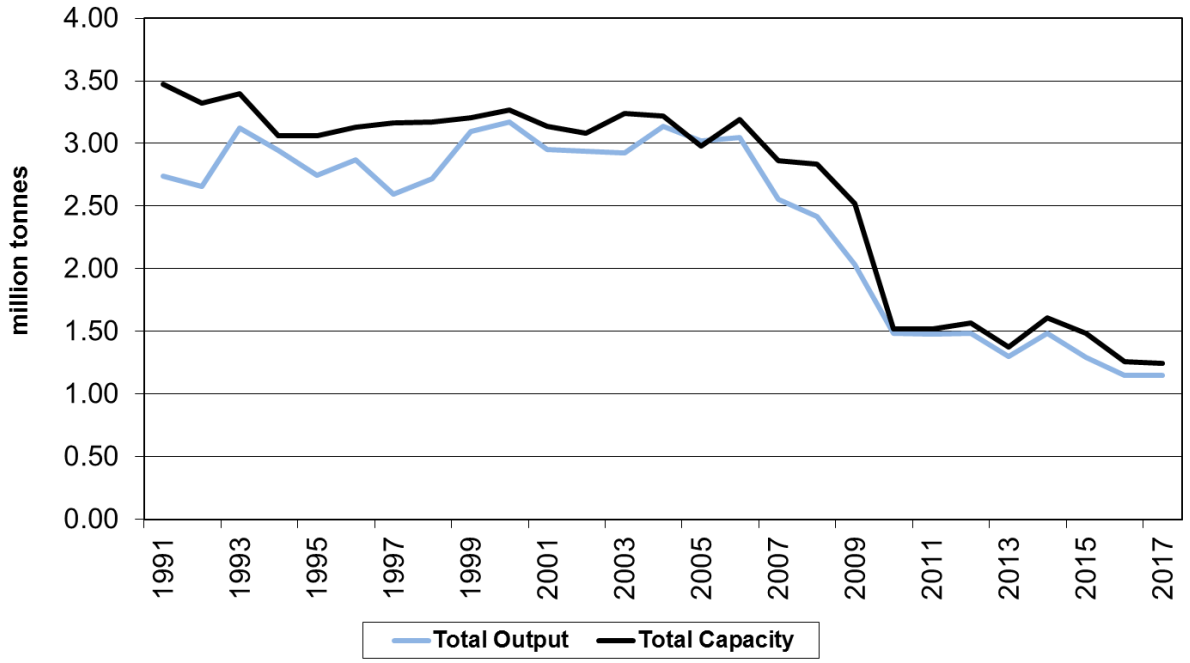
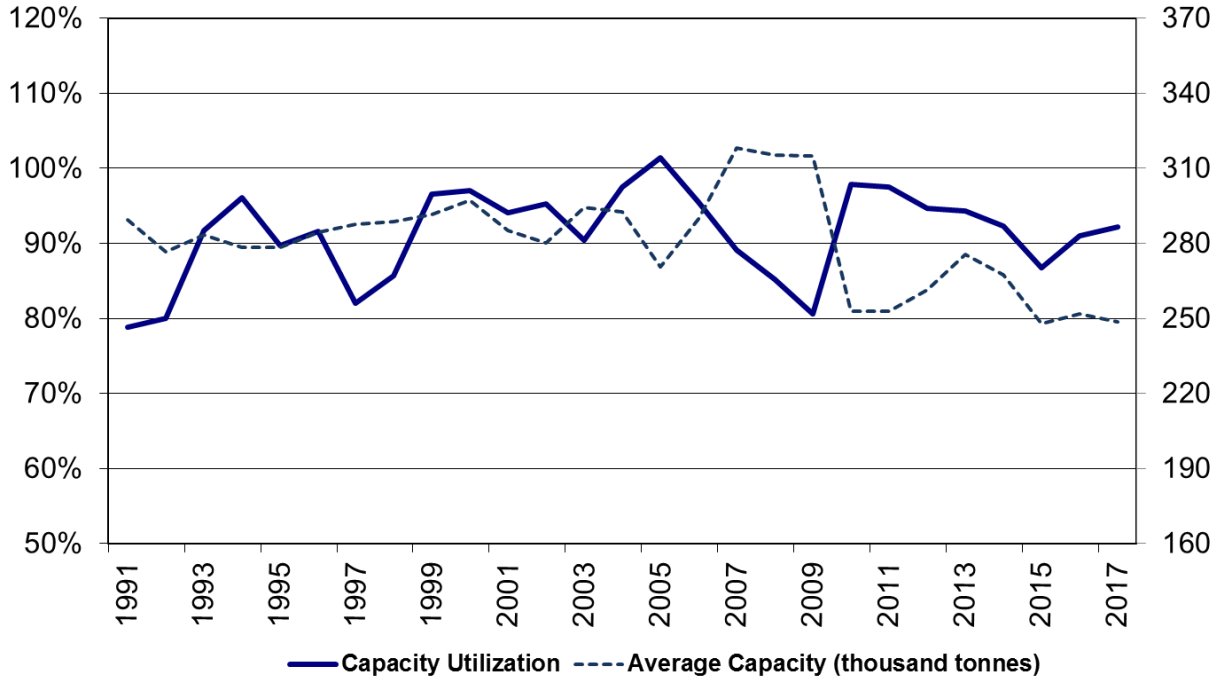


Figure 17: B.C. Paper Mills
Capacity Utilization and Average Capacity



4) Pellet Mills

Wood pellets are primarily used as wood fuel, and may also be used in niche markets such as animal bedding. Pellets are made from compacting fibre, usually sawdust, into the desired pellet diameter and length. Wood pellets are predominantly produced from sawmill residues.

Source: Wood Pellet Association of Canada[18]

In 2017, B.C. exported 1.78 million tonnes of wood pellets worth CA$311 million in 2017. The U.K. was the primary destination by weight (73%), followed by Japan (14%), Belgium (7%) and Italy (3%).[19]

Number of Mills

- There were 13 pellet plants operating in B.C. and they were all in the Interior.
- In May 2016, the Pinnacle Renewable Energy (Pinnacle) temporarily curtailed its Quesnel pellet plant, and remained closed in 2017.[20]

Mill Capacity, Input, Output, and Capacity Utilization

- Figure 18 shows the total capacity continued to grow between 2012 and 2016 but slightly decreased by 4% in 2017 because of Pinnacle's mill curtailment.
- In 2017, the input (mainly sawdust) and output continued increasing at a slower speed compared to the past three years.
- Capacity utilization was highly variable over 2005-2016 because new or reopened mills brought additional capacity while not necessarily operating in the full year. In 2017, the capacity utilization was nearly 100%, reflecting high operating efficiency.

[18] Source: https://www.pellet.org/production/production
[19] Source: *2017 Economic State of the B.C. Forest Sector*
[20] There is one year lag for this report to capture the impact of mill closures. Mills curtailed in 2017 were treated as "Open" mills in 2017. The mill closure information was cited from the 2016 Mill Status Report and the B.C. Mill List Database.

Table 5: British Columbia Pellet Mill Summary Statistics

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change 2005-2017
Number of Mills		5	8	8	9	9	11	11	11	11	12	14	14	13	160%
Total Capacity	(million tonnes)	0.36	0.81	0.99	1.07	0.96	1.31	1.99	1.67	1.69	1.77	2.05	2.22	2.13	492%
Total Output	(million tonnes)	0.36	0.39	0.41	0.79	0.76	1.11	1.36	1.64	1.68	1.65	1.80	2.06	2.08	478%
Total Input	(million bone dry units)	0.41	0.44	0.47	0.81	0.68	1.13	1.28	1.37	1.58	1.62	1.73	1.92	1.95	376%
Average Capacity	(000s tonnes)	72	101	124	119	107	119	181	152	154	148	146	159	164	128%
Average Fibre Input	(thousand bone dry units per mill)	82	55	59	90	76	103	116	125	144	135	124	137	150	83%
Capacity Utilization	(output divided by capacity)	100%	48%	41%	74%	79%	85%	68%	98%	99%	93%	88%	93%	98%	-2%
Recovery Factor	(Tonnes of output per tonne of bone dry input)	0.88	0.89	0.87	0.98	1.12	0.98	1.06	1.20	1.06	1.02	1.04	1.07	1.07	21%

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

Notes:

Output Capacity is estimated based on three 8-hour shifts, 345 days per year.

Figure 18: B.C. Pellet Mills Capacity and Output

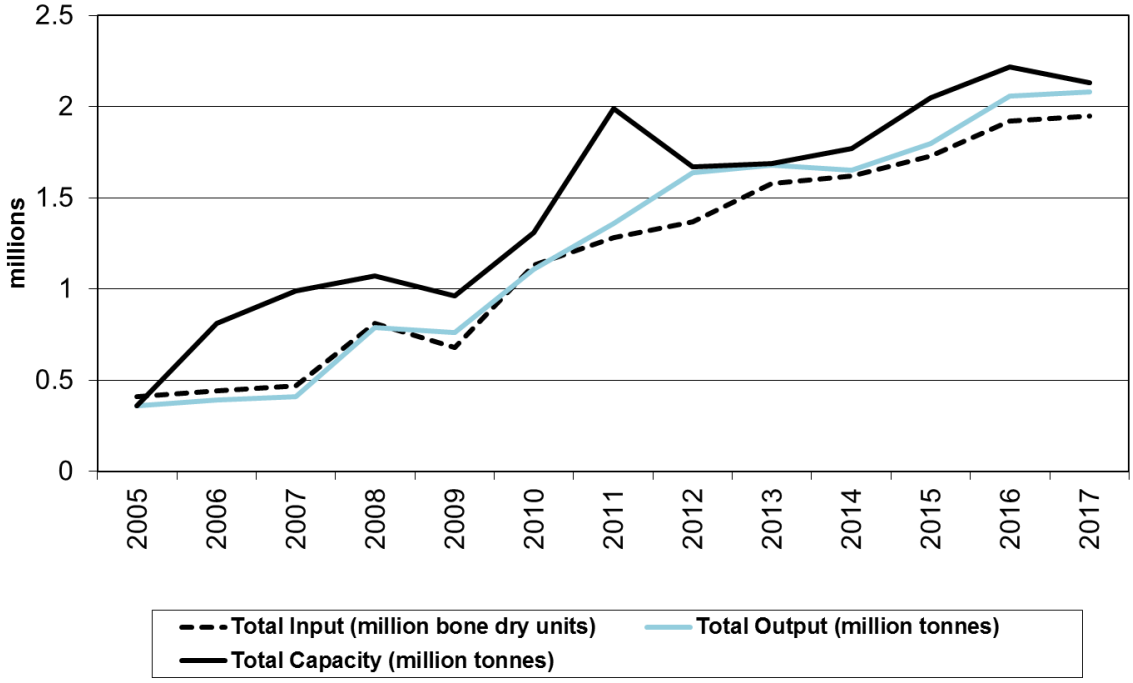
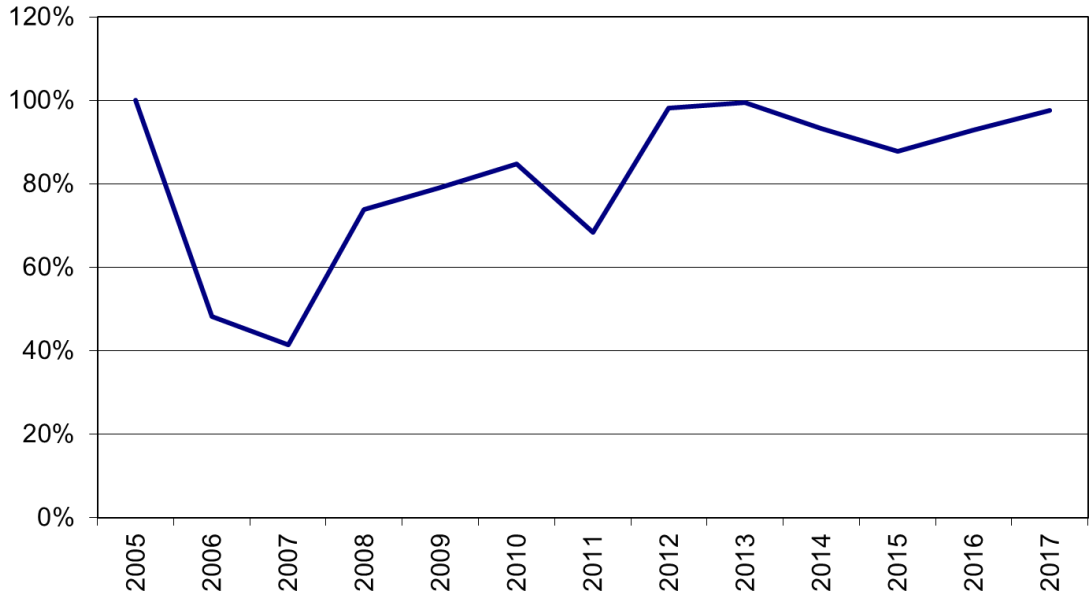
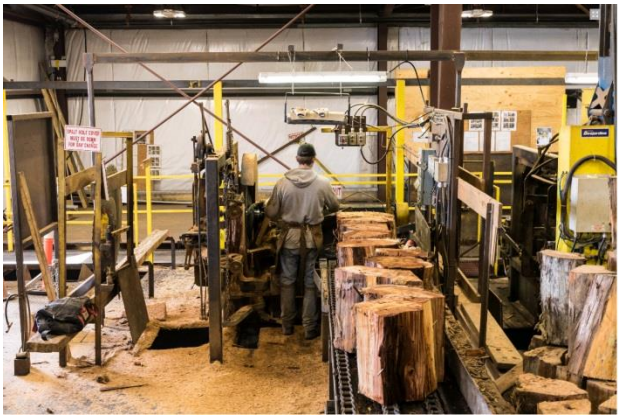


Figure 19: B.C. Pellet Mills Capacity Utilization



5) Shake and Shingle Mills

The shake and shingle industry comprises mills primarily engaged in sawing and/or splitting blocks of wood to produce shakes and shingles. The main roofing product types include Handsplit and Resawn shakes as well as Tapersawn shakes and shingles. A wide variety of sidewall shingle products are also produced.[21]



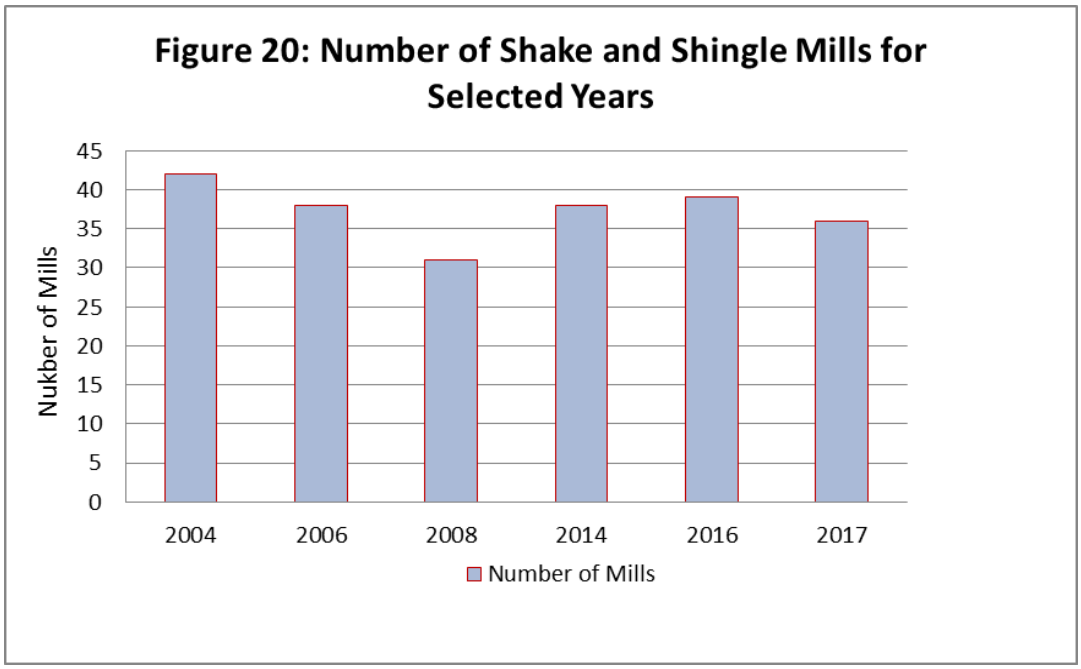
Sources: Waldun Forest Products and Best Quality Cedar Products Company Websites [22]

The total manufacturing sales for shake and shingle products increased from CA$420 million in 2016 to CA$538 million in 2017.[23] In 2017, the Province exported about 10 million square metres of shake and shingle products worth CA$213 million to foreign countries.[24]

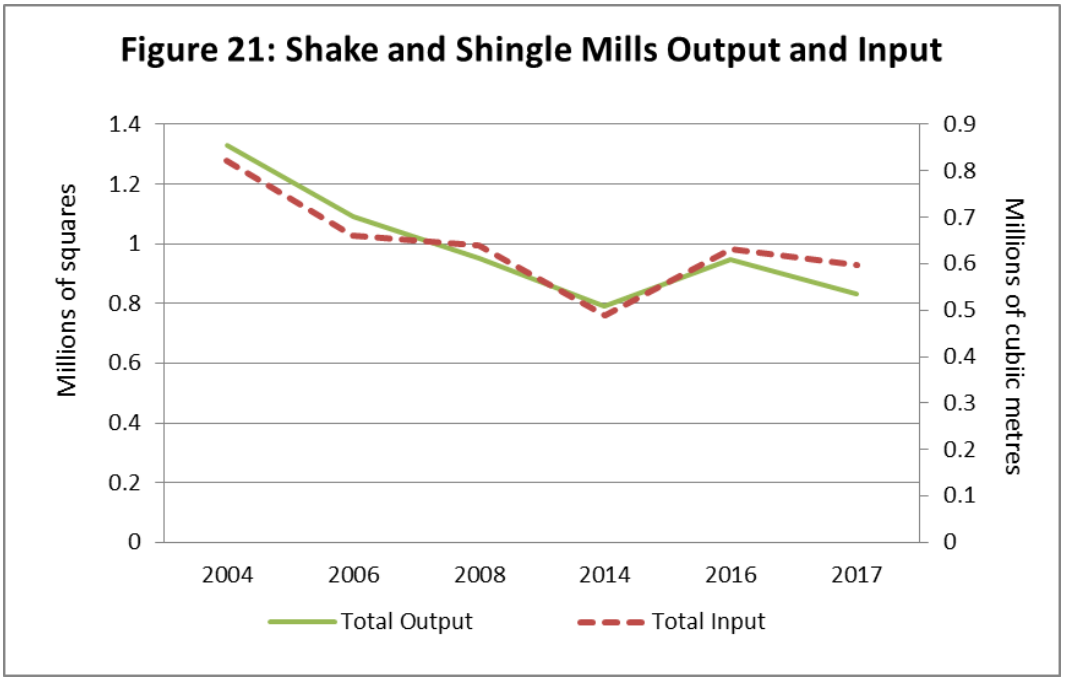
Number of Mills, Input, Output and Capacity Utilization:

- Figure 20 shows the number of shake and shingle mills declined over 2004-2008 and increased from 2014 onwards. In 2017, 36 shake and shingle mills responded to the survey, with 31 mills on the Coast and five mills in the Interior.
- Between 2004 and 2008, total log input and output decreased due to the contraction of the forest industry (2004 - 2009). The log input and output have increased since 2014, mainly driven by the U.S. housing market recovery (Figure 21).
- Most shake and shingle mills in B.C. are small to medium cedar producers. They heavily rely on larger-diameter Western Red and Yellow Cedar logs. Those logs are also desirable for other cedar-driven mills. Some salvage fibre has been used. With the decline of cedar log supply on the Coast, the competition for cedar fibre caused supply tightness for shake and shingle mills, resulting in less than 60% capacity utilization rates in the past 14 years (Figure 22).

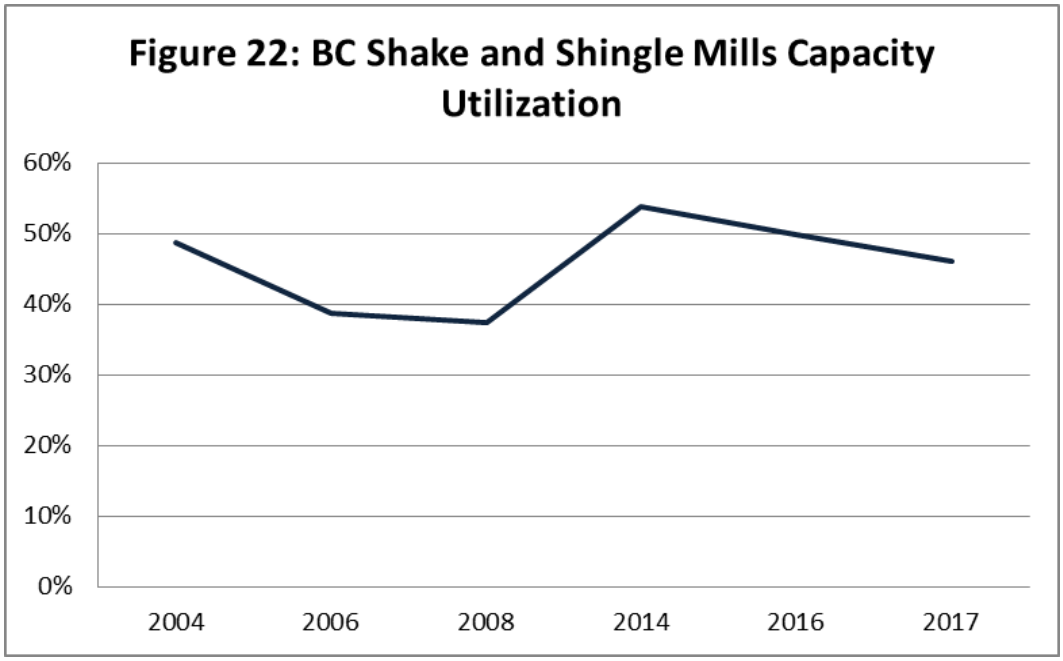
[21] Source: Cedar Shake and Shingle Bureau
[22] Source: http://waldun.com/waldun/gallery/?_gallery=gg-2-7 and https://www.bestqualitycedar.com/gallery/
[23] Source: StatsCan: CANSIM 304-0015
[24] Source: B.C. Statistics



Note: The Ministry did not survey shake and shingle mills between 2009 and 2013.



Note: The Ministry did not survey shake and shingle mills between 2009 and 2013.



Note: The Ministry did not survey shake and shingle mills between 2009 and 2013.

Related References

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Appendix: List of Mills

Figure 23: Administrative Areas and Natural Resource District Boundaries in 2017

Source: Economic Services Branch, 2017
Timber Operations, Pricing and First Nations Division
Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Lumber Mills

(Listed Alphabetically By Company)

Mills producing lumber are provided in separate tables, one for those with the estimated annual capacity above 40 million board feet of lumber, and one for those below.

The annual capacity reported in the following tables is estimated based on the same standard operating assumption for each mill (i.e. 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. 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.

Notes:

1. Measurement units are in millions of board feet.

2. Estimated annual capacity is established 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 23 for details).

4. The List of Lumber Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

LUMBER MILLS WITH CAPACITY GREATER THAN 40 MILLION BOARD FEET OF LUMBER IN 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (millions of board feet)
137	Apollo Forest Products Ltd.	Fort St James	North	Fort St. James	125
498	Aspen Planers Ltd.	Merritt	South	Cascades	192
213	Babine Forest Products Limited -Hampton Affiliates	Burns Lake	North	Nadina	219
252	C & C Wood Products Ltd.	Quesnel	South	Quesnel	79
127	Canadian Forest Products Ltd.	Chetwynd	North	Peace	209
64	Canadian Forest Products Ltd.	Vavenby	South	Thompson Rivers	216
130	Canadian Forest Products Ltd.	Mackenzie	North	Mackenzie	320
166	Canadian Forest Products Ltd.	Prince George	North	Prince George	330
122	Canadian Forest Products Ltd.	Fort St John	North	Peace	292
160	Canadian Forest Products Ltd.	Bear Lake	North	Prince George	229
135	Canadian Forest Products Ltd.	Isle Pierre	North	Prince George	221
90	Canadian Forest Products Ltd.	Radium Hot Springs	South	Rocky Mountain	200
93	Canadian Forest Products Ltd.	Wynndel	South	Selkirk	58
82	Canadian Forest Products Ltd.	Elko	South	Rocky Mountain	232
193	Canadian Forest Products Ltd.	Houston	North	Nadina	475
140	Canadian Forest Products Ltd.	Engen	North	Vanderhoof	493
150	Carrier Lumber Ltd.	Prince George	North	Prince George	297
133	Conifex Timber Inc.	Fort St James	North	Fort St. James	280
129	Conifex Timber Inc.	Mackenzie	North	Mackenzie	216
181	Decker Lake Forest Products - Hampton Affiliates Ltd.	Burns Lake	North	Nadina	72
326	Delta Cedar Sawmill LP	Delta	Coast	Chilliwack	51
45	Downie Timber Ltd.	Revelstoke	South	Selkirk	119
158	Dunkley Lumber Ltd.	Strathnaver	North	Prince George	528
86	Galloway Lumber Co. Ltd.	Galloway	South	Rocky Mountain	60
66	Gilbert Smith For Prod Ltd.	Barriere	South	Thompson Rivers	64
537	Goldwood Industries Ltd.	Richmond	Coast	Chilliwack	53
14	Gorman Bros Lumber Ltd.	Westbank	South	Okanagan Shuswap	120
1005	Halo Sawmill Manufacturing LP	Pitt Meadows	Coast	Chilliwack	48
30	International Forest Products Ltd.	Grand Forks	South	Selkirk	163
70	International Forest Products Ltd.	Adams Lake	South	Thompson Rivers	337
297	International Forest Products Ltd.	Hammond	Coast	Chilliwack	148
62	International Forest Products Ltd.	Castlegar	South	Selkirk	203
283	International Forest Products Ltd.	Delta	Coast	Chilliwack	126
88	J H Huscroft Ltd.	Erickson	South	Selkirk	43
100	J.S. Jones	Surrey	Coast	Chilliwack	192
50	Kalesnikoff Lumber Co. Ltd.	Thrums	South	Selkirk	62
144	L & M Lumber Ltd.	Vanderhoof	North	Vanderhoof	240
149	Lakeland Mills Ltd	Prince George	North	Prince George	126
1000	Ledcor	Chilliwack	Coast	Chilliwack	76
618	North Enderby Timber Ltd.	Enderby	South	Okanagan Shuswap	55

LUMBER MILLS WITH CAPACITY GREATER THAN 40 MILLION BOARD FEET OF LUMBER IN 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (millions of board feet)
626	Porcupine Wood Products Ltd.	Salmo	South	Selkirk	48
183	ROC Holdings	Terrace	North	Coast Mountain	100
454	S & R Sawmills Ltd.	Surrey	Coast	Chilliwack	223
750	Sigurdson Forest Products	Williams Lake	South	Cariboo Chilcotin	72
539	Stag Timber Ltd.	Surrey	Coast	Chilliwack	86
396	Terminal Forest Products Ltd.	Vancouver	Coast	Chilliwack	41
540	Terminal Forest Products Ltd.	Richmond	Coast	Chilliwack	245
68	Tolko Industries Ltd.	Armstrong	South	Okanagan Shuswap	223
103	Tolko Industries Ltd.	Williams Lake	South	Cariboo Chilcotin	225
107	Tolko Industries Ltd.	Williams Lake	South	Cariboo Chilcotin	191
98	Tolko Industries Ltd.	Quesnel	South	Quesnel	197
20	Tolko Industries Ltd.	Lavington	South	Okanagan Shuswap	229
67	Tolko Industries Ltd.	Kelowna	South	Okanagan Shuswap	192
31	Vaagen Fibre Canada	Midway	South	Selkirk	144
552	West Fraser Mills Ltd.	Chetwynd	North	Peace	311
532	West Fraser Mills Ltd.	LeJac	North	Vanderhoof	273
114	West Fraser Mills Ltd.	Williams Lake	South	Cariboo Chilcotin	160
191	West Fraser Mills Ltd.	Smithers	North	Skeena Stikine	259
95	West Fraser Mills Ltd.	100 Mile House	South	100 Mile House	153
214	West Fraser Mills Ltd.	Clinton	South	100 Mile House	226
113	West Fraser Mills Ltd.	Quesnel	South	Quesnel	420
320	Western Forest Products	Cowichan Bay	Coast	South Island	127
392	Western Forest Products	Port Alberni	Coast	South Island	65
528	Western Forest Products	Port Alberni	Coast	South Island	154
393	Western Forest Products	Chemainus	Coast	South Island	70
546	Western Forest Products	Duke Point	Coast	South Island	91
442	Western Forest Products	Ladysmith	Coast	South Island	170
376	Western Forest Products	Ladysmith	Coast	South Island	83
29	Weyerhaeuser Company Ltd.	Princeton	South	Cascades	208

LUMBER MILLS WITH CAPACITY LESS THAN 40 MILLION BOARD FEET OF LUMBER IN 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (millions of board feet)
9	A.J. Forest Products ltd.	Brackendale	Coast	Sea to Sky	23.04
5	Abfam Enterprises Ltd.	Port Clements	Coast	Haida Gwaii	9.12
990	Alan Hyde Sawmill	Sicamous	South	Okanagan Shuswap	7.20
8	Andersen Pacific Forest Products Ltd	Maple Ridge	Coast	Chilliwack	23.04
10	BC Custom Timber Products Ltd.	Vanderhoof	North	Vanderhoof	9.60
643	Bear Lumber Ltd.	Cranbrook	South	Rocky Mountain	3.84
986	Brasier Mill	Masset	Coast	Haida Gwaii	0.48
255	Buff Lumber Ltd.	Westwold	South	Okanagan Shuswap	12.00
117	Continental Pole Ltd.	Pemberton	Coast	Sea to Sky	1.92
377	Coulson Manufacturing Ltd (2017)	Port Alberni	Coast	South Island	28.80
1051	COWICHAN LAKE TIMBER	Lake Cowichan	Coast	South Island	3.60
1003	Duz Cho Forest Products	Mackenzie	North	Mackenzie	25.44
1048	E Schuk contracting Ltd.	Tatla Lake	South	Cariboo Chilcotin	0.13
1056	Eaglecrest Enterprises	Port Clements	Coast	Haida Gwaii	1.44
717	Edgegrain	Woss	Coast	North Island - Central Coast	2.40
1046	Entzminger Sawmill	Quesnel	South	Quesnel	N/A
301	Errington Cedar Products Ltd.	Errington	Coast	South Island	13.83
714	Franklin Forest Products Ltd.	Port Alberni	Coast	South Island	19.20
1004	Fu So Enterprises Ltd.	Kamloops	South	Thompson Rivers	2.40
32	Gibbs Custom Sawmill	McBride	North	Prince George	0.96
957	Gold Island Forest Products Ltd.	Slocan	South	Selkirk	16.80
567	Green Forest Products Ltd.	Merville	Coast	Campbell River	0.72
1016	Greenslide Cattle Co Ltd	Revelstoke	South	Selkirk	0.96
975	Harold Turner	Pritchard	South	Thompson Rivers	0.82
1006	Harrop-Proctor Forest Products	Horrop	South	Selkirk	1.92
172	Hauer Bros. Lumber Ltd.	Tete Jaune Cach	North	Prince George	N/A
708	Island Pacific Wood Products	Tahsis	Coast	Campbell River	0.96
1058	JCI Touchwood Sawmills	Terrace	North	Coast Mountain	3.60
512	Jemico Enterprises Ltd.	Chemainus	Coast	South Island	10.56
47	Joe Kozek Sawmills Ltd.	Revelstoke	South	Selkirk	9.60
184	Kitwanga Forest Products	Kitwanga	North	Skeena Stikine	33.60
1007	Lake Drive Lumber	Terrace	North	Coast Mountain	1.68
597	Lakeside Timber (2007) Ltd.	Tappen	South	Okanagan Shuswap	19.20
399	Lois Lumber Ltd	Powell River	Coast	Sunshine Coast	4.80
712	Long Hoh Enterprises Canada Ltd	Qualicum Beach	Coast	South Island	26.88
1052	Ludwig Lumber	Black Creek	Coast	Campbell River	1.44
197	McDonald Ranch & Lumber Ltd.	Grasmere	South	Rocky Mountain	4.80

LUMBER MILLS WITH CAPACITY LESS THAN 40 MILLION BOARD FEET OF LUMBER IN 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (millions of board feet)
974	Murray Kane Site 6LW	Clinton	South	100 Mile House	0.48
408	Nagaard Sawmills Ltd.	Port Alberni	Coast	South Island	30.51
199	North Star Hardware and Building Supplies	Athalmer	South	Rocky Mountain	3.84
988	Northern Log & Timber	Winfield	South	Okanagan Shuswap	0.96
1010	Pacific Timber	Burns Lake	North	Nadina	38.40
711	Port Hardy Merchandising Ltd.	Port Hardy	Coast	North Island - Central Coas	4.80
582	Quadra Island Forest Products Ltd.	Quadra Island	Coast	Campbell River	2.88
905	Rainforest Sawmill	Black Creek	Coast	Campbell River	0.72
271	Rouck Brothers Sawmill Ltd.	Lumby	South	Okanagan Shuswap	3.84
731	SCG Forest Inc.	Courtenay	Coast	Campbell River	2.40
480	Schapol Logging Ltd.	Enderby	South	Okanagan Shuswap	19.20
23	Shannon Lumber	Mission	Coast	Chilliwack	9.60
654	SpikeTop Cedar Ltd.	Port Hardy	Coast	North Island - Central Coas	0.96
24	Suncoast Lumber and Milling	Sechelt	Coast	Sunshine Coast	10.85
991	T & N Custom Sawmill	Enderby	South	Okanagan Shuswap	1.44
1023	Take to heart Specialty Wood Product	Revelstoke	South	Selkirk	0.72
1054	Tenured Wood Product Enterprises	Skidegate	Coast	Haida Gwaii	1.44
96	Thomson Bros. Lumber Co. Ltd.	Courtenay	Coast	Campbell River	1.44
979	Woodco Management Ltd	Barriere	South	Thompson Rivers	28.80
1025	Woodpecker sawmill	Golden	South	Selkirk	0.96

Pulp and Paper Mills

(Listed Alphabetically By Product)

Mills producing pulp and paper 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 assumption 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. 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.

Notes:

1. Measurement units are in thousands of tonnes.

2. Estimated annual capacity is established on a standardized operation of 345 operating days per year, 24 hours per day. Actual operations may vary from this schedule.

3. Administrative areas and natural resource districts were applied (see Figure 23 for details).

4. The List of Pulp and Paper Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

PULP AND PAPER MILLS - 2017

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Estimated Annual Capacity (000s of tonnes)
500	Canadian Forest Products Ltd.	Prince George	PLP	North	Prince George	329
335	Canadian Forest Products Ltd.	Taylor	PLP	North	Peace	211
503	Canadian Forest Products Ltd.	Prince George	PLP	North	Prince George	568
960	Canadian Forest Products Ltd.	Prince George	PLP	North	Prince George	326
497	Cariboo Pulp & Paper Co. Ltd.	Quesnel	PLP	South	Quesnel	306
483	Catalyst Paper	Crofton	PLP	Coast	South Island	658
487	Catalyst Paper	Port Alberni	PLP	Coast	South Island	202
486	Catalyst Paper	Powell River	PLP	Coast	Sunshine Coast	244
2	Domtar	Kamloops	PLP	South	Thompson Rivers	343
484	Howe Sound Pulp & Paper Corporation	Port Mellon	PLP	Coast	Sunshine Coast	358
488	Nanaimo Forest Products	Cedar	PLP	Coast	South Island	356
505	Paper Excellence BV.	Mackenzie	PLP	North	Mackenzie	186
553	Quesnel River Pulp Company	Quesnel	PLP	South	Quesnel	363
1	Skookumchuk Pulp Inc	Skookumchuk	PLP	South	Rocky Mountain	256
501	Zellstoff Celgar Limited Partnership	Castlegar	PLP	South	Selkirk	461
500	Canadian Forest Products Ltd.	Prince George	PPR	North	Prince George	167
486	Catalyst Paper	Powell River	PPR	Coast	Sunshine Coast	288
483	Catalyst Paper	Crofton	PPR	Coast	South Island	427
487	Catalyst Paper	Port Alberni	PPR	Coast	South Island	306
491	Kruger Products LP	New Westminster	PPR	Coast	Chilliwack	56

Veneer, Plywood, OSB and Other Panel Mills

(Listed Alphabetically by Product)

Mills producing veneer, plywood and other types of panel 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 assumption 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. 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.

Notes:

1. Measurement units are in millions of square feet, 3/8" basis (mill. sq. ft., 3/8").

2. Estimated annual capacity of veneer mills is based on a standardized operation of 240 days per year, two 8-hour shifts per day. For plywood mills, estimated annual capacity is based on a standardized operation of 240 days per year, three 8-hour shifts per day. For OSB and other panel mills, 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.

3. Administrative areas and natural resource districts were applied (see Figure 23 for details).

4. The List of Veneer, Plywood, OSB and Other Panel Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

VENEER, PLYWOOD, OSB AND OTHER PANEL MILLS - 2017*

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Annual Capacity (million sq. ft, 3/8" basis)
411	Norbord Inc.	100 Mile House	OSB	South	100 Mile House	668
942	Peace Valley OSB	Fort St John	OSB	North	Peace	727
650	Louisiana Pacific Canada Ltd.	Dawson Creek	OSB	North	Peace	364
105	West Fraser Mills Ltd.	Williams Lake	PLY	South	Cariboo Chilcotin	212
84	Louisiana Pacific Canada Ltd.	Golden	PLY	South	Selkirk	117
112	West Fraser Mills Ltd.	Quesnel	PLY	South	Quesnel	229
109	Aspen Planers Ltd.	Savona	PLY	South	Thompson Rivers	121
1042	Thompson River Veneer Products Ltd.	Kamloops	PLY	South	Thompson Rivers	115
394	Tolko Industries Ltd.	Heffley Creek	PLY	South	Thompson Rivers	204
12	Canoe Forest Products Ltd.	Canoe	PLY	South	Okanagan Shuswa	140
68	Tolko Industries Ltd.	Armstrong	PLY	South	Okanagan Shuswa	259
478	Richmond Plywood Corp. Ltd.	Richmond	PLY	Coast	Chilliwack	166
113	West Fraser Mills Ltd.	Quesnel	PNL	South	Quesnel	181
115	Aspen Planers Ltd.	Lillooet	VNR	South	Cascades	134
105	West Fraser Mills Ltd.	Williams Lake	VNR	South	Cariboo Chilcotin	158
34	B C Veneer Products Ltd	Surrey	VNR	Coast	Chilliwack	2
35	Tolko Industries Ltd.	Lumby	VNR	South	Okanagan Shuswa	158
478	Richmond Plywood Corp. Ltd.	Richmond	VNR	Coast	Chilliwack	108
1044	Hardwood Lumber	Maple Ridge	VNR	Coast	Chilliwack	0
394	Tolko Industries Ltd.	Heffley Creek	VNR	South	Thompson Rivers	173
12	Canoe Forest Products Ltd.	Canoe	VNR	South	Okanagan Shuswa	157
84	Louisiana Pacific Canada Ltd.	Golden	VNR	South	Selkirk	128
51	Atco Wood Products	Fruitvale	VNR	South	Selkirk	142
68	Tolko Industries Ltd.	Armstrong	VNR	South	Okanagan Shuswa	177
508	CIPA Lumber Co. Ltd.	Annacis Island	VNR	Coast	Chilliwack	216
244	Coastland Wood Industries Ltd.	Nanaimo	VNR	Coast	South Island	213
112	West Fraser Mills Ltd.	Quesnel	VNR	South	Quesnel	144

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

Chip Mills

(Listed Alphabetically By Company)

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 assumption 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. 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.

Notes:

1. Measurement units are in thousands of bone dry units (000 BDUs).

2. 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.

3. Administrative areas and natural resource districts were applied (see Figure 23 for details).

4. The List of Chip Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

CHIP MILLS - 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity (000s of BDUs)
1002	BC Ecochips Ltd	Midway	South	Selkirk	144
252	C & C Wood Products Ltd.	Quesnel	South	Quesnel	4
446	Campbell River Fibre Ltd.	Campbell River	Coast	Campbell River	90
166	Canadian Forest Products Ltd.	Prince George	North	Prince George	418
1	Canadian Forest Products Ltd.	Skookumchuk	South	Rocky Mountain	114
924	Chips Ahoy Fibre Supply	Mission	Coast	Chilliwack	168
345	DCT Chambers Trucking Ltd.	Chemainus	Coast	South Island	165
356	East Fraser Fibre Co Ltd.	Mackenzie	North	Mackenzie	198
409	Howe Sound Pulp & Paper Ltd.	Vancouver	Coast	Chilliwack	236
1013	Karlite Manufacturing Ltd.	Cowichan Bay	Coast	South Island	58
1000	Ledcor Group	Chilliwack	Coast	Chilliwack	109
1050	North Island Chipping Ltd.	Port McNeill	Coast	North Island - Central Coast	54
1021	Pacific Bioenergy	Quesnel	South	Quesnel	132
937	Pacific Fibre	Port Mellon	Coast	Sunshine Coast	120
952	River City Fibre	Kamloops	South	Thompson Rivers	553
18	Terminal Forest Products Ltd.	Langdale Dryland Sort	Coast	Sunshine Coast	34
394	Tolko Industries Ltd.	Heffley Creek	South	Thompson Rivers	96
68	Tolko Industries Ltd.	Armstrong	South	Okanagan Shuswap	38
1024	Trace Resources	Merritt	South	Cascades	142
1001	Valiant Log Sort Ltd.	Port Coquitlam	Coast	Chilliwack	96
113	West Fraser Mills Ltd.	Quesnel	South	Quesnel	181

Pellet Mills

(Listed Alphabetically By Company)

Mills producing wood pellets for bio-energy are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumption 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. 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.

Notes:

1. Measurement units are in thousands of tonnes.

2. 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.

3. Administrative areas and natural resource districts were applied (see Figure 23 for details).

4. The List of Pellet Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

PELLET MILLS - 2017

Mill Number	Company	Location of Mill	Administrative Area	Natural Resource District	Estimated Annual Capacity ('000s of tonnes)
127	Canadian Forest Products Ltd.	Chetwynd	North	Peace	100
122	Canadian Forest Products Ltd.	Fort St John	North	Peace	75
996	Diacarbon Energy	Merritt	South	Cascades	67
1049	Lavington Pellet Limited Partnership	Lavington	South	Okanagan Shuswap	176
930	Pacific BioEnergy	Prince George	North	Prince George	448
980	Pinnacle Pellet Burns Lake	Burns Lake	North	Nadina	337
947	Pinnacle Pellet Houston	Houston	North	Nadina	204
929	Pinnacle Renewable Energy Group	Armstrong	South	Okanagan Shuswap	66
976	Pinnacle Renewable Energy Group	Strathnaver	North	Prince George	160
948	Pinnacle Renewable Energy Group	Williams Lake	South	Cariboo Chilcotin	145
932	Premium Pellet Ltd.	Vanderhoof	North	Vanderhoof	207
933	Princeton Standard Pellet Corporation	Princeton	South	Cascades	95
995	Vanderhoof Specialty Wood Products	Vanderhoof	North	Vanderhoof	47

Pole and Post Mills

(Listed Alphabetically by Product)

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 assumption 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.

Notes:

1. Measurement units are in thousands of pieces (000 pics).

2. 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.

3. Administrative areas and natural resource districts were applied (see Figure 23 for details).

4. The List of Pole and Post Mills is available as an Excel spreadsheet online at: http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

TYPES OF POLE MILLS - 2017

Mill Number	Company	Location of Mill	Product	Administrative Area	Natural Resource District	Estimated Annual Capacity ('000s of pieces)
498	Aspen Planers Ltd.	Merritt	PLE	South	Cascades	N/A
117	Continental Pole Ltd.	Pemberton	PLE	Coast	Sea to Sky	12
250	Nicola Post and Rail Ltd.	Merritt	PLE	South	Cascades	120
677	Pacific Inland Pole & Piling Ltd.	Nakusp	PLE	South	Selkirk	12
498	Aspen Planers Ltd.	Merritt	PST	South	Cascades	480
390	Box Lake Lumber Prod Ltd	Nakusp	PST	South	Selkirk	600
117	Continental Pole Ltd.	Pemberton	PST	Coast	Sea to Sky	N/A
250	Nicola Post and Rail Ltd.	Merritt	PST	South	Cascades	720
739	Panhandle Forest Products	Lumberton	PST	South	Rocky Mountain	360
232	Princeton Wood Preservers Ltd	Princeton	PST	South	Cascades	437
188	Bell Pole and Lumber LLC	Rossland	UTI	South	Selkirk	6
659	Brisco Wood Preservers Ltd.	Brisco	UTI	South	Rocky Mountain	24
556	Chinook Forest Products Ltd.	Courtenay	UTI	Coast	Campbell River	14
117	Continental Pole Ltd.	Pemberton	UTI	Coast	Sea to Sky	17
40	Gorman Bros Lumber Ltd.	Lumby	UTI	South	Okanagan Shuswap	28
181	Hampton Lumber Mills Canada Ltd.	Burns Lake	UTI	North	Nadina	10
999	Otter Point Timber Ltd.	Ladysmith	UTI	Coast	South Island	11
677	Pacific Inland Pole & Piling Ltd.	Nakusp	UTI	South	Selkirk	N/A
48	Stella Jones Inc.	Salmon Arm	UTI	South	Okanagan Shuswap	72
637	Stella Jones Inc.	Prince George	UTI	North	Prince George	48
648	Stella Jones Inc.	Galloway	UTI	South	Rocky Mountain	23
222	Stella Jones Inc.	Haney	UTI	Coast	Chilliwack	18

Note: Aspen Planers Ltd. (Mill # 498) did not report pole operation in 2017.

Shake and Shingle Mills

(Listed Alphabetically By Company)

Mills producing shakes and shingles are listed in this section.

The annual capacity reported in these tables is estimated based on the same standard operating assumption 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.

Notes:

1. Measurement units are in thousands of roofing squares (000s of 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 23 for details).

4. The List of Shake and Shingle Mills is available as an Excel spreadsheet online at:http://www2.gov.B.C..ca/gov/content/industry/forestry/competitive-forest-industry/forest-industry-economics/fibre-mill-information

Mill Number	Company	Location of Mill	Administrative Areas	Natural Resource District	Estimated Annual Capacity- ('000s of squares)
1026	A.K. Cedar Products Ltd.	Abbotsford	Coast	Chilliwack	N/A
673	Anbrook Industries Ltd.	Pitt Meadows	Coast	Chilliwack	58
688	Best Quality Cedar Products Ltd	Maple Ridge	Coast	Chilliwack	192
449	Campbell River Shake and Shingle Co Ltd	Campbell River	Coast	Campbell River	23
1072	Canadian American Forest Products Ltd.	Abbotsford	Coast	Chilliwack	N/A
1028	Cape Scott Cedar Products Ltd. Mill	Port Hardy	Coast	North Island - Central Coast	22
1029	Cedar Valley Specialty Cuts	Valemount	North	Prince George	5
315	Comox Valley Shakes Ltd.	Campbell River	Coast	Campbell River	50
638	Confederate Shake & Shingle Ltd.	Youbou	Coast	South Island	19
69	Copper Mountain Cedar Products	Terrace	North	Coast Mountain	4
1062	G & R Cedar (2009) Ltd.	Chilliwack	Coast	Chilliwack	22
587	G & R Cedar Ltd.	Matsqui	Coast	Chilliwack	38
399	Goat Lake Forest Products	Powell River	Coast	Sunshine Coast	38
1061	Gold Band Shake and Shingle Ltd.	Mission	Coast	Chilliwack	43
1030	Golden Ears Shingle Ltd.	Mission	Coast	Chilliwack	5
72	Imperial Shake Co Ltd	Maple Ridge	Coast	Chilliwack	144
1071	Island Cedar Products	Matsqui	Coast	Chilliwack	N/A
321	J & D Shake and Cedar Mill Ltd.	Duncan	Coast	South Island	72
583	Madewell Cedar Inc.	Mission	Coast	Chilliwack	103
1033	Pacific Cedar	Port Alberni	Coast	South Island	14
1034	Pacific Chalet Ltd.	Powell River	Coast	Sunshine Coast	2
1009	Pendragon-Goldwood Industries Ltd	Burns Lake	North	Nadina	38
460	Port McNeill Shake & Shingles (2007) Ltd.	Port McNeill	Coast	North Island - Central Coast	19
266	Premium Cedar Products Ltd.	Ruskin	Coast	Chilliwack	108
1036	Riverside Shingle Products	Errington	Coast	South Island	N/A
455	S & W Shake & Shingle Ltd.	Ruskin	Coast	Chilliwack	120
1037	S&K Cedar Products Ltd.	Mission	Coast	Chilliwack	77
591	Serpentine Cedar Ltd.	Fort Langley	Coast	Chilliwack	38
612	Silver Creek Premium Products	Mission	Coast	Chilliwack	226
1039	Stave Lake Cedar Mills (1992) Inc.	Maple Ridge	Coast	Chilliwack	78
902	Taylor Contracting Ltd.	Zeballos	Coast	Campbell River	12
585	Teal cedar products	Revelstoke	South	Selkirk	19
1040	Titan Cedar Products Ltd.	Port Coquitlam	Coast	Chilliwack	7
1070	Valley Cedar Shake Products Ltd.	Abbotsford	Coast	Chilliwack	N/A
691	W. Boyes Shake and Shingle Ltd.	Gateway	South	100 Mile House	14
464	Waldun Forest Products Ltd.	Ruskin	Coast	Chilliwack	187