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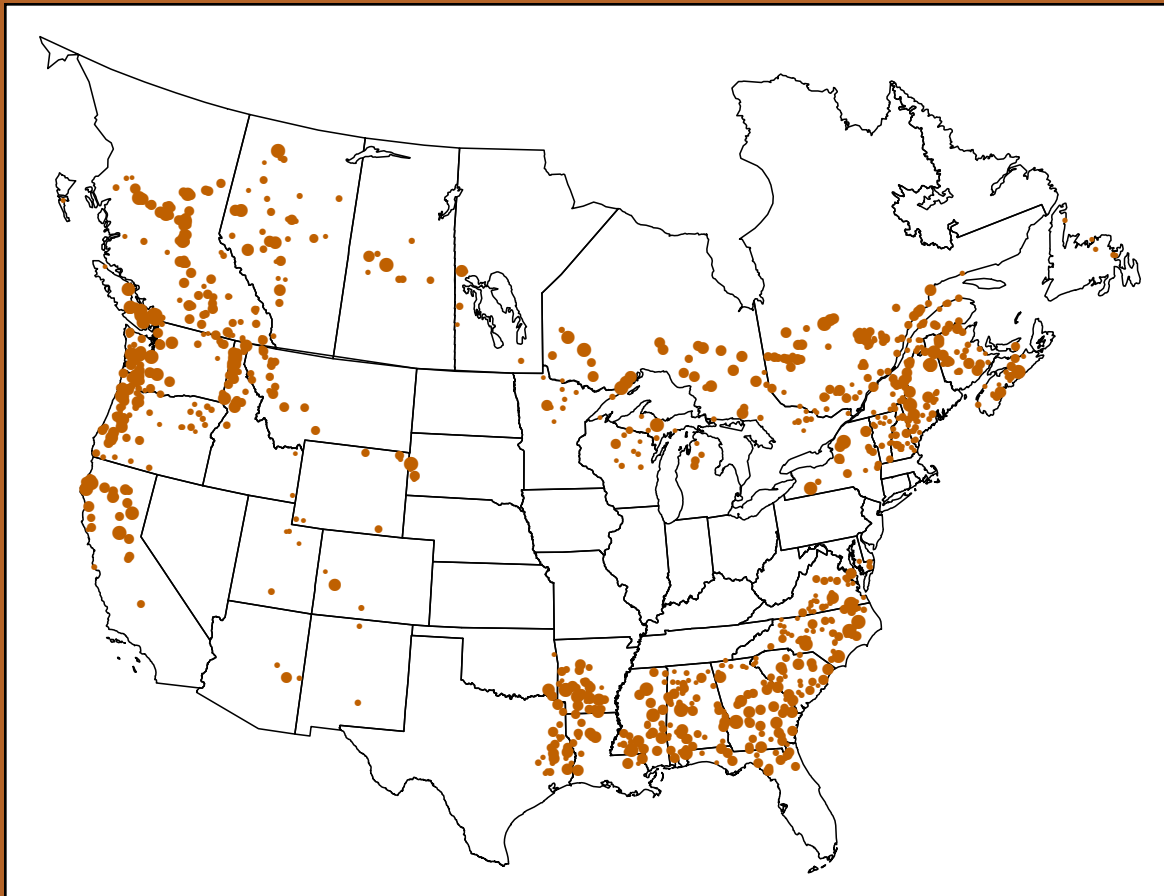
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Profile 2007: Softwood Sawmills in the United States and Canada

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David McKeever
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Abstract

The number of larger, permanent softwood lumber mills in the United States and Canada has shrunk from 1,311 in 1995 to 990 as of June 2007. These mills had a combined capacity of 190.2 million m³ (80.6 × 10⁹ board feet), slightly down from the 2005 value. In 2006, they produced 171 million (nominal) m³ (72.3 × 10⁹ board feet) of lumber, and in the process, generated approximately 0.56 oven-dried metric tons of chips and 0.23 tons of saw-dust and shavings for every 2.36 m³ (1,000 board feet) of lumber produced. Of the chips, 95% were used for pulp and the contribution of this product stream to sawmill economics was approximately \$2.1 billion (10⁹) U.S. dollars. Of the sawdust and shavings, 59% were used for boards, 25% for fuel, 7% for animal bedding, 4% for pellets, and about 5% were unused or unaccounted for. Employment dropped to about 93,000 people, down from 99,000 in 2005 and 115,000 in 1995. Economic prospects for the industry are clouded by overcapacity because of weakness in demand caused by a cyclical downturn in housing. Longer term influences include the ongoing mountain pine beetle (*Dendroctonus ponderosae*) epidemic in British Columbia that threatens to cut timber supplies over the next 5 to 10 years and the 2006 Softwood Lumber Agreement affecting the terms under which lumber is imported from Canada into the United States.

Keywords: softwood sawmill capacity, softwood lumber production, residues, chips, sawdust, shavings, employment

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Conversion Table

To convert item	To	Multiply item by
Million ^a board feet nominal lumber	m ³ (nominal)	2.36
1 b.d.u. chips	tonne	2400/2205
1 short ton residue	tonne	2000/2205
1 yard ³ shavings	short ton	27 × D ^a × BD ^b /2000

^aD, species density

^bBD, bulk density factor (0.25)

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Preface

This report updates *Profile 2005: Softwood Sawmills in the United States and Canada*, which was published in August 2005. *Profile 2007* contains information on the location, ownership, and approximate capacities of 990 currently existing softwood sawmills in the United States and Canada. Additionally, we review major end markets for lumber and changes in usage trends along with data on the amounts and uses of chips, shavings, and sawdust generated as byproducts in the course of sawing lumber.

When we first conducted the report in 1999, we gathered the information in this study solely from published sources. These included directories of wood-using industries published by regional U.S. and Canadian forestry departments, commercial directories such as the *Big Book* (Random Lengths Publications, Inc. 2006) and *Madison's Canadian Lumber Directory* (Madison's Canadian Lumber Reporter 2004), company press releases, Securities and Exchange Commission filings, and company web sites. Over the years, we have continually updated this data from various news sources. For this update, we also contacted the approximately 1,050 mills that we perceived to be still operating. The information gleaned collectively from these sources forms the basis for this report. The report contains three appendixes: Detailed Softwood Lumber Use Statistics (Appendix A), Data Gathering Procedures and Sources (Appendix B), and Sawmill Capacity and Timber Inventory by State and Province (Appendix C).

Our objective is to present periodic snapshots of the evolving softwood sawmill industry. This sector is highly diverse with a multitude of publicly traded and privately held companies. Information about its activities is scattered and often withheld. Thus, we are grateful to the individuals whose willingness to share data about their operations made this project possible. Nevertheless, in data-gathering efforts of this size, omissions or inaccuracies are unavoidable. We urge readers to submit corrections by e-mail to Henry Spelter (hspelter@fs.fed.us).

We follow the convention of reporting most data in metric units, but we also show imperial units parenthetically. For lumber, we converted board foot volumes to cubic meters based on 424 board feet equaling 1 m³, a factor derived from the tautological conversion of imperial sizes assigned to a board foot to metric equivalents. This assumes that lumber is full sawn, whereas in North America lumber sizes are only nominal. Therefore, the metric volumes so derived are also nominal. For lumber residues, a variety of different weight and volume measures use the factors shown below. We converted these to a common oven-dried basis expressed in metric tons.

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Profile 2007: Softwood Sawmills in the United States and Canada

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Introduction

As of June 2007, the mainline softwood lumber industry in the United States and Canada consisted of approximately 990 sawmills. Their combined capacity of 190.2 million m³ (80.6 × 10⁹ board feet) employed about 93,000 people, producing about 171 million m³ (72.3 × 10⁹ board feet) of lumber and generated about 57 million oven-dried metric tons of wood residues, excluding bark. The capacities of these larger permanent plants are laid out in Appendix C and summarized in Table 1. Small or seasonal operations whose contributions to lumber production are negligible are omitted. In the following, we describe changes in capacity and ownerships, present data on the amounts of chips, sawdust, and shavings generated as byproducts of lumber manufacturing and their uses, review the major end uses of lumber, and conclude with a review of current economic issues of concern to the industry.

Capacity

Appendix C lists sawmill locations and their capacities for 2002 to 2007. Sawmill capacity and production are summarized in Table 1. By necessity, data for 2007 and for the terminal years in previous reports were based on firms' projections or extensions of previous data, so current year data are preliminary and subject to change as actual figures are obtained later.

These numbers reflect primary mill capacity. Remanufacturing plants are excluded, and where we knew of sawmills finishing other plants' rough lumber, we reduced their capacities to avoid double counting. In a few cases, it was convenient to represent an area's capacity by the planing mill and we excluded smaller satellite mills supplying it. We defined capacity as the production limit based on a mill's normal shift schedule as opposed to a fixed number of shifts. The reason for this is the absence of a standard pattern of operation in sawmilling. Most mills run two shifts daily, but some run three and many only one. Shifts also range from 8 hours a day to 9 or 10 hours and can vary as a result of market conditions. Thus, physical output limits can differ from our numbers for a given mill.

As so defined, U.S. and Canadian sawmill capacity grew from 148.9 million m³ (63.1 × 10⁹ board feet) in 1995 to 190.2 million m³ (80.6 × 10⁹ board feet) in 2007 (Table 2).

Table 1—Capacity and production of United States and Canadian softwood lumber sawmills from 2001 to 2007

Year	Mills (No.)	Capacity (× 10 ⁶ m ³)	Production (× 10 ⁶ m ³)	Capacity utilization (%)
2002	1,153	173.9	162.2	93
2003	1,137	179.3	162.4	91
2004	1,098	186.1	174.5	94
2005	1,068	190.3	176.7	93
2006	1,018	191.5	170.7	89
2007	990	190.2	—	—

Table 2—North American softwood sawmill capacity estimates, 1005 to 2007^a

Year	Capacity estimates (× 10 ⁶ m ³)		
	United States	Canada	Total
1995	83	66	149
1996	84	67	152
1997	87	69	156
1998	90	71	161
1999	92	76	167
2000	94	78	172
2001	92	80	172
2002	92	81	174
2003	96	83	179
2004	100	86	186
2005	103	88	190
2006	103	88	192
2007	103	87	190
Annual increase (%)	1.9	2.3	2.1

^a United States and Canadian numbers may not add to total because of rounding.

If capacity growth is viewed as one measure of an industry's condition, then the state of the lumber business could be described as moderately vigorous. Its overall growth over the past 12 years averaged 2.1% per year. Canada's rate exceeded that by 0.2% while the United States lagged by the same amount.

Table 3—Softwood sawmill capacity, 1995 to 2007

Region ^a	Sawmill capacity						
	1995	1997	1999	2001	2003	2005	2007
	Volume ($\times 10^6$ m ³)						
U.S. South	37.2	40.3	42.7	43.9	45.2	48.2	49.0
U.S. North	4.3	4.7	5.2	4.7	4.6	4.5	4.8
U.S. West	41.1	42.0	43.7	43.6	46.4	49.7	49.5
BC ^a	35.6	35.1	35.9	36.7	39.2	43.2	44.6
Other Canada	30.6	34.0	39.9	43.0	43.9	44.5	42.2
Total	148.9	156.2	167.4	171.8	179.4	190.3	190.2
Region ^a	Index						
	1995	1997	1999	2001	2003	2005	2007
	Index						
U.S. South	1.00	1.08	1.15	1.18	1.21	1.30	1.32
U.S. North	1.00	1.09	1.21	1.08	1.07	1.05	1.12
U.S. West	1.00	1.02	1.06	1.06	1.13	1.21	1.21
BC ^a	1.00	0.99	1.01	1.03	1.10	1.22	1.25
Other Canada	1.00	1.11	1.31	1.41	1.44	1.46	1.38
Total	1.00	1.05	1.12	1.15	1.20	1.28	1.28

^aBC, British Columbia, Canada.

Regionally, the Canadian provinces east of the Rocky Mountains grew the fastest; their growth was made possible by sawmilling advances that enabled the economic conversion of the region's abundant, small-diameter resource into lumber (Table 3). However, this trend reached its apogee in 2005 and has since reversed because of reductions in allowable cuts and a generally negative economic climate. Following the eastern Canadian provinces was the U.S. South with a 32% expansion. British Columbia was third, but it grew especially fast during the last 6 years, its growth fueled by the spreading mountain pine beetle (*Dendroctonus ponderosae*) calamity that vastly increased short-run fiber availability. A similar surge lifted capacity in the U.S. West on the back of major expansions along the Coast while growth in the U.S. North, primarily a hardwood rich region, has been the least.

Since the 2005 report, 78 mills have closed, a number that is likely to grow as the year unfolds because of difficult prevailing economic conditions. Underscoring the challenging operating environment, 40 of these have been in Canada, mostly in provinces east of the Rockies or along the coastal Vancouver region in British Columbia. For the United States, the biggest growth occurred in the state of Washington, where despite a net loss of five plants, three large new coastal mills lifted capacity.

There have been major mergers and consolidations in the last two years resulting in a more concentrated but relatively still diffuse industry. This has rearranged the hierarchy in terms of overall size measured by production capacity. The top entity now appears to be West Fraser, which acquired 13 mills in the U.S. South (Table 4). With the sale of several plants in Canada and the closure of mills in Washington and

Table 4—Softwood sawmill capacity by firm, June 2007 (million board feet)

Firm	Country activity	Capacity	Mills	Market share (%)
West Fraser	Can/US	6,013	29	7.5
Weyerhaeuser	Can/US	5,790	28	7.2
CanFor	Can/US	5,215	19	6.5
AbitibiBowater	Can/US	3,131	26	3.9
Georgia Pacific	US	2,680	27	3.3
Tolko	Canada	2,573	10	3.2
Sierra Pacific Industries	US	1,972	13	2.4
Hampton Affiliates	Can/US	1,912	7	2.4
Tembec	Canada	1,493	10	1.9
Domtar	Canada	1,416	11	1.8
InterFor	Can/US	1,399	9	1.7
Simpson Timber Company	US	1,381	6	1.7
Western Forest Products	Canada	1,235	9	1.5
Buchanan Lumber	Can/US	1,107	8	1.4
Stimson Lumber Company	US	1,104	8	1.4
Potlatch Corp	US	1,090	6	1.4
J.D. Irving	Can/US	1,047	11	1.3
Temple-Inland	US	1,008	6	1.3
RSG Forest Products	US	995	5	1.2
Pope and Talbot	Can/US	915	4	1.1
Top 20		43,476	252	53.9
Others		37,132	738	46.1
Top 20 share		53.9%	25%	

Oregon, Weyerhaeuser dropped to second. Canfor, having expanded mills at Plateau and Houston in British Columbia and acquired three mills in the U.S. South, rated third. The merger of Abitibi Consolidated and Bowater raised them into fourth place. Likewise, the acquisition of some International Paper mills by Georgia Pacific boosted their capacity, rating them fifth. Between them, the top 20 entities account for 252 mills and 54% of the industry capacity. No firm, however, has more than an 8% share.

Capacity is most useful as a guide to a sector's economic condition when contrasted against production. Softwood lumber that enters market channels normally carries a grading agency's stamp certifying that it meets industry product standards. The responsible grading agency then bills plants according to the volumes shipped. These data on shipments, along with estimates of production orders and stocks, are compiled and reported in the U.S. by trade associations (WWPA 2006, SFPA 2006). A government bureau separately conducts annual censuses of the industry and reports

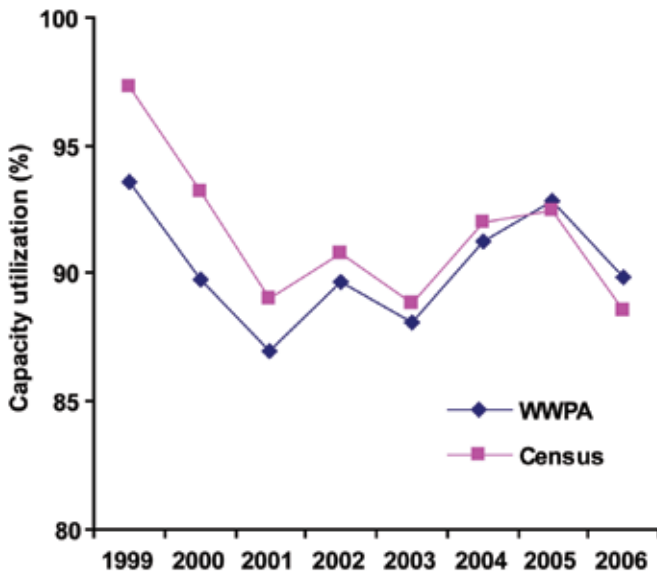


Figure 1—Capacity utilization estimates comparing U.S. Census Bureau data with Western Wood Products Association (WWPA) production estimates, U.S. South.

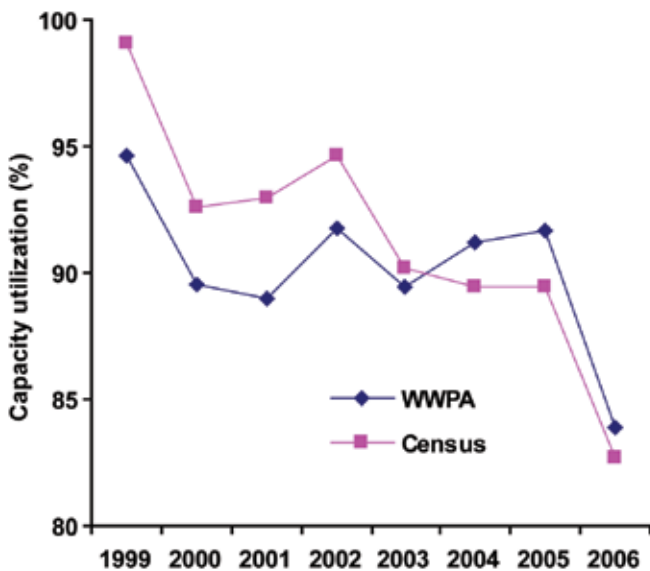


Figure 2—Capacity utilization estimates comparing U.S. Census Bureau data with Western Wood Products Association (WWPA) production estimates, U.S. West.

figures on production and stocks (U.S. Census Bureau 2006). In Canada, data gathering falls primarily to a government statistical agency (Statistics Canada 2006). Table 5 shows these various production estimates.

For most of the years the figures from the Census, which theoretically covers all U.S. sawmills, showed higher volumes than the trade associations. Over time, though, the differences have narrowed, and in the last two years they have fallen below trade association estimates.

Figures 1 and 2 display U.S. production/capacity ratios obtained from our capacities and the two sources of

production estimates. Both the trade association and Census tallies fall within the bounds of our capacity estimates. In both charts, the recent tendency of Census data to lag association data is evident. The largest divergence occurs in the West. A possible reason for this is the startup of several large new sawmills that may have been missed in the initial Census canvas. Data for 2006 shows a significant drop in capacity utilization, indicating the oversupply recently affecting the lumber market.

Byproducts

Of the fiber that sawmills process, only a portion ends up as lumber. With the growing emphasis on energy and finding petroleum alternatives, the attention of policy makers in much of the developed world has shifted to, among other things, woody biomass of which sawmill residues are prominent. Subsidized programs for alternative renewable energy sources may possibly co-opt traditional uses of this fiber in the future.

Bark is the first major residue stream in the process, followed by slabs and sawdust as logs are sawed. Slabs are pieces from the log periphery that are too narrow to yield standard-sized lumber and sawdust is micro-sized chips generated by saw teeth.

Additional chippable residues are created by edgers and trimmers where planks are sized to standard widths and lengths. Then planers that smooth and size finished lumber produce shavings (fine flake-like pieces of wood). Finally, defects developed on lumber ends during drying end up as planer trim.

In this study, we focused only on the amounts of chips (slabs, edgings, planer trim) and fines (sawdust and shavings). These contribute significantly to sawmill economics and account for a substantial share of the fiber input, as shown by a 1967 study of Oregon mills (Table 6) (Manock and others 1968).

If we exclude bark, the proportion of wood that converts to lumber was just 45%, according to the Oregon findings. Over time, this has been subject to change. New technical advances that increase lumber yield include thinner saws that produce less sawdust; sawing with the curve of the log, thereby reducing slab volume; and computer-optimized saws, edgers, and trimmers that make better breakdown decisions. Decreases in log size, on the other hand, produce more chips because slabs form a greater fraction of smaller logs.

In contrast to the Oregon results, a recent analysis of sawmills in interior British Columbia showed 48% of the wood volume emerging as lumber (British Columbia Ministry of Forests 2005). Considering that logs in interior British Columbia are smaller than was the norm in 1967 Oregon, when much of the timber was still old growth, this figure indicates the improvements in lumber recovery that resulted from

Table 5—North American softwood sawmill production estimates by different sources

Year	Production estimates ($\times 10^6$ m ³)			
	Statistics Canada	U.S. WWPA ^a	U.S. Census Bureau	Difference between U.S. estimates (%)
1995	61.6	75.0	78.0	4.0
1996	63.9	77.5	80.4	3.7
1997	65.0	81.8	83.7	2.3
1998	63.8	81.8	84.7	3.5
1999	72.9	86.4	89.8	3.9
2000	75.2	84.9	87.7	3.3
2001	72.0	81.3	83.7	3.0
2002	78.0	84.1	85.8	2.1
2003	76.0	85.9	86.6	0.8
2004	82.8	91.7	91.0	–0.8
2005	81.2	95.5	93.9	–1.7
2006	79.2	91.4	89.1	–2.5

^a Western Wood Products Association.

Table 6—Quantities of residues developed from 1,000 board feet (nominal) of sawn lumber, Oregon, 1967^a

Region	Quantity (ODMT ^b (%))						
	Green chips	Dry chips	Sawdust	Shavings	Bark	Lumber	Total
	Dry weight (ODMT (%))						
Coastal	0.49 (24)	0.04 (2)	0.27 (13)	0.20 (10)	0.26 (13)	0.80 (39)	2.05
Interior	0.44 (24)	0.03 (2)	0.24 (13)	0.17 (10)	0.21 (12)	0.71 (39)	1.80

^a Manock and others 1968.

^b Oven-dried metric tons.

better technology. This is underscored by the decreased share of sawdust and shavings, which in the British Columbia interior was 14% compared with 26% in the 1967 Oregon mills. Chip output by contrast was 38% in British Columbia compared with 29% in Oregon, reflecting the impact of smaller logs.

Sawmill chip residues in the United States supply about a quarter of the pulpwood used by pulp mills, and in the West the proportion is much higher at 78% (FRA 2006). Accordingly, the economics of the two sectors are intertwined. Among integrated firms especially, the more capital-intensive pulp sector can often dictate the pace of sawmill activity.

Shavings and sawdust are also vital industrial inputs. The particleboard, medium-density fiberboard and hardboard industries rely for most of their fiber on this resource. Some alternative outlets for these byproducts include animal bedding, mulch, and wood pellets. When other options

Table 7—Average quantity of residues developed from 1,000 board feet (nominal) of sawn lumber, 2006 (this report) compared with Oregon (1967) and British Columbia (2004)

Year, region, and mill type	Chips (ODMT ^a)	Sawdust and Shavings (ODMT)
2006		
U.S. South	0.60	0.20
U.S. North	0.56	0.24
U.S. West	0.42	0.24
British Columbia	0.55	0.23
Canada EOR ^b	0.75	0.27
Dimension	0.53	0.21
Studs	0.71	0.25
Board	0.53	0.28
Timbers	0.46	0.29
All	0.56	0.23
1967 Oregon	0.53	0.47
2004		
BC Interior	0.53	0.19
BC Coast	0.66	0.42
BC	0.55	0.23

^a Oven-dried metric tons.

^b East of the Rockies.

are closed, these, along with bark, can be burned to generate process heat or electricity. Only in a few remote areas, mostly in Canada, are these products landfilled or burned for no recoverable energy (AGB Technologies 2001).

We quantified the extent of this facet of sawmilling by asking respondents for information on the amounts of chips, sawdust, and planer shavings that they generated. Based on returns from 324 mills, accounting for 76 million m³ of capacity and 68 million m³ of production, we obtained the results contained in Table 7.

These findings underscore the tendency of smaller logs to generate more residues than larger logs. In eastern Canada, where the log supply consists of the smallest-sized commercially used saw logs in North America, mills produce the most chips, sawdust, and shavings per thousand board feet of lumber. Similarly, stud mills, which generally use logs from the smaller end of the size spectrum, exhibit high chip volumes.

Overall, our data show 0.56 oven-dried metric tons of chips and 0.23 of shavings and sawdust per thousand board feet of lumber in North American sawmills. These findings present

Table 8—Disposition of chips, sawdust, and shavings, 2006

Region	Disposition of chips, sawdust, and shavings (%)					Unaccounted for
	Pulp/board	Fuel	Burned	Bedding	Pellets	
Chips						
U.S. South	96	1	0	—	—	2
U.S. North	90	8	1	—	—	—
U.S. West	92	6	2	—	—	—
BC ^a	94	6	0	—	—	—
Canada EOR ^b	99	0	1	—	—	—
All	95	3	1	—	—	1
Sawdust and Shavings						
U.S. South	59	23	—	12	2	3
U.S. North	24	44	—	30	2	—
U.S. West	71	20	—	5	4	1
BC ^a	48	37	—	4	7	4
Canada EOR	55	23	—	4	5	14
All	59	25	—	7	4	5

^a BC, British Columbia.

^b East of the Rockies.

an interesting contrast with the 1967 Oregon results where the chip proportion was smaller, but the sawdust and shavings proportion was higher. The first reflects the larger sized timber, the second the less advanced state of technology 30 years ago.

As a partial check on our results, we show estimates for British Columbia from the recent report on residue generation there (British Columbia Ministry of Forests 2005). For the province overall, the two results coincide. In the more disaggregated British Columbia study, the coastal region showed considerably higher chip, sawdust, and shavings volumes than the interior. This reflects a number of differences on coastal British Columbia including larger logs, less modern technology, and a higher fraction of thinner boards in the product mix.

In terms of end use, almost all the chips generated by sawmills are used for pulp production (Table 8). Only a small fraction is burned for process heat. Of the sawdust and shavings, 59% is used as furnish for board manufacturing. Fuel for process heat or electricity cogeneration is next at 25%. Bedding provides a lucrative market for mills located near areas where horses and other large animals are kept. Pine shavings are particularly desired for their good absorbent properties. Pellet manufacturing takes about 4% with British Columbia mills leading the way in this developing market made possible by demand for such fuels in Europe.

If we apply these factors to 2006 North American softwood lumber production of 72 billion board feet, we get

40 million dry metric tons as an estimate of 2006 chip volume, 95% of which was sold to pulp mills. At approximately U.S. \$55/dry metric ton, this yields U.S. \$2.1 billion dollars of revenue, or U.S. \$29 per thousand board feet of lumber. Similarly, the volume of shavings and sawdust amounts to 17 million metric tons, 70% of which is used for board, bedding, or pellets according to our findings. At U.S. \$25/dry metric ton, this yields U.S. \$0.3 billion, or U.S. \$4 per thousand board feet. Between them, these residue streams contribute about U.S. \$33 per thousand board feet to sawmill economics in addition to providing a substantial share of the fiber that supports the pulp and board industry infrastructure.

One further metric of note concerning residues is the ratio of sawmill chip receipts recorded by pulp mills to lumber production. United States sawmill chip receipts are tallied by the Forest Resources Association (FRA 2006), and lumber production is available from the sources described earlier. Figure 3 displays the trend for the U.S. West from 1995 onward and compares these with our findings. The end point of the Forest Resource data comes close to our estimate, but the striking feature of the FRA data is the pronounced 24% decline over the time span. This partly reflects the 25% regional shrinkage of the plywood industry, which is also a chip supplier but is not included in the denominator. However, softwood chip exports have also declined by a third during the period, offsetting about three quarters of the loss from plywood. Thus, the greater part of the decline must be attributed to higher saw mill yields.

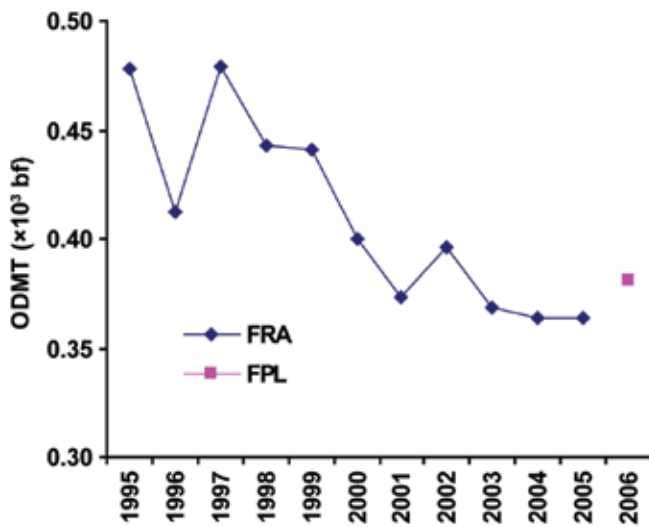


Figure 3—Pulp mill receipts of oven-dried metric tons (ODMT) of saw mill chips per thousand board feet (bf) of lumber produced – U.S. West (Forest Resource Association (FRA) and current study (FPL).

Employment

With the decreasing number of sawmills, employment has also fallen from 115,000 in 1995 to our current tally of 93,000 in 2006. This 19% drop in direct employment does not include those who are engaged in sawmill-related activities such as silviculture, logging, trucking, and corporate governance. Estimated Canadian employment declined from over 48,900 in 1995 to 40,600, a 17% drop not including current temporary layoffs. Estimated U.S. employment in the same period declined from 66,300 to 52,600, a 21% decrease.

Softwood Lumber Uses

New building construction and the repair and remodeling of existing buildings are the main markets for softwood lumber, by which we mean dimension lumber and boards and the lumber equivalent of wood trusses. A separate category is engineered lumber, which includes glued-laminated timbers, wood I-joists, laminated veneer lumber, and similar composite structural lumber products.

Three comprehensive studies conducted in 2003 enumerated the types and amounts of wood products used to build new residential structures, to repair and remodel existing residential structures, and to build, alter, and renovate low-rise nonresidential buildings (Wood Products Council 2005a, Wood Products Council 2005b, McKeever and others 2006). Although these studies are now a few years old, they provide the most current insights into likely softwood lumber use practices and provide a means by which to evaluate potential areas in which the use of softwood lumber might be increased.

Overall, an estimated 134 million m³ (56.8×10^9 board feet) of softwood lumber was consumed in the United States in

2003 for all uses (Howard 2007) (Table 9). Based on the studies mentioned above, more than one-third of this (38%) was for the construction of new single family houses and multifamily apartments. Total residential construction, which includes new construction and repair and remodeling of existing structures (but excludes manufactured housing), accounted for 65% of all softwood lumber consumption. Low-rise nonresidential buildings accounted for just 2% of consumption. The remaining 33% was used for nonresidential high-rise and nonbuilding construction, manufacturing and industrial uses, packaging and shipping, and other miscellaneous uses.

Engineered lumber is principally used for new construction, primarily new single family and multifamily residential construction where nearly three-fourths (74%) were used. Residential repair and remodeling and new nonresidential construction each used 5% of consumption.

New Residential Construction

In 2003, an estimated 51 million m³ (21.7×10^9 board feet) of softwood lumber was used to build new single-family and multifamily houses (Table 9, Appendix A Tables A1 and A2). Additionally, 6 million m³ (2.6×10^9 board feet) of engineered lumber was consumed. In previous decades, softwood lumber was steadily displaced in most floor, roof, and wall sheathing applications by structural and nonstructural panels and non-wood building products. Now engineered lumber is the latest competitor for larger dimension softwood lumber and timbers used to frame floors and span large openings.

One way to assess inroads by engineered lumber is to examine framing incidence of major construction applications. In order to be considered a softwood lumber framed system, the principal framing material must be softwood lumber, although other construction materials may be present in lesser amounts. For example, the incidence of engineered lumber floor framing systems in new single family construction increased from 15% of all floor systems in 1995 to 29% in 2003 (Appendix A, Table A1). Softwood lumber framed floors systems fell from 47% to 32% during the same period. In contrast, wall and roof framing has remained largely softwood lumber. About 91% of all wall systems and 98% of all roof systems were primarily softwood lumber and have been so since 1995.

Another approach is to examine the share of each in specific construction applications. In 1995, wood floor systems in new multifamily buildings contained 69% softwood lumber and 31% engineered lumber (Appendix A, Table A2). By 2003, softwood lumber accounted for just 51% and engineered lumber 49%. Wall and roof framing also showed increasing, but relatively small, use of engineered lumber.

Use factors—the amount of wood used per unit of construction activity—also demonstrate the changes occurring in

Table 9—Softwood lumber and engineered lumber consumption and market share in the United States, 2003^a

End use	Softwood lumber		Engineered lumber	
	Amount ($\times 10^3$ m ³)	Market share (%)	Amount ($\times 10^3$ m ³)	Market share (%)
Residential construction ^b				
New single family	47,177	35	5,264	64
New multifamily	3,952	3	828	10
Total, new residential	51,129	38	6,092	74
Repair and remodel	36,432	27	377	5
Total, residential	87,561	65	6,469	78
Nonresidential construction ^c	2,612	2	388	5
Total buildings	90,172	67	6,857	83
Total all other ^d	43,876	33	1,403	17
Total	134,048	100	8,260	100

^a Adair 2004; Howard 2007; McKeever and others 2006; Wood Products Council 2005a; Wood Products Council 2005b.

^b Excludes manufactured housing.

^c Low-rise structures of four or fewer stories only.

^d Includes nonresidential high-rise and nonbuilding construction, manufacturing and industrial uses, packaging and shipping, and miscellaneous uses.

new residential construction. In 2003, on average, 145 m³ of softwood lumber, and 16 m³ of engineered lumber were used per m² (5.72 bf and 0.64 bf per ft², respectively) of finished floor area in new single family houses (Appendix A, Table A1). These differ considerably from 1995 when the usage was 162 m³ softwood lumber compared with 11 m³ of engineered lumber per m² (6.39 bf compared to 0.42 bf per ft²) of finished floor area, representing an increase of more than 50% for engineered lumber during the 8-year period.

Engineered lumber has made steady inroads into traditional softwood lumber uses in new residential construction. But this is not to say that softwood lumber is necessarily at a disadvantage nor that it can't retain or increase its presence. Employing these market surveys, we can evaluate softwood lumber potential under hypothetical "what-if" scenarios that target desired market shares for each application. No single wood or nonwood product is likely to ever capture 100% of an application, and there are areas where it is conceivable that softwood lumber consumption could increase. Pressure-treated wood foundations, wood floor systems to replace poured concrete, and exterior siding all hold potential for increasing the use of softwood lumber.

Pressure-Treated Wood Foundations

Currently less than one-half of 1% of all single family house foundations are made with pressure-treated wood. These use about 28 thousand m³ (12 million bf) out of the total 843 thousand m³ (357 million bf) of lumber foundations. Increasing this share to 20% would boost softwood lumber consumption by 1.5 million m³ (982 million bf) in all foundations, nearly a 3-fold increase.

Wood Floor Systems

The Hurricane Katrina disaster revealed that considerable losses could have been prevented had houses in flood prone areas employed wood floor systems on raised piers, instead of being set on a concrete slab at grade level. Displacing concrete slabs on grade systems used throughout much of the southern Sunbelt would result in a gain of about 3.2 million m³ (1.3×10^9 bf) of softwood lumber, thus increasing floor market shares from about one-third to one-half.

Exterior Lumber Siding

Only about 5% of the exterior siding market is lumber. A 20% target share would result in an increase of about 2.3 million m³ (1×10^9 bf).

Based on these target market shares, softwood lumber use would increase from 47.2 million to 52.3 million m³ (20.0 to 22.2×10^9 bf) for new single family residential construction, and from 4.0 million to 5.0 million m³ (1.7 to 2.1×10^9 bf) for new multifamily residential construction. To achieve these potentials, builders would have to be convinced that softwood lumber would perform as well or better than current alternatives and would do so with a cost or other advantage. Likewise, consumers must be convinced that softwood lumber offers a cost, aesthetic, durability, environmental, or another advantage. New single family construction accounts for about 90% of total new residential potential. Achievement of such targets would likely require concerted promotional and research efforts, determining, for example, the impact on sale value of using wood versus alternative building products.

Residential Repair and Remodeling

Amounts of softwood lumber consumed annually for the repair and remodeling of residential structures is second only to new single family residential construction. In 2003, 36.4 million m³ (15.4×10^9 bf) of softwood lumber and 0.4 million m³ (0.2×10^9 bf) of engineered lumber was consumed (Table 9, Appendix A, Table A3). The large difference between softwood lumber and engineered lumber in residential repair and remodeling compared with new single family construction is due to several factors. One is that typically homeowners prefer more traditional wood products with which they are familiar, and it tends to be somewhat easier to use the types of wood products that are already present in existing structures. Also, with the exception of room additions, many repair and remodeling projects are not amenable to the use of engineered lumber. As with new residential construction, however, the repair and remodeling market too holds potential to increase the use of softwood lumber.

Residential repair and remodeling projects that include room additions tend to be contractor built, resulting in more modern construction materials and methods. Alterations, maintenance, and repairs make up varying proportions of the repair and remodeling market. For this reason, there is a large “Other” application category which has no associated framing incidence. This other category contains about half of all the softwood lumber used, but less than one-half of 1% for engineered lumber, which indicates that engineered lumber is primarily used for additions and major alterations. Not surprisingly, framing incidences for repair and remodeling closely follow new single family construction framing incidences. In 2003, 92% of all walls and roofs were principally built from softwood lumber, whereas just 37% of all floors were softwood lumber framed (Appendix A, Table A3). Wall and roof framing incidences remained fairly constant between 1997 and 2003, but floor framing incidence fell from 55% to 37%. Some of the change in floor framing is due to a 5% increase in engineered lumber floor system use.

Residential repair and remodeling activity is measured in dollars of expenditure. Wood use per thousand (constant 2000 \$) dollars of expenditure showed no real patterns between 1997 and 2003. Because residential repair and remodeling consists of a variety of construction, changes in the mix of project types will greatly affect use factors.

The potential for increases in softwood lumber use would be smaller than gains in new residential construction. An additional 1.7 million m³ (723 million bf) of softwood lumber could be used if targeted market share increases similar to those in one-family structures were achieved. Exterior siding is by far the application with the greatest softwood lumber use potential. About 95% of the softwood lumber incremental use is attributed to exterior siding (Table 10). Currently just 0.2% of all room addition foundations are wood. Floors are the next largest area of potential gain. As

with new residential construction, achieving these increases would largely depend on builders and consumers accepting wood foundations, reducing the use of concrete slab floor systems, and returning, in part, to lumber exterior siding.

Nonresidential Buildings

Nonresidential construction is an important component of the United States’ construction market and a major market for wood products. In 2003, the construction value of all nonresidential buildings \$283 \times 10⁹ dollars. Low-rise buildings of four or fewer stories had construction valued at \$269 \times 10⁹ dollars in 2003 (McKeever and others 2006).

Nonresidential buildings are diverse and subject to varying building and fire code limitations. This analysis is limited to low-rise nonresidential buildings where code-based restrictions on using wood-framed construction codes are less limiting.

The choice of materials and methods used in nonresidential buildings is dependent on many factors including building type, location, size, state and local building codes. Because the use of wood is less extensive than in residential, the nonresidential building market has been traditionally viewed as holding the greatest potential for expanding the use of wood in general, and softwood lumber in particular. In 2003, concrete and metal construction continued to dominate the nonresidential building construction market, accounting for nearly 80% of total construction. In recent years, however, wood-framed construction (defined as buildings with predominately wood-framed exterior walls, regardless of materials used in other applications) has made modest gains, as the costs of steel and concrete have risen, so it is conceivable that additional gains are possible.

Unlike new residential construction, where nearly all applications are wood framed and market potential is often based on the substitution of one wood product for another, the greatest potential for increasing wood market share in new nonresidential construction is to increase the share of wood at the expense of concrete and steel-framed buildings.

We define market potential for nonresidential construction as the incremental amount of wood that could be used if some amount of concrete and steel-framed buildings were built like wood-framed buildings, exhibiting the same usage rate (volume of wood used per unit of finished floor area) as structures currently built with wood. For example, in 2003, small (less than 4,645 m² (50,000 ft²) of finished floor area), wood-framed office buildings averaged about 56 m³ of softwood lumber per 1,000 m² (2,200 bf of softwood lumber per 1,000 ft²) of finished floor area (McKeever and others 2006). In comparison, small concrete framed office buildings averaged 20 m³ (768 bf) whereas small steel-framed office buildings averaged 6 m³ per 1,000 m² (235 bf per 1,000 ft²) of floor area. Thus, the total softwood lumber potential would then be the total finished floor area

Table 10—Current and targeted potential for softwood lumber use, 2003

Application	New single family				New multifamily construction			
	Market share		Wood use		Market share		Wood use	
	Current (%)	Target (%)	Current ($\times 10^3$ m ³)	Target ($\times 10^3$ m ³)	Current (%)	Target (%)	Current ($\times 10^3$ m ³)	Target ($\times 10^3$ m ³)
Foundations	0.4	20	843.0	2,316.7	0.0	20	27.1	572.6
Floors	32.0	50	5,031.0	7,863.0	34.6	50	760.3	1,098.9
Walls	91.0	95	17,148.9	17,902.7	89.0	95	1,849.2	1,973.9
Roofs	97.5	98	16,504.4	16,589.0	92.0	98	789.9	841.5
Millwork	—	—	4,452.3	4,452.3	—	—	408.0	408.0
Exterior siding	5.0	20	736.2	2,935.4	1.6	20	11.8	144.5
Other	—	—	3,197.2	3,197.2	—	—	117.3	117.3
Total	—	—	47,176.7	52,320.8	—	—	3,951.9	5,012.2

Application	Residential repair & remodeling				New low-rise nonresidential			
	Market share		Wood use		Market share		Wood use	
	Current (%)	Target (%)	Current ($\times 10^3$ m ³)	Target ($\times 10^3$ m ³)	Current (%)	Target (%)	Current ($\times 10^3$ m ³)	Target ($\times 10^3$ m ³)
Foundations	0.2	20	323.3	1,062.5	—	—	—	—
Floors	36.8	50	1,880.2	2,555.7	—	—	135.5	417.8
Walls	92.0	95	4,094.2	4,228.2	—	—	1,055.1	6,533.2
Roofs	92.0	95%	5,306.7	5,479.2	—	—	1,415.9	6,525.5
Millwork	—	—	6,514.6	6,514.6	—	—	5.4	62.8
Exterior siding	11.2	20	2,125.3	3,802.5	—	—	5.4	62.8
Other	—	—	18,312.8	18,312.8	—	—	—	—
Total	—	—	36,431.9	38,153.1	21%	100%	2,611.8	13,539.3

in concrete and steel buildings divided by 1,000 and then multiplied by 56 m³ (2,200 bf) less the amount of wood that would have been used had the buildings actually been concrete and steel framed.

The upper limit to the potential for wood products in new nonresidential buildings is the amount of wood that would be used if concrete and steel upper story floors, exterior and interior walls, roofs, and siding were built principally with wood at current wood usage rates. We view the least likely targets for wood promotion to be the foundation and ground-level nonresidential floor applications.

In 2003, an estimated 2.6 million m³ (1.1×10^9 bf) of softwood lumber was used for nonresidential building construction (Appendix A, Table A4). Engineered lumber use amounted to nearly 0.4 million m³ (0.2×10^9 bf). Roofs accounted for more than half of all softwood lumber used. If all nonwood-framed buildings had been built similarly to wood-framed buildings, an additional 10.9 million m³ (4.6×10^9 bf) of softwood lumber would have been used in 2003 (Table 10). Walls and roofs held the greatest potential for softwood lumber use. Because wood foundations and

ground level floors are excluded, floors held very little potential.

These potentials have to be placed in context of the limitations imposed by building and fires codes and long-standing user preferences. Building codes in the United States place limits on the use of wood framing in nonresidential buildings. A building’s area, height, and intended usage (“occupancy”) determine whether all or part of the building can be wood-framed and sheathed.

The International Building Code is now the dominant model code in the United States. It defines area and height limits for each building by occupancy and by various types of structural assemblies that are enumerated by the code in terms of fire protection. However, area and height limits can be substantially increased through the addition of automatic fire protection sprinklers, the use of firewalls to subdivide large buildings, and through the provision for substantial frontage to the building to enable easy firefighting access. Using the most aggressive assumptions regarding sprinklers, use of fire-rated assemblies, and building frontages in order to capture the maximum code-allowable gain for wood,

almost 64% of total constructed nonresidential value could have been framed in wood in 2003. This results in a potential incremental increase in softwood lumber consumption of nearly 7.6 million m³ (3.2×10^9 bf). This is about 56% of the estimated softwood lumber potential if all concrete and steel-framed buildings had been built similarly to wood-framed buildings.

Total Potential for Softwood Lumber

The construction of new single family houses and multifamily apartment buildings, their repair and remodeling, and new low-rise nonresidential buildings hold potential for increasing the use of softwood lumber. In 2003 about 90 million m³ (38×10^9 bf) of softwood lumber was used (Table 11). According to our scenarios, an additional 19 million m³ (8×10^9 bf) of lumber could have been used if our market share targets for specific buildings and applications had been realized.

Much of this potential is dependent on consumer preference, particularly in the new single-family construction and the residential repair and remodeling markets. Concrete is by far the product of choice for foundations and slabs, and low- and no-maintenance products dominate exterior siding markets.

It is difficult to determine what part of this potential for softwood lumber could actually be achieved. Nonresidential construction is dependent on the environment set by various building and fire codes and building types where wood use would be incompatible with the structure's purpose. However, through promotion, research efforts, and direct involvement of builders, architects, buyers, and others in the design, construction, and use of softwood lumber in residential and nonresidential building construction, it is possible that softwood lumber can gain market share in these applications.

Economic Issues

Three issues affecting the contemporary economic outlook for sawmilling stand out: The decline in housing; the softwood lumber agreement between Canada and the United States; and the widening impact of the mountain pine beetle epidemic in British Columbia.

Housing Recession

Housing activity started to weaken in early 2006. As a consequence, the growth of lumber demand first slowed and by April 2006, began to decline. Estimated U.S. softwood lumber consumption fell by 6% in 2006 and by a further 13% through the first half of 2007.

The context for the current housing decline was the aggressively liberal monetary policies pursued following the 2000 stock market collapse (Ince and others 2007). The multigenerational lows in borrowing costs fueled a rush into real estate that resulted in a run up in home values, outpacing gains in underlying incomes (Fig. 4).

Table 11—Current and targeted potential for softwood lumber use in the United States, 2003

Application	Wood use	
	Current ($\times 10^3$ m ³)	Target ($\times 10^3$ m ³)
Foundations	1,194	3,952
Floors	7,807	11,935
Walls	24,147	30,638
Roofs	24,017	29,435
Millwork	11,380	11,438
Exterior siding	2,879	6,945
Other	21,627	21,627
Total	90,172	109,025

A vehicle facilitating this surge was the proliferation of a bevy of novel mortgage instruments that made monthly mortgage payments affordable even when home prices in relation to incomes reached new highs. A common feature among them was the adjustability of their rates. For an initial period of 2 to 3 years, a borrower could enjoy low starter rates after which the terms would then reset to some benchmark such as the 10-year Treasury note. More often than not, these resets were significantly higher. However, if the reset was too burdensome, borrowers could often opt to refinance into another adjustable rate mortgage with low starter rates so long as short term rates stayed low.

This situation began to change in late 2004 when the Federal Reserve began raising to more normal levels the short term interest rates it controls. By June of 2006, these rates had risen to 5.25% from 1% two years before. As this unfolded, housing activity began to wane and many borrowers found themselves trapped between their escalating variable rate contracts and escalating refinancing terms.

In past cycles when housing activity weakened, lowering short-term rates by the Federal Reserve would facilitate a recovery, as shown in Figure 5 by a composite of five previous housing recovery cycles since 1980. This time, however, when the Fed stopped its rate-raising campaign in mid-2006, it did not follow through with cuts. Long-term rates, to which mortgages rates are tied, initially followed a normal downward path that seemed to pave the way for a housing recovery. However, when the longer term rates rebounded to previous peaks by mid-2007, housing stayed stuck in the doldrums (Fig. 5).

We can track the growth of the adjustable rate mortgage (ARM) sector through the Mortgage Bankers Association's Purchase Index and the share thereof that featured adjustable rates (Fig. 6). Lagging a moving average of this data by 2½ years gives a rough measure of when the reset clauses of such contracts kick in, exposing borrowers to potential payment risk.



Figure 4—Home prices and mortgage payments relative to average per capita U.S. wages.

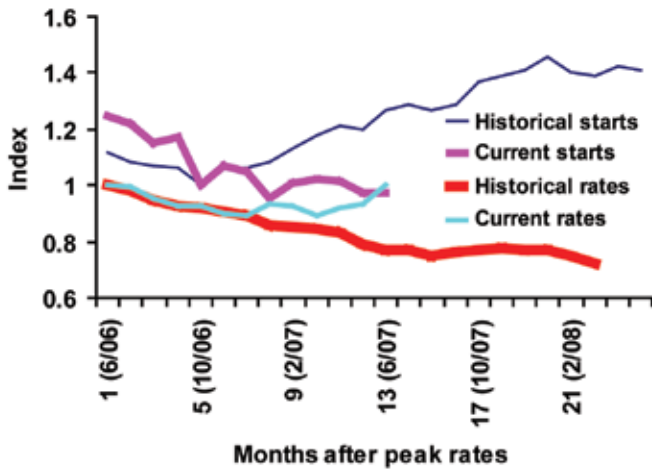


Figure 5—Indexes of one-family starts and interest rates over 5 post-1980 rate cycles compared with current cycle.

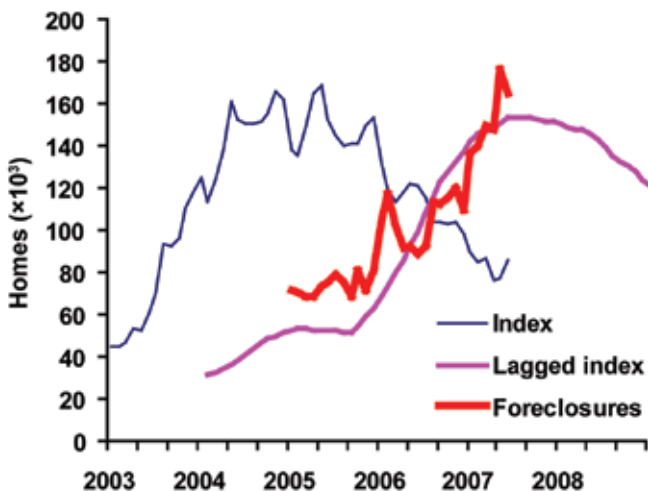


Figure 6—Index (current and lagged 2½ years) of homes purchased with adjustable rate mortgages compared with number of U.S. homes in some stage of foreclosure.

We can see that the zone of maximum vulnerability to this type of disturbance is about the second half of 2007, with the likely prospect that it will stay near this area for at least a year thereafter. Resets often made the cost burden unbearable, and refinancing was increasingly not an option because of higher short-term rates. Selling the home for a price that covered costs also became elusive in a softening market, thus many borrowers became delinquent. This resulted in a rising wave of foreclosures that led lenders to further tighten by raising the qualifying criteria for higher risk borrowers.

Comparing the lagged ARM index with data on foreclosures shows that the measure has reliably foretold the growing turmoil in real estate finance. Looking ahead, we can surmise that this process has at least a year to go before it unwinds to less distressed levels. Barring a major change in Fed policy to aggressively cut interest rates, housing and its associated industries should plan for continued weakness in home building through at least mid 2008.

Softwood Lumber Agreement

One major event in 2006 was the resolution of the softwood lumber trade dispute between the U.S. and Canada. A new compact, the 2006 Softwood Lumber Agreement (SLA), went into force on October 12, 2006. Its intent was to manage product flows from Canada into the United States during times when, like in 2006-07, demand in the United States was slumping.

The SLA is a complex document, but boiled down to its essentials, it revolved around two alternative measures to limit Canadian imports during periods of U.S. market decline. The first is a set of tariffs that increase as lumber prices fall. Figure 7 shows three tariff levels tied to a broad market price index published by the Random Lengths price reporting organization. As prices fall to \$355, an initial tariff of 5% is assessed. A further decline to \$335 raises that to 10%. Finally, a price at or below \$315 causes the highest levy of 15% to be imposed. Additionally, surcharges of 2.5%, 5%, and 7.5% are applied at the three volume levels if a “surge” in exports exceeds a specified share of U.S. consumption by 10%. Above \$355 there are no limits on trade.

The second is an option that allows provinces to choose a lower set of tariffs, ranging from 2.5% to 5%, by adding explicit volume controls. These are quotas based on expected U.S. demand and range from a province’s allotted share of an overall 34% of expected U.S. demand when prices are at or below \$355, 32% at \$335, to 30% at \$315.

Both the quotas and the triggers for surcharges are derived from estimates of prospective U.S. demand, so getting an accurate read on it is vital to the functioning of the scheme. It is here that a sleeper clause in the Agreement was missed during its legal vetting, which threw a wrench into the system when the time came to implement it in January 2007.

According to the wording of the passage in question, the “calculation of Expected U.S. Consumption for the

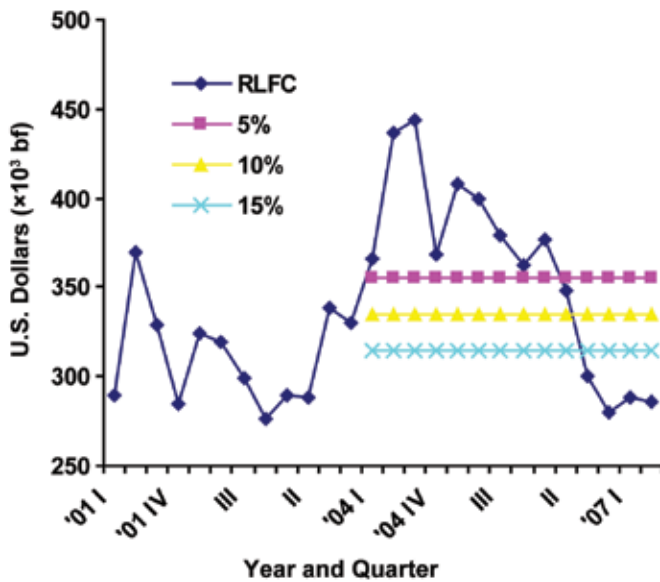


Figure 7—The Random Lengths Framing Lumber Composite (RLFC) is a broad measure of price behavior in the U.S. framing lumber market. The RLFC is shown here in the context of three levels of levies on Canadian imports under the high tariff option of the 2006 Softwood Lumber Agreement.

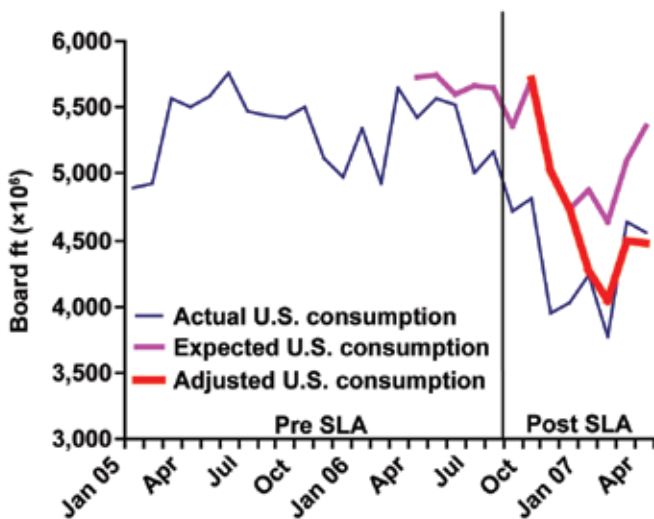


Figure 8—The Random Lengths Framing Lumber Composite in the context of different levels of levies on Canadian imports under Option A of the 2005 Softwood Lumber Agreement.

following Quarter for which quotas are being determined shall be adjusted...” (Annex 7D(#14), emphasis added).

The estimate of expected U.S. consumption is obtained from a 12-month moving average of recent U.S. consumption, adjusted for normal seasonality for the month in question. Because by its nature, a moving average lags a changing trend, an adjustment is added by comparing the most recently available quarter’s actual data with the model’s calculation. If this deviates by more than 5%, then the difference

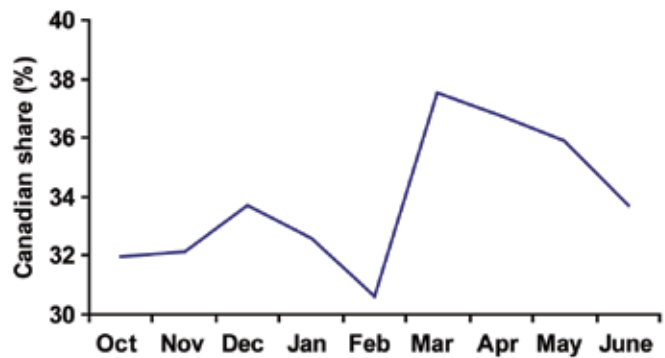


Figure 9—Canadian exports’ share of the U.S. market from start of the Softwood Lumber Agreement (October 12, 2006) through June 2007.

is divided by three and added to or subtracted from each of the next three month’s seasonally adjusted moving average projections.

Since there are no quotas for those selecting the high tariff option, the government authority administering the agreement determined that an “adjustment” to “expected U.S. consumption” was not required for provinces that chose the high-tariff, no quota option. Thus, British Columbia and Alberta were not subjected to this added step. Its omission meant that the set points for surcharges were higher in a down cycle than they would have been had the adjustment been applied (Fig. 8).

This was important to market dynamics in early 2007 because Canadian shares of the U.S market could theoretically exceed the 30% to 34% band without incurring the extra tariffs envisioned during periods of market slack. Export data indeed showed that Canadian market shares climbed to the 36% to 38% range in March through May (Fig. 9). However, as 2007 progressed to its midpoint, the situation was overtaken by events. The Canadian dollar surged from \$0.85 in March to \$0.95 in June, effectively saddling Canadian exports to the U.S. with a 10% surcharge, exceeding the maximum 7.5% that would have been required had the lower calculated surge levels been in place. As seen in Figure 9, the Canadian share fell in June.

It goes without saying that the Canadian interpretation of the SLA has opposite ramifications when a demand rebound sets in. Just as the unadjusted U.S. demand projection lags downturns, so it will lag upturns. At that point it will potentially trigger surcharges at lower levels of exports unless prices recover above U.S. \$355, where tariffs cease.

The American interpretation of the disputed surge trigger clause, by contrast, is that a subsequent clause specifies the calculation of the surge triggers to be made “in accordance with Annex 7D.” According to this view, that implies that the same demand projection adjustment should be made as for the quota choosing provinces. In mid-2007, negotiations were being held to resolve this difference. In the meantime,

Table 12—Capacity utilization rates and change in activity by corporate and noncorporate lumber companies, 2006 to 2007

Region (firms)	Year and quarter (%)						
	2006				2007		Average
	I	II	III	IV	I	II	
Capacity utilization							
EOR (5) ^a	93	97	87	74	73	79	87
BC (5) ^b	101	94	94	86	91	91	93
US (7)	97	99	95	89	87	89	93
T Corp (17)	98	97	93	85	86	87	92
Total North American	95	93	88	80	84	84	87
Noncorporate	93	90	85	77	82	82	85

^a Provinces east of the Rocky Mountains.
^b British Columbia.

by the first half of 2008, the lagging moving average will have caught up with declining demand and the surge triggers are likely to be the same under either method.

While robust Canadian exports contributed to oversupply in 2006 to 2007, the credit for the excesses cannot be attributed exclusively to that. Major U.S. producers also operated at near full capacity through most of 2006, as shown by production data filed in reports by 17 publicly traded corporations. Through the first half of 2006, these firms ran their mills at near full capacity. They lowered them only modestly in the third and fourth quarters to 94% and 86%, respectively, followed by a small rise in the first half of 2007 (Table 12). Consequently independent, non-corporate companies shouldered a bigger share of the necessary cut-backs. Among the publicly traded companies, only those in eastern Canada underperformed the overall industry average operating rates. The collapse of prices in 2006–2007 is mainly attributable to the relatively inelastic supply response by the industry, among whom the larger producers tended to be least elastic. By contrast, the effectiveness of determined supply control measures to stabilize markets was demonstrated in May 2007, when despite weak demand, a critical mass of curtailments temporarily reversed sliding prices.

Mountain Pine Beetle Epidemic

A third issue with long term ramifications is the mountain pine beetle epidemic currently afflicting British Columbia. The outbreak traces its roots to the early 1990s to Tweedsmuir National Park arising from the confluence of two trends: The overall aging of the pine population above historical norms through the suppression of fire, and the warming trend in the region’s winters (British Columbia Ministry of Forests and Range 2003). The first made a greater portion of the stand vulnerable; the second enabled more of the insects to survive. Abatement usually involves cutting a break around the leading edge of an infestation, but by the

time the epidemic spread beyond the park’s boundaries, it was too big for this to be practical.

Out of a province-wide total of 45 million hectares of stocked, productive, non-reserved forestland, 23 millions constitute the “timber harvesting land base,” 15 million of which contain lodgepole pine (*Pinus contorta*) of all ages and stocking densities. Of this, 4.3 million contain stands in which *mature* pine constitutes more than one half of the standing volume, while an additional 2.3 million are stocked 10% to 50% with mature pine (British Columbia Ministry of Forests and Range 2007). The latter two types are most at risk.

Recent aerial surveys indicate that over 9 million hectares showed various levels of “red-attack,” usually the first year after trees have been colonized and killed. This represents a slowing rate of spread (Fig. 10). However, with over 60% of lodgepole pine-containing stands affected, there is not that much remaining. Moreover, the reduction in volume killed is less. By 2006, the mortality was estimated at 582 million m³, a third of the province’s 1.8 billion m³ of lodgepole pine and 8% of the 7.5 billion m³ mature softwoods. The species accounts for about 66% of the hard-hit central interior’s recent 30 million m³ annual allowable cut.

The major effort now is to recover as much value as possible before the dead timber burns or decays. Annual allowable cuts have been “uplifted” in the hard-hit regions by about a third to facilitate greater salvage, and the province’s lumber capacity has expanded by 20% since 2000. However, the sheer annual volume of affected timber is more than can be processed, meaning that a considerable amount is left standing for possible future recovery.

In the process of drying out, within about two years in dry zones and three in wet, the bole of a tree develops a check from the pith to the surface, rendering the log unusable for plywood. This, however, is less serious for lumber. As it

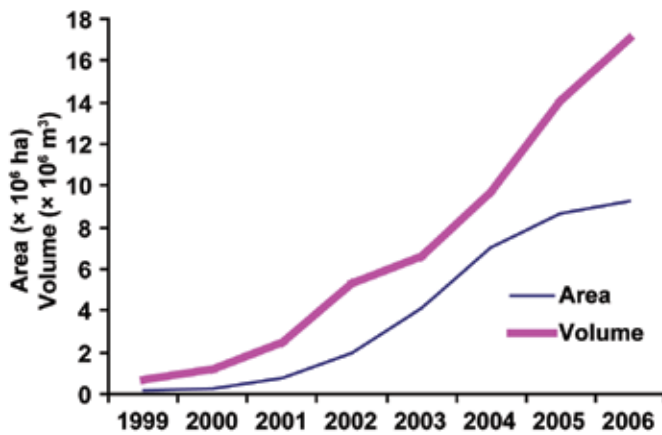


Figure 10—Area of forestland and volume of lodgepole pine (*Pinus contorta*) affected by the mountain pine beetle (*Dendroctonus ponderosae*) in British Columbia.

ages, further checks develop and the Ministry estimates that within 5 to 7 years, the cleavages will reduce the lumber recovery potential by about 50%. Beyond reduced yield, however, the degradation has other process ramifications. First, lower yields also reduce throughput, raising processing costs. Second, wood becomes brittle and breaks more easily. This increases losses and costs both in the woods and in the mill. Third, debarkers have to be set at lighter settings to handle the drier, less weighty wood. This complicates the processing of dead-live log mixes. Finally, the dry hardwood wears saws faster, increasing maintenance costs. Reduced yields and higher processing costs therefore combine to make the “shelf life” of dead wood a function of economics: the higher the product price, the longer one can wait to process the timber, and the longer timber has been left to dry, the lower is its value.

In the extreme, a devastated British Columbia lodgepole pine resource means a loss of about a fifth of the province’s timber supply. British Columbia Ministry of Forests simulations indicate nearly 40% reductions from current “up-lifted” levels in the affected regions within 10 years, but these are based on somewhat hopeful assumptions about “shelf-life” (Eng and others 2006). The falloff is effectively more likely to happen sooner, as experience with killed timber has already led to the closure of one plywood plant while sawmills are reporting increasing problems and lower yields with the growing proportion of dead timber in their log mixes.

If supply from British Columbia falls by 20%, curtailing lumber supply by a like amount, it would be similar to the withdrawal of U.S. federal timber in the 1990s. Prior to the spotted owl, federal timber accounted for about 20% of North American supply. After the withdrawal of some 9 billion board feet, its share fell to 2%. Today British Columbia timber accounts for about 20% of the timber supply. A 20% reduction would mean shrinkage in supply of 4%. This is

not quite the level of the spotted owl shock, but the situation is analogous and could become even more so if the beetle succeeds in breaking out into the eastern Canadian boreal forest. Looking back at the impact of the spotted owl withdrawals, stumpage prices in the South doubled in a decade as the sawmill industry expanded there to make up for the shortage. The U.S. South is likely again to be the main beneficiary as it has the greatest potential to increase supply because of favorable climate and extensive private timberland ownership. The recent acquisition of sawmills in the South by two major British Columbia companies suggests this tendency.

Discussion

The stickiness of interest rates through mid 2007 and the rise in foreclosures are likely to prolong the housing slump over at least the next 12 months. On the other hand, the lumber industry’s capacity is geared up for a more robust housing environment, leading to a mismatch between supply and demand. This will likely cause disruptions to the existing infrastructure that is already evident in rising curtailments, insolvencies, and permanent mill closures.

In contending with this, the industry has three options. First is to hope that an early rebound in housing will rectify the demand shortfall. Based on Figure 6, however, we are likely to have to contend with a difficult home sales environment for at least a year or more, as fallout from the excesses of the previous boom are worked out. Therefore, this option is unlikely to result in near-term relief.

Second, through competitive pricing and assertive marketing the industry could hope to expand its markets in areas such as nonresidential construction. Most studies of the price responsiveness of lumber demand, however, indicate that it is strongly inelastic. Further, as noted above, fire and building codes are barriers to easy substitution. Substantial potential exists in some nonhousing markets, but gains in market share, if any, are likely to come slowly and over an extended period. Thus, these are also unlikely to provide much assistance near term.

A third and often neglected option is the global market. The weakened dollar has created opportunities for U.S. products overseas. However, U.S. producers have not traditionally placed major emphasis on exports. One likely contributing factor is the use of measures and sizes that are out of sync with metric sizes used elsewhere. U.S. producers are often reluctant to modify processes geared for domestic sizes and standards in order to make limited volume export runs where economies of scale are lacking.

It is instructive in this regard, however, to compare the responses of U.S. and German lumber producers to recent poor market conditions in North America (Fig. 11). Whereas German producers quickly steered sales toward better opportunities in the Middle East, Asia, and Europe, cutting

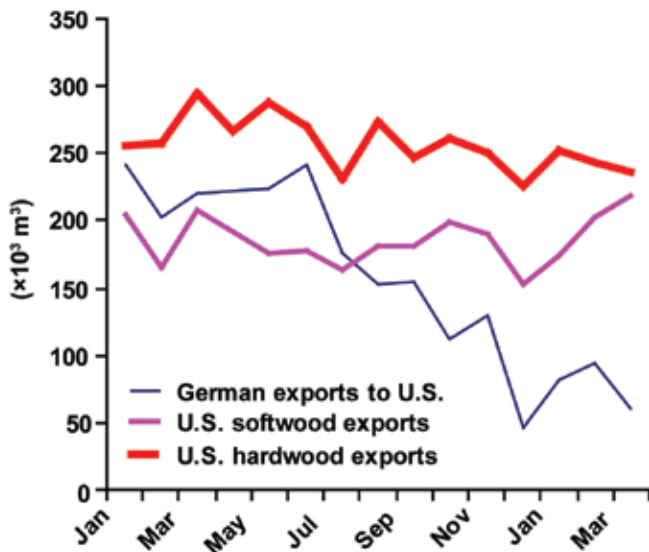


Figure 11—Imports of softwood lumber from Germany compared with exports of U.S. lumber, 2006–2007.

U.S. shipments by three quarters, U.S. exports, either of softwood or hardwood, hardly deviated from flat trend lines. The focus on domestic markets at the expense of opportunities elsewhere indicates a weakness in the U.S. lumber business model that isolates U.S. business from growing global opportunities.

In summary, the North American softwood lumber industry currently faces a mismatch between high capacity and low demand. Difficulty in calibrating supply to reduced demand led to low prices in 2006–2007. Moreover, the demand shortfall is likely to last for at least one more year due to slackened demand and a severe overhang of unsold homes. Either new market outlets are needed or greater supply discipline must be exercised to avoid continued losses and capacity contraction.

The resolution of the softwood lumber dispute with Canada in the form of an agreement that manages Canadian exports in times of depressed U.S. markets has put in place a structure that will help to better align supply and demand in the long run. Current problems arising out of different interpretations of a key clause remain to be resolved, but even in the absence of a resolution, either interpretation of the agreement will give the same result by mid 2008. Furthermore, in addition to the agreement’s effects, two other forces are at work to change the competitive balance. First, the Canadian dollar’s appreciation by 50% over the last 4 years is favoring U.S. competitiveness. Second, over the next decade the mountain pine beetle epidemic will reduce Canadian supply. These developments suggest a change favoring U.S. producers.

An apparent blind spot in the U.S. lumber business model is the inability to take greater advantage of opportunities overseas made possible by changes in the exchange rate. The

primary focus on the domestic market combined with the continuing use of sizes incompatible with norms elsewhere isolates the U.S. industry from global opportunities and gives an advantage to more nimble producers offshore.

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Appendix A—Detailed Softwood Lumber Use Statistics

Table A1—Softwood lumber and engineered lumber use in new single family residential construction in the United States, 1995, 1998, and 2003

Year and application	Lumber use (Single family)									
	Framing incidence		Softwood lumber				Engineered lumber			
	Softwood lumber ^b (%)	Engineered lumber ^b (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)
			Total (× 10 ³ m ³)	Per m ² (m ³)			Total (× 10 ³ m ³)	Per m ² (m ³)		
1995										
Foundations	0.7	0.0	632.3	3.0	2	100	0.0	0.00	0	0
Floors	47.4	15.4	4,635.5	22.1	14	72	1,766.6	8.44	80	28
Walls	90.7	0.4	12,031.1	57.5	35	98	245.5	1.17	11	2
Roofs	97.5	2.1	10,501.0	50.1	31	98	201.5	0.96	9	2
Millwork	—	—	3,945.3	18.8	12	100	0.0	0.00	0	0
Exterior siding	6.3	—	660.9	3.2	—	—	—	—	—	—
Other	—	—	2,263.8	10.8	7	100	0.0	0.00	0	0
Total	—	—	34,008.9	162.4	100	94	2,213.5	10.57	100	6
1998										
Foundations	0.8	0.0	774.1	3.0	2	100	0.0	0.00	0	0
Floors	47.5	22.6	5,923.8	22.9	14	64	3,369.3	13.03	85	36
Walls	91.1	0.5	13,955.8	54.0	34	98	345.8	1.34	9	2
Roofs	97.5	2.2	13,808.9	53.4	33	98	254.0	0.98	6	2
Millwork	—	—	4,370.0	16.9	11	100	0.0	0.00	0	0
Exterior siding	5.7	—	721.0	2.8	—	—	—	—	—	—
Other	—	—	2,684.9	10.4	6	100	0.0	0.00	0	0
Total	—	—	41,517.4	160.6	100	91	3,969.1	15.35	100	9
2003										
Foundations	0.4	0.0	843.0	2.6	2	100	0.0	0.00	0	0
Floors	32.0	29.2	5,031.0	15.5	11	53	4,447.1	13.71	84	47
Walls	91.0	0.6	17,148.9	52.9	36	96	625.0	1.93	12	4
Roofs	97.5	2.4	16,504.4	50.9	35	99	192.2	0.59	4	1
Millwork	—	—	4,452.3	13.7	9	100	0.0	0.00	0	0
Exterior siding	5.0	—	736.2	2.3	—	—	—	—	—	—
Other	—	—	3,197.2	9.9	7	100	0.0	0.00	0	0
Total	—	—	47,176.7	145.4	100	90	5,264.3	16.22	100	10

^aBased on 1,000 bf = 2.36 m³

^bMay include unspecified types and amounts of engineered lumber and/or softwood lumber.

Sources: APA - The Engineered Wood Association 1996, Wood Products Council 1999a, Wood Products Council 2005a.

Table A2—Softwood lumber and engineered lumber use in new multifamily residential construction in the United States, 1995, 1998, and 2003

Year and application	Lumber use (Multifamily residential construction)									
	Framing incidence		Softwood lumber				Engineered lumber			
	Softwood lumber ^b (%)	Engineered lumber ^b (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)
			Total (× 10 ³ m ³)	Per m ² (m ³)			Total (× 10 ³ m ³)	Per m ² (m ³)		
1995										
Foundations	2.1	0.0	31.9	1.1	1	100	0.0	0.0	0	0
Floors	40.3	17.6	447.7	16.1	15	69	204.3	7.3	88	31
Walls	95.4	0.1	1,507.0	54.0	51	99	19.1	0.7	8	1
Roofs	98.6	1.4	517.5	18.6	18	98	8.0	0.3	3	2
Millwork	—	—	450.9	16.2	15	100	0.0	0.0	0	0
Exterior siding	7.9	—	55.2	2.0	—	—	—	—	—	—
Other	—	—	1.0	0.0	0	100	0.0	0.0	0	0
Total	—	—	2,956.0	106.0	100	93	231.4	8.3	100	100
1998										
Foundations	0.1	0.0	32.6	1.0	1	100	0.0	0.0	0	0
Floors	45.0	19.1	684.3	20.0	18	63	402.6	11.8	88	37
Walls	89.3	0.2	1,804.2	52.7	47	99	21.3	0.6	5	1
Roofs	94.0	4.5	809.3	23.6	21	96	33.3	1.0	7	4
Millwork	—	—	528.9	15.4	14	100	0.0	0.0	0	0
Exterior siding	6.6	—	53.0	1.5	—	—	—	—	—	—
Other	—	—	0.7	0.0	—	100	0.0	0.0	—	0
Total	—	—	3,859.8	112.8	100	89	457.2	13.4	100	100
2003										
Foundations	0.0	0.0	27.1	0.7	1	100	0.0	0.0	0	0
Floors	34.6	24.4	760.3	19.7	19	51	726.7	18.8	88	49
Walls	89.0	0.4	1,849.2	47.9	47	98	38.5	1.0	5	2
Roofs	92.0	5.5	789.9	20.5	20	93	62.7	1.6	8	7
Millwork	—	—	408.0	10.6	10	100	0.0	0.0	0	0
Exterior siding	1.6	—	11.8	0.3	—	—	—	—	—	—
Other	—	—	117.3	3.0	—	100	0.0	0.0	—	0
Total	—	—	3,951.9	102.4	100	83	827.8	21.5	100	100

^aBased on 1,000 bf = 2.36 m³^bMay include unspecified types and amounts of engineered lumber and/or softwood lumber.

Sources: APA - The Engineered Wood Association 1996, Wood Products Council 1999a, Wood Products Council 2005a.

Table A3—Softwood lumber and engineered lumber use in new residential repair & remodeling in the United States, 1995, 1998, and 2003

Year and application	Lumber use (Residential repair and remodeling)									
	Framing incidence		Softwood lumber				Engineered lumber			
	Softwood lumber ^b (%)	Engineered lumber ^b (%)	Amount ^a		Appli- cation share (%)	Wood product share (%)	Amount ^a		Appli- cation share (%)	Wood product share (%)
			Total (× 10 ³ m ³)	Per \$1,000 (m ³)			Total (× 10 ³ m ³)	Per \$1,000 (m ³)		
1997										
Foundations	0.4%	0.0%	646.7	4.62	2%	100%	0.0	0.00	0%	0%
Floors	54.7%	15.7%	2,449.1	17.49	8%	86%	400.2	2.86	76%	14%
Walls	92.1%	1.6%	5,483.3	39.17	18%	99%	76.9	0.55	15%	1%
Roofs	92.0%	1.2%	3,357.6	23.98	11%	99%	47.1	0.34	9%	1%
Millwork	—	—	4,870.5	34.79	16%	100%	0.0	0.00	0%	0%
Exterior siding	8.5%	—	1,214.5	8.68	—	—	—	—	—	—
Other	—	—	14,098.1	100.70	46%	100%	1.7	0.01	0%	0%
Total	—	—	30,905.3	220.76	100%	98%	526.0	3.76	100%	2%
2003										
Foundations	0.2%	0.0%	323.3	1.94	1%	—	0.0	0.00	0%	—
Floors	36.8%	20.3%	1,880.2	11.31	5%	85%	340.5	2.05	90%	15%
Walls	92.0%	1.8%	4,094.2	24.63	11%	99%	21.0	0.13	6%	1%
Roofs	92.0%	1.3%	5,306.7	31.92	15%	100%	15.4	0.09	4%	0%
Millwork	—	—	6,514.6	39.19	18%	100%	0.0	0.00	0%	0%
Exterior siding	11.2%	—	2,125.3	12.78	—	—	—	—	—	—
Other	—	—	18,312.8	110.15	50%	100%	0.0	0.00	0%	0%
Total	—	—	36,431.9	219.14	100%	99%	376.9	2.27	100%	1%

^aBased on 1,000 bf = 2.36 m³. Dollars are constant 2000 \$.

^bMay include unspecified types and amounts of engineered lumber and/or softwood lumber.

Sources: Wood Products Council 1999b, Wood Products Council 2005b.

Table A4—Softwood lumber and engineered lumber use in low-rise nonresidential construction in the United States, 1995, 1998, and 2003

Year and application	Lumber use (Nonresidential construction)									
	Construction type		Softwood lumber				Engineered lumber			
	Wood (%)	Nonwood (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)	Amount ^a		Appli-cation share (%)	Wood product share (%)
			Total (× 10 ³ m ³)	Per \$1,000 (m ³)			Total (× 10 ³ m ³)	Per \$1,000 (m ³)		
1995										
Floors	—	—	355.4	2.39	10	89	43.9	0.30	10	11
Walls	10.0	90.0	1,690.2	11.37	49	99	9.0	0.06	2	1
Roofs	—	—	1,400.4	9.42	41	78	390.9	2.63	88	22
Millwork	—	—	—	—	—	—	—	—	—	—
Exterior siding	—	—	9.8	0.07	—	—	0.0	0.00	—	—
Total	—	—	3,455.9	23.24	100	89	443.8	2.99	100	11
2003										
Floors	—	—	135.5	0.91	5	60	91.9	0.62	24	40
Walls	20.8	79.2	1,055.1	7.10	40	96	45.2	0.30	12	4
Roofs	—	—	1,415.9	9.52	54	85	250.7	1.69	65	15
Millwork	—	—	—	—	—	—	—	—	—	—
Exterior siding	—	—	5.4	0.04	—	—	0.0	0.00	—	—
Total	—	—	2,611.8	17.57	100	87	387.8	2.61	100	13

^aBased on 1,000 bf = 2.36 m³. Dollars are constant 2000 \$.

Sources: McKeever and Adair 1998, McKeever et. al. 2006.

Appendix B—Data Gathering Procedures and Sources

Data for this report are recorded continuously as items are found in newspapers, industry trade journals, securities filings, news releases, and company websites.

Such information is augmented by periodic inquiries to mills asking for information on current capacity, production, and various operating variables such as residue generation, product yields, or log sizes.

In March of 2007, the current inquiry was mailed to approximately 1,050 U.S. and Canadian mills thought to be engaged in sawmilling. Of these, about 50 were returned as undeliverable. Follow up by phone determined that most of these had ceased to operate and were closed. In all, we received data from 374 active sites, representing about 43% of the industry capacity and 36% of the mills. For nonresponding mills, previously available data for capacity were used.

The characteristics and extent of residue generation was the current year's feature and we obtained 324 usable responses from a wide spectrum of the industry. This survey is not a controlled sample but relies on broad coverage to get a

representative estimate of general residue generation characteristics. As with any sample, the more the data are disaggregated, the greater is the expected variability. We obtained the factors in Table 7 by aggregating the responses in each class and dividing them by the production of the mills in the class, that is, we weighted each value by the respective volumes of lumber produced.

We used supplementary information from the Forest Resources Association, Inc.'s annual pulpwood statistics data on U.S. residue chip receipts at pulp mills for general validation. Their data, adjusted for residues sourced from plywood mills and residues shipped for export, were divided by the Western Wood Product Association's estimates of lumber production to obtain benchmark region-wide chip residue factors. These were compared with our estimates as laid out in the table below. The differences in the two results for the two regions were less than 10%, which gives us a reasonable degree of confidence in the validity of our estimates at the aggregate regional level.

Item	U.S. South	U.S. West	Units
1. Residue chip receipts	+ 13.8	+ 7.0	10 ⁶ (ODMT ^a)
2. Plywood production	9.7	4.7	10 ⁹ ft ²
3. Plywood residue factor	0.245	0.245	ODMT/10 ³ ft ²
4. Plywood chips (2 × 3)	- 2.4	- 1.1	10 ⁶ ODMT
5. Chip exports		+ 0.9	10 ⁶ ODMT
6. Sawmill chips (1 + 4 + 5)	= 11.4	= 6.8	10 ⁶ ODMT
7. Sawmill output	19.0	19.3	10 ⁹ bf ^b
8. Chips/Lumber (6 ÷ 7)	0.60	0.35	ODMT/10 ³ bf
9. Survey result	0.60	0.42	ODMT/10 ³ bf
10. Used for pulp	0.96	0.92	Fraction
11. Net survey (9 × 10)	0.58	0.38	ODMT/10 ³ bf
12. Difference (11-8)/8	- 3	+ 8	Percentage

^a Oven-dried metric tons.

^b Board feet.

Appendix C—Sawmill Capacity and Timber Inventory by State and Province

The following maps and tables show past and current capacity of sawmills and the availability of timber, by county, in the vicinity of these mills in 30 States. Information on timber density by county in Canada is not available; hence, those maps contain only sawmill sites.

The maps, and their associated tables, are arranged in alphabetical order, as follows:

Alabama

Alberta

Arizona, New Mexico, and Utah

Arkansas

British Columbia, Vancouver

British Columbia, South East

British Columbia, North

California, North

Colorado, South Dakota, and Wyoming

Florida—*see* Georgia

Georgia

Idaho

Louisiana—*see* Arkansas

Maine

Manitoba—*see* Saskatchewan

Maritime Provinces (New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island)

Maryland—*see* Virginia

Michigan—*see* Wisconsin

Minnesota—*see* Wisconsin

Mississippi—*see* Alabama

Montana—*see* Idaho

New Brunswick—*see* Maritime Provinces

Newfoundland—*see* Maritime Provinces

New Hampshire—*see* Vermont

New Mexico—*see* Arizona

New York

North Carolina

Nova Scotia—*see* Maritime Provinces

Oklahoma—*see* Arkansas

Ontario

Oregon

Quebec

Prince Edward Island—*see* Maritime Provinces

Saskatchewan and Manitoba

South Carolina—*see* North Carolina

South Dakota—*see* Colorado

Texas, eastern—*see* Arkansas

Utah—*see* Arizona

Vermont and New Hampshire

Virginia

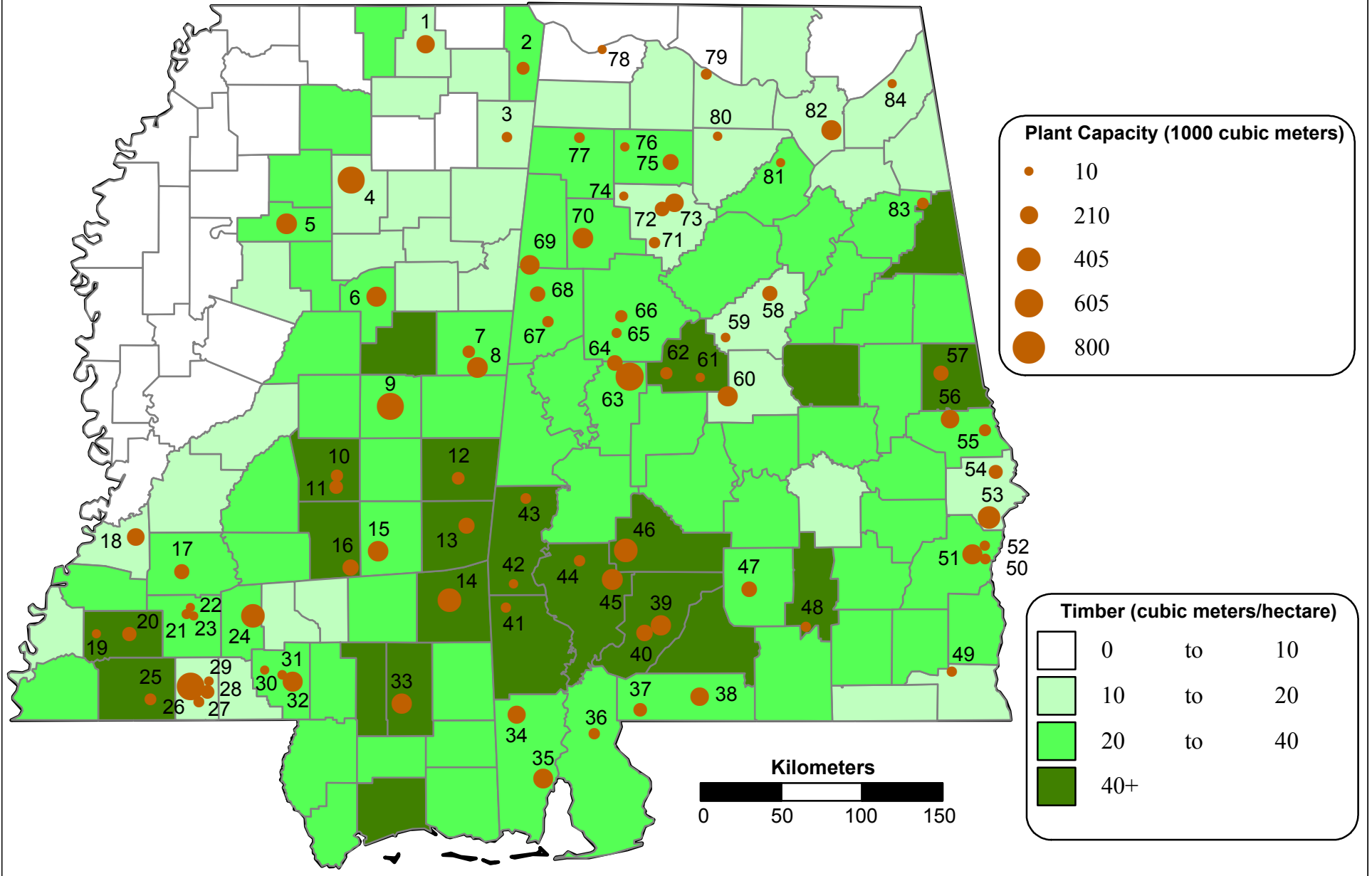
Washington

Wisconsin

Wyoming—*see* Colorado

Mississippi & Alabama

Softwood Roundwood Inventory & Softwood Sawmill Capacity



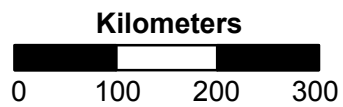
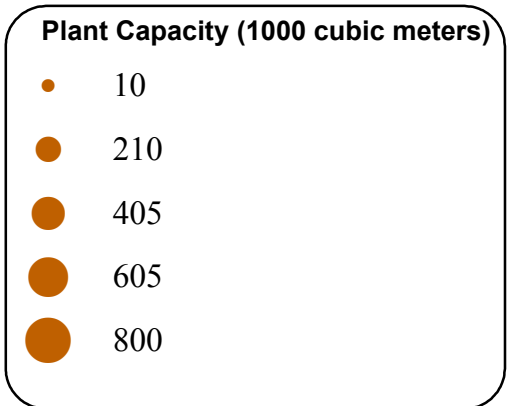
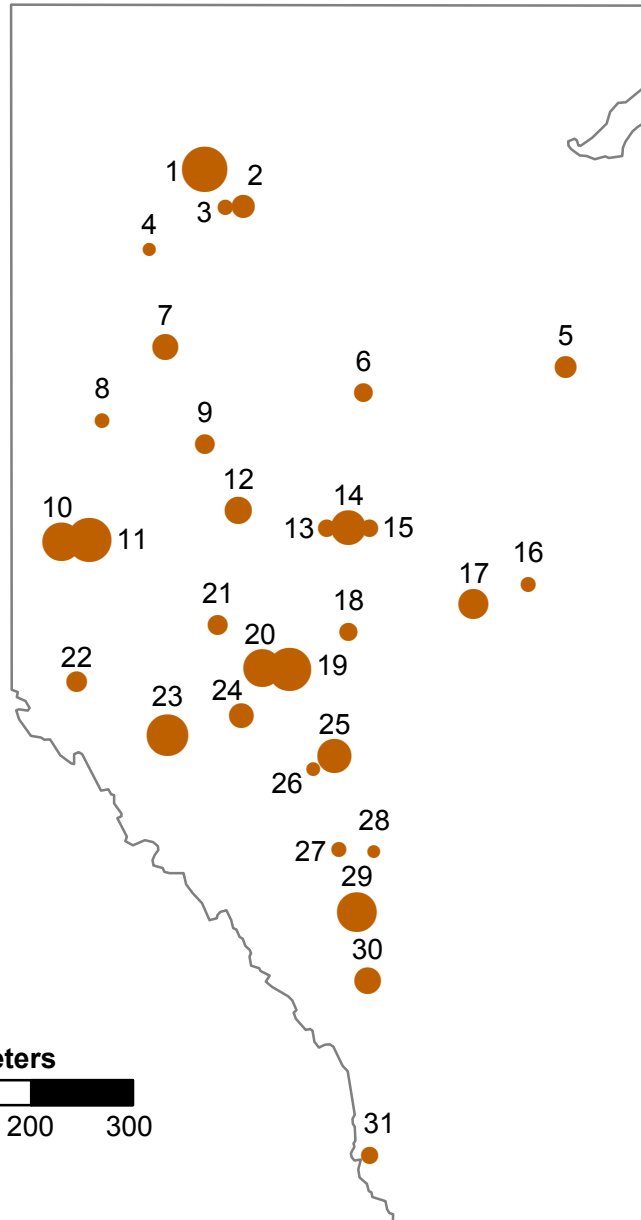
Alabama, Mississippi

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	International Pap Corp		Morton	91					
	McEntyre Lum Co		East Gadsden	12	12				
	Fisackerly Lum Co		Winona	8	8				
	D J Bondurant Lum Co		Flomaton	21	21				
	International Pap Corp		Moundville/Tuscal	283	142				
	A C Swindle		Quinton	8	8	8			
	Hankins Lum Co		Winona	47	47	47			
	Newton Lum Co		Tuscaloosa	11	11	11			
	Robins Lum Co		Double Springs	12	12	12			
	J H Nash Lum Co		Haleyville	19	19	19			
	Garrison Sawmill		Haleyville	36	36	36			
	Vance Lum Co		Vance	59	59	59			
	Broadhead Lum & Mfg Co		Mendenhall	12	12	12	12		
	Sterling Lum & Sup Co		Goodwater	8	8	8	8		
	KyKenKee		Vance	21	21	21	21		
	Gulf Lum Co	Boise Cascade	Jackson	109	109	130	153	153	
Timber Mills									
7	Barge F P		Macon	52	61	61	61	61	71
27	Byrd Lum Co		Fernwood	38	42	42	42	42	42
3	Homan F P		Fulton	33	33	33	33	33	33
47	International Pap Corp	Union Camp Corp	Chapman	137	137	142	142	142	142
11	Jack Batte & Sons		Forest	83	83	94	94	94	94
22	Lincoln Lum Co		Brookhaven	12	12	12	12	12	12
31	Rogers Lum Corp		Columbia	18	18	18	18	18	18
40	Roy O Martin Lum Co	Rocky Creek Lum Co	Mexia	142	153	165	165	165	165
77	Valley Lum Co		Hackleburg	35	35	35	35	35	35
64	Westervelt Corp	Gulf States Pap	Moundville		106	118	118	118	118
Stud Mills									
16	Georgia Pacific Koch Corp		Taylorville	158	158	158	158	158	158
69	Weyerhaeuser Co		Millport	238	238	238	248	260	260
Dimension Mills									
2	A V Littrell Lum Mill		Tishomingo	83	83	83	83	83	83
82	AbitibiBowater		Albertville	248	247	271	271	271	271
58	AbitibiBowater	Prod For Alliance	Westover	118	118	130	130	130	130
13	Bazor Lum Co	Hankins Lum Co	Quitman	153	0	153	153	153	153
12	Buchanan Lum/Mid So	Mid South Lum Co	Meridian	57	57	76	76	76	76
21	Columbus Lum Co	Phillips Brothers Lum	Brookhaven	24	24	24	24	24	24
23	Columbus Lum Co		Brookhaven	182	184	189	189	189	189
55	Dudley Lum Co		Salem	61	61	61	61	61	61
20	Franklin Tim Co		Bude	47	47	111	111	111	111
15	Georgia Pacific Koch Corp		Bay Springs	290	290	290	290	290	290
32	Georgia Pacific Koch Corp		Columbia	271	271	271	271	271	271
70	Georgia Pacific Koch Corp		Fayette	288	288	288	288	288	288
33	Georgia Pacific Koch Corp		New Augusta	236	236	236	283	283	283
19	Georgia Pacific Koch Corp		Roxie	0	0	158	0	158	0
75	Grayson Lum Corp		Houston	146	153	153	153	153	153
35	Gulf Lum Co		Mobile	260	260	260	264	264	264
1	Hankins Inc		Ripley	189	201	212	224	236	217
5	Hankins Lum Co		Grenada	283	283	295	295	295	295
39	Harrigan Lum Co		Monroeville	201	201	283	260	283	283
17	Hazlehurst Lum Co		Hazlehurst	130	130	130	130	130	130
14	Hood Industries	Longleaf F P	Waynesboro	366	366	389	401	401	401
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				11833	11901	12533	12566	12924	12639
Reported output (U.S. Census)				10101	10238	11040	11236		
Implied capacity utilization				85%	86%	88%	89%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
73	Jasper Lum Co		W Jasper	80	84	84	90	93	95
72	Jasper Lum Co	SE Wood-Jasper	Jasper	118	118	118	118	118	118
24	Joe N Miles & Sons		Silver Creek	340	401	401	425	401	401
51	M C Dixon Lum Co		Eufaula	153	153	212	273	271	271
25	Mabry Lum Co		Liberty	47	47	47	47	57	57
53	Mead Westvaco	Georgia Kraft	Cottonton	295	319	319	342	361	361
62	Olon Belcher Lum Co		Brent	65	65	65	65	65	65
6	Packaging Corp	Tenneco	Ackerman	266	276	276	276	276	276
67	Pate Lum Co		Carrollton	42	42	50	50	52	52
45	Scotch Lum Co		Fulton	236	236	236	236	307	307
8	Shuqualak Lum Co		Shuqualak	278	278	278	278	295	307
18	Southern Lum Co		Hermanville	172	177	194	194	191	198
38	T R Miller Mill Co		Brewton	177	212	236	236	255	255
44	Thomasville Lum Co	Coastal Lum Co	Thomasville	0	47	47	47	47	47
34	West Fraser Tim Co	International Pap	Citronelle	212	212	212	212	212	212
60	West Fraser Tim Co	International Pap	Maplesville	271	271	271	271	271	271
56	West Fraser Tim Co	International Pap	Opelika	224	224	224	224	224	224
63	Westervelt Corp	Gulf States Pap	Moundville	366	366	401	566	590	590
4	Weyerhaeuser Co		Bruce	517	519	543	543	543	543
26	Weyerhaeuser Co	Cavenham	Fernwood/McComb	514	555	543	555	566	566
9	Weyerhaeuser Co		Philadelphia	514	543	543	543	543	543
46	Weyerhaeuser Co	McMillan Bloedel	Pine Hill	378	389	401	401	401	401
Board Mills									
43	Jachin Lum Co		Jachin	34	34	34	34	34	34
10	King Lum Co		Forest	65	65	65	65	65	65
61	Kornegay Lum Co		Centreville	14	14	14	14	14	14
80	Littrell Bros Lum Co		Vinemont	15	15	15	15	15	15
79	Littrell Lum Mill		Decatur	42	42	42	42	42	42
68	McShan Lum Co		McShan	125	135	135	135	135	135
28	Three S Enterprises	Seago Lum Co	McComb	84	101	101	101	101	101
Specialty or Unknown									
83	Bennett Lum Co		Piedmont	53	53	53	53	53	53
52	Brabham Lum Co		Eufaula	30	30	30	30	30	30
36	Crosby Lum Co		Bay Minette	47	47	47	47	47	47
49	Custom Lum Mfg Co		Dothan	28	28	28	28	28	28
48	Dozier Lum Co		Dozier	28	28	28	28	28	28
74	Earley Lum Co		Carbon Hill	7	7	7	7	7	7
57	East Alabama Lum Co		Lafayette	132	132	132	132	132	132
84	F G Lum Co		Sylvania	7	7	7	7	7	7
30	Foxworth & Thompson		Foxworth	9	9	9	9	9	9
50	Garrison Bros Lum Co		Eufaula	35	35	35	35	35	35
76	Great Southern F P		Haleyville	16	16	16	16	16	16
42	Lassiter Lum Co		Silas	15	15	15	15	15	15
71	LKL Lum Co	Guthrie Lum Co	Oakman	47	47	47	47	47	47
29	Magnolia Lum Co		Fernwood	17	17	17	17	17	17
78	McKinney Lum Co		Muscle Shoals	7	7	7	7	7	7
41	Miltry Mill Co		Miltry	24	24	24	24	31	31
81	Mooneyham Lum Co		Blountsville	4	4	4	4	4	4
65	Pearson Lum Co		Tuscaloosa	23	23	23	23	23	23
54	Phenix Lum Co		Phenix City	59	59	59	59	94	106
59	Seaman Tim Co		Montevallo	18	18	18	18	18	18
37	Swift Lum Co		Atmore	71	71	94	94	94	94
66	W G Sullivan Lum Co		Northport	66	66	66	66	66	66
Number of sawmills				97	97	95	87	85	84
Number employed ('000)				7.3	7.2	7.2	6.9	6.9	

Alberta

Softwood Sawmill Capacity



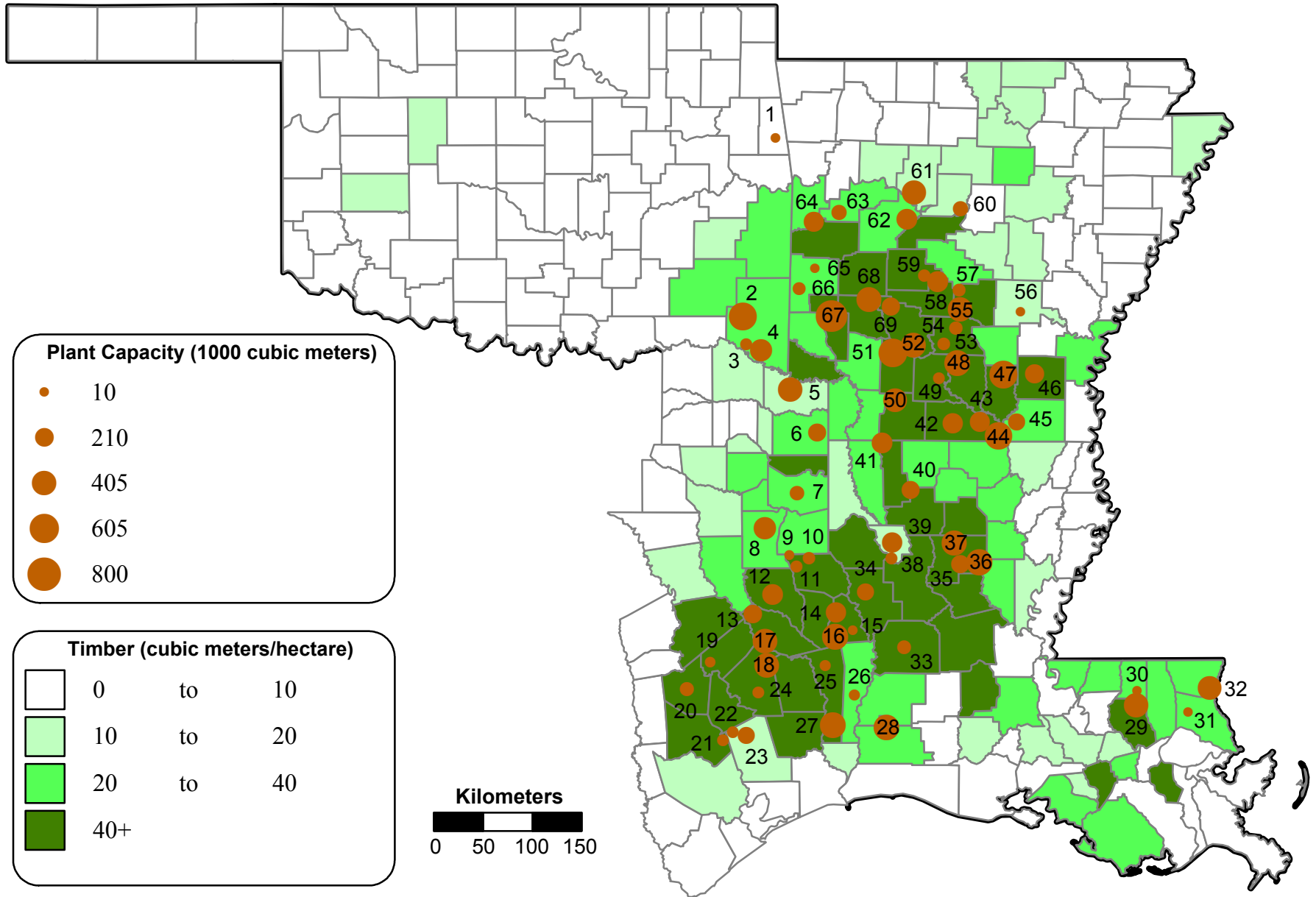
Alberta

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
Closed Mills								
	Tara For Prod		Calling Lake	59	5			
	Calling Lake Lum		Athabasca	24	24	24		
	CanFor		Hines Creek	201	201	201	94	
	Carrier Janvier F P		Ft. McMurray	130	130	130	130	
	West Fraser Tim Co	Seehta For Prod	Red Earth Cree	142	142	142	142	
Timber Mills								
26	Tall Pine Tim		Lodgepole	21	21	21	21	21
Stud Mills								
13	Alberta Plywood Ltd	West Fraser Tim Co	Slave Lake	83	83	83	83	71 71
6	Carrier Lum Ltd		Trout Lake	89	89	89	89	89 89
2	LaCrete Sawmills		LaCrete	113	113	113	113	142 165
Dimension mills								
31	Atlas Lum		Blairmore	66	66	66	66	66 66
9	Boucher Bros		Nampa	61	71	99	101	106 106
12	Buchanan Lum		High Prairie	236	236	236	236	236 248
10	CanFor		Grande Prairie	491	503	555	562	562 562
16	Ed Bobocel Lum		Lac La Biche	28	28	35	35	35 35
7	Manning Diverified F P		Manning	205	205	224	224	224 224
17	Millar Western Ind		Boyle	271	295	319	319	319 319
20	Millar Western Ind		Whitecourt	448	531	531	531	543 543
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006 2007
Estimated capacity				7469	7583	7945	8171	8070 8058
Production (Stats Can)				7205	7541	7812	7348	7283
Implied capacity utilization				96%	99%	98%	90%	90%

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
21	Mostowich Lum		Fox Creek	113	113	113	109	109 109
5	Northland F P		Fort McMurray	142	142	142	142	142 142
27	Rocky Wood Preservers		Rocky Mtn Hse	28	28	38	38	38 38
30	Spray Lake		Cochrane	165	165	165	236	236 236
24	Sundance		Edson	201	201	201	201	201 201
18	Timeu F P	Spruceland Millworks	Fort Assinibone	83	83	83	83	83 83
1	Tolko	Daishowa	High Level	628	637	708	779	944 897
14	Vanderwell		Slave lake	448	448	448	448	448 448
23	West Fraser Tim Co	Hi-Atha Sawmill	Hinton	578	578	663	663	666 666
15	West Fraser Tim Co	Zeidler For Ind	Slave Lake	71	71	71	71	71 71
29	West Fraser Tim Co	Sunpine	Sundre	510	510	597	602	602 602
19	West Fraser Tim Co	Blue Ridge	Whitecourt	614	644	649	684	720 720
25	Weyerhaeuser Can		Drayton Valley	326	326	378	425	425 425
11	Weyerhaeuser Can		Grande Prairie	529	529	675	750	755 755
Specialty or Unknown								
3	Evergreen Lum		LaCrete	19	19	19	19	42 42
22	Foothills F P	C & C Wood Prod	Grande Cache	297	297	71	118	118 118
28	Hansen F P		Eckville	12	12	12	12	12 12
4	Wetkeg F P		Keg River	15	15	15	15	15 15
8	Zavisha Sawmills		Hines Creek	24	24	32	32	32 32
				2002	2003	2004	2005	2006 2007
Number of sawmills				36	36	35	34	31 31
Number employed ('000)				3.7	3.6	3.5	3.3	3.3

Arkansas, Louisiana, Oklahoma, Eastern Texas

Softwood Roundwood Inventory & Softwood Sawmill Capacity



Arkansas, Oklahoma, Texas, Louisiana

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
Closed Mills								
	Wood Lum Co		Chidester	15	15			
	Mountain Man		Willis	8	8			
	Leesville Lum Co	Louisiana-Pacific Corp	Bernice	106	106	47		
	Eas-Tex Lum Co		Livingston	9	9	9	9	
	C & M Lum Co		Waldron	14	14	14	14	
	Scott County Lum Prod		Waldron	23	23	23	23	
Timber Mills								
49	Garland Gaston Lum	Freestone Sawmill Part	Camden	12	12	12	47	47 47
26	Southern For Prod	Hughes Sawmill	Bon Wier	42	42	39	38	38 38
Stud Mills								
23	Georgia Pacific Koch	Louisiana-Pacific Corp	Cleveland	130	153	153	153	165 165
45	Georgia Pacific Koch Corp		Crossett	165	165	165	165	165 165
14	Temple-Inland		Pineland	212	236	248	260	260 260
29	Weyerhaeuser Co	Cavenham	Holden	293	302	378	401	401 401
40	Weyerhaeuser Co	Willamette Industries	Taylor	189	189	189	189	194 194
34	Weyerhaeuser Co	Willamette Industries	Zwolle	153	153	165	165	165 165
Dimension Mills								
6	Anthony F P		Atlanta	165	165	177	177	189 189
43	Anthony F P		Strong/Urbanda	224	224	224	224	238 248
48	Anthony Timberlands	Bearden Lum Co	Bearden	307	314	319	319	460 460
58	Anthony Timberlands		Malvern	212	260	271	283	283 283
19	Atchley Lum & Sup Co		Trinity	31	31	31	31	31 31
68	Bean Lum Co		Glenwood	342	401	413	413	413 413
4	Bibler Brothers	Georgia-Pacific Corp	Idabel	290	295	309	319	319 319
61	Bibler Brothers	Nekoosa Paper	Russellville	354	366	389	389	389 389
59	Buddy Bean Lum Co		Hot Springs	59	59	59	59	71 59
12	Cal-Tex Lum Co		Nacogdoches	222	241	241	241	260 260
13	Clemsa Lum Co	Hampton Affiliates	Pollok	125	170	186	201	203 203
22	CLW		Cleveland	47	47	47	47	47 47
24	CLW		Livingston	47	47	47	47	47 47
21	CLW	Duke City Lum Co	Splendora	47	47	47	47	47 47
69	Curt Bean Lum Co		Amity	189	201	201	201	201 201
62	Deltic Tim Corp		Ola	201	248	248	271	271 271
50	Deltic Tim Corp		Waldo	307	321	330	366	378 378
18	Georgia Pacific Koch	International Pap Corp	Camden	382	382	382	382	408 408
42	Georgia Pacific Koch Corp		El Dorado	271	260	260	260	260 260
52	Georgia Pacific Koch	International Pap Corp	Gurdon	293	295	295	401	415 415
41	Georgia Pacific Koch	International Pap Corp	Springhill	271	94	271	271	271 271
60	Green Bay Pkg	Pinecrest Lum Co	Plumerville	153	153	160	165	151 118

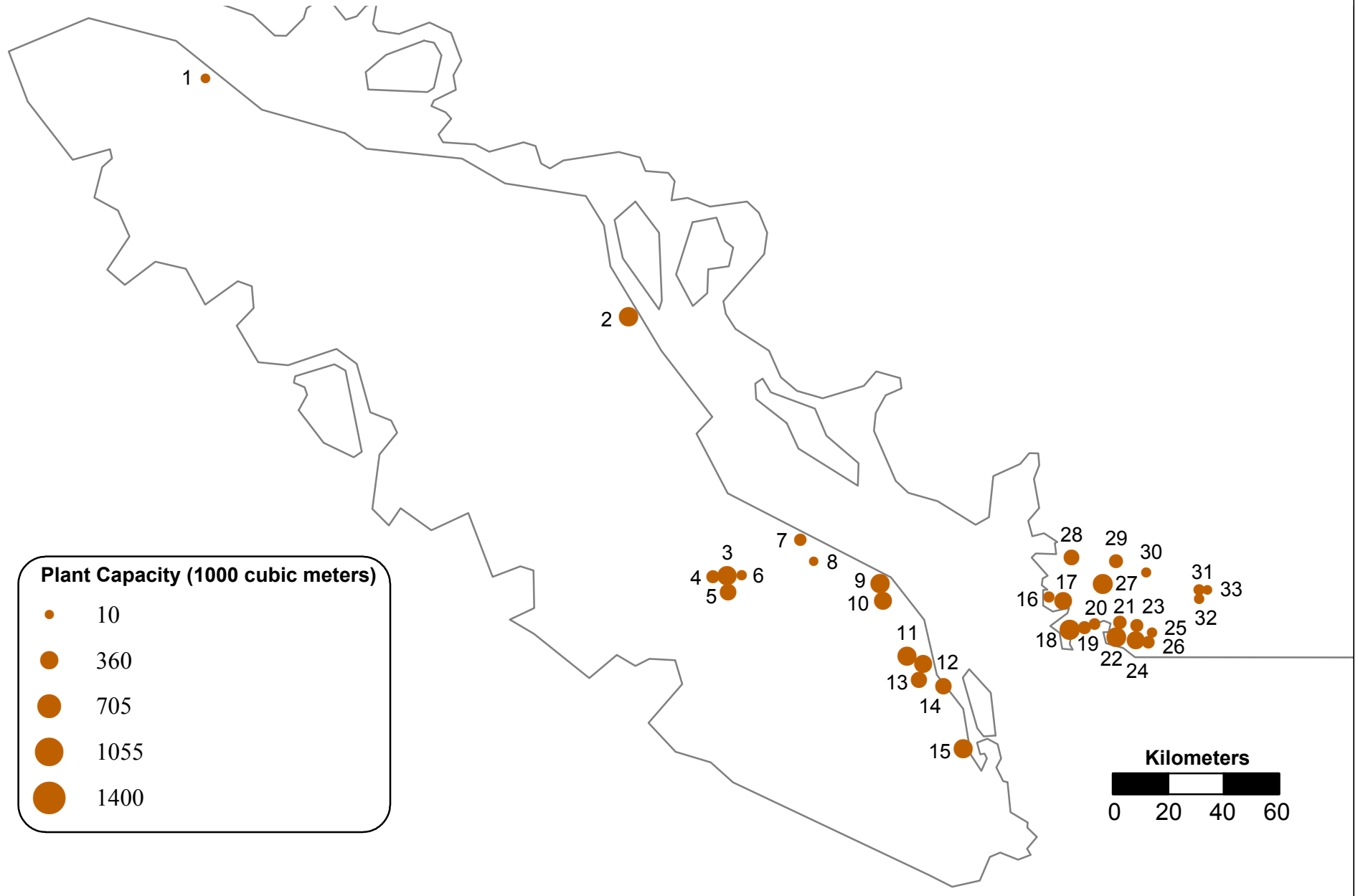
Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
39	Hood Industries	International Pap Corp	Coushatta	110	110	110	110	110 110	
54	Idaho Tim Corp		Carthage	83	83	83	83	83 83	
32	Joe N Miles & Sons		Bogalusa	389	389	354	366	378 378	
46	JP Price Lum Co		Monticello					223	
33	Leesville Lum Co		Leesville	94	94	106	106	118 118	
35	PBS Lum Mfg	Freestone Sawmill Part	Winnfield	142	142	165	202	202 202	
51	Pottlatch Corp		Prescott	465	543	531	543	531 531	
47	Pottlatch Corp		Warren	378	531	531	531	531 531	
20	Steely Lum Co		Huntsville	40	40	83	94	94 94	
27	Temple-Inland		Buna	354	366	373	451	451 451	
28	Temple-Inland		Dequincy	354	378	378	401	439 439	
17	Temple-Inland		Diboll	342	378	378	409	409 409	
16	Temple-Inland		Pineland	354	413	413	472	463 463	
64	Travis Lum Co		Mansfield	248	248	248	248	248 248	
63	US Tim Co South		Booneville	118	118	118	118	118 118	
8	West Fraser Tim Co	International Pap Corp	Henderson	295	307	307	321	330 330	
44	West Fraser Tim Co	Plum Creek Tim Co	Huttig	264	271	330	519	519 519	
36	West Fraser Tim Co	Plum Creek Tim Co	Joyce	437	448	460	472	496 496	
55	West Fraser Tim Co	International Pap Corp	Leola	401	401	401	401	401 401	
5	West Fraser Tim Co	International Pap Corp	New Boston	342	342	354	378	396 406	
67	Weyerhaeuser Co		Dierks	590	590	661	661	708 708	
37	Weyerhaeuser Co	Willamette Industries	Dodson	217	425	425	425	425 425	
2	Weyerhaeuser Co		Wright City	543	543	543	543	543 543	
Board Mills									
10	Arkansas F P		Tenaha	59	59	59	59	59 59	
57	H G Toler & Son		Leola	71	71	71	71	71 71	
25	Hart Lum Co		Jasper	35	35	35	35	35 35	
11	Nix For Ind		Timpson	42	52	52	52	52 52	
53	Ray White Lum Co		Sparkman	57	57	61	66	66 66	
7	Snider Ind		Marshall	106	106	106	106	106 106	
Specialty or Unknown									
38	Almond Bros Lum Co		Coushatta	54	54	53	52	52 52	
1	Conner Ind		Stilwell	15	15	15	15	15 15	
30	Conway Guiteau Lum Co		Amite	8	8	8	8	8 8	
15	G D Edgar Lum Co		Hemphill	13	13	13	13	13 13	
56	Hixson Lum Sales		Pine Bluff	7	7	7	7	7 7	
66	Lewis Lum & Mfg Co		Cove	71	71	71	71	71 71	
65	Mid-South Wood Prod		Mena	7	7	7	7	7 7	
9	Ross Lum Co		Timpson	17	17	17	17	17 17	
31	Ryan F P		Covington	5	5	5	5	5 5	
3	Wood Lum Co		Idabel	52	54	54	54	54 54	

	2002	2003	2004	2005	2006	2007
Softwood lumber (1,000 m³)						
Estimated capacity	13243	13990	14486	15221	15569	15766
Reported output (U.S. Census)	11368	12751	13275	13997		
Implied capacity utilization	86%	91%	92%	92%		

	2002	2003	2004	2005	2006	2007
Number of sawmills	74	74	72	71	68	69
Number employed ('000)	7.5	7.4	7.5	7.4	7.4	

British Columbia - Coast

Softwood Sawmill Capacity



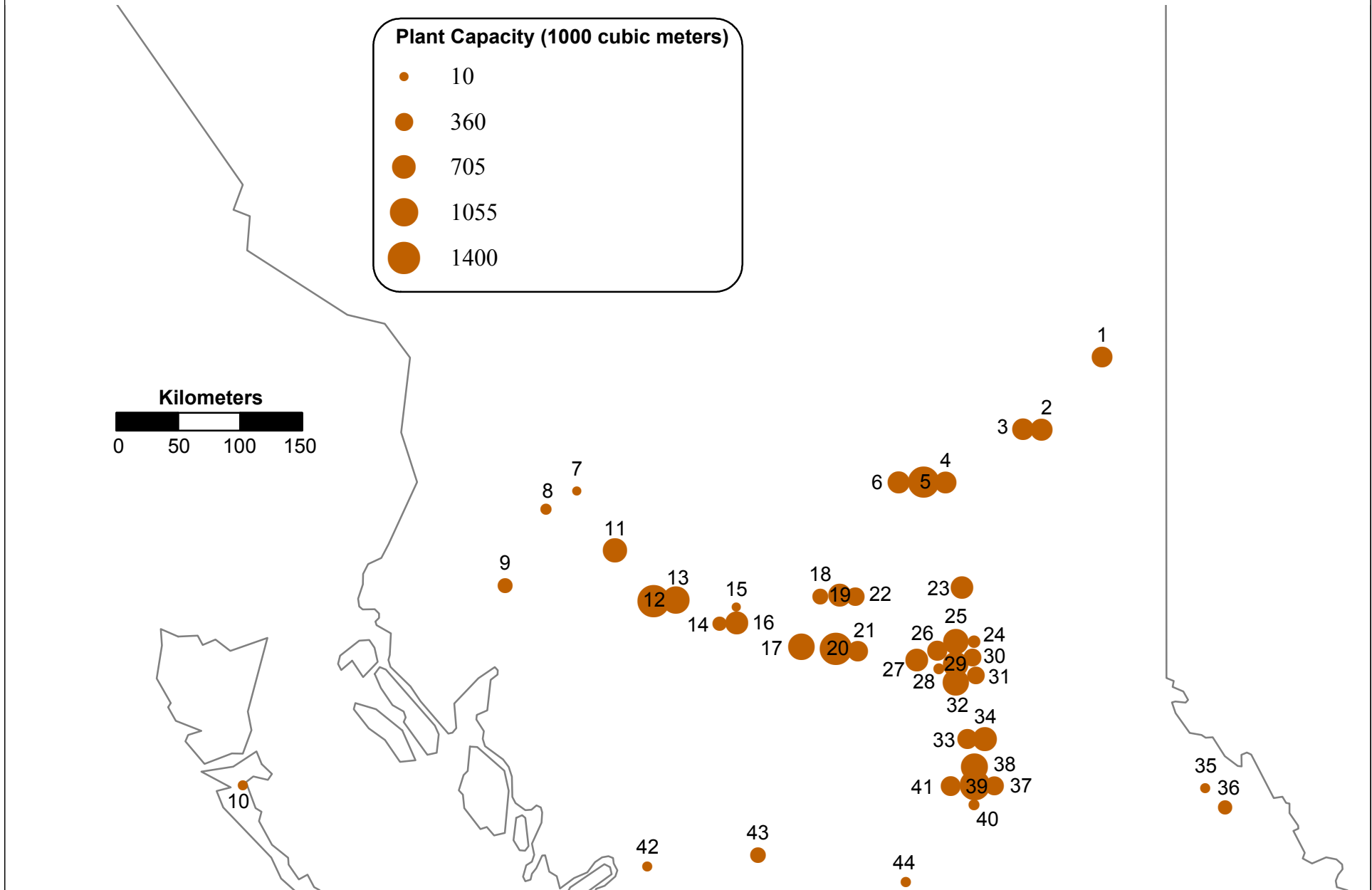
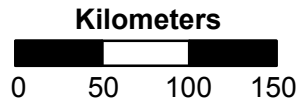
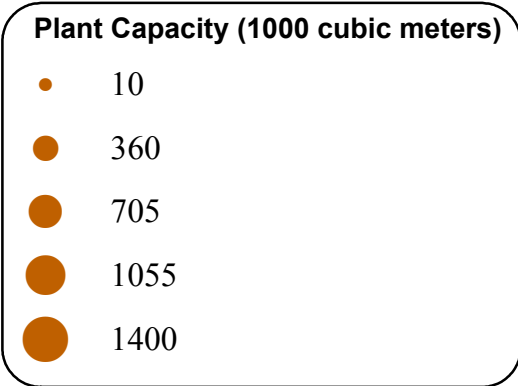
British Columbia - Coast

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
				Closed Mills						
	Weyerhaeuser Can Doman	McMillan Bloedell	Vancouver(Wh Pine)	59						
			Chemainus/Nanoose	113						
	Western FP Inc	Weldwood	Squamish	224	75					
	Western FP Inc	FletchChall/BCFP	Vancouver	396	396					
	Howe Sound	West Coast Cellulofibre	Vancouver	142	142	142				
	InterFor Prod	Primex(Field mill)	Courtenay	224	295	330				
	A J FP		Brackendale	23	23	23	23			
	Western FP Inc	Doman	Vancouver/Silvertree	238	238	250	283			
	Brascan	Weyerhaeuser Can	Nanaimo/Isi Phoenix	342	342	142	142			
	Western FP Inc	Cascadia For Prod	New Westminster	319	319	319	319	319	24	
				Timber Mills						
23	Mill & Tim Prod		Surrey	153	132	132	132	132	132	
21	Stag Timber	Teal Cedar Prod	Surrey	153	153	153	153	153	153	
				Dimension Mills						
27	InterFor Prod (Queensboro)	Western Whitewood	New Westminster/Queens	189	189	189	189	342	425	
24	J S Jones Timber		Surrey	0	0	354	354	354	354	
2	TimberWest For	FletchChall/CFI	Campbell Rvr/Elk Falls	283	319	401	401	425	425	
14	Western FP Inc	Chemainus Div	Chemainus	307	307	307	271	271	271	
15	Western FP Inc	Cowichan Bay Div	Duncan	340	340	356	382	413	413	
13	Western FP Inc	Ladysmith Div	Ladysmith	312	250	238	260	260	260	
12	Western FP Inc	Saltair Div	Ladysmith	396	307	290	242		354	
11	Western FP Inc	Duke Pt Div	Nanaimo	210	172	271	415	413	413	
3	Western FP Inc	APD Div	Pt Alberni	406	406	406	413	425	425	
				Cedar Mills						
32	Andersen Pac FP		Ruskin	40	40	40	40	40	40	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007	
Estimated capacity				7916	7772	7793	7615	7105	7242	
Production (Stats Can)				6063	5802	6288	5899	5503		
Implied capacity utilization				77%	75%	81%	77%	77%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
4	Coulson Manufacturing Ltd		Port Alberni	113	125	125	125	125	130
20	Delta Cedar	Halo F P	Delta	85	85	85	90	90	90
8	Errington Cedar		Errington	20	20	20	20	20	20
25	Fraser Pulp Chips Ltd		Surrey	40	47	47	47	47	47
16	Goldwood Industries Ltd		Richmond	91	91	71	71	71	71
9	InterFor Prod (Hammond Cedar)	FletchChall/BCFP	Maple Ridge	366	366	425	425	425	425
29	Mill & Tim Prod	Flavelle Cedar	Port Moody	153	170	170	170	170	170
28	Terminal FP Ltd (Mainland Div)		Vancouver	181	241	241	241	241	241
17	Terminal FP Ltd (Woodlands Div)		Richmond	236	236	340	340	340	340
31	Twin River Cedar	Empire Cedar	Maple Ridge	57	71	71	71	71	71
5	Western FP Inc	Somass Div	Pt Alberni	182	182	182	283	283	283
				Specialty or Unknown					
6	Franklin F P		Port Alberni		57	57	57	57	47
30	Halo Sawmill Ltd	Y.N. For Corp	Pitt Meadows	35	35	35	35	35	35
18	InterFor Prod (Acorn Div)	Primex	Delta	425	425	425	425	378	378
26	McKenzie Sawmills Ltd	McKenzie Seizai Mills	Surrey	177	177	76	116	116	116
7	Longhouse Trading Co Ltd		Qualicum Beach		47	111	111	111	111
1	Lukwa Mills Ltd		Port Hardy	24	24	24	24	24	24
22	S & R Sawmills Ltd		Surrey	453	453	453	453	448	448
33	Silvermere FP	Slave Lake Cedar	Maple Ridge	28	24	24	24	24	24
10	Western FP Inc	Nanaimo Div	Nanaimo	307	340	340	340	354	354
19	Weyerhaeuser Can	Coast Mtn Hardwds	Delta	113	113	130	130	130	130
22	S & R Sawmills Ltd		Surrey	453	453	453	453	448	448
33	Silvermere FP	Slave Lake Cedar	Maple Ridge	28	24	24	24	24	24
10	Western FP Inc	Nanaimo Div	Nanaimo	307	340	340	340	354	354
19	Weyerhaeuser Can	Coast Mtn Hardwds	Delta	113	113	130	130	130	130
				2002	2003	2004	2005	2006	2007
Number of sawmills				39	40	39	38	33	34
Number employed ('000)				5.3	4.6	4.5	4.4	4.0	

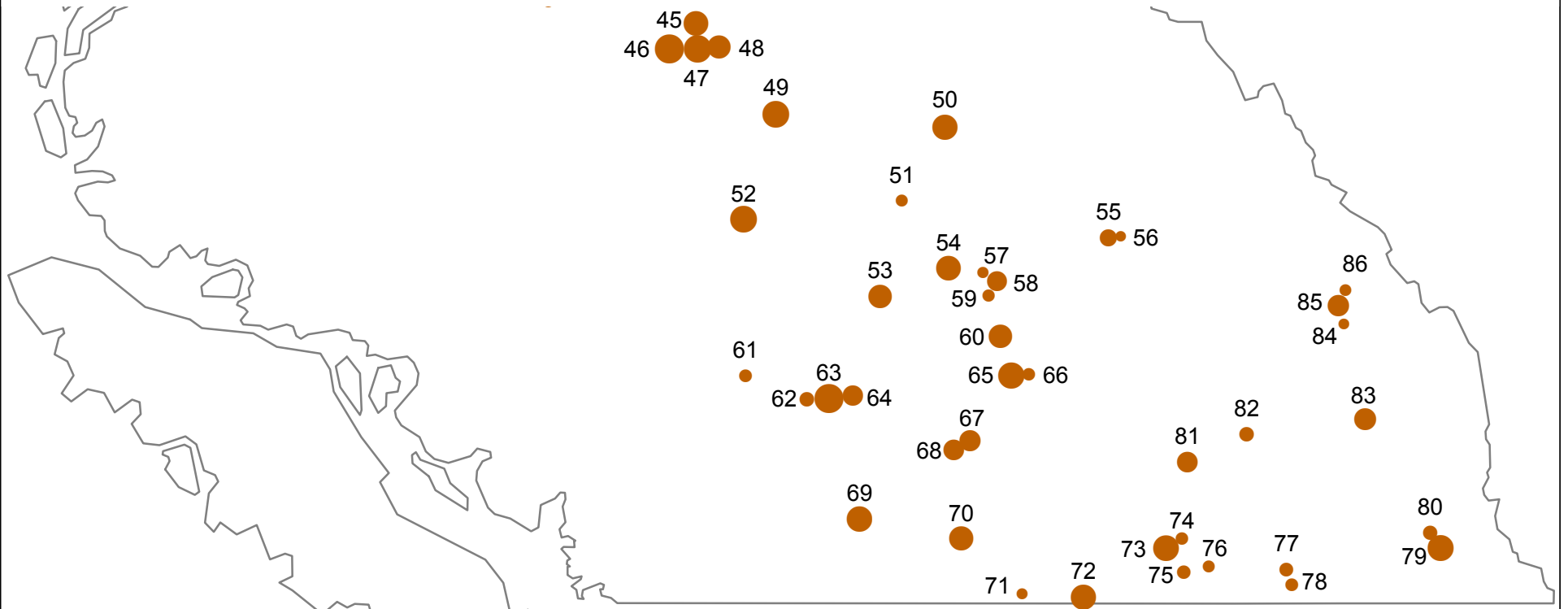
British Columbia - North

Softwood Sawmill Capacity

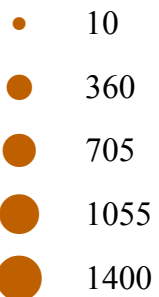


British Columbia - Southeast

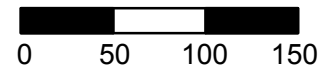
Softwood Sawmill Capacity



Plant Capacity (1000 cubic meters)



Kilometers

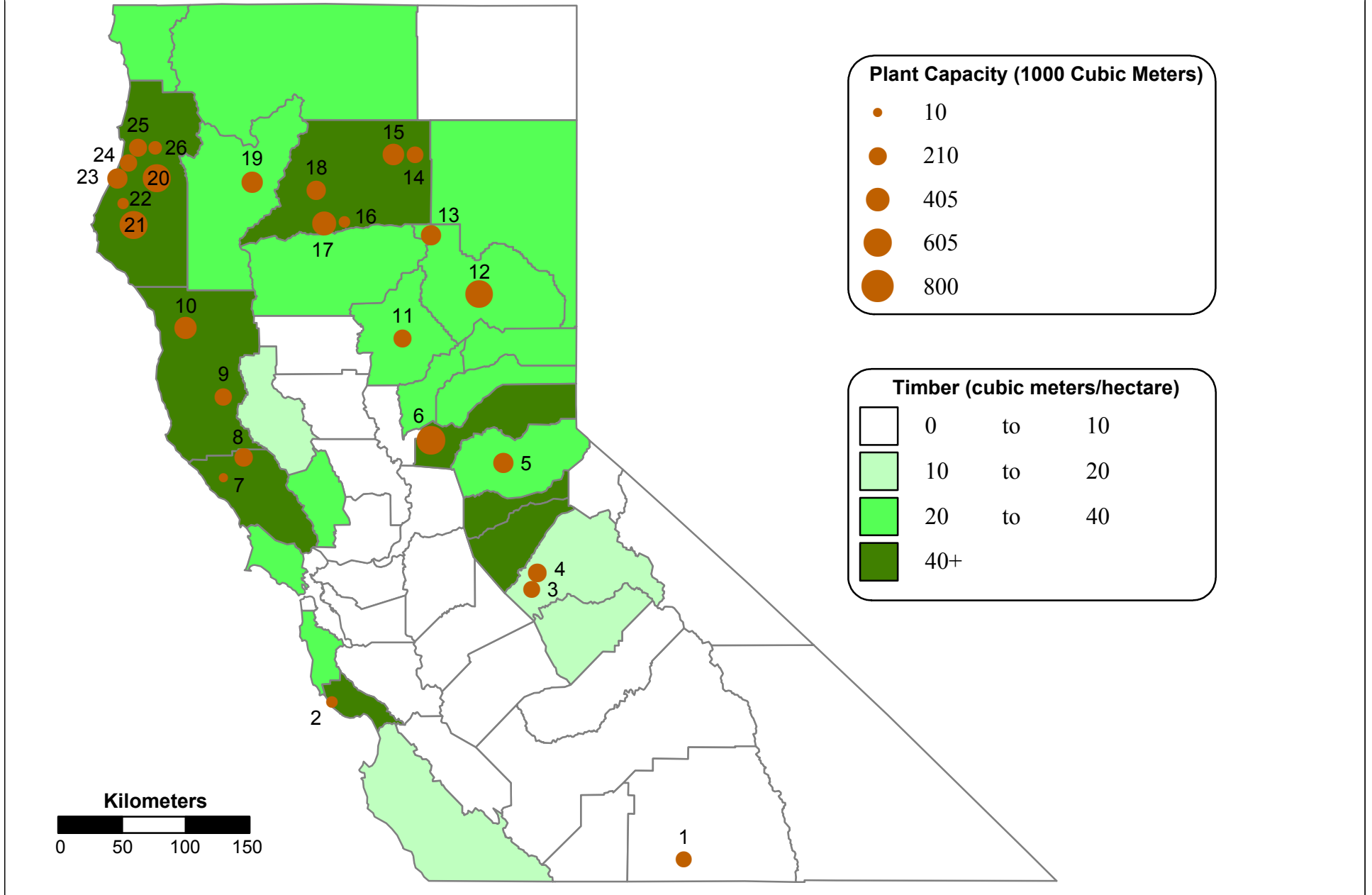


British Columbia - Interior

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)							Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)											
				2002	2003	2004	2005	2006	2007	2002					2003	2004	2005	2006	2007							
Closed Mills																										
	Atco		Fruitvale	23							35	Hauer Bros Lum Ltd.		Valemount	14	14	14	14	14	14						
	J S Jones		Boston Bar	401							54	InterFor Prod	Adams Lake	Chase	378	401	519	649	708	708						
	CanFor	Northwood	Upper Fraser	732	354						8	Kitwanga Lum Co		Kitwanga	170	146	59	59	71	71						
	CanFor	Balfour For Prod	Taylor	189	118						73	Pope & Talbot		Castlegar	500	566	566	590	614	621						
	Poplar Creek		Salmon Arm	28	28						19	Pope & Talbot	CanFor	Fort St. James	644	647	647	647	647	647						
	Tolko		Louis Creek/Barriere	330	264						72	Pope & Talbot		Grand Forks	316	319	319	363	545	590						
	West Fraser Tim Co	Skeena Cellulose	Smithers	123	123						44	Sigurdson Bros Logging Co		Williams Lake/Hancev	47	47	47	47	47	47						
	Weyerhaeuser Can		Vavenby	373	93						81	Springer Creek FP	CanFor	Slocan	260	363	363	363	363	363						
	C GED FP	Westar Ind	Kitwanga	113	113	113					18	Stuart Lake Lum Co		Fort St. James	255	255	255	255	255	255						
	Canfor-B	Slocan - B	Quesnel	118	59	118					83	Tembec	Crestbrook For Ind	Canal Flats	307	413	425	425	425	425						
	Louisiana-Pacific Corp	Evans For Prod	Malakwa	118	118	118					79	Tembec	Crestbrook For Ind	Elko	363	531	590	637	637	637						
	CanFor (Tackama FP Div)	Slocan	Fort Nelson	201	283	260	127				47	Tolko	Riverside	Lakeview/Williams Lk	538	538	720	720	720	720						
	Tolko		Lumby/Lavington	12	12	12	9				46	Tolko (Creekside Div)	Riverside FP	Creekside/Williams Lk	493	543	614	614	736	826						
	Terrace Lum Co	Skeena Cellulose	Terrace				59	89			65	Tolko (Lavington Div)		Vernon	342	354	389	389	602	661						
	FSJ All Nations For Corp		Fort St James				28	28	28	28	63	Tolko (Nicola Valley Div)		Merritt	354	354	413	578	767	826						
	Paragon Wood Prod (Grindr)	Custom Pre-Cut Stud	Vernon	34	45	45	45	45	45	45	41	Tolko (Quest Wood Div)	Ernst F P	Quesnel	460	460	481	519	496	460						
	McBride For Ind Ltd	West Fraser Tim Co	McBride	51	51	52	52	52			2	West Fraser Mills Ltd	Chetwynd For Ind	Chetwynd	548	576	590	602	602	602						
	Pope & Talbot		Midway	366	385	385	385	278	165		52	West Fraser Mills Ltd	Ainsworth	Clinton/Chasm	354	540	602	602	673	673						
											17	West Fraser Mills Ltd	Eurocan Pulp&Pap	Fraser Lake	566	802	826	826	936	903						
											13	West Fraser Mills Ltd	Houston FP	Houston	696	696	779	850	968	968						
56	Joe Kozek Sawmills		Revelstoke	12	12	12	12	9	9		39	West Fraser Mills Ltd		Quesnel	795	868	892	1133	1227	1227						
84	North Star Planing		Athalmer	11	17	17	17	17	17		11	West Fraser Mills Ltd	Pac Inl Res	Smithers	529	623	684	684	743	743						
Stud Mills																										
30	CanFor	Clear Lake Div	Pr George	342	342	354	354	354	354		45	West Fraser Mills Ltd		Williams Lake	465	524	566	566	566	566						
43	Carrier Lum Ltd	West Chilcotin FP	Anahim Lake	222	250	250	250	250	250		37	West Fraser Mills Ltd	Northstar	Quesnel	314	314	382	382	394	406						
15	Cheslatta FP (Ootsa Lake)	Carrier Lum Ltd	Burns Lake	106	118	146	146	146			9	West Fraser Mills Ltd	West Fraser Mills L	Terrace	189	94	191	191	212	212						
31	Lakeland Mills Ltd		Prince George	295	316	316	337	337	337		49	West Fraser Tim Co	Weldwood	100 Mile House	510	522	581	590	673	673						
22	Sinclair/Apollo FP Ltd		Fort St James	260	290	330	389	389	389		53	Weyerhaeuser Can		Kamloops	283	319	486	496	496	496						
21	Sinclair/L & M Lum	Nechako Lum	Vanderhoof	368	396	396	396	496	496		70	Weyerhaeuser Can		Okanagan Falls	385	385	548	548	543	543						
60	Tolko	Riverside FP	Armstrong	330	389	474	496	496	496		69	Weyerhaeuser Can		Princeton	345	361	552	625	614	614						
67	Tolko	Riverside FP	Kelowna	340	378	387	385	385	385		25	Winton Global Lumber	The Pas Lum Co	Prince George/Bear L	566	637	649	743	826	826						
48	Tolko (Soda Creek Div)	Riverside FP	Williams Lk	283	354	484	484	484	484		Cedar Mills															
Dimension Mills																										
5	AbitibiBowater	Donohue/Finlay	MacKenzie	826	826	791	944	1239	1298		10	Abfam Enterp		Queen Charlotte Islan	34	34	34	33	33	33						
64	Aspen Planers		Merritt	177	182	238	354	354	354		42	C & C Wood Prod	Little Valley FP	Bella Coola	38	38	38	38	38	38						
75	Atco		Park Siding	94	94	94	94	94	94		59	Cooper Creek Cedar		Salmon Arm	45	57	57	57	57	57						
23	CanFor	Polar Div	Bear Lake	590	623	623	623	623	623		51	Gilbert Smith FP Ltd	Glenn Propty	Barriere	57	52	52	52	52	52						
3	CanFor		Chetwynd	524	531	566	566	566	566		57	Lakeside Tim		Tappen	28	33	33	33	24	28						
1	CanFor	Ft St John Div	Fort St. John	472	566	708	708	496	519		82	Meadow Creek Cedar		Kaslo	113	125	125	125	125	125						
12	CanFor	Northwood	Houston	1038	1038	1345	1421	1421	1421		66	Paragon Wood Prod (L Custom Pre-Cut St		Lumby	68	68	68	68	68	68						
27	CanFor	Isle Pierre	Isle Pierre	566	581	618	618	625	637		Board Mills															
6	CanFor	Slocan	MacKenzie	448	448	566	602	602	602		68	Gorman Bros		Westbank	260	283	295	307	366	366						
4	CanFor	Slocan	MacKenzie	425	425	543	578	578	578		78	J H Huscroft		Creston	57	83	71	71	71	71						
32	CanFor	Rustad Div	Pr George	684	720	885	885	902	902		Specialty and Unknown															
29	CanFor	Northwood	Pr George	543	566	826	826	826	826		62	Ardrew		Merritt	108	108	127	127	127	127						
38	CanFor	Slocan - A	Quesnel	373	623	944	944	944	944		40	C & C Wood Prod		Quesnel	57	64	64	64	64	64						
85	CanFor	Radium Div	Radium Hot Spr.	283	378	378	401	401	401		36	Carrier Lum Ltd	NW Specialty Lum	Valemount	236	236	189	189	189	189						
20	CanFor	Plateau Div	Vanderhoof/Plateau/I	850	885	979	1121	1405	1440		55	Downie Timber Ltd		Revelstoke	125	165	175	175	212	212						
50	CanFor	Vavenby Div	Vavenby/Clearwater	453	495	519	595	595	595		58	Federated Coop		Canoe	203	203	203	283	283	321						
33	Carrier Lum Ltd		Pr George	396	413	472	472	472	472		71	Hilmoe FP		Rock Creek	23	23	23	24	24	24						
26	Dunkley Lum		Strathnaver	173	472	472	472	472	472		74	Kalesnikoff		Thrums	71	71	61	61	61	61						
34	Dunkley Lum		Strathnaver	732	732	732	732	732	732		7	Kispiox FP	Stage Logging	Richmond	113	113										
80	Galloway Lum		Galloway	125	125	118	118	118	118		61	Lytton Lum Ltd		Lytton	38	71	71	71	71	71						
24	Gateway FP		Prince George								76	Porcupine Wood Prod		Salmo	47	45	45	45	47	52						
14	Hampton Affiliates	Decker Lake	Burns Lake	156	165	177	177	189	189		86	Seel For Prod		Edgewater	34	42	42	42	42	42						
16	Hampton Affiliates	Babine FP	Burns Lake	590	595	642	642	661	661		28	Woodland Lum		Prince George	68	68	68	68	68	68						
											77	Wynndel Box & Lumber Co		Wynndel	40	83	83	83	104	104						
Softwood lumber (million m ³)														2002	2003	2004	2005	2006	2007							
Estimated capacity														29.8	31.4	34.2	35.6	37.5	37.5	Number of sawmills						
Production (Stats Can)														29.4	29.6	33.6	35.1	35.5		Number employed ('000)						
Implied capacity utilization														99%	94%	98%	99%	95%		14.8	14.7	13.7	13.7	13.7		

Northern California

Softwood Roundwood Inventory & Softwood Sawmill Capacity



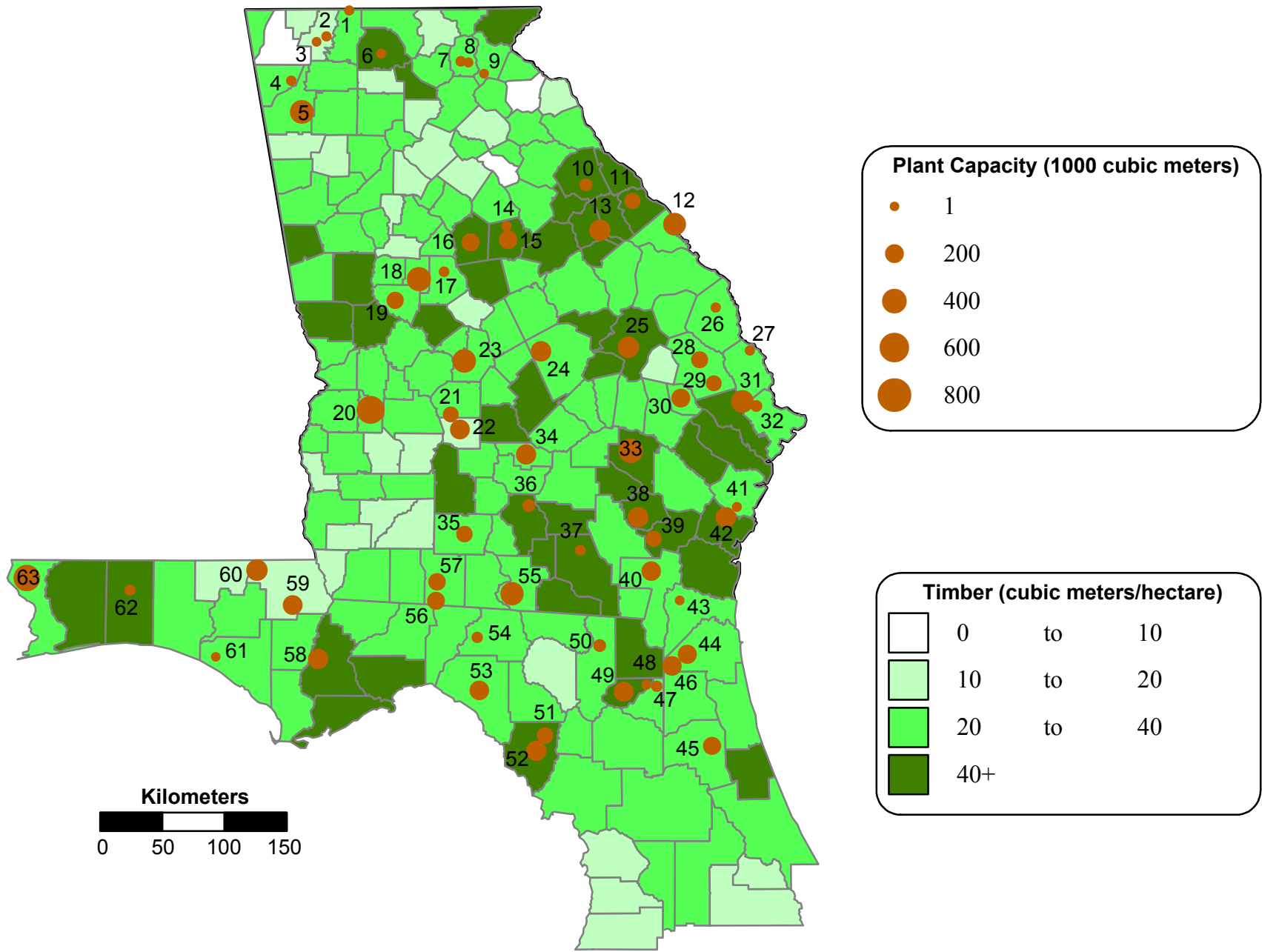
California

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Wisconsin-California FP		Redding	47					
	Blue Lake For Prod		Arcata	142					
	Georgia-Pacific Corp		Fort Bragg	214					
	Mendocino FP	Louisiana-Pacific Corp	Fort Bragg	94	59				
	Pacific Lum Co	Wetsel-Oviatt Lum Co	EIDorado Hills	83	61				
	California Cedar	P&M Cedar Prod	McCloud	149	149				
	Pacific Lum Co	Louisiana-Pacific Corp	Carlotta	224	224	12			
	Sierra Pacific Ind		Susanville	227	236	59			
	Pacific Lum Co		Fortuna	257	314	315	157		
Timber Mills									
7	Berry's Sawmill		Cazadero	14	7	7	7	7	
24	Sierra Pacific Ind		Arcata	185	217	219	227	189	
Stud Mills									
16	Sound Stud		Anderson	52	52	52	52	52	
Redwood Mills									
2	Big Creek Lum Co		Davenport	52	52	52	54	59	
25	Britt Lum Co		Arcata	212	212	212	212	212	
9	Mendocino FP	Louisiana-Pacific Corp	Ukiah	142	142	189	189	189	
8	Redwood Empire		Cloverdale	212	212	224	224	224	
23	Schmidbauer Lum Co		Eureka	217	224	236	241	260	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				6913	6911	6917	7162	6934	6863
Production (WWPA)				6216	6263	6521	6344		
Implied capacity utilization				90%	91%	94%	89%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
26	Simpson Tim Co	Gr Diamd Res/Orick	Arcata	94	94	94	94	94	94
20	Simpson Tim Co	Green Diamond Res	Korbel	557	557	557	583	583	583
Dimension Mills									
13	Collins Pine Co		Chester	35	236	236	283	283	283
22	Eel River Lum Prod		Fortuna		24	177	47	47	47
10	Harwood Prod		Branscomb	307	307	307	354	354	354
21	Pacific Lum Co		Scotia			177	590	590	590
1	Sierra For Prod		Terra Bella	109	142	153	153	153	153
17	Sierra Pacific Ind		Anderson	387	408	413	413	413	413
15	Sierra Pacific Ind		Burney	333	375	396	404	378	330
5	Sierra Pacific Ind	Michigan-California	Camino	269	283	283	283	283	283
3	Sierra Pacific Ind		Chinese Camp	244	244	244	244	179	179
6	Sierra Pacific Ind		Lincoln	583	588	607	614	614	614
12	Sierra Pacific Ind		Quincy	543	543	548	550	552	566
18	Sierra Pacific Ind		Shasta Lake	238	248	250	255	255	255
19	Trinity River Lum Co		Weaverville	295	319	312	337	330	319
Cedar Mills									
11	Sierra Pacific Ind		Oroville	106	146	172	194	201	212
Board Mills									
14	Shasta Green Inc	Big Valley Lum Co	Burney	94		165	165	165	170
4	Sierra Pacific Ind		Standard/Sonora	196	236	248	236	229	229
				2002	2003	2004	2005	2006	2007
Number of sawmills				33	30	29	27	26	26
Number employed ('000)				4.7	4.3	4.3	3.9	3.7	

Georgia & Florida

Softwood Roundwood Inventory & Softwood Sawmill Capacity



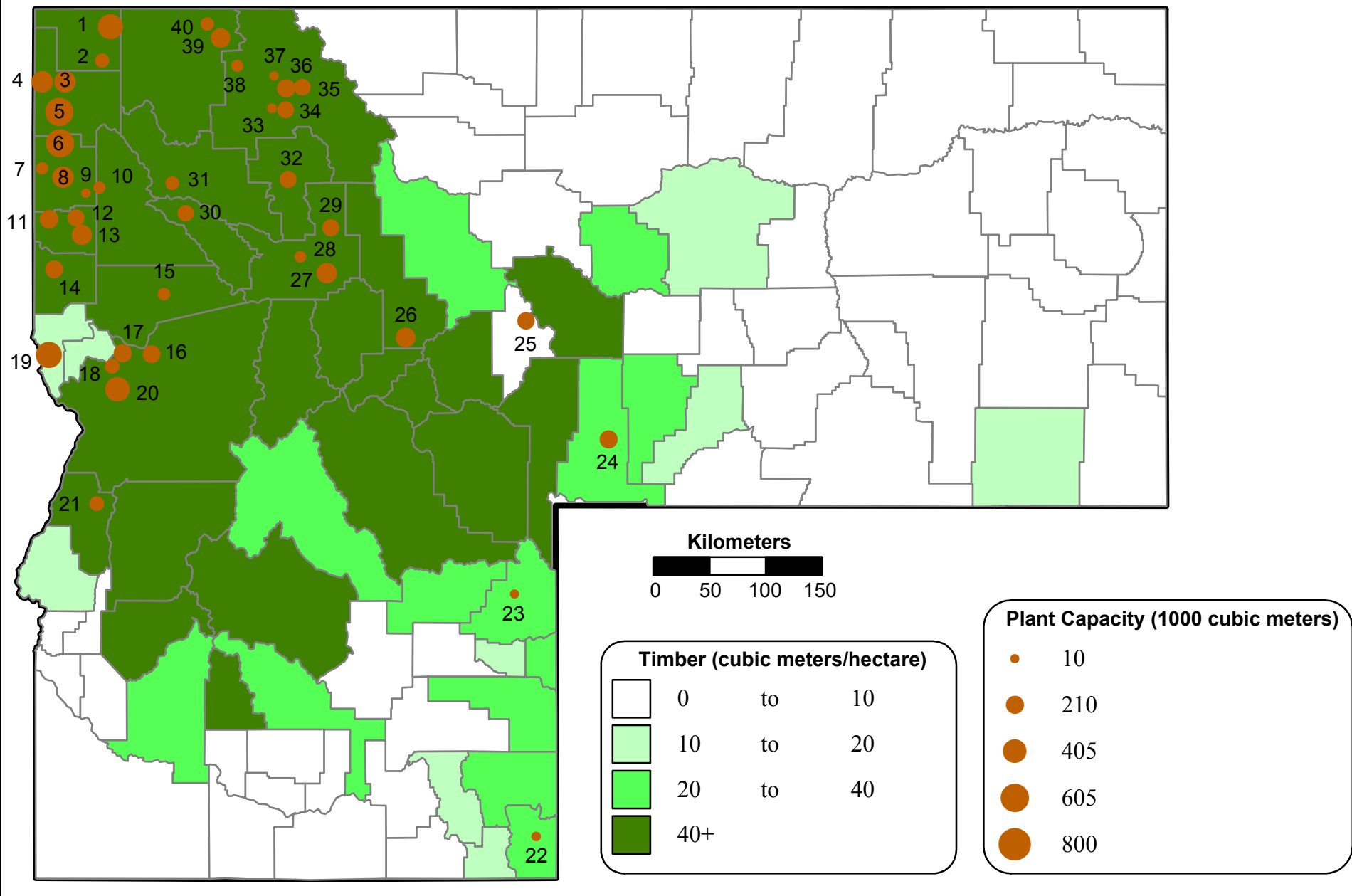
Florida, Georgia

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Georgia Mountain Tim		Cornelia	6					
	J P Haynes Lum Co		Canton	14					
	Georgia Lum Co		Covington	47					
	Burgin Lum Co		Cuthbert	78					
	Mead Westvaco		Greenville	260	130				
	Del-Cook Lum Co		Adel	201	201				
	S L Miller & Sons Lum		Armuchee	30	30	30	30		
Timber Mills									
10	Burt Lum Co		Washington	52	54	59	59	59	
61	Grayson Lum Corp	Louisiana-Pacific Corp	Westbay	83	83			*	
4	Hogan & Storey Wood Prod		Armuchee	18	18	18	18	18	
48	Pride of Florida		Raiford	12	12	9	10	10	
47	Tatum Bros Lum Co		Lawley	33	33	33	33	31	
2	W D Cline & Sons Lum Co		Dalton	12	12	12	12	12	
Stud Mills									
16	Georgia Pacific Koch Corp		Monticello	177	177	177	177	177	
59	Grayson Lum Corp	Louisiana-Pacific Corp	Marianna/Cyp	236	236	236	236	236	
29	W M Sheppard Lum Co		Brooklet	64	118	123	123	123	
Dimension Mills									
57	Balfour Lum Co	Beadles Lum Co	Thomasville	118	118	142	142	149	
35	Beadles Lum Co		Moultrie	135	153	130	130	137	
28	Claude Howard Lum Co		Statesboro	113	165	165	165	149	
62	Fleming Lum Co		Crestview	27	27	27	27	27	
41	Georgia Pacific Koch Corp		Brunswick/Sterling			167	250	250	
30	Georgia Pacific Koch Corp		Claxton	201	201	201	201	201	
52	Georgia Pacific Koch Corp		Cross City	212	236	236	245	245	
45	Georgia Pacific Koch Corp ITT Rayonier		Palatka	179	179	184	184	184	
13	Georgia Pacific Koch Corp		Warrenton	201	201	201	201	271	
38	Gilman Building Prod Co		Blackshear	212	227	227	236	255	
24	Gilman Building Prod Co		Dudley	243	243	243	255	255	
34	Gilman Building Prod Co		Fitzgerald	241	241	241	248	248	
49	Gilman Building Prod Co		Lake Butler	224	224	224	236	236	
46	Gilman Building Prod Co		Maxville	212	212	212	224	224	
53	Gilman Building Prod Co		Perry	186	198	198	201	224	
50	Great South Tim & Lum	Daniels Lum	Lake City	47	54	54	54	59	
21	Griffin Lum Co		Cordele	111	111	111	111	125	
8	Hogan Lum Co		Cleveland	14	14	9	9	9	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				8798	9035	9203	9858	10139	10174
Reported output (U.S. Census)				8357	7833	8777	9343		
Implied capacity utilization				95%	87%	95%	95%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
56	Hood Industries	Metcalf Lum Co	Metcalf	177	177	177	177	177
31	International Pap Corp	Union Camp Corp	Meldrim	307	307	307	307	319
18	Jordan Lum & Sup Co	Weyerhaeuser Co	Barnesville	319	236	236	295	378
19	Keadle Lum Enterprise		Thomaston	135	142	153	160	180
55	Langdale For Prod Co		Valdosta	319	326	331	342	342
58	North Florida Lum Co		Bristol	153	153	248	248	248
11	Pollard Lum Co		Appling	125	125	130	130	130
33	Rayonier		Baxley	389	389	389	389	425
15	Rayonier	Louisiana-Pacific Corp	Eatonton	177	177	189	189	212
25	Rayonier	Champion	Swainsboro	283	283	283	283	283
60	Rex Lum LLC	U.S. For Ind	Graceville		208	248	269	269
51	Suwannee Lum Mfg Co		Cross City	142	142	142	142	142
5	Temple-Inland	Inland Container	Rome	283	319	319	357	357
23	Tolleson Lum Co		Perry	295	307	307	378	361
20	Tolleson Lum Co	Container Inc	Preston	260	271	271	519	532
22	US Timber	Southeastern For Prod	Cordele		47	236	236	236
39	Varn Wood Prod		Hoboken	94	94	94	130	130
12	West Fraser Tim Co	International Pap Corp	Augusta	307	307	307	314	323
40	West Fraser Tim Co	International Pap Corp	Folkston	189	212	212	212	217
63	West Fraser Tim Co	International Pap Corp	McDavid	366	413	463	472	472
44	West Fraser Tim Co	International Pap Corp	Whitehouse	210	210	210	210	210
Board Mills								
54	Sherrod Lum Co		Greenville	30	30	30	30	30
Specialty or Unknown								
3	Baldrige Bros		Dalton	5	5	5	5	5
42	Edgy Planing Mill		Darien	9	9	9	9	9
26	Evans Lum Co		Sylvania	15	15	15	15	15
43	Franklin Lum Co		Hilliard	6	6	6	6	6
14	Hallman Wood Prod		Eatonton	16	16	16	16	16
36	Hubert Moore Lum Co		Alapaha	59	59	59	59	59
9	Irvin Lum Co		Cornelia	7	7	7	7	7
27	J W Exley Lum Co		Clyo	12	12	12	12	12
37	Little Suwannee Lbr Co		Homerville	20	20	20	20	20
7	Mount Yonah Lum Co		Cleveland	19	19	19	19	19
32	Shearouse Lum Co		Pooler	28	40	40	40	40
6	Sparks Lum Co		Ellijay	11	11	11	11	11
1	Sutton Lum Co		Tennga	14	14	14	14	14
17	Vaughn Lum Co		Forsyth	21	21	21	21	21
Number of sawmills				67	65	64	64	63
Number employed ('000)				5.2	5.3	5.3	5.3	5.4
* Note: Mill idled, but not yet closed								

Idaho & Montana

Softwood Roundwood Inventory & Softwood Sawmill Capacity



Idaho, Montana

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Crowder Lum Co	Berg Lum Co	Lewistown	35	59				
	Louisiana-Pacific Corp		Belgrade	208	112				
	Riley Creek Lum Co	Crown Pacific	Bonnors Ferry	295	177				
	Vinson Tim Prod		Trout Creek	57	57				
	Watters Lum Co		Thompson Falls	9	9				
	Cascade Tim		Laurel	30	30	30			
	Bennett For Ind	Shearer Lum Prod	Elk City	142	153	153	102		
	Blackfoot River Lum Co		Victor	30	30	30	30		
	Stimson Lum Co	Idaho For Ind Inc	Coeur d'Alene-Atlas	201	189	94	83		
	Owens and Hurst Lum Co		Eureka	189	189	189	94		
	D & G Lum Co		Three Forks	59	59	59	59		
	Stillwater For Prod		Kalispell	94	94	94	94	94	
Timber Mills									
33	Klinger Lum Co		Kalispell	21	21	21	21	21	
Stud Mills									
28	Eagle Stud Mill		Missoula	54	54	54	54	54	
7	Idaho Veneer Co	Ceda-Pine Veneer	Post Falls	59	59	59	59	59	
39	Plum Creek Tim Co		Fortine	195	234	234	248	248	
34	Plum Creek Tim Co		Kalispell/Evergr	244	248	248	271	208	
11	Plummer FP	Rayonier	Plummer	165	179	224	224	224	
12	Regulus Stud Mill		Saint Maries	177	177	177	177	177	
1	Riley Creek Lum Co	Louisiana-Pacific Corp	Moyie Springs	378	437	484	389	453	
24	RY Tim		Livingston	212	212	212	212	212	
25	RY Tim		Townsend	165	189	189	189	189	
27	Stimson Lum Co		Bonner	142	283	283	283	283	
8	Stimson Lum Co	Idaho For Ind Inc	Coeur d'Alene-Dean	319	321	321	321	321	
3	Stimson Lum Co	Idaho For Ind Inc	Priest River	330	319	319	319	319	
26	Sun Mountain Lum	Louisiana-Pacific Corp	Deer Lodge	319	319	319	319	260	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				8027	8271	8117	7953	7932	8034
Reported output (WWPA)				7196	7144	6960	7144		
Implied capacity utilization				90%	86%	86%	90%		

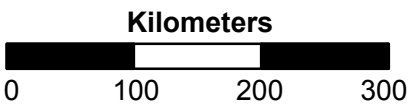
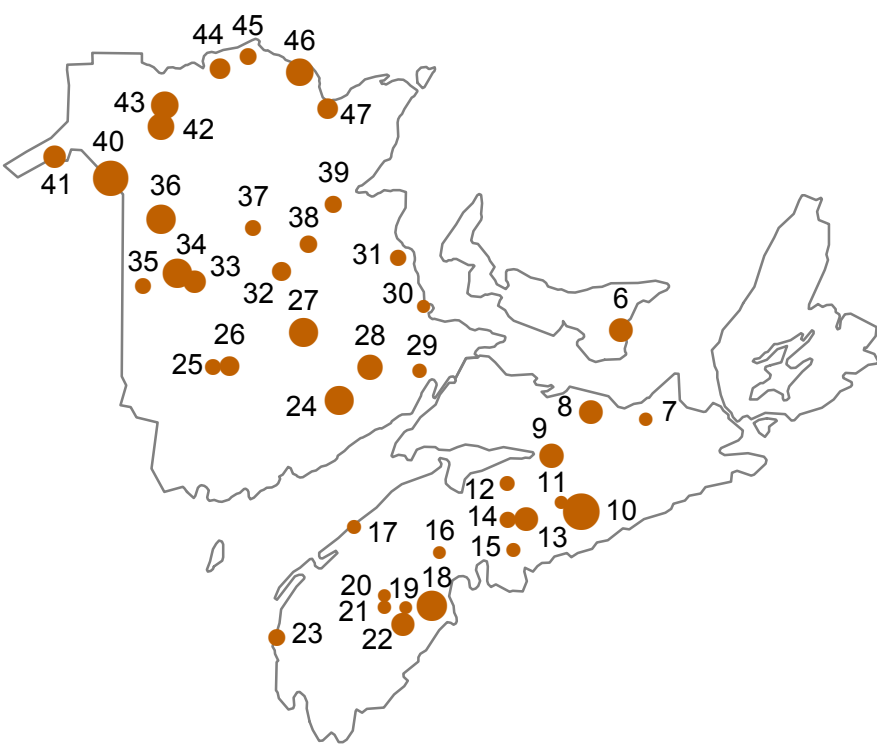
Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
30	Tricon Timber		Saint Regis	153	160	165	165	150	159
Dimension Mills									
16	Clearwater For Ind		Kooskia	194	196	201	201	201	201
18	Empire Lum Co	Kamiah Mills	Kamiah	118	118	118	118	118	118
21	Evergreen For Prod		New Meadows	123	123	123	123	123	123
35	F H Stoltze Land & Lum Co		Columbia Falls	149	142	142	142	165	165
4	J D Lumber		Priest River	307	319	319	319	319	319
40	Lone Pine Tim Ind		Eureka	90	90	90	90	90	90
19	Pottlatch Corp	Clearwater Lum	Lewiston	378	401	413	425	496	496
13	Pottlatch Corp		St Maries	212	248	271	271	283	283
6	Riley Creek Lum Co	Louisiana-Pacific Corp	Chilco (Athol)	453	472	566	566	566	566
5	Riley Creek Lum Co		Laclede	460	496	543	566	590	590
31	Thompson River Lum		Thompson Falls	94	94	94	94	94	94
17	Three Rivers Tim		Kamiah	130	137	137	137	165	212
Board Mills									
20	Bennett For Ind		Grangeville						307
14	Bennett Lum Co		Princeton	201	217	224	224	236	203
10	Malloy Lum Co		Kingston	59	59	59	59	59	59
38	North End Tim Prod		Olney	59	59	59	59	59	59
36	Plum Creek Tim Co		Columbia Falls	189	189	189	212	217	217
32	Plum Creek Tim Co		Pablo	177	172	212	230	177	177
29	Pyramid Mountain Lum		Seely Lake	142	153	177	177	177	177
15	Tri Pro	Konkolville Lum Co	Orofino	64	64	68	71	71	71
Specialty or Unknown									
22	Jensen Lum Co		Ovid	19	19	19	19	19	19
37	RBM Lum		Columbia Falls	4	4	4	4	5	5
23	Stoddard Lum Co		St Anthony	12	12	12	12	5	3
2	Welco Lum Co		Naples	101	106	106	106	106	106
9	Whiteman Lum Co		Cataldo	14	14	14	14	14	14
				2002	2003	2004	2005	2006	2007
Number of sawmills				51	51	46	45	41	40
Number employed ('000)				4.6	4.5	4.2	4.0	3.8	

Maritime Provinces & Newfoundland

Softwood Sawmill Capacity

Plant Capacity (1000 cubic meters)

- 10
- 210
- 405
- 605
- 800



New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland

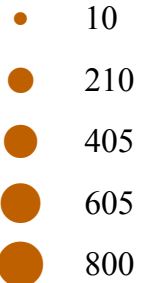
Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
Closed Mills										
	Lakeburn Lum Co		Moncton	35	35	35	35			
	J D Irving	Lewis Sawmill	Weymouth	135	135	135	90			
	Hugh Park & Son		Thorburn	9	9	9	9			
	Kingston Lum&Bldg Suppl		Kingston	12	12	12	12			
	C F Dickson For Prod		Westville	28	28	28	28			
	Julimar Lum		Brookfield	71	71	71	71	47		
Timber Mills										
35	H J Crabbe & Sons Ltd		Bristol	47	47	47	47	47	47	
Stud Mills										
47	Bathurst Lumber	UPM Kymmene	Bathurst	118	118	118	118	118	118	
46	Chaleur Sawmill Assoc	Scieries Chaleur	Belledune	177	177	248	260	260	260	
31	Delco FP		W. Branch	52	52	52	52	52	52	
25	Devon Lum Co		Fredericton	59	59	59	59	47	47	
28	H A Fawcett & Son Ltd		Petitcodiac	201	212	212	212	212	212	
22	Harry Freeman & Son		Greenfield	165	165	168	168	168	168	
15	Heffer FP Ltd		Lower Sackville	24	24	24	24	24	24	
6	J D Irving	Georgetown Tim Inc	Georgetown	177	177	177	177	177	177	
43	J D Irving	Deniso Lebel	Kedgwick	248	253	260	260	260	260	
40	J D Irving		St. Leonard	463	463	463	463	463	463	
24	J D Irving	Bayshore Lum	Sussex	295	295	295	295	295	295	
13	Ledwidge Lum Co		Enfield	142	142	158	177	177	177	
8	Ligni Bel Ltd	Deniso Lebel	Scotsburn	142	142	165	260	177	177	
4	Sexton Lumber Co	Bloomfield Lum Ltd	Bloomfield	47	52	52	52	52	52	
Dimension Mills										
3	A L Stuckless & Sons	N Atlantic Lumber	Glenwood	28	28	28	28	28	28	
18	AbitibiBowater		Bridgewater	260	262	307	319	323	323	
45	Adrien Arsenault Sawmill		Balmoral	59	59	59	59	59	59	
19	Barrett Lum Co		Lower Sackville	16	16	12	12	12	12	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007	
Estimated capacity				5879	5909	6143	6280	6011	5958	
Production (Stats Can)				5158	5322	5563	5190	4964		
Implied capacity utilization				88%	90%	91%	83%	83%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
38	Blackville Lum	UPM Kymmene	Blackville	71	71	71	71	71	71	
1	Canada Bay Lum Co		Roddickton	30	30	30	30	30	30	
23	Comeau Lum		Meteghan	35	35	26	26	26	61	61
2	Cottle's Isl Lum Co		Summerford	24	24	24	24	24	24	
14	Elmsdale Lum Co		Elmsdale	52	52	52	52	52	52	
34	Fraser Timber Ltd	Juniper Lum Co Ltd	Juniper	378	378	378	378	307	307	
36	Fraser Timber Ltd	Nexfor Fraser Papers	Plaster Rock	271	274	274	283	307	307	
41	J D Irving	Bowater	Baker Brook	156	156	156	156	156	156	
27	J D Irving	Grand Lake Tim Ltd	Chipman	295	295	295	295	295	295	
33	J D Irving		Deersdale/Juniper	153	153	153	153	153	153	
9	J D Irving	Sproule Lum Ltd	Truro/Valley	189	189	189	189	189	189	
5	Jamestown Lum Co Ltd		Lethbridge	22	22	22	22	22	28	28
26	M L Wilkins & Son Ltd		Fredericton	106	106	106	106	101	101	
10	McTara Ltd		Upper Musquodoboit	378	401	472	472	496	496	
37	Miramichi Lum Prod	Newcastle Lum Co	Boiestown	47	24	24	47	47	47	
44	N American For Prod	Belanger Div	St. Arthur	118	118	118	118	118	118	
42	N American For Prod		St. Quentin	236	236	236	236	236	236	
39	Newcastle Lum Co		Newcastle	41	42	54	66	66	66	
29	T P Downey & Sons		Hillsborough	35	35	35	35	36	31	
Board Mills										
30	Goguen Lumber		Cocagne	12	14	14	14	14	14	
21	Holdwright Lum Prod		Caledonia	9	9	9	9	9	9	
32	J D Irving		Doaktown	94	94	94	94	94	94	
20	N F Douglas Lumber Co		Caledonia	19	19	19	19	19	19	
11	Taylor Lum Co		Middle Musquodoboit	15	15	15	15	15	15	
Specialty or Unknown										
17	Hoeg Bros Lum		Southampton	24	24	24	24	24	24	
16	Murray Reeves		New Ross	11	11	11	11	12	12	
12	Russel White Lum		Kennetcook	35	35	35	35	35	35	
7	Williams Bros Ltd		Barney's River	15	15	15	15	19	19	
				2002	2003	2004	2005	2006	2007	
Number of sawmills				53	53	53	53	48	47	
Number employed ('000)				3.8	3.8	3.9	3.8	3.8		

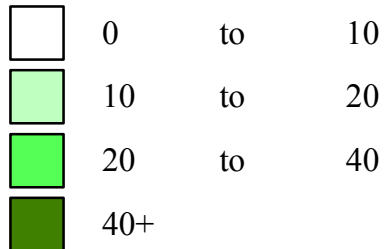
Maryland & Virginia

Softwood Roundwood Inventory & Softwood Sawmill Capacity

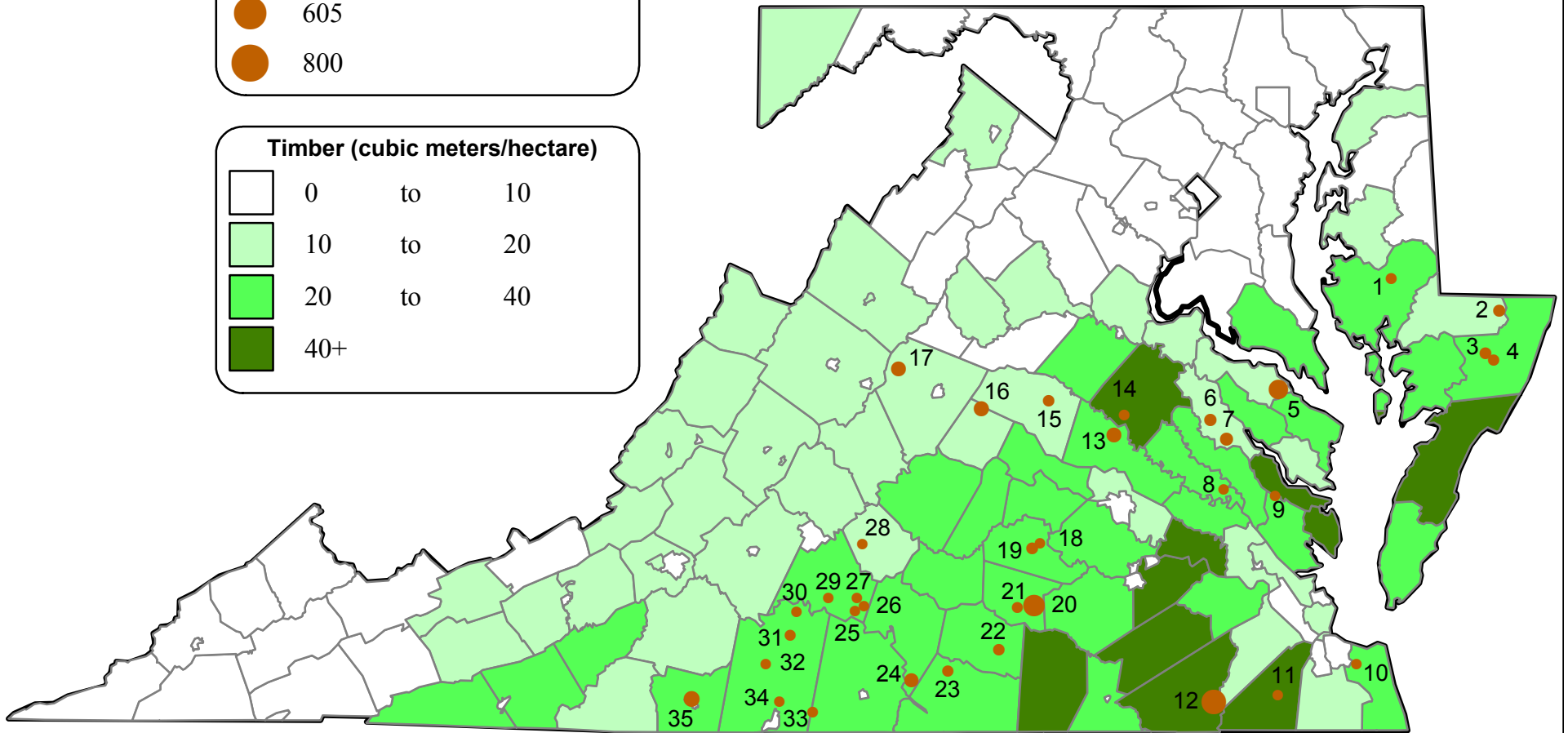
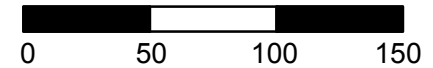
Plant Capacity (1000 cubic meters)



Timber (cubic meters/hectare)



Kilometers



Maryland, Virginia

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
Closed Mills								
	Coastal Lum Co		Suffolk	24				
	Tradewinds of Virginia		Bumpass	59				
	Evans Lum Co		Waverly	59	24			
	Dalton Lum Corp		Altavista	4	4			
	Northern Neck Lum Co		Warsaw	5	5			
	Dixon Lum Co		Galax	17	17			
	Georgia Pacific Koch Corp		Wakefield	76	38			
	Rappahannock Lum Co		Saluda	7	7	7		
	Nottoway Lum Co		Blackstone	83	83	24		
	Dominion For Prod		Martinsville	5	5	5	5	
	St Laurent Papbd	Chesapeake Bldg	Princess Anne	64	64	64	64	
	Earl W. Withers Inc		Callao	14	8	14	19	19
	J Franklin Jones Lum Co		Accomac	21	21	21	21	2
	J V Wells Lum Co		Sharptown	83	83	83	83	60
Timber Mills								
20	ArborTech		Blackstone	165	183	194	215	222 231
16	Chips		Troy	83	83	85	85	85 85
31	Gibson Lum Co		Gretna	17	17	17	17	17 17
3	Millville Lum Co	J. Milton Laws	Snow Hill	24	24	28	28	28 28
30	Robertson Lum		Hurt	9	9	12	12	12 12
Dimension Mills								
19	Amelia Lum Co		Amelia	26	28	28	28	28 28
13	Flippo Lum Corp		Doswell	79	80	80	80	80 80
12	International Pap Corp	Union Camp Corp	Franklin	295	307	314	314	314 314
35	Pine Prod Inc		Martinsville	99	99	99	99	99 99
6	Tidewater Lum Corp		Tappahannock	35	35	35	35	35 35

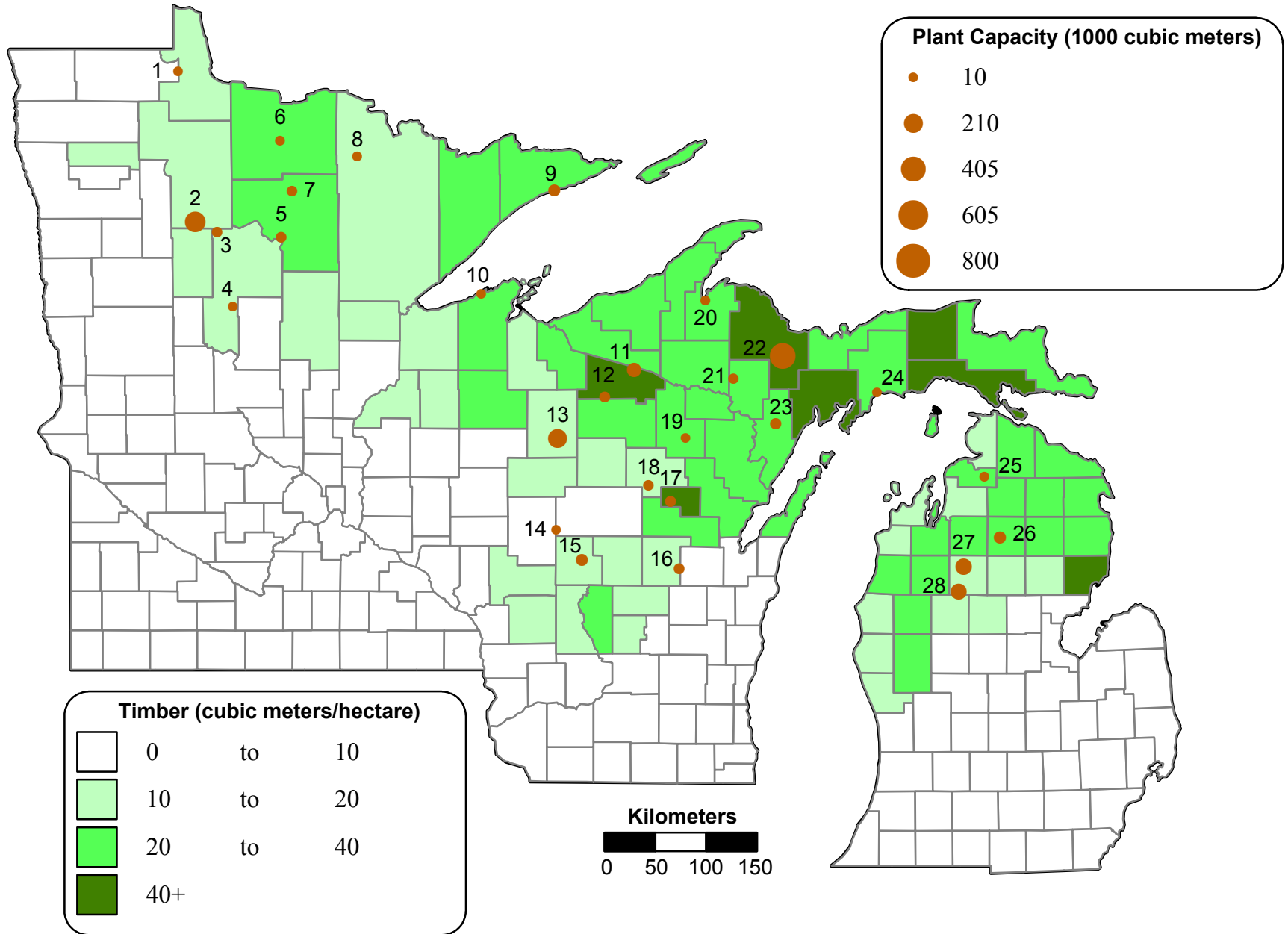
Softwood lumber (1,000 m³)	2002	2003	2004	2005	2006	2007
Estimated capacity	1834	1668	1734	1776	1638	1569
Production (U.S. Census)	1803	1723	1815	1867		
Implied capacity utilization	98%	103%	105%	105%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)				
				2002	2003	2004	2005	2006
Board Mills								
22	Barnes Manufacturing Co		Kenbridge	24	24	24	24	24 24
9	Carlton & Edwards		Saluda	19	19	12	12	12 12
11	Kirk Lum Co		Suffolk	5	5	5	5	5 5
34	M Kendall Lum Co		Blairs	21	21	5	5	5 5
24	Morgan Lum Co		Red Oak	50	50	61	61	61 64
5	Potomac Supply Corp		Kinsale	37	0	165	212	177 177
17	R A Yancey Lum Corp		Crozet	79	79	79	79	79 79
32	Saunders Lum Co		Chatham	5	5	5	5	5 5
8	West Pt Logging Corp		West Point	9	9	9	9	9 9
Specialty or Unknown								
26	Adams Lum Co		Brookneal	9	9	9	9	9 9
18	Anderson Bros Lum Co		Amelia	6	6	6	6	6 6
7	Ball Lum Co		Millers Tavern	18	18	42	47	47 47
33	Cloverdale Lum Co		Sutherlin	14	14	14	14	14 14
2	Cropper Brothers Lum Co		Willards	33	33	33	33	33 33
1	Dorchester Lum Co		Linkwood	17	17	17	17	17 17
29	Gladys Tim Prod	The Burruss Co	Gladys	9	9	9	5	6 6
28	J D Martin Lum Co		Spout Spring	6	6	6	6	6 6
14	J H Knighton Lum Co		Ruther Glen	14	14	14	14	14 14
10	Kempsville Bldg Mat		Virginia Beach	12	12	12	12	12 12
4	Paul M Jones Lum Co		Snow Hill	24	24	24	24	24 24
23	Spaulding Lum Co		Chase City	21	21	21	21	21 21
21	Taylor Ramsey Corp		Blackstone	17	17	17	17	17 17
25	Tucker Sawmill Co		Brookneal	6	6	6	6	6 6
15	Walton Lum Co		Mineral	24	24	24	24	24 24
27	Williams Lum Sup Co		Brookneal	6	6	6	6	6 6

	2002	2003	2004	2005	2006	2007
Number of sawmills	49	46	42	40	38	35
Number employed ('000)	1.7	1.6	1.6	1.5	1.3	

Minnesota, Wisconsin, Michigan

Softwood Roundwood Inventory & Softwood Sawmill Capacity

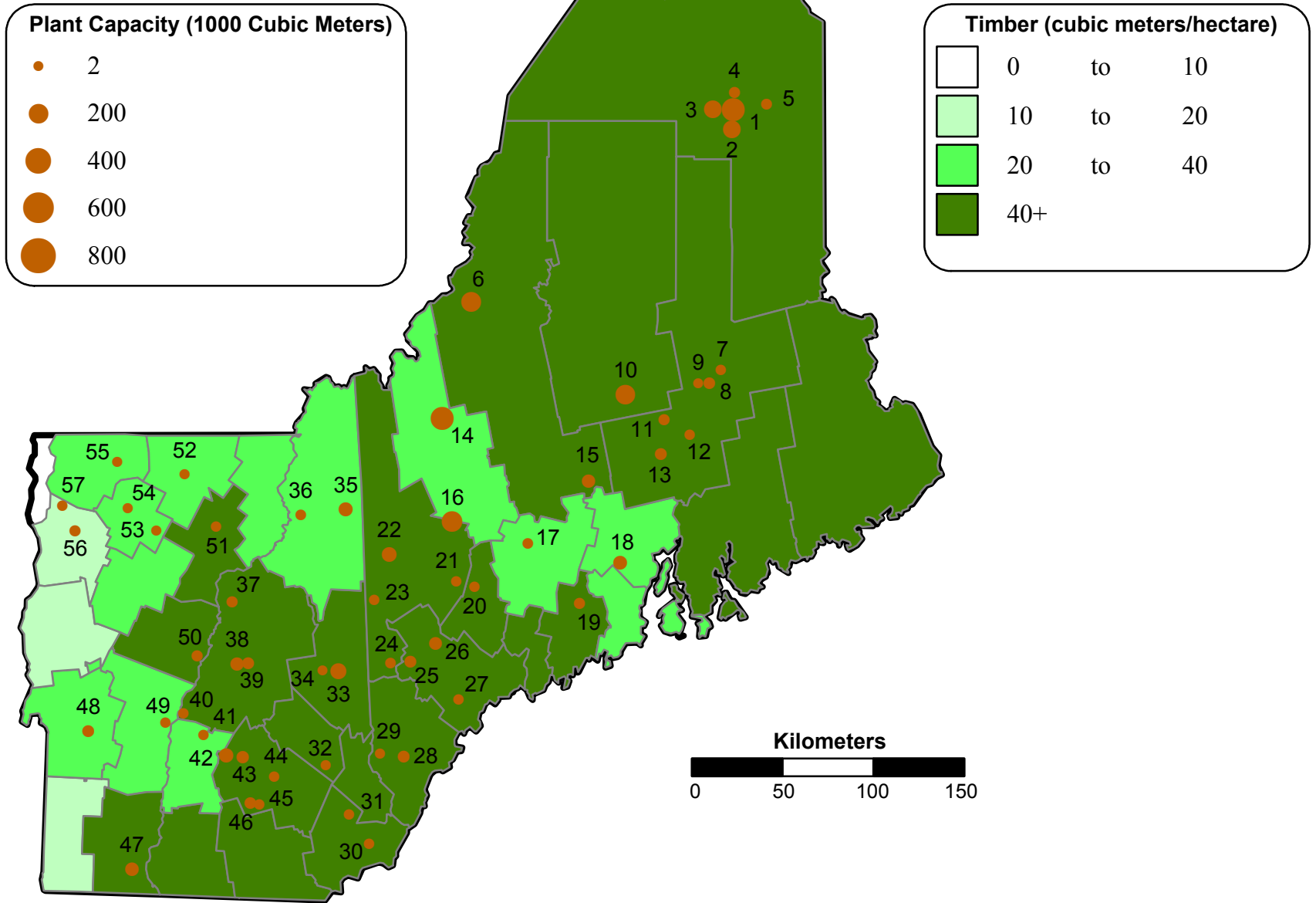


Minnesota, Wisconsin, Michigan

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)					
				2002	2003	2004	2005	2006	2007
Timber Mills									
23	Cedar River Lum Co		Powers	42	42	42	42	35	35
6	Page & Hill For Prod		Big Falls	14	14	14	14	14	14
27	Pine Tech		Lake City	118	118	125	137	142	142
14	Wolf Sawmill		Spencer	8	8	8	8	8	8
Stud Mills									
2	Potlatch Corp		Bemidji	212	236	260	260	260	260
22	Potlatch Corp	Louisiana-Pacific Corp	Gwinn	413	425	437	413	425	437
5	Rajala Tim Co		Deer River	42	42	42	28	28	28
Dimension Mills									
3	Cass FP		Cass Lake	24	24	24	24	24	24
9	Hedstrom Lum Co		Grand Marais	59	59	47	47	47	47
28	John A Biewer Lum Co		McBain	118	118	118	130	130	130
13	John A Biewer Lum Co		Prentice	118	130	130	130	172	212
11	Nagel Lum Co		Land O'Lakes	94	94	94	94	94	94
12	Pukall Lum Co		Woodruff	31	31	31	31	31	31
15	Ralph Hamel FP		Vesper	47	47	47	47	47	47
Board Mills									
26	AJD FP		Grayling	52	52	52	52	52	52
21	Aspen Lum Co		Sagola	21	21	21	21	21	21
10	Isaksson Lum Co		Herbster	6	6	6	6	6	6
17	Menominee Tribal Enter		Neopit	33	33	33	33	33	33
19	Nicolet Lum Co		Laona	7	7	5	5	5	5
7	Rajala Tim Co		Bigfork	24	24	24	24	24	24
Specialty or Unknown									
4	Christensen FP		Pine River	5	5	5	5	5	5
20	Erickson Lum		Lanse	15	15	15	15	15	15
18	Kretz Lum Co		Antigo	24	24	24	24	24	24
24	Manistique Saw & Planing		Manistique	7	7	7	7	7	7
25	Matelski Lum Co		Boyne Falls	14	14	14	14	14	14
8	N Lights Tim & Lum	Nett Lake Res	Orr	14	14	14	14	14	14
16	Ort Lum		New London	28	28	28	28	28	28
1	Roosevelt Lum		Roosevelt	5	5	5	5	5	5
Softwood lumber (1,000 m ³)				2002	2003	2004	2005	2006	2007
Estimated capacity				1596	1643	1671	1657	1709	1761
Production (Census)				1348	1591	1567	1593		
Implied capacity utilization				84%	97%	94%	96%		
Number of sawmills				27	27	27	27	27	27
Number employed ('000)				1.7	1.7	1.7	1.6	1.4	

Maine, New Hampshire, Vermont

Softwood Roundwood Inventory & Softwood Sawmill Capacity

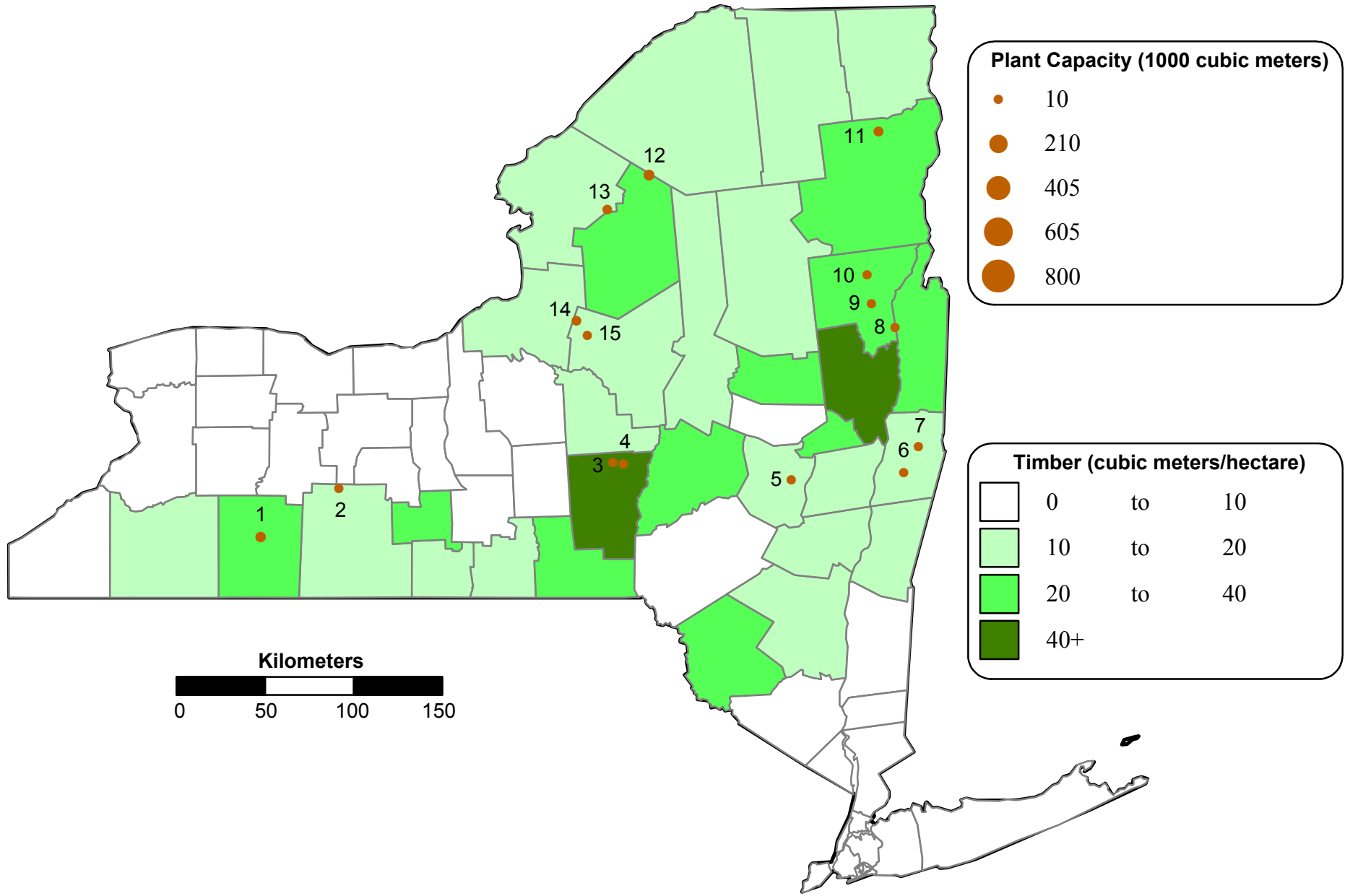


New England (Maine, New Hampshire, Vermont)

Mill		Former name	Capacity / Production (1,000 m ³)					Mill		Former name	Capacity / Production (1,000 m ³)								
I.D.	Name	or DBA	Location	2002	2003	2004	2005	2006	2007	I.D.	Name	or DBA	Location	2002	2003	2004	2005	2006	2007
Closed Mills																			
	Cousineau		Strong	12						8	Cold Stream Lum Co		West Enfield	24	24	24	28	28	28
	Goose Bay Sawmill		Chichester	9						41	Cote & Roney Lum Co		Grantham	12	12	12	12	9	9
	Louisiana-Pacific Corp	Georgia-Pacific Corp	Woodland	156						57	Cyr Lum		Milton	9	9	12	12	12	12
	M S K Lum Co		East Kingston	7						42	Durgin-Crowell Lum Co		New London	61	64	66	66	78	78
	Onnela Lum Co		Lempeter	12						31	Fernald Lum Co		Nottingham	8	8	8	8	8	8
	Stinson		Rumney	7						4	Fraser Tim Ltd	J Paul Levesque	S Ashland	24	24	24	24	24	24
	Bailey Manufacturing Co		Fryeburg	24	24					46	Granite State For Prod		Henniker	31	31	31	31	31	31
	Bingham Lum		Brookline	19	19					51	Greenwood Mill	Calendar Brook Lum	Lyndonville	8	8	8	9	9	9
	R Leon Williams Lum Co		Clifton	24	24					37	H G Wood Prod		Bath	21	21	24	24	24	24
	Richardson For Prod	Crobb Box Co	Ellsworth	17	12					17	Hammond Lum Co		Belgrade	12	12	13	13	13	13
	Tembec	Scierie Davidson	Woodsville	71	47					22	Hancock Lum Co	P.H. Chadbourne &	(Bethel)	57	57	61	68	85	89
	Timco Inc	Desoto Treated Materials	Center Barnstead	40	20					26	Hancock Lum Co		Casco	73	40	40	40	49	50
	Cherokee Lum Co		Newport	7	7	7	7			15	Hancock Lum Co		Pittsfield	38	47	41	41	55	58
	Crestwoods Inc	Beaman Lum Co	Winchester	24	24	24	24			7	Haskel Lum		Lincoln	9	9	9	12	9	9
Timber Mills																			
29	Great Brook Lum Co		Lebanon	9	9	6	6	6	6	54	Heath Lum		North Hyde Park	5	5	5	5	5	5
11	Parker Lum Co		Bradford	17	17	24	24	24	24	27	Hillside Lum		Westbrook	5	8	9	8	8	8
36	Perras Lum Co		Groveton	17	17	17	17	14	14	16	J D Irving	Highland Lum Co	Dixfield	236	236	236	236	236	236
12	Stillwater Lum		Stillwater	12	12	12	12	12	12	38	King For Ind		Wentworth	59	59	59	59	59	59
Stud Mills																			
3	Fraser Tim Ltd	J Paul Levesque	Ashland	177	177	165	153	153	153	56	Lamell Lum Corp		Essex Junction	21	21	21	21	21	21
9	Pleasant River Lum Co		W Enfield						*	28	Lavalley Lum		Sanford	35	35	35	35	35	35
Dimension Mills																			
5	Beaulieu Bros Lum		Chapman	17	17	17	17	17	17	25	Limington Lum Co		East Baldwin	24	24	35	35	35	35
1	Fraser Tim Ltd	J Paul Levesque	Masardis	260	295	295	271	307	307	23	Lovell Lum Co		Lovell	15	15	12	12	12	12
2	J D Irving	Pinkham Lum Co	Ashland	153	153	153	153	153	153	55	Lussier's Sawmill		Enosburg Falls	7	7	7	7	7	7
6	Moose River Lum Co		Moose River	201	201	215	215	215	215	52	M Piette & Sons		Irasburg	6	6	6	6	6	6
10	Pleasant River Lum Co	Gerard Crete&Fils	Dover-Foxcroft	118	189	189	201	201	201	33	Madison Lum Mill	International Pap Co	West Ossipee	83	94	111	111	111	111
14	Stratton Lum Co		Stratton	125	130	130	165	307	307	43	Middleton Bldg Sup	Diprizio Pine Sales	Middleton	35	35	35	35	40	40
35	Vallee Lum Co		Milan	83	83	28	24	71	71	48	Mill River Lum		N. Clarendon	35	35	35	35	35	35
Board Mills																			
32	Barton Lum Co		Barnstead	7	7	7	7	7	7	20	Moose Creek Lum Co		Turner	9	9	9	9	9	9
50	Britton Lum Co		Fairlee	24	24	24	24	24	24	19	N C Hunt		Jefferson	30	30	30	30	19	24
47	Cersosimo Lum Co		Brattleboro	62	62	62	62	62	62	13	Old Town Lum Co		Kenduskeag	35	35	35	35	35	35
40	Cersosimo Lum Co		W Lebanon	12	12	12	12	12	12	45	Patenaude Lum Co		Henniker	12	12	12	12	12	12
34	Chocorua Valley Lum	Bellingham Lum Co	South Tamworth	18	18	18	18	3	4	39	Precision Lum		Wentworth	28	28	28	28	35	35
44	Colby Lum Co		Boscawen	9	9	9	9	9	9	53	P&R Lum		Wolcott	5	5	5	5	5	5
Softwood lumber (1,000 m ³)				2002	2003	2004	2005	2006	2007	Number of sawmills				70	64	58	58	56	56
Estimated capacity				2915	2768	2616	2643	2870	2883	Number employed ('000)				3.1	2.8	2.5	2.6	2.5	
Reported output (U.S. Census)				2688	2504	2554	2589			* Note: New mill planned for 2008									
Implied capacity utilization				92%	90%	98%	98%												

New York

Softwood Roundwood Inventory & Softwood Sawmill Capacity

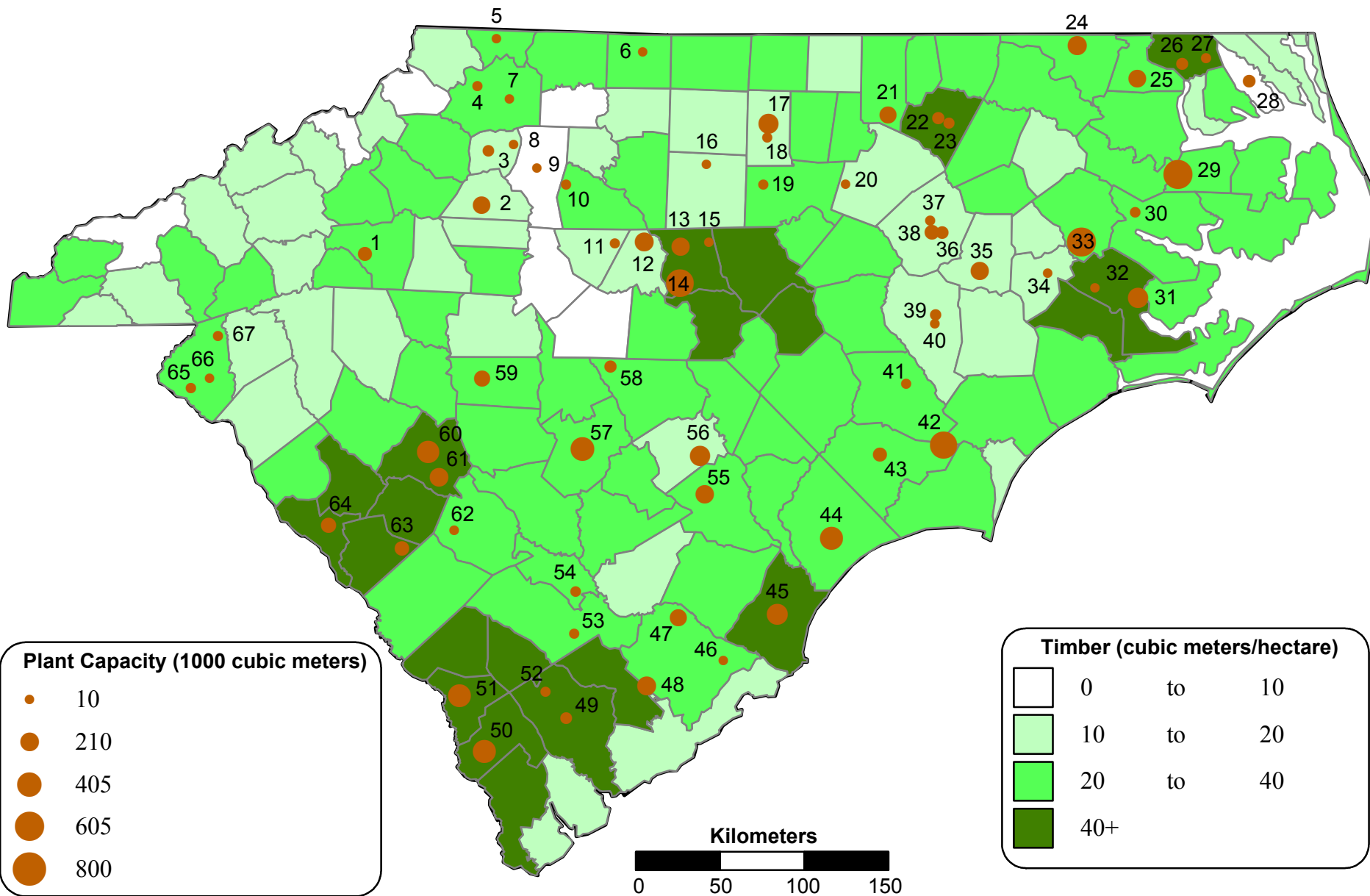


New York

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Brothers Lum		Norwood	7	7	7	7		
	Brown & Son Lum Co		Chestertown	7	7	7	7		
	Cornwright Lum Corp		Lewis	11	11	11	11		
	Cote Wood Prod		Groton	12	12	7	12		
	Drake Lum Corp		Schroon Lake	9	9	9	9		
	Wood Prod Inc		Ausable Forks	9	9	9	9		
Timber Mills									
1	Angelica For Prod		Angelica	19	19	19	19	31	31
4	Lok-N-Logs		Sherburne	12	12	12	12	12	12
11	Ward Lum Co		Jay	33	33	33	33	29	21
Dimension Mills									
3	Edmonds Lum		Smyrna	7	7	7	7	1	1
2	Fleischman Farms		Atlanta	7	7	7	7	5	5
14	G W Platt & Sons		Westdale	18	18	18	18	18	18
6	L J Valente, Inc		Averill Park	5	5	5	5	6	6
7	Rynard G Gundrum Lum		Grafton	7	7	7	7	7	7
15	Spink Lum		Camden	7	7	7	7	7	7
5	Urrey Lum		Middleburgh	7	7	7	7	2	2
Board Mills									
10	Cooper Lum Inc		Chestertown	7	7	7	7	7	7
12	HDK Wood Products	Bestway Enterprises	Harrisville					12	35
13	Johnson Lum Co		Carthage	31	31	31	31	19	19
8	Mead Lum		Queensbury	7	7	7	7	9	9
9	Richard Baker & Sons		Warrensburg	7	7	7	7	7	7
Softwood lumber (1,000 m ³)				2002	2003	2004	2005	2006	2007
Estimated capacity				97	97	95	97	73	80
Production (U.S. Census)				69	68	70	71		
Implied capacity utilization				71%	70%	74%	73%		
Number of sawmills				20	20	20	20	15	15
Number employed ('000)				0.2	0.2	0.2	0.2	0.3	

North Carolina & South Carolina

Softwood Roundwood Inventory & Softwood Sawmill Capacity



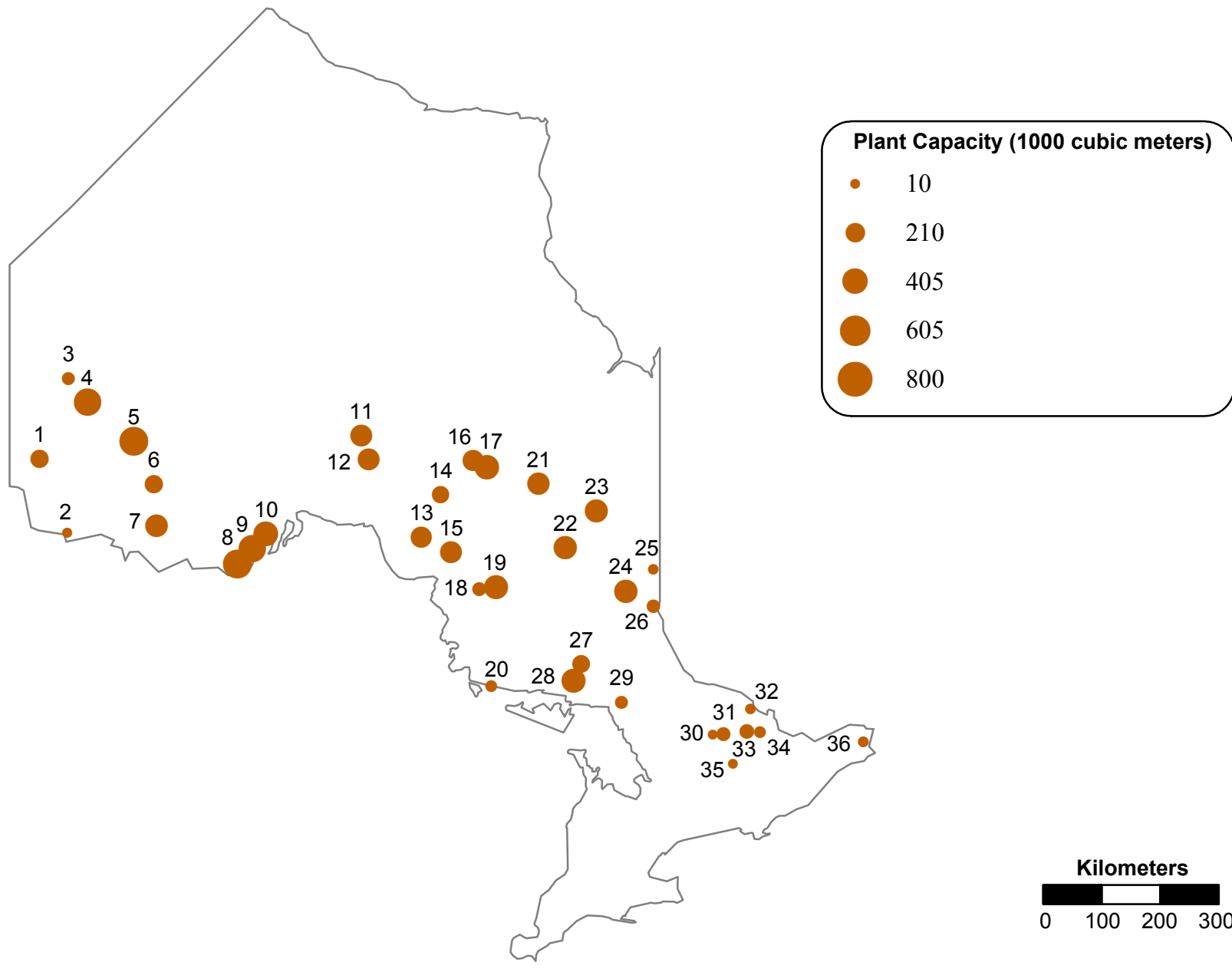
North Carolina, South Carolina

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
Closed Mills										
	Roanoke Lum Co		Roanoke Rapids	34						
	Allen Bros Tim Co		Rockingham	10	5					
	Mebane Lum Co		Mebane	78	97	8				
	King Lum Co		Seagrove	24	24	24				
	Umphlett Lum Co		Moncks Corner	57	57	57				
	Hillsville Lum Co		Trinity	8	8	8				
	Waters Lum Co		Bostic	19	19	19				
	Younce & Ralph Lum Co		Pantego	19	19	19				
	American Pallet Leasing	G & G/Cherokee Lum	Blacksburg	32	32	28	28			
	A & M Lum	Eck Wood Products	Hodges	24	24	24	24			
	Evans Lum Co	Albemarle For Prod	Edenton	21	24	24	24			
	Evans Lum Co		Lewiston	71	71	71	71			
	G & G Lum Co		Union Grove	42	42	42	24			
	Troy Lum Sales Corp		Norman	25	25	25	25			
	M L Corley&Sons Sawmill		Lexington	71	71	59	59	59		
Timber Mills										
27	Hofler & Sons Lum Co		Sunbury	24	24	24	24	24	24	
Stud Mills										
59	Chester Wood Prod	Weyerhaeuser Co	Chester	106	118	118	118	130	142	
47	GeorgiaPacificKoch Corp		Russellville	170	170	170	170	165	165	
60	West Fraser Tim Co	International Pap Corp	Newberry	330	330	330	330	330	330	
31	Weyerhaeuser Co		New Bern	212	271	271	260	260	260	
Dimension Mills										
18	Braxton Sawmill		Graham	24	24	24	24	24	24	
57	Canfor	New South	Camden	354	378	378	378	378	378	
44	Canfor	New South	Conway	283	307	307	354	354	354	
17	Canfor	New South	Graham	201	201	231	236	253	253	
55	Charles Ingram Lum Co		Effingham	144	153	184	205	205	205	
56	Chesterfield Lum Co		Darlington	189	189	201	201	201	201	
49	Coastal Lum Co		Walterboro	47	47	47	47	47	47	
51	Collums Lum Prod		Allendale	180	278	330	354	354	340	
50	Elliott Sawmilling Co		Estill	261	271	271	271	354	354	
25	GeorgiaPacificKoch Corp		Ahoskie	184	184	184	184	184	184	
21	GeorgiaPacificKoch Corp	Champion	Creedmoor	168	168	168	168	168	168	
35	GeorgiaPacificKoch Corp		Dudley	198	198	198	198	198	198	
64	GeorgiaPacificKoch Corp		McCormick	118	118	118	118	118	118	
61	GeorgiaPacificKoch Corp		Prosperity	212	201	212	212	212	212	
43	GeorgiaPacificKoch Corp		Whiteville	170	170	94	94	94	94	
12	H W Culp Lum Co		New London	182	186	189	219	219	219	
63	International Pap Corp	Federal Paperbd	Johnston	106	106	106	106	106	106	
45	International Pap Corp		Sampit	260	260	260	260	260	283	
14	Jordan Lum & Sup Co		Mount Gilead	366	401	472	519	531	531	
30	Mason Lum Co		Washington	35	38	38	28	28	28	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007	
Estimated capacity				8090	8460	8623	8722	8774	8738	
Production (U.S. Census)				7370	7500	8005	8057			
Implied capacity utilization				91%	89%	93%	92%			

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
48	Mead Westvaco		Summerville	215	221	221	221	221	221	
13	Troy Lum Co		Troy	163	170	170	170	196	196	
42	West Fraser Tim Co	International Pap Corp	Riegelwood	472	472	500	500	507	507	
24	West Fraser Tim Co	International Pap Corp	Seaboard	224	224	224	224	224	224	
33	Weyerhaeuser Co		Ayden/Greenv	566	590	590	590	590	590	
29	Weyerhaeuser Co		Plymouth	472	543	590	590	590	590	
Board Mills										
46	Charleston Heartpine Co		Jamestown	6	6	6	6	6	6	
40	F L Turlington Lbr Co		Clinton	13	13	13	13	13	13	
28	J W Jones Lum Co		Elizabeth City	58	59	64	66	67	67	
37	Jerry G Williams & Sons		Smithfield	21	21	24	24	24	24	
39	Keener Lum Co		Clinton	40	40	42	42	42	42	
36	Keener Lum Co		Smithfield	33	33	59	66	66	66	
38	Lampe&Malphrus Lum Co		Smithfield	83	83	97	109	109	109	
1	Parton Co		Rutherfordton	94	94	94	94	94	94	
16	Randleman Lum Co		Randleman	7	12	12	12	12	12	
7	Sale Lum Co		N. Wilkesboro	7	7	11	11	11	12	
41	Ward Lum Co		Elizabethtown	24	24	24	24	24	24	
32	Warmack Lum Co		Cove City	8	8	8	8	8	8	
52	Warren & Griffin		Williams	35	35	26	26	21	21	
Specialty or Unknown										
20	Apex Lum Co		Apex	11	11	11	11	11	11	
6	Bill Hanks Lum Co		Danbury	11	11	11	11	11	11	
9	Brittain Lum Co		Statesville	9	9	9	9	9	9	
58	C M Tucker Lum Co		Pageland	57	57	57	57	57	57	
54	Cameron Lum Co		Cameron	28	28	28	28	31	31	
26	Coxe Lewis Lum Co	Ashton Lewis Lum Co	Gatesville	52	54	54	54	54	54	
66	F B Davis Sawmill		Richland	11	11	11	11	11	11	
3	F S Childers&Sons Lbr Co		Taylorsville	44	44	44	44	44	44	
8	Fortner Lum Co		Hiddenite	6	6	6	6	2	2	
2	Gregory Wood Products	G & G Lum Co	Newton			5	83	177	177	
5	L F Delp Lum Co		Sparta	4	4	4	4	4	4	
15	McIntosh Lum Co		Star	12	12	12	12	12	12	
11	Piedmont Hardwd Lbr Co		Mount Pleasant	21	21	21	21	21	21	
23	Pruitt Lum Co		Louisburg	35	35	35	35	35	35	
4	Randy Miller Lum Co		Millers Creek	24	26	26	26	26	26	
62	Ridge Lum		Leesville	14	14	14	14	14	14	
34	Roger Carter Corp		Kinston	5	5	5	5	5	5	
10	Shaver Wood Prod		Cleveland	21	21	21	21	21	21	
65	Thrift Brothers Lum Co		Westminster	18	18	18	18	24	24	
22	Toney Lum Co		Louisburg	41	42	54	54	54	57	
53	V P Kiser Lum Co		Bowman	21	21	21	21	24	21	
14	Jordan Lum & Sup Co		Salem	22	24	24	24	24	24	
19	Wrenn Bros		Siler City	23	23	23	23	23	23	
Number of sawmills				81	80	80	74	68	67	
Number employed ('000)				5.5	5.6	6.0	5.7	5.4		

Ontario

Softwood Sawmill Capacity



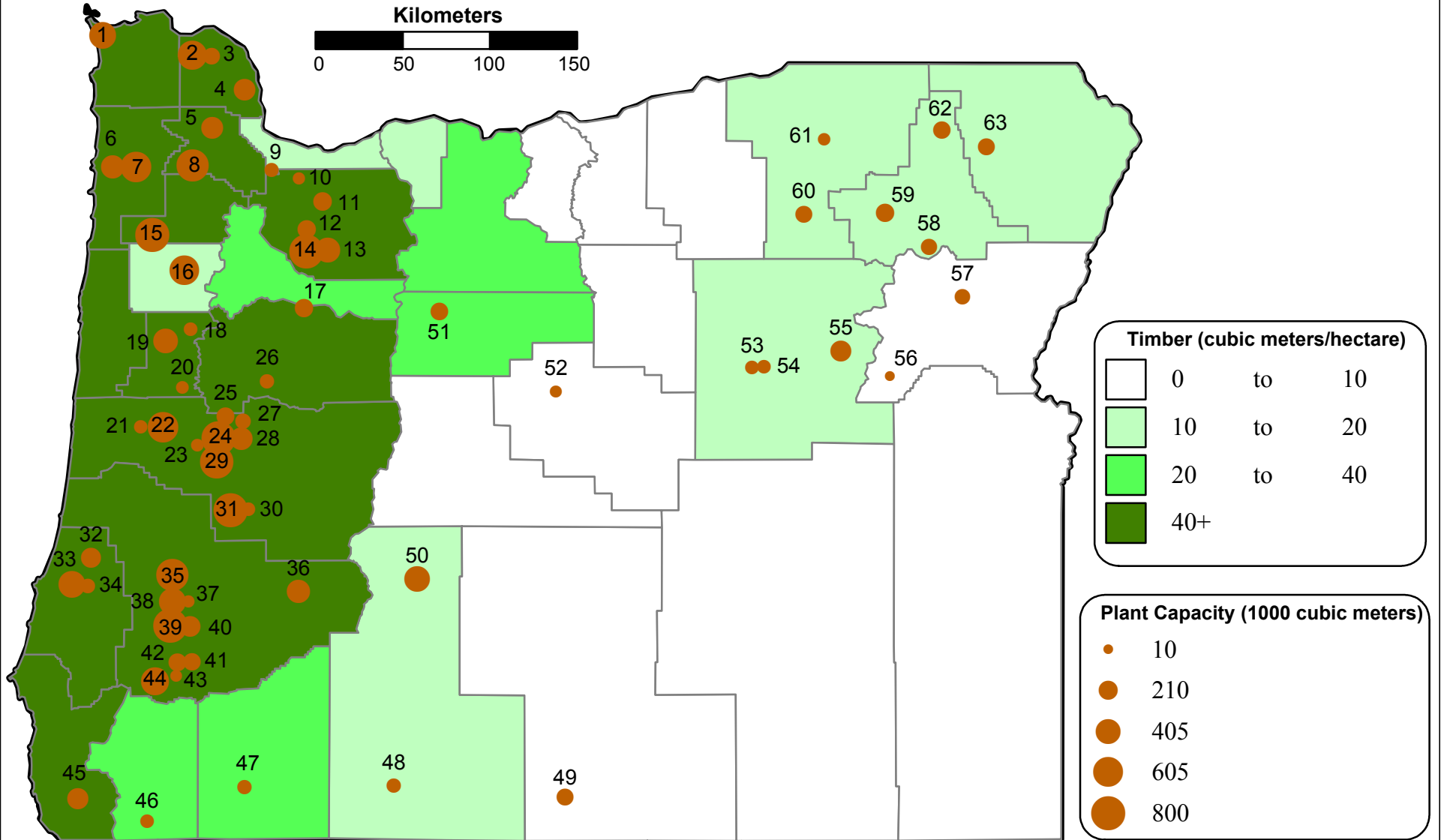
Ontario

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
Closed Mills										
	Tembec		Mattawa	83						
	Domtar	AGAWA	Sault Ste. Marie	94						
	Weyerhaeuser	Avenor	Dryden	196	147					
	Tembec	Malette	Kirkland Lake	125	125	125				
	Domtar	E B EDDY/JE Martell	Chapleau	184	184	101	25			
	Tembec	Excel For prod	Opasatika	177	201	196	53			
	Devlin Tim Co	Tri Lake Tim inc	Kenora	19	19	19	19	0		
	Portelance Lum Capreol		Hanmer	35	47	47	47	47		
	Trilake Tim Co		Keewatin	24	24	24	24	24		
	Isidore Roy Ltd		Sturgeon Falls	25	25	25	25	25		
	Goulard Lum (1971) Ltd		Sturgeon Falls	106	106	106	106	106		
	Tembec	Malette	Timmins	342	342	342	342	342		
Timber Mills										
34	L Heidemann & Sons		Eganville	35	35	35	35	42	42	
Stud Mills										
8	Bowater		Thunder Bay	0	118	330	448	526	526	
5	Buchanan Lum/McKenzie FP	McKenzie FP Inc.	Hudson	472	496	507	507	531	531	
27	Gogama FP Ltd	Domtar	Levack	165	165	165	165	165	165	
1	Kenora For Prod	Prendville Industries	Kenora	175	175	189	189	178	178	
23	Tembec	Malette/Normick P	Cochrane	319	330	330	316	316	316	
21	Tembec	Spruce Falls Inc	Kapuskasing	283	283	293	293	293	293	
Dimension Mills										
7	Buchanan Lum/Atikokan FP	Atikokan For Prod Ltd	Atikokan	307	307	307	307	307	307	
15	Buchanan Lum/Dubreuil FP	Dubreuil For Prod Ltd	Dubreuilville	283	283	283	283	283	283	
9	Buchanan Lum/Great West	Great West Tim Ltd	Thunder Bay	472	519	519	519	472	472	
12	Buchanan Lum/Longlac FP	Long Lake For Prod	Longlac	283	283	283	283	283	283	
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007	
Estimated capacity				7843	7905	8013	8153	8165	7716	
Production (Stats Can)				8589	8409	8340	8572	8622		
Implied capacity utilization				110%	106%	104%	105%	106%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
10	Buchanan Lum/N Sawmills	Northern Sawmills	Thunder Bay	378	378	378	378	378	378	
11	Buchanan Lum/Nakina FP	Nakina For Prod	Nakina	283	283	283	283	283	283	
4	Conifex Inc	Domtar	Ear Falls	304	304	304	354	378	472	
24	Conifex Inc	Elk Lake Planing Mills	Elk Lake	236	236	236	293	328	330	
28	Conifex Inc	Domtar	Nairn Center	496	496	413	378	354	354	
22	Conifex Inc	Domtar	Timmins	142	158	283	295	330	330	
13	Conifex Inc	Domtar	White River	295	295	295	295	260	260	
16	Lecours Lum Co		Calstock	236	248	260	260	260	260	
26	Liskeard Lum Ltd		New Liskeard	71	71	71	71	71	71	
14	Olav Haavaldsrud Tim Co		Hornepayne	153	153	153	153	153	153	
18	Pineal Lake Lum		Chapleau	83	83	83	83	83	83	
19	Tembec	Weyerhaeuser	Chapleau	212	236	236	330	354	354	
17	Tembec	Malette	Hearst	283	283	283	366	366	366	
Board Mills										
33	Ben Hokum & Son		Killaloe	94	94	94	94	94	94	
6	Bowater	Ignace Saw	Ignace	0	0	45	165	184	182	
32	Herb Shaw & Son		Petawawa	21	21	21	21	21	21	
2	Manitou For Prod		Emo	12	12	12	12	14	14	
20	Midway Lum Mills		Thessalon	42	42	42	42	42	42	
31	Murray Brothers Lum Co		Madawaska	83	83	83	83	83	83	
Specialty or Unknown										
36	C A Spencer		Lochiel	24	24	24	24	24	24	
25	Cheminis Lum		Larder Lake	26	26	26	26	26	26	
35	Freymond Lum Ltd		Bancroft	17	17	12	12	12	12	
29	H&R Chartrand		Noelville	59	59	59	59	59	59	
3	LKGH Contracting Ltd		Red Lake	59	59	59	59	59	59	
30	McRae Mills Ltd		Whitney	31	31	31	31	9	9	
				2002	2003	2004	2005	2006	2007	
Number of sawmills				46	45	45	44	41	36	
Number employed ('000)				5.6	5.3	5.2	5.0	4.9		

Oregon

Softwood Roundwood Inventory & Softwood Sawmill Capacity



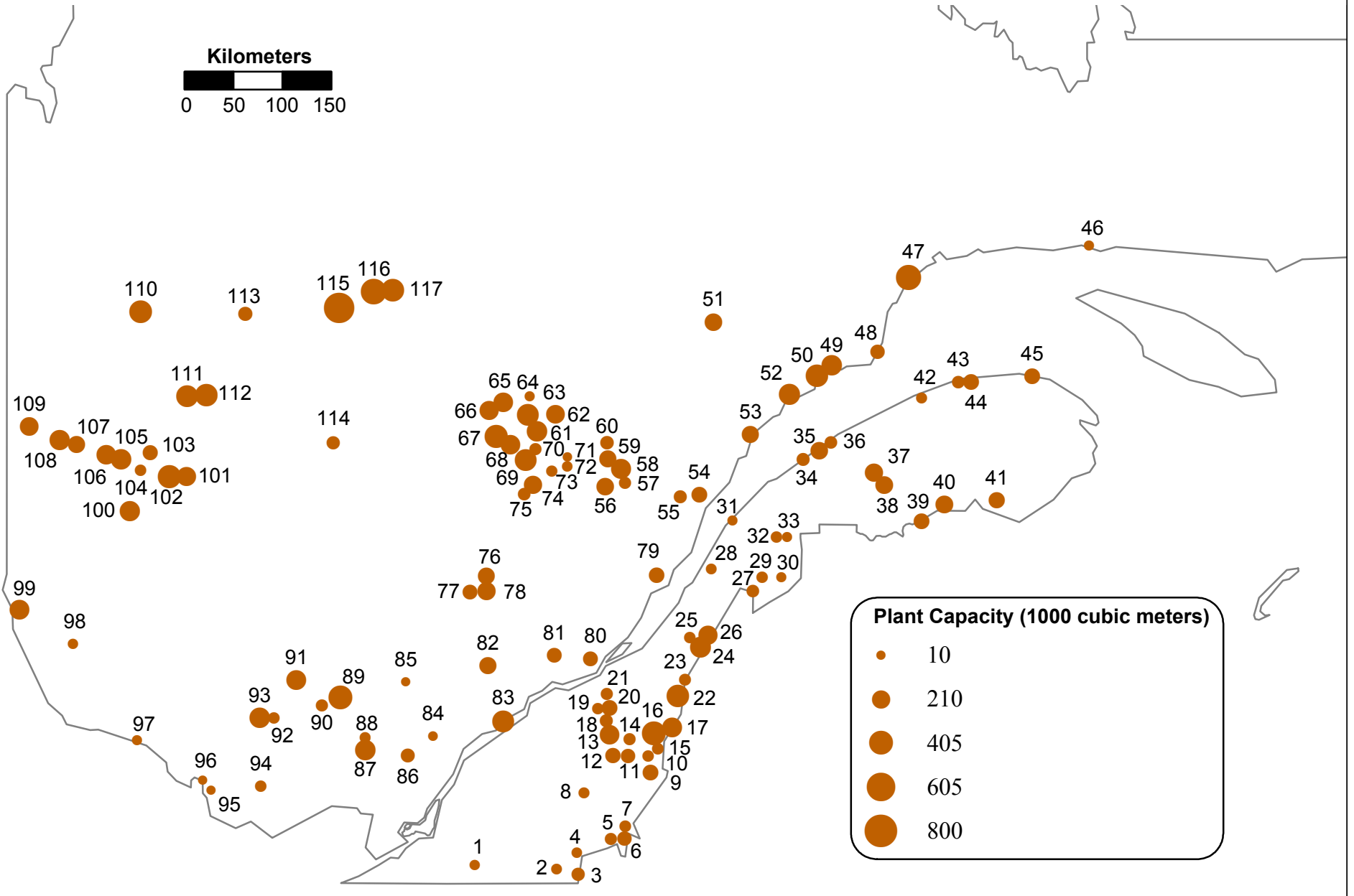
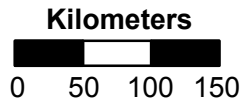
Oregon

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Davidson Ind		Mapleton	47	47	6			
	Hampton Affiliates	Fort Hill Lum	Grand Ronde	94	94	55			
	Allen For Prod		Hillsboro	57	57	57	57		
	Weyerhaeuser Co	Willamette Ind	Lebanon	142	142	165	165	110	
	Stimson Lum Co	Friesen Lum Co	St. Helens	260	260	286	286	286	
	Weyerhaeuser Co	Willamette Ind/Baumar	Lebanon	288	260	260	260	260	54
Timber Mills									
56	Burnt River Lum Co	Great Wood Products	Unity	14	14	14	14	14	14
20	Hull-Oakes Lum Co		Monroe	54	54	127	127	59	59
3	Stimson Lum Co		Clatskanie	148	148	148	148	148	148
23	Zip-O-Log Mills		Eugene	59	59	59	59	59	59
Stud Mills									
62	Boise Cascade		Elgin	165	165	165	165	165	165
35	Douglas County FP		Winchester	448	519	519	708	708	708
58	DR Johnson Lum Co	North Powder L C	North Powder	59	137	137	137	137	137
40	DR Johnson Lum Co	Umpqua Lum Co	Dillard	153	201	236	236	260	260
55	DR Johnson Lum Co	Prairie Wood Prod	Prairie City	264	264	264	264	264	264
63	DR Johnson Lum Co	Wallowa FP	Wallowa	113	123	142	153	153	153
12	Interfor Pacific Inc	Floragon For Prod Inc	Molalla	366	366	366	366	366	366
28	Rosboro LLC	Mill "B"	Springfield	266	425	425	519	358	321
39	Roseburg	Dillard stud	Dillard	496	543	779	932	944	944
45	South Coast Lum Co		Brookings	142	142	165	295	255	274
32	Southport FP LLC		North Bend				142	236	
6	Stimson Lum Co	Trask Riv Lum Co	Tillamook	165	321	321	321	340	337
36	Superior Studs LLC	Glide Lum Prod LLC	Glide	330	330	342	342	342	342
38	Superior Studs LLC	Sun Studs LLC	Roseburg	330	330	342	366	378	401
26	Triple T Studs		Sweet Home/C	94	94	94	94	94	94
9	Alder Creek Lum Co		Portland	71	87	87	87	87	87
Dimension Mills									
5	Banks Lum Co		Banks	248	248	295	295	295	295
61	Blue Mountain Lum Prod		Pendleton	92	92	57	57	57	57
42	DR Johnson Lum Co	Umpqua Lum Co	Riddle	106	182	182	182	182	182
17	Frank Lum Co		Mill City	177	177	177	177	179	189
19	Georgia-Pacific Corp	Diamond-B	Philomath	307	345	396	396	396	396
33	Georgia-Pacific Corp		Coos Bay	408	472	472	472	472	472
15	Hampton Lumber Mills	Willamina Lumb Co	Willamina	932	1062	1180	1180	1204	1204
7	Hampton Lumber Mills	Tillamook Lum Co	Tillamook	566	614	630	630	630	630
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				6610	7263	7815	8079	8005	8079
Reported output (WWPA)				6177	6532	7126	7433		
Implied capacity utilization				93%	90%	91%	92%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
13	Interfor Pacific Inc	Floragon	Molalla	177	177	177	177	177	177
60	Kinzua Resources		Pilot Rock	165	153	153	153	153	153
18	Mary's River Lum Co		Corvallis/Philom:	104	104	83	83	78	78
25	Rosboro LLC	Mill "A"	Springfield	195	196	196	207	207	182
14	RSG FP Inc		Molalla	413	750	807	807	755	814
11	RSG FP Inc	Estacada Lum Co	Estacada	189	189	189	189	201	201
2	RSG FP Inc	Olympic For Prod	Mist	401	472	543	543	543	566
29	Seneca Sawmill Co		Eugene	873	767	767	767	767	767
34	Southport FP LLC		Coos Bay	99	99	99	99	99	99
8	Stimson Lum Co		Forest Grove	661	675	696	709	709	709
27	Sundance		Springfield	106	113	118	118	118	118
44	Swanson-Superior LLC	Swanson Group	Glendale	260	425	484	496	496	496
22	Swanson-Superior LLC	Swanson Group	Noti	307	389	519	531	543	543
21	Swanson Bros		Noti	54	54	54	54	76	76
51	Warm Springs FP		Warm Springs	165	165	170	170	170	170
24	Weyerhaeuser Co	Willamette Ind	Eugene/Coburg	479	479	755	802	826	826
16	Weyerhaeuser Co	Willamette Ind	Dallas	531	519	590	590	590	590
31	Weyerhaeuser Co		Cottage Grove	791	826	850	850	850	850
4	Stimson Lum Co	Friesen Lum Co	St. Helens	260	260	286	286	286	0
1	Weyerhaeuser Co	Willamette Ind	Warrenton	453	472	448	472	472	472
Cedar Mills									
37	Keller Lum Co		Roseburg	52	52	52	52	52	52
Board Mills									
47	Boise Cascade		Medford/Wh. Cit	94	94	94	94	94	94
59	Boise Cascade		LaGrande	189	189	189	189	189	189
52	Consolidated Pine		Prineville	47	47	47	47	47	47
54	DR Johnson Lum Co	Grant Western L C	John Day	118	118	118	118	83	83
50	Interfor Pacific	Crown Pacific	Gilchrist	425	425	425	389	389	389
46	Rough & Ready Lum Co		Cave Junction	149	35	83	83	83	83
48	Thomas Lumber	Jeld-Wen	Klamath Falls	94	94	94	94	94	94
57	U S Timber		Baker City		118	118	118	118	118
Specialty or Unknown									
10	Arrowhead Tim Co		Carver	53	53	53	53	53	53
41	C and D Lum Co		Riddle	130	165	165	165	165	165
49	Collins Pine	Fremont Sawmill	Lakeview	153	153	153	153	153	153
43	Herbert Lum Co		Riddle	45	45	45	45	45	45
53	Ochoco Lum Co	Malheur Lum Co	John Day	94	83	76	76	78	83
30	Starfire Lum Co		Cottage Grove	71	71	83	83	78	78
Number of sawmills				66	67	67	65	65	63
Number employed ('000)				7.4	7.4	7.3	7.3	7.0	

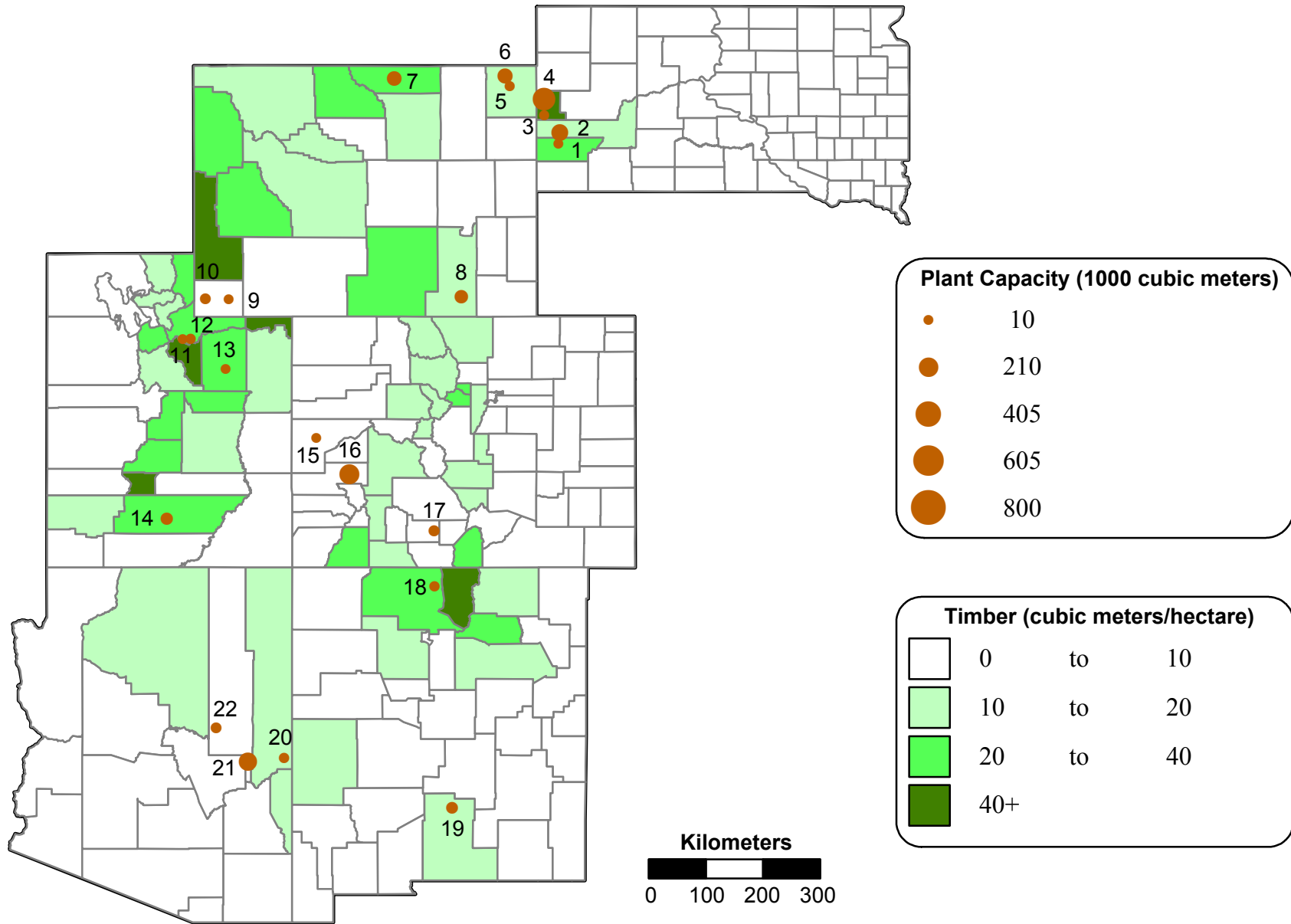
Quebec

Softwood Sawmill Capacity



Arizona, Colorado, New Mexico, South Dakota, Utah, Wyoming

Softwood Roundwood Inventory & Softwood Sawmill Capacity

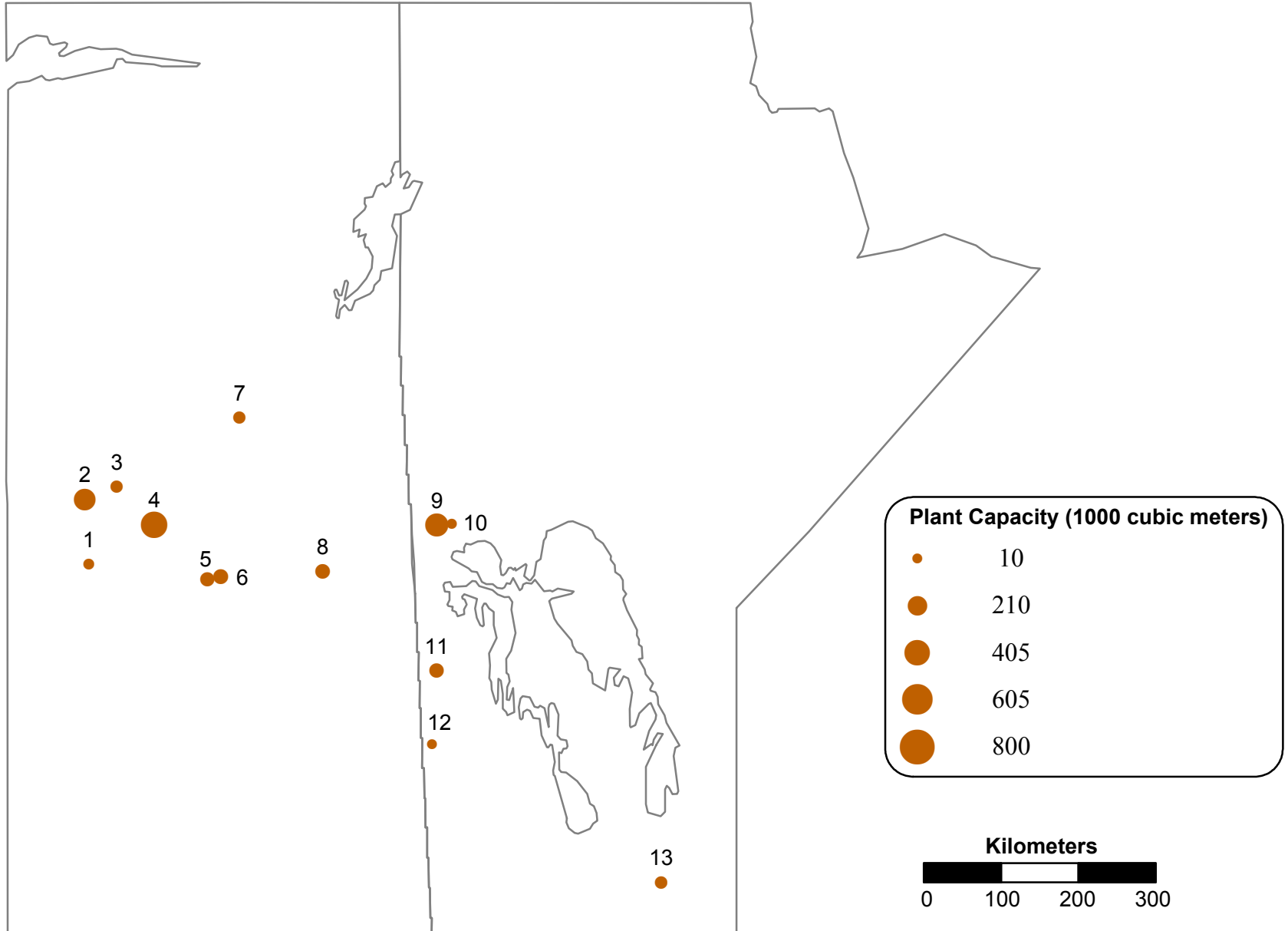


Arizona, Colorado, New Mexico, South Dakota, Utah, Wyoming

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	Louisiana-Pacific Corp		Saratoga	236					
	Idaho Tim Corp	Rio Grande FP	Espanola	130	65				
	Mescalero FP	Allied FP	Alamogordo	73	73	73			
	South Fork Lum		Wheatland	6	6	6			
	Cody Lum Co		Cody	19	19	12	12	12	
Timber Mills									
9	Ayres & Baker		Mt. View	7	7	7	7	7	9
5	Bear Lodge FP	Hullett Post & Pole	Hulett	9	9	14	14	14	14
Stud Mills									
16	Intermountain FP		Montrose	94	94	94	94	201	224
7	Wyoming Sawmills		Sheridan	94	94	94	94	94	94
Dimension Mills									
21	Fort Apache Tim Co		White River	113	142	177	177	177	177
19	Mescalero FP		Mescalero	41	41	41	41	41	41
Board Mills									
2	Neimann/Rushmore	Continental Lum Co	Hill City	135	137	137	137	142	142
8	Big Horn Lum Co		Laramie	47	47	52	57	59	71
6	Neimann Sawmill	Devils Tower FP	Hulett	118	118	118	118	106	106
17	Pleasant Logging & Milling		Monte Vista	30	30	30	30	30	30
4	Pope & Talbot		Spearfish	271	271	297	302	302	302
22	Precision Pine	Evergreen Lum	Heber	28	28	28	28	24	24
20	Reidhead Bros Lum Co		Nutrioso	0	19	19	19	19	19
Specialty or Unknown									
12	Blizzard Lum Co		Kamas	16	16	16	16	17	17
15	Doug Jones Sawmill		Grand Junctio	5	5	5	5	5	5
13	Fabrizio Sawmill		Duchesne	0	0	14	14	7	7
11	Leavitt Lum Co		Kamas	28	7	7	7	7	7
1	R E Linde Sawmills		Custer	12	12	12	12	12	12
14	Skyline For Res	Utah FP	Escalante	24	24	47	47	47	47
10	South & Jones		Evanston	24	24	24	24	24	24
18	Vallecitos	Vaughn Bros	Vallecitos	19	19	19	19	19	19
Softwood lumber (1,000 m ³)				2002	2003	2004	2005	2006	2007
Estimated capacity				1603	1330	1360	1288	1378	1404
Production (WWPA)				1307	1147	1107	1074		
Implied capacity utilization				82%	86%	81%	83%		
Number of sawmills				25	25	25	23	23	22
Number employed ('000)				1.8	1.7	1.6	1.6	1.5	

Saskatchewan & Manitoba

Softwood Sawmill Capacity

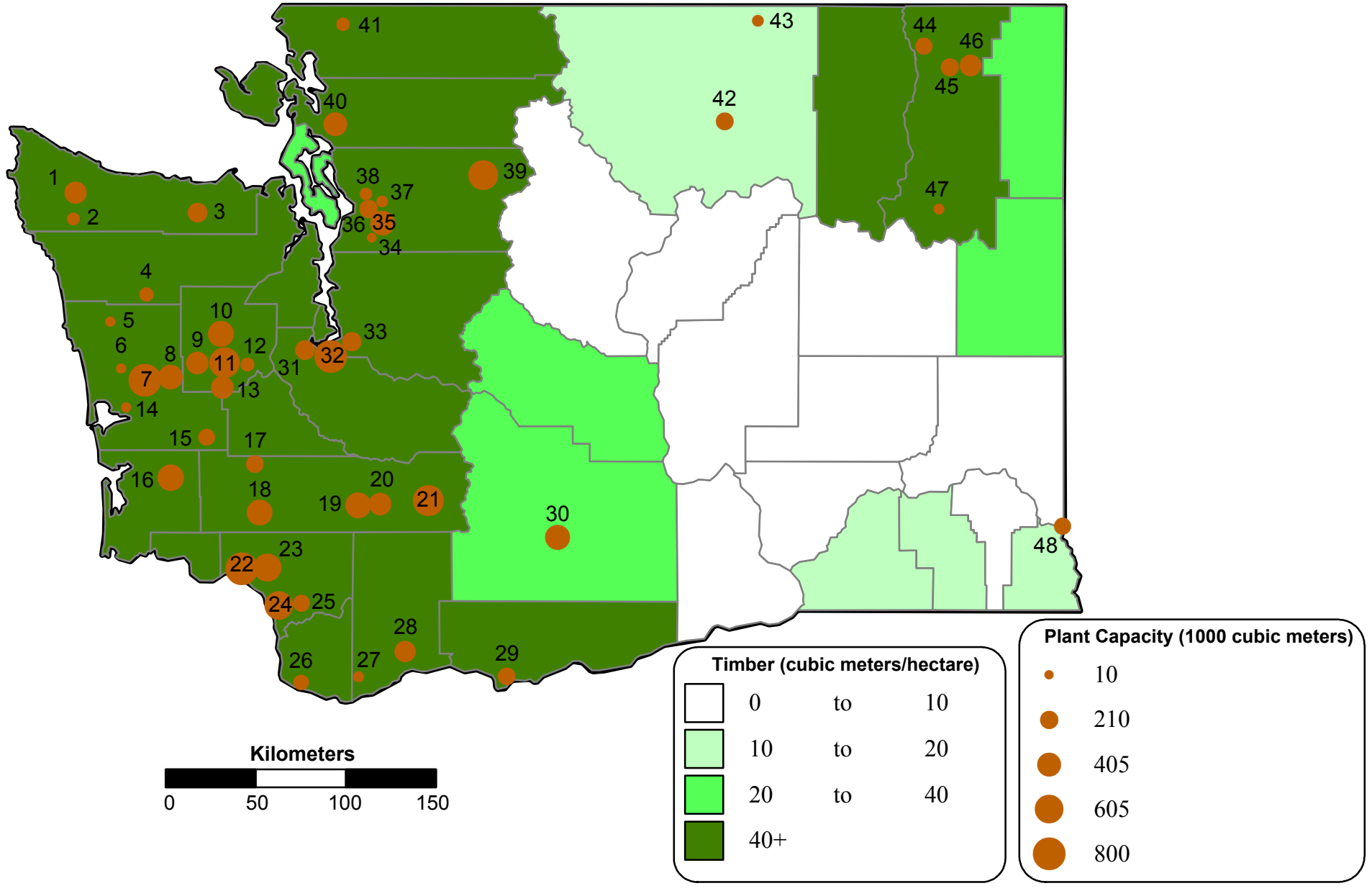


Saskatchewan, Manitoba

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m ³)					
				2002	2003	2004	2005	2006	2007
Stud Mills									
8	C & C Wood Prod	Weyerhaeuser Can	Carrot River	189	189	189	189	189	94
6	Carrier Lum Ltd	Provincial FP	Prince Albert	14	14	14	14	99	99
2	Norsask FP		Meadow Lake	271	271	271	271	271	271
Dimension Mills									
4	Domtar	Weyerhaeuser Can	Big River	507	578	578	543	145	434
3	Green Lake Metis		Green Lake	47	47	47	47	47	47
1	L&M Prod		Glaslyn	19	24	24	24	24	24
13	South East FP		Blumenort	47	47	53	53	53	53
11	Spruce Prod Ltd		Swan River	78	83	90	90	90	90
9	Tolko		The Pas	437	437	437	448	472	319
5	Wapawekka Lum Ltd		Buckland	170	170	85	85	85	85
10	Waugh's Woods Ltd		The Pas	14	14	14	14	14	14
7	Zelensky-LaRonge		LaRonge	48	48	48	48	48	48
Specialty or Unknown									
12	Roblin FP		Roblin	8	8	8	8	8	8
Softwood lumber (1,000 m ³)				2002	2003	2004	2005	2006	2007
Estimated capacity				1850	1930	1858	1835	1545	1586
Production (Stats Can)				1692	1598	1765	1450	1006	
Implied capacity utilization				91%	83%	95%	79%	65%	
Number of sawmills				13	13	13	13	13	13
Number employed ('000)				1.0	1.0	1.0	1.0	0.9	

Washington

Softwood Roundwood Inventory & Softwood Sawmill Capacity



Washington

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)					
				2002	2003	2004	2005	2006	2007
Closed Mills									
	TreeSource	Spanaway	Spanaway	143					
	Vaagen Bros		Republic	189					
	Pacific Crest Lum Co		Winlock	47	9				
	Weyerhaeuser Co		Enumclaw/Sno	519	108				
	Frontier	Boise Cascade	Yakima	212	212	212	44		
	Caffal Bros		Longview	224	260	260	195		
	Weyerhaeuser Co		Aberdeen	295	307	307	307		
	TreeSource	Tumwater Lum Co	Tumwater	201	201	236	260		
	Inter For Prod	Crown Pacific	Marysville	94	71	71	71		
	Layman Lum Co		Naches	80	80	80	80	41	
	Hampton Affiliates	Longview Fibre	Leavenworth	224	236	236	236	224	
	Pony Lum LLC	Louisiana-Pacific Corp	Tacoma	165	165	189	236	177	
Timber Mills									
36	Buse Timber & Sales		Everett	184	201	202	210	208	208
37	Canyon Lum Co Inc		Everett	52	52	52	52	52	52
27	Hambleton Lum Co		Washougal	42	42	42	42	42	42
47	Springdale Lum Co		Springdale	45	45	35	35	35	35
Stud Mills									
2	Allen Logging Co		Forks	71	71	71	71	71	71
19	Hampton Affiliates	Pac Lum & Ship	Morton	446	437	437	448	453	472
21	Hampton Affiliates	Pac Lum & Ship	Randle	555	599	604	649	649	708
3	Interfor Pacific	Crown Pacific	Port Angeles	295	295	295	295	295	330
18	Lewis County FP		Winlock	146	319	472	472	472	472
4	Mary's River Lum Co		Montesano	104	104	104	104	104	104
9	Mason County FP	Olympic Wood Prod	Shelton				177	354	354
15	Oakville For Prod		Oakville		24	59	71	165	165
29	SDS Lum		Bingen	132	132	177	189	189	189
17	Sierra Pacific Ind	Centralia Sawmill Co	Centralia					83	189
23	Simpson Tim Co	Caffal Bros	Longview				42	566	566
Dimension Mills									
48	Bennett Lum Co		Clarkston	177	177	177	177	177	177
39	Hampton Affiliates	Summit Tim Co	Darrington	283	425	500	501	567	649
31	Manke Lum		Tacoma	369	369	369	369	248	248
Softwood lumber (1,000 m³)				2002	2003	2004	2005	2006	2007
Estimated capacity				11592	12665	13533	14146	14283	14605
Reported output (WWPA)				10915	11559	12874	13520		
Implied capacity utilization				94%	91%	95%	96%		

Mill I.D.	Name	Former name or DBA	Location	Capacity / Production (1,000 m³)						
				2002	2003	2004	2005	2006	2007	
13	Mason County FP		Shelton						177	354
1	Portac		Beaver	307	307	333	333	333	333	333
33	Portac		Tacoma	224	236	236	236	236	236	236
24	RSG FP		Kalama	437	543	543	543	590	590	590
35	Seattle-Snohomish		Snohomish	366	378	401	401	401	401	425
7	Sierra Pacific Ind		Aberdeen	7	448	708	732	802	802	802
40	Sierra Pacific Ind		Mt. Vernon							392
10	Simpson Tim Co	Mill #3	Dayton	330	472	472	472	484	484	484
11	Simpson Tim Co	Mill #5	Shelton	590	649	649	708	795	682	682
32	Simpson Tim Co	Commencement Bay	Tacoma	566	850	1062	1062	850	850	850
46	Vaagen Bros		Colville	342	307	319	319	319	319	319
8	Weyerhaeuser Co		Aberdeen	342	366	413	425	472	425	425
22	Weyerhaeuser Co		Longview/Gr Mtn/Toutle	599	661	708	802	802	802	802
16	Weyerhaeuser Co		Raymond	451	451	425	496	496	496	496
28	Wilkins Kaiser Olsen High		Cascades	207	295	307	307	307	307	307
43	Zosel Lum Co		Oroville	38	38	42	52	52	52	52
Cedar Mills										
5	Crane Creek Cedar Corp		Amanda Park	26	26	26	26	26	26	26
6	Premier FP		Humtulsips	24	24	24	24	24	24	24
25	RSG FP	Gram Lum Co	Kalama	177	198	94	94	177	177	177
20	TMI FP	Tubafor Mill	Morton	104	201	245	286	319	354	354
12	Welco-Skookum	Delson Lum Sales	Shelton	71	71	71	71	87	94	94
38	Welco Lum Co		Marysville	177	189	189	189	75	64	64
Board Mills										
42	Boise Cascade		Kettle Falls (2)	177	177	177	177	177	177	177
44	Colville Precision Pine		Omak	196	196	196	196	196	196	196
45	Stimson Lum Co	Plum Creek Mfg	Colville/Arden	196	176	176	176	203	203	203
30	Yakama FP		White Swan	272	425	448	448	448	448	448
Specialty or Unknown										
26	Columbia Vista Corp		Vancouver/Camas	118	118	118	118	138	138	138
34	Fritch FP Inc		Snohomish	17	17	17	17	17	17	17
41	Great Western		Everson	59	59	78	83	85	85	85
14	Little River Inc	Dahlstrom	Hoquiam	24	24	24	24	24	24	24
Number of sawmills				53	53	51	53	50	48	48
Number employed ('000)				6.2	6.3	6.2	6.0	6.0	6.0	6.0