

**Secondary Manufacturing in British Columbia:  
A Regional Breakdown**

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**by**

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## Secondary Manufacturing in British Columbia: A Regional Breakdown

This report provides a regional analysis of results from the 1997 survey of secondary wood processors in BC. Regional summary results are presented along with select comparisons with an earlier (1991) survey of BC secondary manufacturing on sales (all in nominal dollars) and employment levels. The 1997 survey encompassed nine business types, while the 1991 survey included seven business types. When comparing results from the two surveys, the same seven business types are the basis of comparison.

Some of the regions in the interior consist of a small number of companies within certain business types. In these cases two or more business types are combined into the “all other” category. In addition, the two with the least activity in secondary manufacturing, Prince George and Prince Rupert, are combined into the Northern Interior forest region. These aggregations were done to ensure that the information provided by responding companies was kept confidential.

The process of scaling up from sample statistics to estimates for the entire population is done using median values for each business type. Again, given the small populations for certain business types in the interior regions, median values estimated from data for the total interior region are used in each of these cases. A second set of values is estimated for each business type in the Vancouver region.

### Cariboo Region

Table 1 gives the numbers of secondary wood manufacturers that were identified in the Cariboo (population) and the number for which data was gathered (sample). These are given for both the current (1997) survey and a previous survey done for the 1991 production year.

**Table 1      Business Types in the Cariboo, Identified Population and Survey  
Sample, Current and Previous Surveys**

Business Type	1991 Survey		1997 Survey	
	Population	Sample	Population	Sample
Reman	5	3	10	5
EWP	8	7	11	10
Cabinets	0	0	2	2
Furniture	0	0	1	1
Panel Products	0	0	4	2
Other WP	0	0	3	1
<b>Totals</b>	<b>13</b>	<b>10</b>	<b>31</b>	<b>21</b>

The results in Table 1 show that many more companies were identified in the most recent survey of secondary wood manufacturers for the Cariboo region. This increase and the small sample size in the region, mean that population estimates must be viewed with caution.

Sales and employment statistics from the survey respondents must be scaled up to develop population estimates for the Cariboo. This is done by adding up the totals from the survey respondents and making an adjustment to reflect those in the population which did not respond. This adjustment is made by assuming that the sample median (based on the data set for all of the interior regions) is the most representative statistic for the non-respondents. These estimates for 1991 and 1997 are given in Table 2.

**Table 2 Sales and Employment Estimates for the Cariboo Region, 1991 and 1997 Production Years**

	Sales		Employment	
	1991	1997	1991	1997
	\$'000		#	
<b>7 Business Types</b>				
<b>Sample Estimates</b>				
Reman	11,100	43,650	79	196
EWP	6,600	22,850	89	173
All Other <sup>a</sup>	0	1,500	0	9
<b>Sample Totals</b>	<b>17,700</b>	<b>68,000</b>	<b>168</b>	<b>378</b>
Adjustment	6,150	26,400	39	198
<b>Population Estimates</b>	<b>23,850</b>	<b>94,400</b>	<b>207</b>	<b>576</b>
<b>% Change from 1994</b>	n.a.	<b>296%</b>	n.a.	<b>179%</b>
<b>9 Business Types</b>				
<b>Sample</b>	n.a.	<b>170,700</b>	n.a.	<b>854</b>
Adjustment	n.a.	126,240	n.a.	574
<b>Population Estimate</b>	n.a.	<b>296,940</b>	n.a.	<b>1,428</b>

<sup>a</sup> The 'All other' category refers to the remaining companies other than those explicitly listed. This aggregation is done to maintain confidentiality in business types that contain a small number of firms.

Comparisons between the 1997 and 1991 surveys must be carefully considered because the number of companies in both the total identified population and the respondents has changed so much. The total estimated sales for Cariboo secondary wood producers increased three-fold, while the employment increased by 179 percent. Indicators of capacity utilization and plans for expansion are given in Table 3.

**Table 3 Capacity Utilization and Expansion Plans for Secondary Wood Producers in Cariboo, 1997 Production Year**

<b>Business Type</b>	<b>Average Capacity Utilization</b>	<b>Planning to Expand</b>	<b>Average Expansion Amount</b>
		%	
Reman	64	25	100
EWP	80	83	31
All Other	93	40	40
Panel Prod.	95	0	n.a.
<b>All Secondary</b>	<b>80</b>	<b>50</b>	<b>42</b>

Average capacity utilization is highest for the All Other category which includes furniture and cabinet makers. Remanufacturers have a capacity utilization of 64%, and one respondent has expansion plans over the next three years. EWP companies, on the other hand, have higher capacity utilization but still 83% have of responding EWP companies have expansion plans and the average scale of expansion is 31 percent. The major constraints to expansion for Cariboo secondary wood processors are given in Table 4.

**Table 4 Major Constraints to Capacity Expansion**

<b>Business Type</b>	<b>Labour</b>	<b>Markets</b>	<b>Wood Supply</b>
		% of firms	
Reman	67	100	100
EWP	100	33	100
All Other	75	50	100
Panel Prod.	50	0	100
<b>All Secondary</b>	<b>80</b>	<b>47</b>	<b>100</b>

It is clear from the results in Table 4 that the key problem to expansion of secondary wood manufacturing in the Cariboo region is wood supply. Markets are also a large problem for the reman firms and labour for the EWP companies.

### **Kamloops Region**

The numbers of secondary wood manufacturers identified in the Kamloops region and the size of the working sample are given in Table 5. These are again given for both the current survey and a previous survey (1997 and 1991 production years).

**Table 5      Business Types in the Kamloops Region, Identified Population and Survey Sample, Current and Previous Surveys**

<b>Business Type</b>	<b>1991 Survey</b>		<b>1997 Survey</b>	
	<b>Population</b>	<b>Sample</b>	<b>Population</b>	<b>Sample</b>
Remanufacturing	32	31	35	30
Engin. Wood Products	31	23	50	31
Millwork	21	16	22	15
Cabinets	16	7	27	11
Furniture	11	6	15	10
Other Wood Products	2	2	9	7
Pallets and Containers	4	3	4	2
Panel Products	0	0	3	3
Shake & Shingles	0	0	3	2
<b>Totals</b>	<b>117</b>	<b>88</b>	<b>168</b>	<b>111</b>

Comparisons are made with the previous survey of secondary manufacturing to examine changes in sales and employment over the study period of 1997-91. The estimates for the Kamloops Region are based on both a larger sample and a larger population than the Cariboo Region. Table 6 gives the sales and employment estimates from the 1991 and 1997 surveys.

**Table 6 Sales and Employment Estimates for the Kamloops Region, 1991 and 1997 Production Years**

	Sales		Employment	
	1991	1997	1991	1997
	\$'000		#	
7 Business Types				
Sample Estimates				
Remanufacturing	136,000	194,350	811	909
EWP	43,700	59,250	482	661
Millwork	20,800	21,250	233	234
Cabinets	15,700	20,750	184	237
Furniture	20,600	30,750	250	321
All Other <sup>a</sup>	7,150	79,350	95	377
Sample Totals	243,950	405,700	2,054	2,739
Adjustment	47,000	158,850	540	622
Population Estimate	290,950	564,550	2,594	3,361
% Change from 1994	n.a.	94%	n.a.	30%
9 Business Types				
Sample	n.a.	601,250	n.a.	3,539
Adjustment	n.a.	161,410	n.a.	630
Population Estimate	n.a.	762,660	n.a.	4,169

<sup>a</sup> The 'All other' category refers to the remaining companies other than those explicitly listed. This aggregation is done to maintain confidentiality in business types that contain a small number of firms.

Comparisons over the study period for the Kamloops Region are more robust because of the larger sample size and the stability in the number of firms included in both of the surveys. Total (population) estimated sales for the Kamloops Region has increased by 94% for the seven business types and the employment increased by 30 percent. Indicators of capacity utilization and plans for expansion are given in Table 7.

**Table 7 Capacity Utilization and Expansion Plans for Secondary Wood Producers in the Kamloops Region, 1997 Production Year**

<b>Business Type</b>	<b>Average Capacity Utilization</b>	<b>Planning to Expand</b>	<b>Average Expansion Amount</b>
		%	
Remanufacturing	70	71	51
EWP	69	70	39
Millwork	73	60	49
Cabinets	66	50	26
Furniture	72	89	43
All Other	84	36	16
<b>Regional Total</b>	<b>72</b>	<b>65</b>	<b>42</b>

Capacity utilization is quite similar across the business types except in the “All Other” category which includes pallets and containers, panel producers, other wood products and shakes and shingles. Even though this latter group has the highest capacity utilization it also had the lowest number of firms with expansion plans. The major constraints to expansion are given in Table 8.

**Table 8 Major Constraints to Capacity Expansion**

<b>Business Type</b>	<b>Labour</b>	<b>Markets</b>	<b>Wood Supply</b>
		% of firms	
Remanufacturing	52	81	95
EWP	55	90	100
Millwork	60	50	70
Cabinets	63	63	75
Furniture	67	33	78
All Other	55	73	82
<b>Regional Total</b>	<b>65</b>	<b>71</b>	<b>87</b>

The results in Table 8 show that wood supply is the major constraint to expansion in the Kamloops Region. Wood supply difficulties is a particular constraint to each of the two predominant business types, remanufacturing and engineered wood products.

## Nelson Region

The overall population and working samples of secondary wood manufacturers identified in the Nelson Region are given in Table 9.

**Table 9 Business Types in the Nelson Region, Identified Population and Survey Sample, Current and Previous Surveys**

Business Type	1991 Survey		1997 Survey	
	Population	Sample	Population	Sample
Remanufacturing	8	7	12	10
EWP	8	6	15	8
Millwork	10	7	7	4
Cabinets	1	0	2	2
Furniture	0	0	0	0
Other Wood Products	0	0	7	5
Pallets and Containers	0	0	0	0
Panel Products	0	0	2	2
Shake & Shingles	0	0	7	4
<b>Totals</b>	<b>27</b>	<b>20</b>	<b>52</b>	<b>35</b>

The changes in secondary manufacturing sales and employment for the Nelson Region are summarized in Table 10 for the study period of 1997-1999.

**Table 10 Sales and Employment Estimates for the Nelson Region, 1991 and 1997 Production Years**

	Sales		Employment	
	1991	1997	1991	1997
	\$'000		#	
7 Business Types				
Sample Estimates				
Remanufacturing	13,100	62,900	71	444
EWP	25,650	43,600	101	195
Millwork	6,600	3,550	41	32
All Other <sup>a</sup>	0	11,600	0	49
Sample Totals	45,350	121,650	213	720
Adjustment	9,700	70,750	84	190
Population Estimate	55,050	192,400	296	910
% Change from 1994	n.a.	250%	n.a.	207%
9 Business Types				
Sample	n.a.	175,700	n.a.	953
Adjustment	n.a.	123,870	n.a.	390
Population Estimate	n.a.	299,570	n.a.	1,343

<sup>a</sup> The 'All other' category refers to the remaining companies other than those explicitly listed. This aggregation is done to maintain confidentiality in business types that contain a small number of firms.

Total (population) estimated sales for the Kamloops region secondary wood producers increased by 250% and employment doubled for the seven business types. Indicators of capacity utilization and plans for expansion are given in Table 11 and the major constraints to expansion are given in Table 12.

**Table 11 Capacity Utilization and Expansion Plans for Secondary Wood Producers in the Nelson Region, 1997 Production Year**

Business Type	Average Capacity Utilization	Planning to Expand	Average Expansion Amount
		%	
Remanufacturing	65	56	170 <sup>a</sup>
EWP	82	57	40
Millwork	76	67	18
All Other	74	44	54
<b>Regional Total</b>	<b>73</b>	<b>54</b>	<b>84</b>

<sup>a</sup> Two of the remanufacturing companies indicated large expansions plans, one of them a three-fold increase, and the second expanding four-fold.

**Table 12 Major Constraints to Expansion in the Nelson Region**

Business Type	Labour	Markets	Wood Supply
	% of firms		
Remanufacturing	56	100	78
EWP	86	86	86
Millwork	100	67	100
All Other	67	56	67
<b>Regional Total</b>	<b>71</b>	<b>79</b>	<b>79</b>

The constraints to capacity expansion in the Nelson Region are similar to those for the Kamloops Region. Markets and wood supply are identified by a higher proportion of firms than labour problems. One hundred percent of the responding Reman firms identified markets as the key constraint to expansion.

### **Northern Interior 'Region'**

Due to the small sample sizes and the need to maintain company confidentiality, the results for the two northernmost regions, Price George and Prince Rupert, are combined and presented as the Northern Interior. The overall population and working sample of secondary wood manufacturers identified in this region are given in Table 13.

**Table 13 Business Types in the Northern Interior, Identified Population and Survey Sample, Current and Previous Surveys**

Business Type	1991 Survey		1997 Survey	
	Population	Sample	Population	Sample
Remanufacturing	13	11	22	18
EWP	7	7	13	7
Millwork	4	2	4	1
Cabinets	2	0	2	1
Furniture	1	1	2	0
Other Wood Products	2	2	2	1
Pallets and Containers	0	0	1	1
Panel Products	0	0	3	2
Shake & Shingles	0	0	4	3
<b>Totals</b>	<b>29</b>	<b>23</b>	<b>53</b>	<b>35</b>

The trend in sales and employment for the region over the 1997-1991 study period are summarized in Table 14.

**Table 14 Sales and Employment Estimates for the Northern Interior, 1991 and 1997 Production Years**

	Sales		Employment	
	1991	1997	1991	1997
	\$'000		#	
7 Business Types				
Sample Estimates				
Remanufacturing	27,250	129,750	193	765
EWP	31,800	17,650	264	136
All Other <sup>a</sup>	9,050	21,550	405	134
Sample Totals	68,100	168,950	862	1,034
Adjustment	15,850	51,300	89	274
Population Estimate	83,950	220,250	945	1,308
% Change from 1994	n.a.	162%	n.a.	38%
9 Business Types				
Sample	n.a.	234,100	n.a.	1,649
Adjustment	n.a.	101,860	n.a.	282
Population Estimate	n.a.	335,960	n.a.	1,931

<sup>a</sup> The 'All other' category refers to the remaining companies other than those explicitly listed. This aggregation is done to maintain confidentiality in business types that contain a small number of firms.

Total (population) estimated sales for the region secondary wood producers increased 162% for the seven business types, while the employment increased by 38 percent. Indicators of capacity utilization and plans for expansion are given in Table 15.

**Table 15 Capacity Utilization and Expansion Plans for Secondary Wood Producers in the Northern Interior, 1997 Production Year**

Business Type	Average Capacity Utilization	Planning to Expand	Average Expansion Amount
		%	
Remanufacturing	68	60	109
EWP	78	25	75
All Others	69	50	41
<b>Regional Total</b>	<b>70</b>	<b>52</b>	<b>89</b>

Just over half of the firms in the northern interior planned expansion in the 1998-2000 period, with the scale of expansion being 89% for those firms. The major constraints to expansion for companies in the northern interior are given in Table 16.

**Table 16 Major Constraints to Expansion in the Northern Interior**

Business Type	Labour	Markets	Wood Supply
	% of firms		
Remanufacturing	80	87	87
EWP	100	50	100
All Other	88	100	88
<b>Regional Total</b>	<b>85</b>	<b>85</b>	<b>89</b>

In the northern interior region of the province, labour is a constraint to expansion for 85% of secondary manufacturing firms, markets was identified as a constraint by 85% or responding companies, and wood supply is identified by just under 90% of the companies.

### Vancouver Region

The number (population) of secondary wood manufacturers identified in the Vancouver Region and the size of the working sample are given in Table 17. These estimates are provided for 1997 and 1991 production years.

**Table 17 Business Types in the Vancouver Region, Identified Population and Survey Sample, Current and Previous Surveys**

Business Type	1991 Survey		1997 Survey	
	Population	Sample	Population	Sample
Remanufacturing	109	85	111	91
EWP	54	38	63	43
Millwork	87	61	88	53
Cabinets	86	37	67	35
Furniture	44	27	46	25
Other Wood Products	7	4	21	13
Pallets and Containers	12	11	12	8
Panel Products	0	0	7	7
Shake & Shingles	0	0	55	30
<b>Totals</b>	<b>399</b>	<b>263</b>	<b>470</b>	<b>305</b>

The number of secondary manufacturing firms increased by 18% and the sample size by 16% over the study period. The estimates for the Vancouver Region are based on the largest sample and population of the regions examined. Table 18 gives the sales and employment estimates from these two surveys.

**Table 18 Sales and Employment Estimates for the Vancouver Region, 1991 and 1997 Production Years**

	Sales		Employment	
	1991	1997	1991	1997
	\$'000		#	
7 Business Types				
Sample Estimates				
Remanufacturing	435,500	657,200	2,250	2,423
EWP	167,850	230,350	1,075	1,030
Millwork	136,750	142,300	1,182	1,228
Cabinets	49,750	69,700	591	843
Furniture	69,950	35,000	734	489
Pallets and Containers	16,150	17,750	148	150
Other Wood Products	2,000	23,300	42	97
Sample Totals	881,950	1,175,600	6,022	6,259
Adjustment	158,600	444,100	1,938	2,044
Population Estimate	1,040,550	1,619,700	7,960	8,303
% Change from 1994	n.a.	56%	n.a.	4%
9 Business Types				
Sample	n.a.	1,543,300	n.a.	8,052
Adjustment	n.a.	630,900	n.a.	2,569
Population Estimate	n.a.	2,174,200	n.a.	10,621

Total (population) estimated sales for the Vancouver Region secondary wood producers increased 56 % for the seven business types, while the employment increased by only 4%. Indicators of capacity utilization and plans for expansion are given in Table 19.

**Table 19 Capacity Utilization and Expansion Plans for Secondary Wood Producers in the Vancouver Region, 1997 Production Year**

Business Type	Average Capacity Utilization	Planning to Expand	Average Expansion Amount
		%	
Remanufacturing	72	43	37
EWP	63	57	58
Millwork	73	56	51
Cabinets	75	38	109
Furniture	78	59	67
Other WP	77	50	59
Pallets & Containers	79	25	25
Panel Products	66	67	46
Shakes & Shingles	73	53	22
<b>Regional Total</b>	<b>72</b>	<b>49</b>	<b>52</b>

Capacity utilization ranges from a low of 63% for engineered wood products (EWP) to a high of 78% for furniture producers. Plans for expansion range from a low of 38% of cabinet manufacturers to a high of 67% of panel producers. It is interesting to note that 38% of cabinet manufacturers planned to expand capacity and that the average planned capacity increase exceeded 100 percent. The major constraints to expansion are given in Table 20.

**Table 20 Major Constraints to Expansion**

Business Type	Labour	Markets	Wood Supply
		% of firms	
Remanufacturing	70	87	87
EWP	74	61	83
Millwork	72	53	78
Cabinets	76	43	76
Furniture	71	47	82
Other WP	58	25	83
Pallets & Containers	75	50	75
Panel Products	100	50	100
Shakes & Shingles	65	53	88
<b>Regional Total</b>	<b>71</b>	<b>61</b>	<b>83</b>

Similar to the other regions, wood supply is the most prevalent constraint to capacity expansion for the Vancouver Region. The Region also identified markets as a greater constraint to expansion than labour.