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Estimating Sawmill Processing Capacity for Tongass Timber: 2005 and 2006 Update

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Abstract

In spring 2006 and 2007, sawmill capacity and wood utilization information was collected for selected mills in southeast Alaska. The collected information is required to prepare information for compliance with Section 705(a) of the Tongass Timber Reform Act. The total estimated design capacity in the region (active and inactive mills) was 289,850 thousand board feet (mbf) Scribner log scale in calendar year (CY) 2005 and 284,350 mbf in CY 2006. The estimated design capacity of active mills was 259,850 mbf for CY 2005 and 247,850 mbf for CY 2006. This is a 2.9-percent decrease in active design capacity from CY 2004 (255,350 mbf) to CY 2006. The estimated volume of material processed during CY 2006 was 32,141 mbf Scribner log scale. This is a 3.6-percent increase over CY 2004 (31,027 mbf Scribner log scale).

Keywords: Southeast Alaska sawmills, mill capacity, timber usage.

Introduction

Through the Alaska National Interest Lands Conservation Act (ANILCA 1980) Congress directed the Secretary of the Treasury to provide funds to maintain the supply of timber from the Tongass National Forest at a rate of 4,500 million board feet (mmbf) per decade. Ten years later, the Tongass Timber Reform Act (TTRA 1990) amended ANILCA and directed the Secretary of Agriculture to "seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle." Efforts to seek to meet demand are constrained by the other multiple-use, sustained-yield requirements of the National Forest Management Act (NFMA 1976) and other related statutes.

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The record of decision (ROD) for the 1997 Tongass Land and Resource Management Plan (USDA FS 1997b: 37) stated, "The Forest Service will develop procedures to ensure that annual timber sale offerings are consistent with market demand." The procedures developed to satisfy the ROD commitment have become known as the Morse methodology (Morse 2000, USDA FS 2000). Although a complete description of the process defined by Morse (2000) is beyond the scope of this report, the process relies on estimates of installed and operable processing capacity, industry rate of capacity utilization, share of industry raw material provided by the Tongass, timber consumption, and other parameters. There have been two previous capacity reports (Brackley et al. 2006, Kilborn et al. 2004). The objective of those reports is to supply some of the information required by the Morse methodology. The objective of this report is to present results of the calendar year (CY) 2005 and 2006 surveys that were conducted to determine characteristics of the southeast Alaska sawmill industry. Owing to changes in the forest products industry in southeast Alaska since 2000, the capacity reports have also become an important source of information for provisioning the model used by scientists at the Pacific Northwest Research Station (PNW) to project future demand for Tongass timber.

Methods

With the exception of CY 2001, annual surveys have been conducted to obtain estimates of sawmill capacity and timber usage in southeast Alaska since 2000. The list of producers was developed in 2001 (for the CY 2000 survey) and reflected the largest and most active mills at that time. These mills accounted for an estimated 80 percent of the total capacity of all mills in the region (which were thought to number approximately 70). There have been no large new mill installations since 2000. Thus, that same list was used as the basis for defining the population for the CYs 2002-2006 surveys. However, firms have been dropped from consideration when equipment and log inventory were removed from the plant site. For purposes of future capacity reports, firms will be added to the industry capacity estimates when equipment is installed, an inventory of logs is onsite, and product is produced.

In spring 2006 and 2007, data for the previous calendar years were collected directly from producers.

In spring 2006 and 2007, data for the previous calendar years were collected directly from producers. Surveys were conducted onsite when possible. If onsite visits were not possible, surveys were conducted via telephone interviews. Respondents were asked to supply information relative to any equipment purchases or modifications that would affect sawmill capacity and the volume of logs that were processed (primary manufacture) during the respective periods. A summary of the basic information (mill name, location, description, and number of employees) for the mills active in CY 2006 is presented in table 1.

Table 1—Basic sawmill information for active mills, calendar year 2006

Mill name	Location	Description	Number of employees
D&L Woodworks	Hoonah	Portable circle saw mill and portable band saw mill	1.5
Icy Straits Lumber Co., Inc.	Hoonah	Merchandiser, log debarker, conventional carriage, circle saw headrig, edger, bull edger, trim saw, dry kiln, planer, moulder	15
Pacific Log and Lumber	Ketchikan	Merchandiser, debarker, conventional carriage mills (2), circle saw headrigs, horizontal band resaw, edger, trim saw, dry kiln, planing mill, specialty equipment: long length bandmill (up to 60 feet)	20
Porter Lumber Co.	Thorne Bay	Conventional carriage, circle saw headrig, gang resaw edger, trim saw, portable circle saw mill, dry kiln	4
Silver Bay, Inc.	Wrangell	Merchandiser, log debarker, conventional carriages, band saw headrigs, linebar resaw, planer mill	30
Southeast Alaska Wood Products	Petersburg	Portable circle saw mills (2), trim saw, dry kiln, moulder	1
The Mill	Petersburg	Portable circle saw mills (4)	1
Thorne Bay Wood Products	Thorne Bay	Portable circle saw mill, trim saw, dry kiln, planer/moulder	3
Thuja Plicata Lumber Co.	Thorne Bay	Portable circle saw mill, carriage mill, shake/shingle mill	1.25
Viking Lumber Co.	Craig	Merchandiser, log debarker, conventional carriage, band saw headrig, linebar and gang resaws, edgers, trim saw, small log line with end dogging circular saw scragg	42
W.R. Jones and Son Lumber Co.	Craig	Portable circle saw mill, dry kiln, planer/moulder	4
Total			122.75

Information collected during the survey was as follows:

- Mill name
- Number of employees
- Owner's name(s)
- Mill status (active, inactive, or uninstalled)
- Mill location
- Percentage over or underrun
- Mill description (equipment)
- Sources of logs processed by the mill
- Estimated mill capacity
- Products produced
- Estimated mill calendar year output
- Market information (where sold)

Mill Capacity Conventions

The following definition of capacity was taken from Evans (2000: 54), "The maximum production capability of a mill under optimum conditions, usually expressed in board or square feet per shift or year." Capacity estimates may be in terms of raw material input or product output. In this report, all capacity values and reported board foot volumes are presented in terms of raw material input (board feet, Scribner decimal C log scale). Sawmill output will differ depending on the equipment used, sawing methods, and product line. The relationship between input and output is referred to as mill overrun or underrun (Evans 2000).

Sawmills and other forest products manufacturing plants are composed of various machines and processing steps. In a well-designed mill, the processing speeds of individual machines and production steps have been taken into consideration (balanced) to generate a product at a desired rate. Total production capacity, however, is a function of the slowest machine or step in the production process. The capacity of a facility may also be limited or vary at different stages, depending on the raw material being processed or products being produced during a specific period (i.e., lumber for export versus domestic markets). Operators and consultants with knowledge of equipment and products can develop reasonable capacity estimates for existing and new mills.

Stevenson (1999: 210-211) provided the following definitions and explanations for various capacity terms:

1. *Design capacity*: the maximum output that can possibly be attained.
2. *Effective capacity*: the maximum possible output given a product mix, scheduling difficulties, machine maintenance, quality factors, and so on.

Design capacity is the maximum rate of output achieved under ideal conditions. Effective capacity is usually less than design capacity (it cannot exceed design capacity) owing to realities of changing product mix, the need for periodic maintenance of equipment, lunch breaks, coffee breaks, problems in scheduling and balancing operations, and similar circumstances. Actual output cannot exceed effective capacity and is often less because of machine breakdowns, absenteeism, shortages of materials, and quality problems, as well as factors that are outside the control of the operations managers.

Industry design capacity is the sum of the design capacities for all active and inactive firms in the region. Active design capacity is the sum of the design capacities of all firms that manufactured products during the survey period. Mill output is the level of production actually achieved during the survey period. Mill output cannot exceed active design capacity.

In this report, estimated design capacity of each mill is based on the amount of net saw-log volume (Scribner log scale) that could be utilized by the mill, as currently configured, during a 250-day-per-year, two-shifts-per-day, annual operating schedule, not limited by availability of employees, raw materials, or market. In the sawmill industry, double shifts do not necessarily double the mill design capacity, because in many mills the evening shift may resaw material rejected by the day shift.

Results—CYs 2005 and 2006

The CY 2006 survey determined that 11 of the 20 mills included in the original CY 2000 survey were active. The equipment had been removed (uninstalled) from six sites. Three other mills with installed equipment were inactive at the time of the CY 2006 survey: the Ketchikan veneer mill, Northern Star Cedar, and the Annette Island Sawmill. We included the first two of these inactive mills in the estimate of installed capacity. We did not include the capacity of the Annette Island Sawmill as it has been idle since 2000 and although the equipment is in place, its operability is questionable.

Total estimated design capacity and usage for CYs 2005 and 2006 are presented in table 2. Additional tables have been prepared to summarize estimates of mill production by species (table 3), mill production by product (table 4), sources of logs processed (table 5), and destinations of manufactured products (table 6). Mill information has been aggregated to provide industry-level information for all firms in southeast Alaska.

The above tables present information for CYs 2005 and 2006. Tables summarizing specific data for CYs 2000 and 2002 are available in Kilborn et al. (2004). Data for CYs 2003 and 2004 are presented in Brackley et al. (2006). Data from all survey years are presented graphically in figures 1 through 6. Active design capacity as shown in figure 1 has not varied much since 2002. The total volume of logs sawn decreased by almost 55 percent between CY 2000 and CY 2002. Since CY 2003, this volume has ranged between 31 and 35 mmbf annually (fig. 2). Western hemlock (*Tsuga heterophylla* (Raf.) Sarg.) remains the primary species of logs processed by southeast Alaska mills (fig. 3). As shown in figure 4, lumber continues to be the primary product manufactured by these mills.

Active design capacity has not varied much since 2002.

Table 2—Estimated sawmill capacity and estimated sawmill production for southeast Alaska, 2005-2006

Mill name	Status CYs 2005 and 2006	Estimated mill capacity		Estimated mill output		Estimated utilization of installed capacity	
		CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006
		Thousand board feet (Scribner C log scale)				*- - Percent - -*	
Active mills:							
D&L Woodworks	Active	1,750	1,750	100	100	5.7	5.7
Icy Straits Lumber Co., Inc.	Active	20,000	22,500	500	700	2.5	3.1
Northern Star Cedar Products	Active (2005)	14,500		322		2.2	
Pacific Log and Lumber	Active	39,600	39,600	4,824	4,234	12.2	10.7
Porter Lumber Co.	Active	12,500	12,500	600	500	4.8	4.0
Silver Bay, Inc.	Active	65,000	65,000	8,747	6,032	13.5	9.38
Southeast Alaska Wood Products	Active	4,500	4,500	100	200	2.2	4.4
The Mill	Active	8,500	8,500	30	45	.4	.5
Thorne Bay Wood Products	Active	5,000	5,000	680	600	13.6	12.0
Thuja Plicata Lumber Co.	Active	7,500	7,500	100	130	1.33	1.73
Viking Lumber Co.	Active	80,000	80,000	18,000	19,000	22.5	23.75
W.R. Jones and Son Lumber Co.	Active	1,000	1,000	690	600	69.0	60.0
Total estimated capacity of active mills		259,850	247,850	34,695	32,141	13.4	13.0
Inactive mills:							
Ketchikan Veneer (formerly GFP)	Inactive	30,000	30,000	0	0	0	0
Northern Star Cedar Products	Inactive (2006)		6,500		0		0
Total estimated installed capacity		289,350	284,350	34,695	32,141	12.0	11.3

Note: CY = calendar year.

Table 3—Estimated sawmill production by species

Mill name	Estimated mill output		Sitka spruce[a]		Western hemlock[b]		Western redcedar[c]		Yellow-cedar[d]		Other	
	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006
	Thousand board feet (Scribner C log scale)											
D&L Woodworks	100	100	50	30	20	30	0	0	30	40	0	0
Icy Straits Lumber Co., Inc.	500	700	100	210	250	210	100	245	50	35	0	0
Northern Star Cedar Products	322	0	22	0	0	0	300	0	0	0	0	0
Pacific Log and Lumber	4,824	4,234	527	836	3,746	2,451	509	807	42	140	0	0
Porter Lumber Co.	600	500	300	350	100	100	160	40	40	10	0	0
Silver Bay, Inc.	8,747	6,032	2,391	1,587	5,575	3,834	0	294	781	185	0	132
Southeast Alaska Wood Products	100	200	30	60	45	100	15	20	10	20	0	0
The Mill	30	45	18	30	12	12	0	0	0	3	0	0
Thorne Bay Wood Products	682	600	205	200	409	200	68	150	0	50	0	0
Thuja Plicata Lumber Co.	100	130	20	30	0	0	80	100	0	0	0	0
Viking Lumber Co.	18,000	19,000	5,538	5,846	10,385	10,961	2,077	2,193	0	0	0	0
W.R. Jones and Son Lumber Co.	690	600	100	112	200	170	250	260	140	58	0	0
Total	34,695	32,141	9,301	9,291	20,742	18,068	3,559	4,108	1,093	541	0	132
Percentage of total	100	100	27	29	60	56	10	13	3	2	0	0

Note: CY = calendar year.
[a] Sitka spruce (*Picea sitchensis* (Bong.) Carr.).
[b] Western hemlock (*Tsuga heterophylla* (Raf.) Sarg.).
[c] Western redcedar (*Thuja plicata* Donn. ex D. Don).
[d] Yellow-cedar (*Chamaecyparis nootkatensis* (D. Don) Spach).

Table 4—Estimated sawmill production by product

Mill name	Estimated mill output		Dimension lumber		Shop lumber		Cants		Other[a]	
	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006
	Thousand board feet (Scribner C log scale)									
D&L Woodworks	100	100	95	95	5	5	0	0	0	0
Icy Straits Lumber Co., Inc.	500	700	500	289	0	215	0	196	0	0
Northern Star Cedar Products	322	0	22	0	0	0	0	0	300	0
Pacific Log and Lumber	4,824	4,234	2,076	1,369	2,247	1,640	500	1,225	0	0
Porter Lumber Co.	600	500	260	250	0	0	340	250	0	0
Silver Bay, Inc.	8,747	6,032	4,126	3,702	2,230	621	2,391	1,672	0	37
Southeast Alaska Wood Products	100	200	100	200	0	0	0	0	0	0
The Mill	30	45	30	45	0	0	0	0	0	0
Thorne Bay Wood Products	682	600	580	540	102	60	0	0	0	0
Thuja Plicata Lumber Co.	100	130	50	130	0	0	50	0	0	0
Viking Lumber Co.	18,000	19,000	7,962	8,399	6,577	6,947	3,462	3,654	0	0
W.R. Jones and Son Lumber Co.	690	600	442	377	248	223	0	0	0	0
Total	34,695	32,141	16,243	15,396	11,409	9,711	6,743	6,997	300	37
Percentage of total	100	100	47	48	33	30	19	22	1	0

Note: CY = calendar year.
[a] Other forest products includes shingles, music wood, and other specialty products.

Table 5—Estimated sources of logs processed (source of logs included in estimated mill production) by southeast Alaska sawmills

Mill name	National forest		Other federal		State of Alaska		Private Native		Private other		Imported		Total	
	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006
	Thousand board feet (Scribner C log scale)													
D&L Woodworks	100	100	0	0	0	0	0	0	0	0	0	0	250	150
Icy Straits Lumber Co., Inc.	400	233	0	0	75	467	0	0	25	0	0	0	500	550
Northern Star Cedar Products	322	0	0	0	0	0	0	0	0	0	0	0	863	1,000
Pacific Log and Lumber	4,824	4,234	0	0	0	0	0	0	0	0	0	0	4,824	4,234
Porter Lumber Co.	600	500	0	0	0	0	0	0	0	0	0	0	600	500
Silver Bay, Inc.	0	0	0	0	8,747	3,921	0	0	0	2,111	0	0	8,747	6,032
Southeast Alaska Wood Products	40	100	0	0	0	0	0	0	60	100	0	0	100	200
The Mill	18	35	0	0	12	10	0	0	0	0	0	0	30	45
Thorne Bay Wood Products	0	60	0	0	545	420	0	0	54	120	0	0	682	600
Thuja Plicata Lumber Co.	100	130	0	0	0	0	0	0	0	0	0	0	100	130
Viking Lumber Co.	16,000	14,250	0	0	2,000	4,750	0	0	0	0	0	0	18,000	19,000
W.R. Jones and Son Lumber Co.	40	360	0	0	585	180	0	0	65	60	0	0	690	600
Total	22,444	20,002	0	0	11,965	9,747	0	0	286	2,391	0	0	34,695	32,141
Percentage of total	65	62	0	0	34	32	5	2	2	2	0	0	100	100

Note: CY = calendar year.

Table 6—Estimated destination of products manufactured from logs processed by southeast Alaska sawmills

Mill name	Alaska		Other U.S. States		Canada		Pacific Rim		Europe		Total	
	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006	CY 2005	CY 2006
	Thousand board feet (Scribner C log scale)											
D&L Woodworks	100	100	0	0	0	0	0	0	0	0	100	100
Icy Straits Lumber Co., Inc.	450	630	50	35	0	0	0	35	0	0	500	700
Northern Star Cedar Products	22	0	300	0	0	0	0	0	0	0	322	0
Pacific Log and Lumber	434	1,143	2,701	2,032	724	296	724	720	241	42	4,824	4,234
Porter Lumber Co.	255	300	340	200	0	0	5	0	0	0	600	500
Silver Bay, Inc.	0	0	8,485	6,032	0	0	262	0	0	0	8,747	6,032
Southeast Alaska Wood Products	100	200	0	0	0	0	0	0	0	0	100	200
The Mill	30	45	0	0	0	0	0	0	0	0	30	45
Thorne Bay Wood Products	545	570	136	30	0	0	0	0	0	0	682	600
Thuja Plicata Lumber Co.	10	30	90	100	0	0	0	0	0	0	100	130
Viking Lumber Co.	0	0	13,846	14,611	0	0	4,154	4,389	0	0	18,000	19,000
W.R. Jones and Son Lumber Co.	425	390	229	210	0	0	36	0	0	0	690	600
Total	2,371	3,408	26,177	23,250	724	296	5,181	5,144	241	42	34,695	32,141
Percentage of total	7	11	75	72	2	1	15	16	1	0	100	100

Note: CY = calendar year.

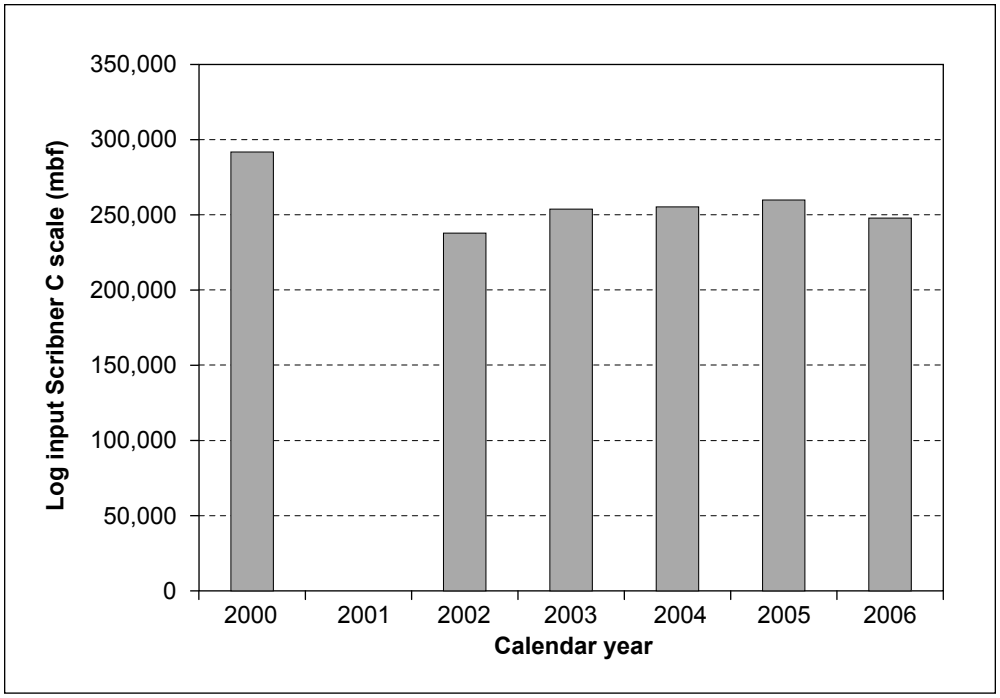

Figure 1—Estimated capacity of active southeast Alaska sawmills, 2000 and 2002–2006.

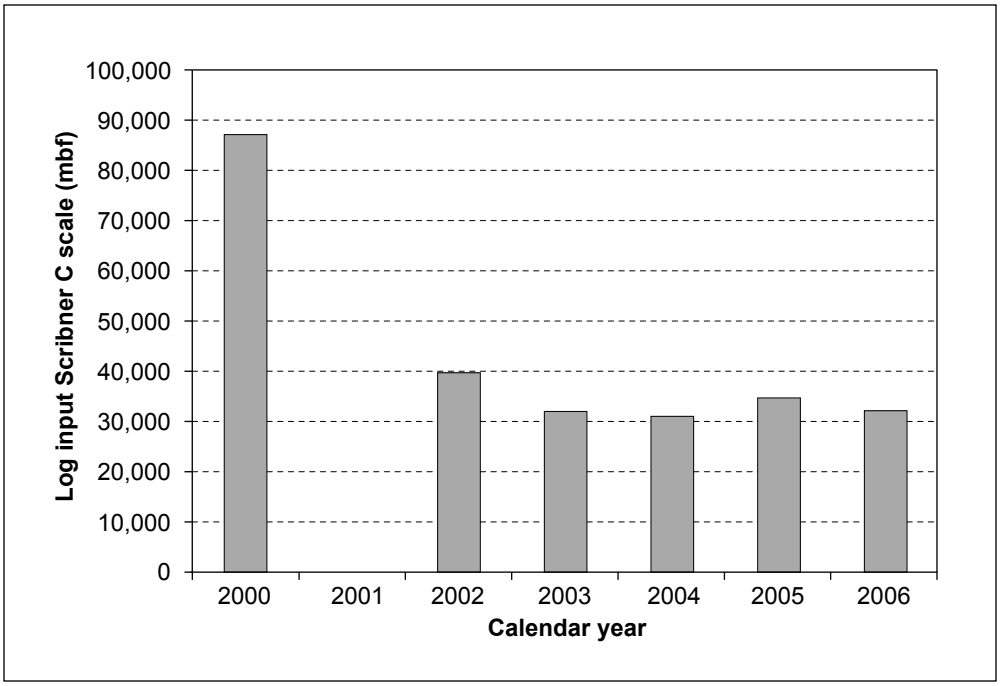

Figure 2—Estimated volume of logs processed by southeast Alaska sawmills, 2000 and 2002–2006.

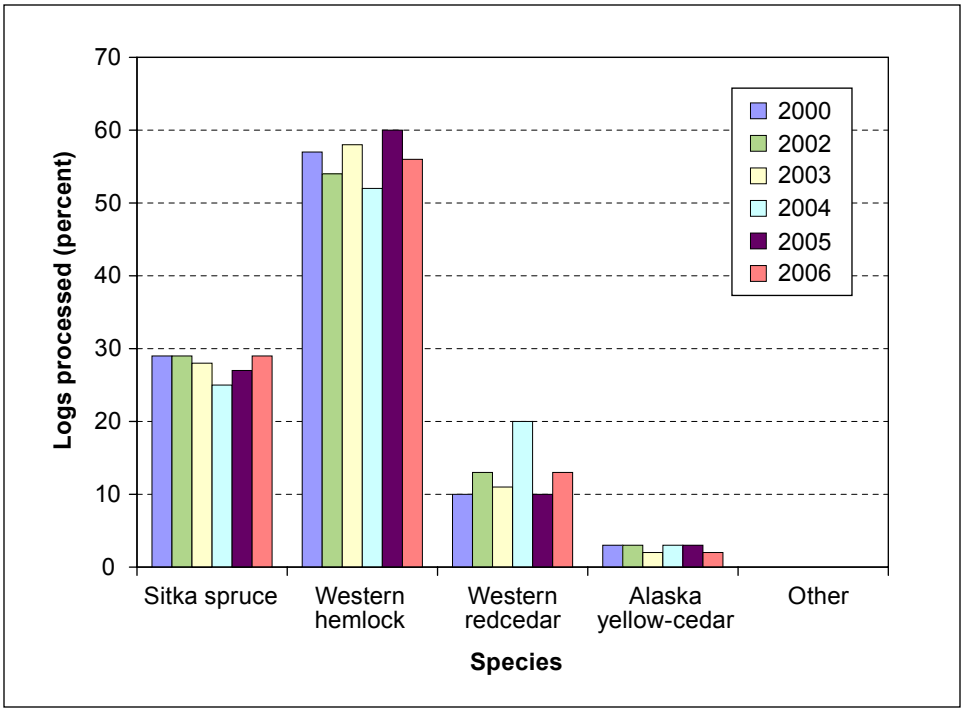

Figure 3—Estimated species composition of logs processed by southeast Alaska sawmills, 2000 and 2002–2006.

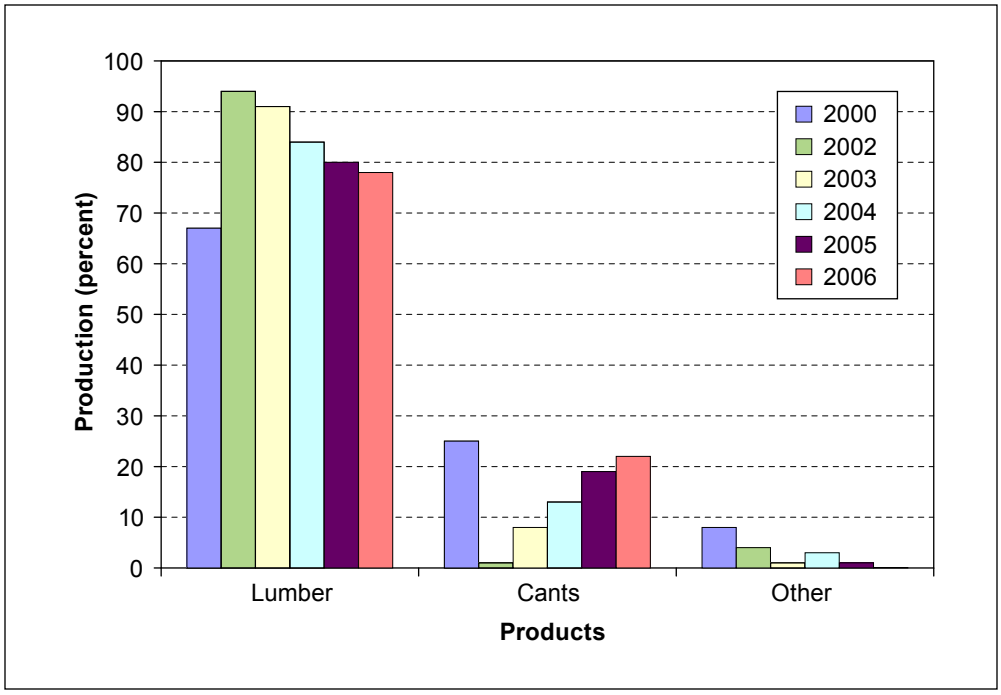

Figure 4—Estimated products produced by southeast Alaska sawmills, 2000 and 2002–2006.

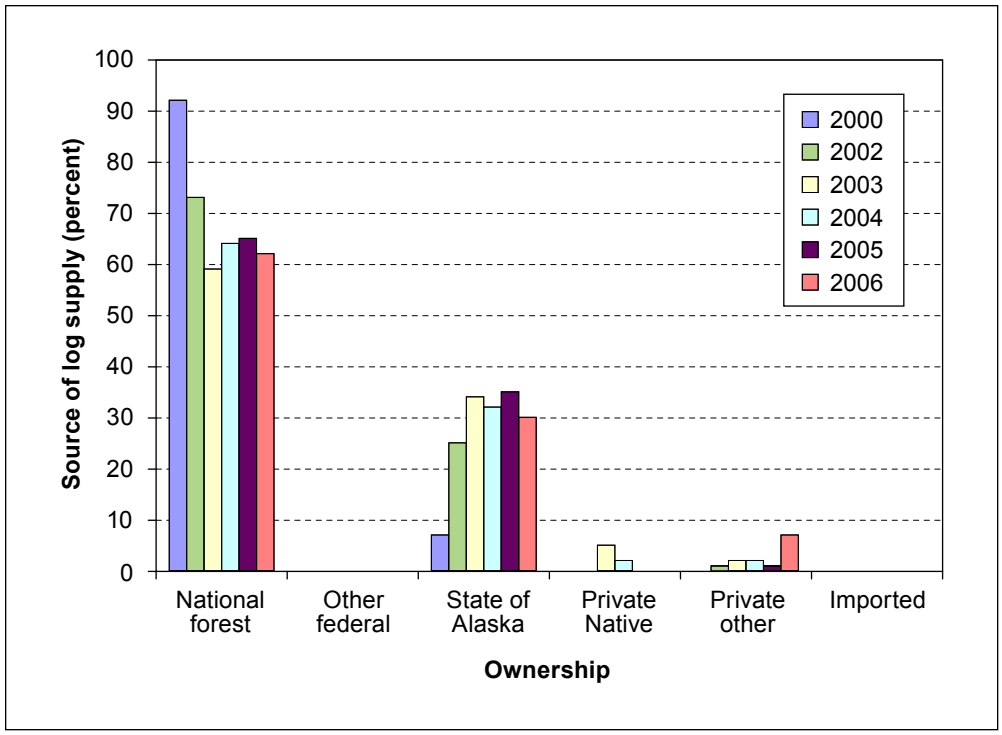

Figure 5—Estimated source of logs processed by southeast Alaska sawmills, 2000 and 2002–2006.

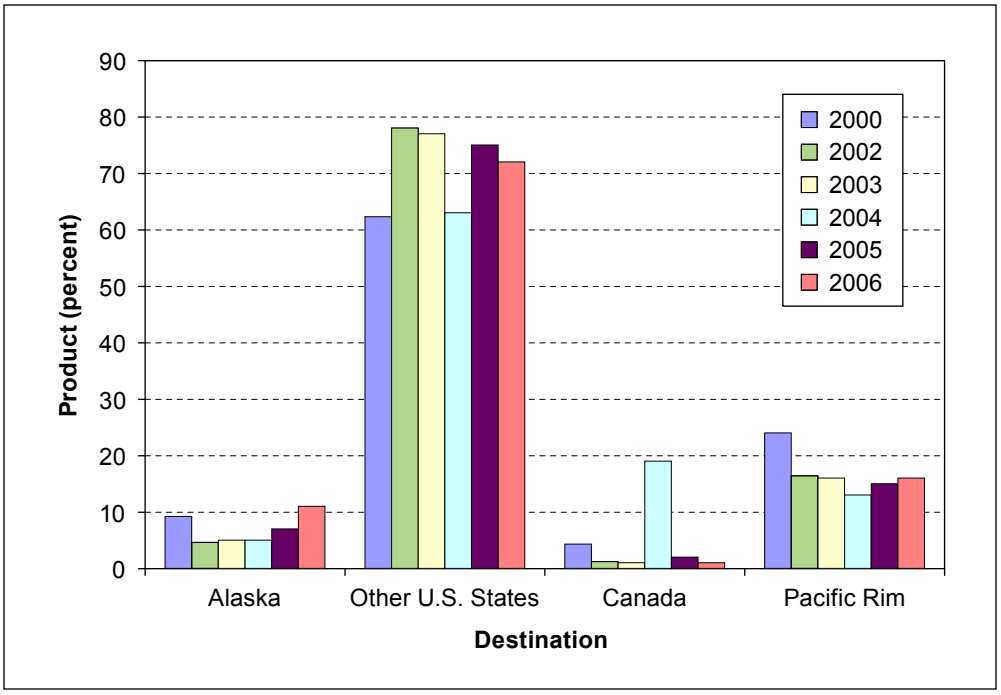

Figure 6—Estimated shipping destination of southeast Alaska forest products, 2000 and 2002–2006.

In CYs 2005 and 2006, the survey questions were modified, and it is now possible to report estimated volumes of shop lumber as well as estimated volumes of dimension lumber.[2] In the past 2 years, about 30 percent of the material produced by southeast Alaska mills was shop lumber. In general, shop lumber grades have higher prices than dimension lumber grades (Haynes and Fight 2004, Random Lengths 2006).

Figure 4 also provides information relative to the production of cants.[3] In 2000, cants accounted for 25 percent of production, but in 2002 this percentage fell to around 1 percent. Since 2002, the volume of cants has steadily increased and in 2006, 20 percent of the production was cants.

The sources of logs processed by mills are presented in figure 5. Since 2000, the volume of logs processed from state lands has increased, ranging between 9.7 and 12 mmbf from 2002 to 2006. Currently, about 30 percent of the logs processed by southeast Alaska sawmills comes from state lands. The volume of logs

[2] Dimension lumber is defined as, "lumber that is from two inches up to, but not including, five inches thick, and that is two or more inches in width. Dimension also is classified as framing, joists, planks, rafters, etc." (Evans 2000: 101). Shop lumber is defined as, "lumber that is graded for the number and sizes of cuttings that can be taken from it. Used in the manufacture of other products such as door and window parts" (Evans 2000: 300).

[3] A cant is defined as, "a large slab cut from a log at the headsaw, usually having one or more rounded edges, and destined for further processing by other saws" (Evans 2000: 53).

processed that come from Tongass National Forest lands decreased dramatically with the last of the Ketchikan Pulp Company long-term contract settlement harvests in 2000. Since 2000, volumes from the Tongass ranged from a high of 29.1 mmbf in 2002 to a low of 18.9 mmbf in 2003. Between 2004 and 2006, the logs coming from national forest lands have accounted for between 62 and 65 percent of the total volume of processed logs.

In the past 2 years, 80 percent of the products have been sold in domestic markets.

Markets supplied by southeast Alaska producers are presented in figure 6. In the past 2 years, 80 percent of the products have been sold in domestic markets. Small amounts (8 to 10 percent) of the products remain in Alaska, but the majority of the products (70 percent in 2006) are being shipped to the lower 48 States. During the last 2 years, less than 19 percent of the products have been directly exported to markets outside North America.

With the exception of CY 2004, figure 6 confirms that the Pacific Rim is the major export destination for products. In CY 2004, an unusually high percentage (18 percent) of material was exported to Canada. A single mill accounted for 83 percent of the volume exported to Canada in that year. In all other survey years the volume of material shipped to Canada has been less than 5 percent of the total volume produced.

Discussion

With the closing of the region's pulp mills in 1994 and 1997, the structure of the forest products industry in southeast Alaska changed. In 1997, the USDA Forest Service (1997a: M-4) wrote,

> Historically, about half of the total timber harvested on the Tongass has been delivered to sawmills; most of the number two grade logs and nearly all the better grades have been sawn while most of the number three grade logs have been pulped. Usually the large diameter logs have been sent to the sawmill and the smaller diameters (15–16 small end diameter) sent to the pulp mill. Utility and cull logs have primarily been pulped, although the utilization of all lower grade logs in sawmills has increased with the presence of more specialized sawmilling capacity.

During the pulp mill era, the primary product manufactured by southeast Alaska sawmills was cants for the export market (primarily, Japan). Lane et al. (1972: 1) wrote, "The lumber market for mills in southeastern Alaska is primarily an export cant market. A small amount is sold for local consumption, and an occasional shipment of the higher-grade boards, produced incidentally to cant manufacture, is shipped to domestic markets outside Alaska."

Today, the industry utilizes only a limited number of grades of harvested logs. The emerging picture of the sawmill industry in southeast Alaska is that of a smaller industry that produces limited amounts of valuable lumber products. Declining supplies of old-growth timber from other regions such as the U.S. Pacific Northwest have resulted in a scarcity of some traditional solid wood products in domestic markets, and the majority of southeast Alaska wood products are now flowing to these niche markets.

Although some cants are still being produced and shipped to export markets, total sawn wood exports to the Pacific Rim from the southeast Alaska mills surveyed have accounted for less than 17 percent of total production for the past 5 survey years (CYs 2002–2006). A major container terminal is being built in Prince Rupert, British Columbia. As the port expands, large numbers of empty containers returning to Pacific Rim ports may create favorable freight rates for southeast Alaska mills interested in exporting products.

The majority of the wood products that are staying in Alaska are coming from the smaller mills. The USDA Forest Service (2008: 3-503) stated,

> Market shifts partly reflect the movement of smaller operators away from exporting round logs, chips, or rough–cut green lumber toward value added products and a shift toward direct marketing of finished products. Value-added products produced by small mills on Prince of Wales Island, for example, include molding, tongue-and-groove, log cabin-style paneling, and shingles (Petersen and Bruns 2005), as well as wood for musical instruments.

Shipping costs have increased and are predicted to continue rising with increases in fuel prices. These increases may allow Alaska value-added wood products to gain a larger share of local markets. The manufacture of pellets or other wood-based heating products in southeast Alaska is also being considered as an option to reduce local communities' dependence on petroleum products for heating needs. Second-growth thinning projects for commercial, restoration, or other purposes is occurring in southeast Alaska, and finding economic uses for the logs and biomass from these projects is also of interest. All of these near-term factors may lead to changes in the utilization of existing capacity and changes in the types of new capacity installed. In the longer term, there may be changes in the types of new capacity installed as the industry starts to harvest the smaller second-growth timber that exists in the previously harvested old-growth units.

Conclusion

Between 2003 and 2006, the total estimated design capacity of the wood products industry in southeast Alaska did not differ much. Estimated mill output also appears to have stabilized during this period. Emerging opportunities to process more of the types and grades of logs that exist in southeast Alaska owing to changes in energy markets may lead to increased utilization of existing capacity as well as new types of processing capacity.

Metric Equivalents

When you know:	Multiply by:	To find:
Board feet, log scale	0.0045	Cubic meters, logs

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