

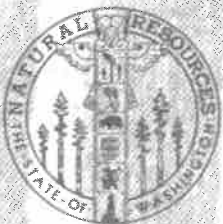
WASHINGTON MILL SURVEY SERIES
REPORT NO. 5

SEPTEMBER 1977

1976 WASHINGTON MILL SURVEY

WOOD CONSUMPTION AND MILL CHARACTERISTICS

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STATE OF WASHINGTON

Department of

Natural Resources

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RALPH BESWICK—SUPERVISOR

Errata

The Department of Natural Resources discovered by working with the export data in the 1976 Washington Mill Survey a data entry by a firm to be questionable. This questionable entry was, in fact, incorrectly reported resulting in tabulated changes in the Olympic Area and Total State Export figures. NO DATA CHANGES ARE TO BE MADE for the lumber; plywood and veneer; shake and shingle; pulp and board; and pole, post and piling industries.

Log Consumption by Type of Industry

- Page xii 1976 Log Export Reads: 32 -- Should read: 28
 1976 Pulp & Board Reads: 8 -- Should read: 9
 1976 Lumber reads: 45 -- Should read: 48
- Page xiii 1976 State Total reads: 6,640 -- Should read: 6,307
 1976 Log Export reads: 2,116 -- Should read: 1,783
- Page xiv 1976 State Total reads top to bottom: 9, 54, 6
 Should read: 11, 53, 5
 1976 Log Export reads top to bottom: 9, 60, 4, 25, 2
 Should read: 11, 60, 2, 24, 3
- Page xv 1976 State Total reads top to bottom: 3, 24, 37, 36
 Should read: 3, 24, 35, 38
 1976 Log Export reads top to bottom: 13, 58, 29
 Should read: 12, 56, 32
- Page xvi 1976 State Total reads top to bottom: 37, 63
 Should read: 36, 64
 1976 Log Export reads top to bottom: 31, 69
 Should read: 26, 74

Wood Consumption

- Page xix Col. 1, point 1, line 1 reads: "6.6 billion board feet of
 roundwood logs"--
 Should read: "6.3 billion board feet of
 roundwood logs"
- Col. 1, point 4, Grays Harbor reads: 1,154,342 MBF
 Should read: 821,342 MBF
- Col. 2, point 1, percentages read top to bottom: 45%, 32%, 10%,
 8%, 4%, 1% --
 Should read: 48%, 28%, 10%,
 9%, 4%, 1%
- Col. 2, point 4 reads: "36% of the roundwood volume was
 Douglas fir; 37%, hemlock; 11%,
 Western redcedar."--
 Should read: "38% of the roundwood volume was
 Douglas fir; 35%, hemlock; 10%,
 Western redcedar."
- Col. 2, point 6, line 1 reads: "54% of the logs came from private"--
 Should read: "53% of the logs came from private"

Page 5 Col. 1, para 1, line 3 reads: "6.6 billion board feet of logs,[†]
 157 million"
 Should read: "6.3 billion board feet of logs,[†]
 157 million"

Figure 4 percentages read: Lumber, 45%; Veneer & Plywood, 10%;
 Export, 32%; Pulp & Board, 8%; Other, 5%--
 Should read: Lumber, 48%; Veneer & Plywood, 10%;
 Export, 28%; Pulp & Board, 9%; Other, 5%

Col. 2, Top

Ownership	Log Supply Percent
State	12
National Forest	19
Bureau of Land Management	††
Other Public	6.5
<hr/>	
Total Public	37 36
Forest Own Wood Supply	26 27
Industry Other Wood Supply	28 26
Farmer & Misc. Private	6.11
<hr/>	
Total Private	63 64
All Owners	100

††Less than 0.5 percent.

Col. 2, Bottom

Ownership	Number of Mills Two-Thirds Dependent
State	27 16
National Forest	57
Bureau of Land Management	3 --
Other Public	28 29
<hr/>	
Total Public	112 102
Forest Own Wood Supply	88 26
Industry Other Wood Supply	112 125
Farmer & Misc. Private	82 84
<hr/>	
Total Private	267 235
All Owners	381 337

Page 6 Col. 1, para 1, lines 1 & 2 read: "At the state level, Douglas
 fir (36%) and hemlock (37%)[†]
 were the dominant species"
 Should read: "At the state level, Douglas
 fir (38%) and hemlock (35%)[†]
 were the dominant species"

Page 19 Col. 1, Log Consumption, line 1 reads: "Export shipments totaled
 2.1 billion"--
 Should read: "Export shipments totaled
 1.8 billion"

Figure 13 percentages read: Puget Sound, 30%; Lower Columbia, 16%;
 Olympic Peninsula, 54%--
 Should read: Puget Sound, 36%; Lower Columbia, 19%;
 Olympic Peninsula, 45%

Page 19 Col. 2, line 4 reads: "sound logs. About 69 percent of the logs"
 Should read: "sound logs. About 74 percent of the logs"

Col. 2, Top

Col. 2, Bottom

	Log Supply Percent	Species	Log Supply Percent
Ownership			
State	23 24	Hemlock	38 56
National Forest	2 3	Douglas fir	23 32
Other Public	4 2	Western redcedar	7 5
<hr/>	<hr/>	Spruce	2
Total Public	27 29	All other	4 5
Forest Industry	60	<hr/>	<hr/>
Farmer & Misc. Private	9 11	Total All Species	100
<hr/>	<hr/>		
Total Private	68 71		
All Owners	100		

Page 42, Table 2, Col. 1, All roundwood and Col. 2, Soundlogs
 Olympic Peninsula

Export reads:	1,140,457	1,138,050	Total reads:	2,427,934	2,132,543
should read:	807,457	805,050	should read:	2,094,934	1,799,543

Total, state

Export reads:	2,116,012	2,113,587	Total reads:	6,640,393	5,939,295
should read:	1,783,012	1,780,587	should read:	6,307,393	5,606,295

Page 43, Table 3, Col. 1, All and Col. 2, Washington

Olympic Peninsula

Export reads:	1,140,457	1,140,457	Total reads:	2,427,934	2,421,636
should read:	807,457	807,457	should read:	2,094,934	2,088,636

Total, state

Export reads:	2,116,012	2,075,788	Total reads:	6,640,393	6,454,591
should read:	1,783,012	1,742,788	should read:	6,307,393	6,121,591

Page 44, Table 4

Olympic Peninsula

	Total	Grays Harbor	Jefferson	Pacific
Grays Harbor and Pacific reads:	1,291,355	549,664	288,175	396,186
should read:	958,355	499,714	154,975	246,336
Total reads:	2,427,934	583,138	512,095	401,538
should read:	2,094,934	533,188	378,895	251,688

Total, state

Now reads:	6,640,393	622,277	569,170	462,435
should read:	6,307,393	572,327	435,970	312,585

1976 Washington Mill Survey
 Errata - Page 4

Page 49, Table 7

<u>Olympic Peninsula</u>	<u>All Owners</u>	<u>State</u>	<u>Other Public</u>	<u>Forest Industry Other Wood Supply</u>
Export reads:	1,140,457	392,788	80,587	537,930
should read:	807,457	309,538	30,637	338,130
Total reads:	2,427,934	529,231	176,011	770,907
should read:	2,094,934	445,981	126,061	571,107
<u>Total, State</u>				
Export reads:	2,116,012	518,893	80,587	1,213,968
should read:	1,783,012	435,643	30,637	1,014,168
Total reads:	6,640,393	825,458	373,266	1,868,550
should read:	6,307,393	742,208	323,316	1,668,750

Page 50, Table 8
Olympic Peninsula

	<u>All Species</u>	<u>Douglas fir</u>	<u>Hemlock</u>	<u>Western redcedar</u>
Export reads:	1,140,457	172,195	775,147	140,964
should read:	807,457	138,895	542,047	74,364
Total reads:	2,427,934	522,432	1,327,448	407,411
should read:	2,094,934	489,132	1,094,348	340,811
<u>Total, State</u>				
Export reads:	2,116,012	610,584	1,225,151	158,283
should read:	1,783,012	577,284	992,051	91,683
Total reads:	6,640,393	2,418,214	2,469,587	703,320
should read:	6,307,393	2,384,914	2,236,487	636,720

Page 52, Table 10
Olympic Peninsula

	<u>All Age Groups</u>	<u>Old Growth (100+ years)</u>	<u>Young Growth (less than 100 years)</u>
Export reads:	1,140,457	709,565	430,892
should read:	807,457	559,715	247,742
Total reads:	2,427,934	1,576,263	851,671
should read:	2,094,934	1,426,413	668,521
<u>Total, State</u>			
Export reads:	2,116,012	1,465,366	650,646
should read:	1,783,012	1,315,516	467,496
Total reads:	6,640,393	4,203,087	2,437,306
should read:	6,307,393	4,053,237	2,254,156

1976 Washington Mill Survey
 Errata - Page 5

Page 133, Table 79
Olympic Peninsula

	<u>Sound logs</u>	<u>Total</u>
Grays Harbor reads:	802,161	802,161
should read:	469,161	469,161
Total reads:	1,138,050	1,140,457
should read:	805,050	807,457
<u>Total, State</u>		
now reads:	2,113,587	2,117,062
should read:	1,780,587	1,784,062

Page 134, Table 81
Olympic Peninsula

	<u>Grays Harbor reads</u>	<u>Should read</u>
Grays Harbor reads:	283,076	233,126
Jefferson reads:	261,053	127,853
Pacific reads:	245,204	95,354
Total reads:	802,161	469,161
<u>State, Total</u>		
now reads:	802,161	469,161
Total reads:	802,161	469,161

Page 135, Table 82
Olympic Peninsula

	<u>All Species</u>	<u>Douglas fir</u>	<u>Hemlock</u>	<u>Western redcedar</u>
Grays Harbor reads:	802,161	121,170	538,488	122,701
should read:	469,161	87,870	305,388	56,101
Total reads:	1,140,457	172,195	775,147	140,964
should read:	807,457	138,895	542,047	74,364
<u>Total, State</u>				
now reads:	2,116,012	610,584	1,225,151	158,283
should read:	1,783,012	577,284	992,051	91,683

For questions or comments, please contact:

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1976

WASHINGTON MILL SURVEY

WOOD CONSUMPTION AND MILL CHARACTERISTICS

by

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**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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ACKNOWLEDGMENT

We thank the major forest industrial associations for their support of this study, and the individual mill owners and operators who provided data for this report.

This study was completed with the cooperation of:

PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT
STATION, U.S. DEPARTMENT OF AGRICULTURE

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FOREWORD

This report presents comprehensive statistics on wood consumption and the characteristics of primary wood processing mills† operating in Washington State during calendar year 1976. It documents the findings of the fifth in a series of biennial surveys regarding mill characteristics, wood flow and the input of raw materials into the State's wood-using industries:

- Sawmills
- Veneer and plywood mills
- Pulp and board mills
- Shake and shingle mills
- Pole, post and piling mills
- Log export operations

The 1976 statistics were obtained from a mail survey with telephone follow-up conducted in 1977. Firms contacted were based on the 1974 survey list updated to 1976.

As the survey was a 100-percent canvass, no sampling error is involved. In a few cases some data had to be estimated based on extrapolation from previous reportings.

The information collected from each mill is assumed to be the most reliable and best

†Mills that use roundwood or are the original firm to process the raw material.

available. An exception is the sawmill and veneer plant log inventory data included in this report for the beginning and end of the survey year. It was not possible to secure recorded data or an informed estimate for a number of mills. Hence, these data are understated in this report.

Information about individual mills or companies is confidential. Data that could reveal individual mill identity have been combined with other data to avoid disclosure.

Production data, while not a major objective of the survey, were obtained to provide information on wood requirements for given levels of production and to generate residue volumes.

The text highlights noteworthy statistics presented in the tables. It also provides a summary of the timber economy in 1976 as well as some recent trend information.

It is hoped that the information on residue and commodity production and wood consumption will allow utilization people to track production and consumption trends.

Special Note:

In the process of checking and preparing the 1976 data for the pulp and board mills, a coding error was discovered in the 1974 data. The change is discussed at the end of the pulp and board section.

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TABLE NUMBER CROSS INDEX
(Between the Five Washington Mill Survey Reports†)

REPORT YEAR AND TABLE NUMBER

1976	1974	1972 and		1976	1974	1972 and	
		1970	1968			1970	1968
1	1	1	1‡	42	41	39	36
2	2	2	2‡	43	42	40	37
3	3	3	3‡	44	43	41	38
4	4	4	4	45	44	42	39
5	5	81	—	46	45	43	40
6	(6,47, 60,72)	(5,45, 58,70)	(5,42, 55,66)	47	46	44	41
7	(7,70)	(6,68)	64	48	48	46	43
8	(8,75)	(7,73)	6‡	49	49	47	44
9	9	8	7	50	50	48	45
10	69‡	67‡	63‡	51	51	49	46
11	10	9	8	52	52	50	47
12	11	10	9	53	—	—	—
13	12	11	10	54	53	51	48
14	13	12	11	55	54	52	49
15	14	13	12	56	55	53	50‡
16	15	14	13	57	56	54	51
17	16	15	14	58	—	—	—
18	17	16	15	59	57	55‡	52‡
19	18	17	16	60	58	56	53
20	19	18	17	61	59	57	54
21	20	19	18	62	61	59	56
22	21	20	19	63	62	60	—
23	22	21	20	64	(63,64, 67)	(61,62, 65)	(57,58, 61)
24	23	22	21	65	65‡	63‡	59‡
25	24	23	22	66	66	64	60
26	25	24	23	67	68	66	62
27	26	25	24	68	71‡	69‡	65‡
28	27	26	25	69	78	76	69
29	28	28	26	70	79	77	70
30	29	27	27	71	80	78	71
31	30	29	28	72	81‡	79‡	—
32	31	31	29	73	(See 64)		
33	32	30	30	74	(See 66)		
34	33	32	—	75	(See 65)		
35	34	—	—	76	74‡	72‡	67‡
36	35	—	—	77	—	—	—
37	36	34	31	78	(See 72)		
38	37	35	32	79	(See 67)		
39	38	36	34	80	(See 66)		
40	39	37	35	81	—	—	—
41	40	38	33	82‡	73	71	68
				—	76	74	—
				—	77	75	—
				—	82	80	72

†Base year 1976.

‡Contains part of the same information.

COMPARISON

1968 - 1970 - 1972 - 1974 - 1976

This section graphically compares data developed from the 1968, 1970, 1972, 1974 and 1976 surveys.

Number of Mills Included in the Surveys†

	1968	1970	1972	1974	1976
Sawmills	212	185	177	187	175
Veneer and Plywood	43	41	41	37	36
Pulp and Board	35	31	26	25	26
Shake and Shingle	158	172	176	205	252
Pole, Post and Piling	19	25	25	23	22
Log Export	‡	‡	96	90	81
Totals	467	454	541	567	592

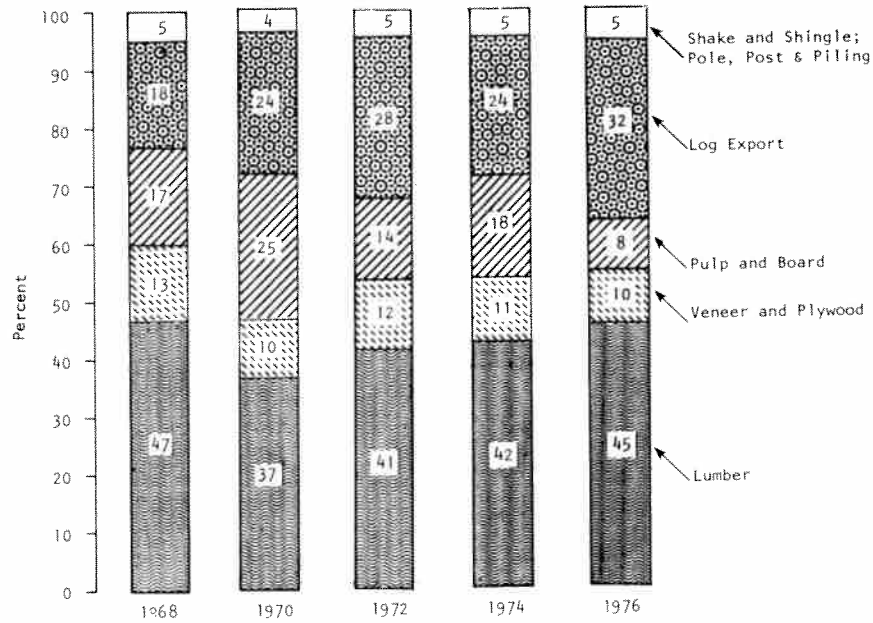
†Only primary wood processing mills that operated during the survey year are included.

‡Not available.

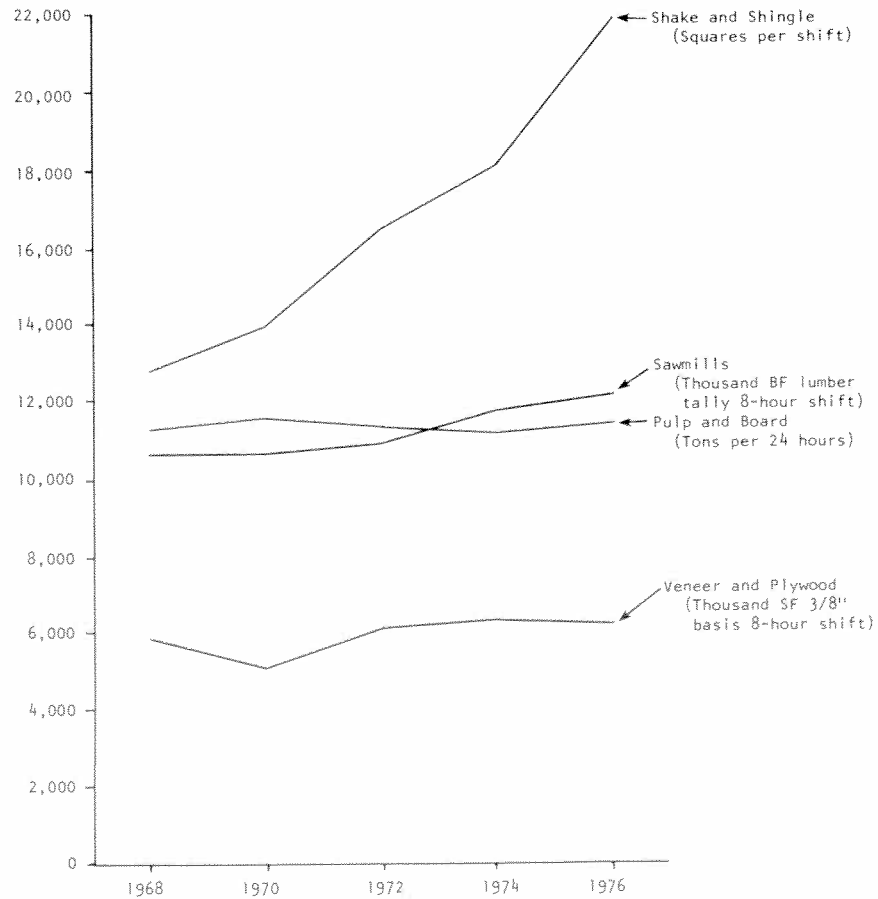
Trends

- The total number of primary processing plants in the forest products industry has increased nine percent from 1972 to 1976. The largest increase has been in the Shake and Shingle sector, which recorded a 59-percent increase from 1968 to 1976. Other sectors have held steady or declined.
- The Export sector's share of log consumption has continued to increase, while the Pulp and Board's share has declined. The Pulp and Board sector continues to consume a greater percentage of utility logs as the total log consumption for this sector declines. It appears that the log consumption is being replaced by chips from low-grade roundwood.
- The Lumber sector continues to gradually increase its share of hemlock logs as opposed to other species.
- Young growth log consumption continues to increase as a share of total log consumption. This trend is particularly noticeable in the Lumber, Veneer and Plywood, and Export sectors.
- The percentage of veneer and plywood mills more than 25 percent dependent on National Forest lands shows a steady increase. The percentage rose from 25 percent in 1968 to 44 percent in 1976.
- The percentage of wood and bark residue that is used continues to increase, reaching 91 percent for all sectors in 1976.
- Single shift lumber production capacity for the Lumber sector continues to increase. Since 1970, the largest (size-class A) sawmills have accounted for over 50 percent of the single shift capacity, and this class has also had the greatest increase. Size-classes B and C have remained relatively stable, but the single shift capacity of the smallest (size-class D) mills has declined.

Log Consumption by Type of Industry (Percent)

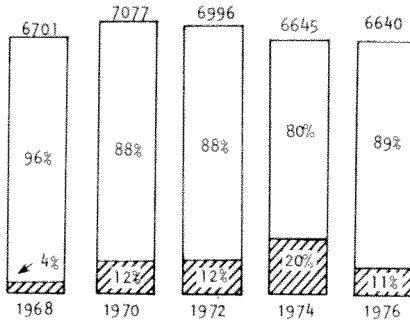


Installed Shift Capacity

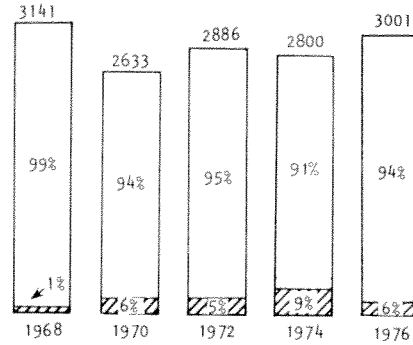


Roundwood Consumption and Percent Utility Logs by Industry (Million Board Feet Scribner)

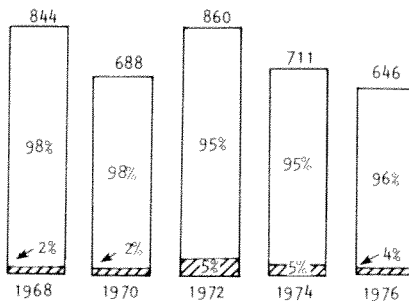
State Total



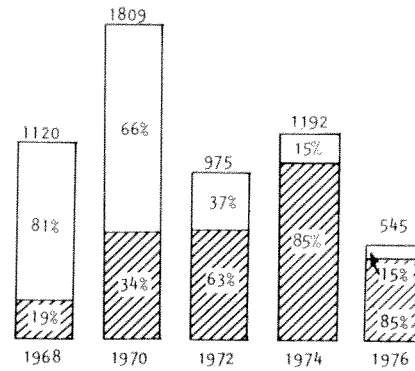
Lumber



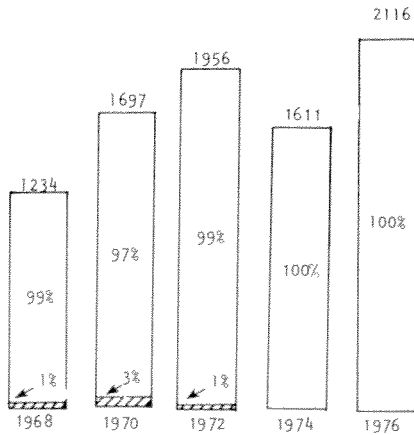
Veneer and Plywood



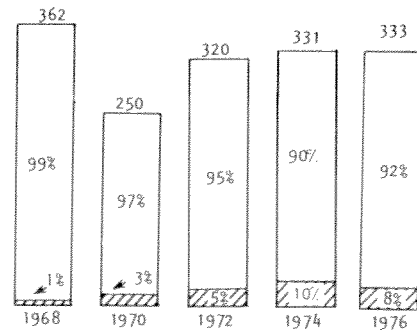
Pulp and Board



Log Export



Shake and Shingle; Pole, Post & Piling



Roundwood

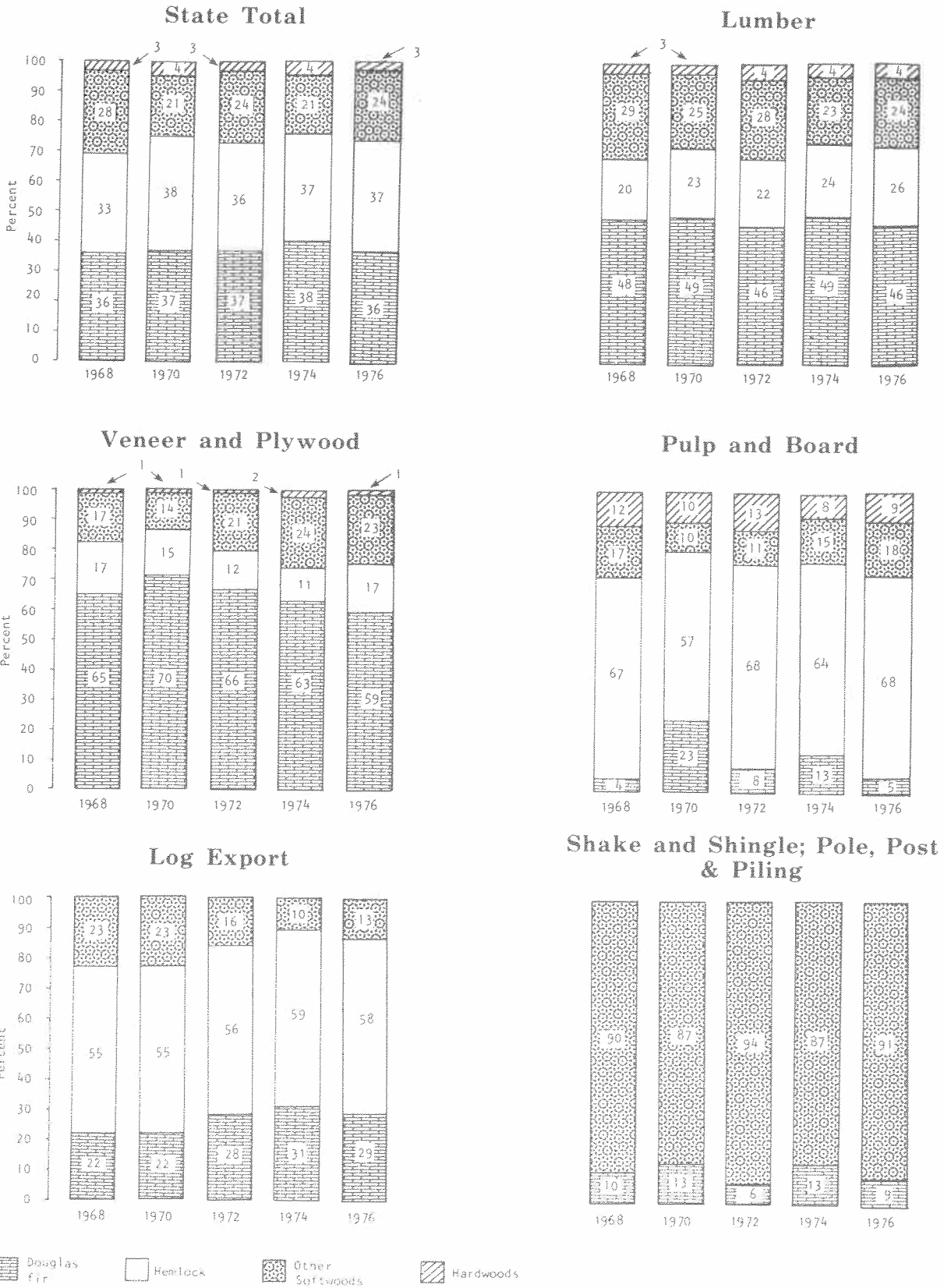


NOTE: 1. Scale for height of bar is different for each industry. Hence visual comparison among the different industries is not valid.
 2. Cordwood consumption of Pulp and Board mills is included in the utility percentage.

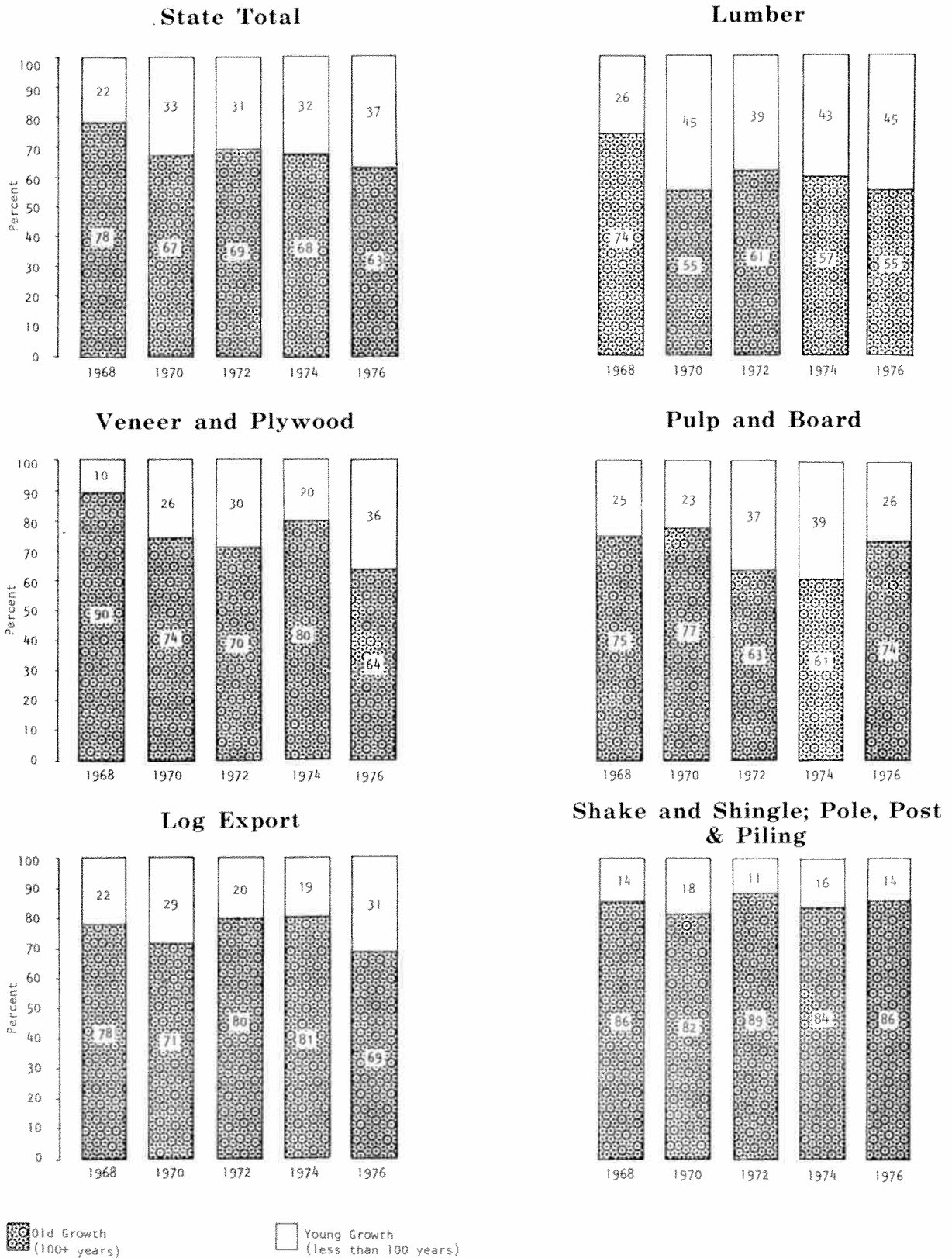
Log Consumption by Ownership Class by Industry (Percent)



Log Consumption by Species by Industry (Percent)

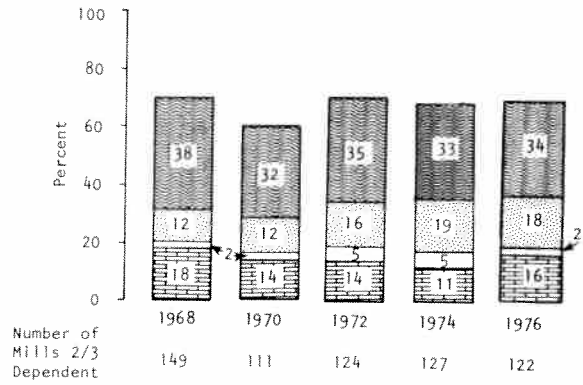


Log Consumption by Timber Age Group by Industry (Percent)

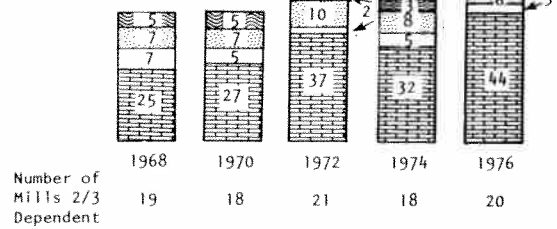


Number of Mills and Percent of Mills More than Two-Thirds Dependent on a Single Ownership Class for Logs by Industry

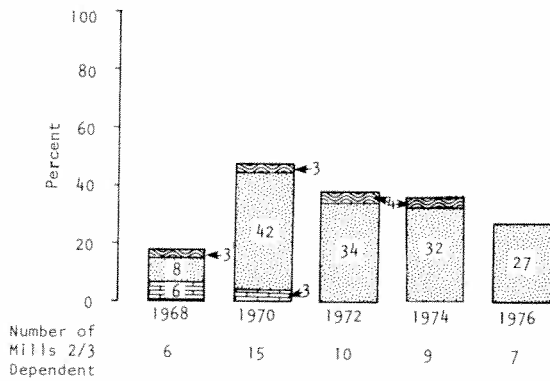
Lumber



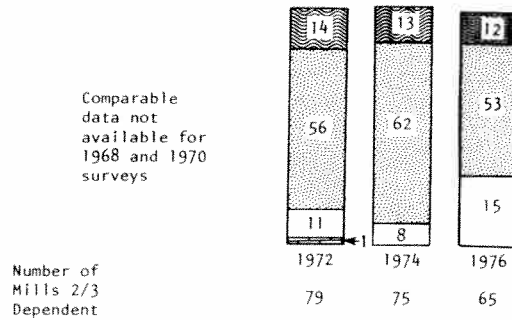
Veneer and Plywood



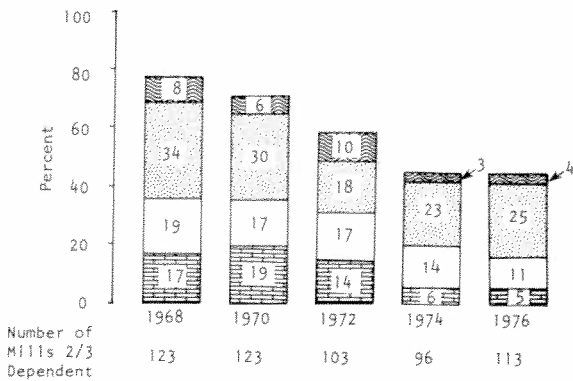
Pulp and Board



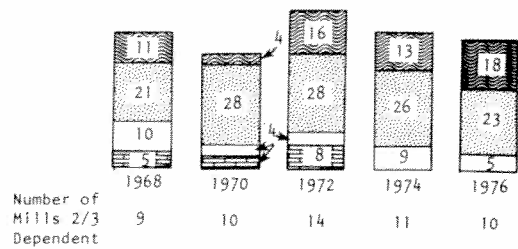
Log Export



Shake and Shingle

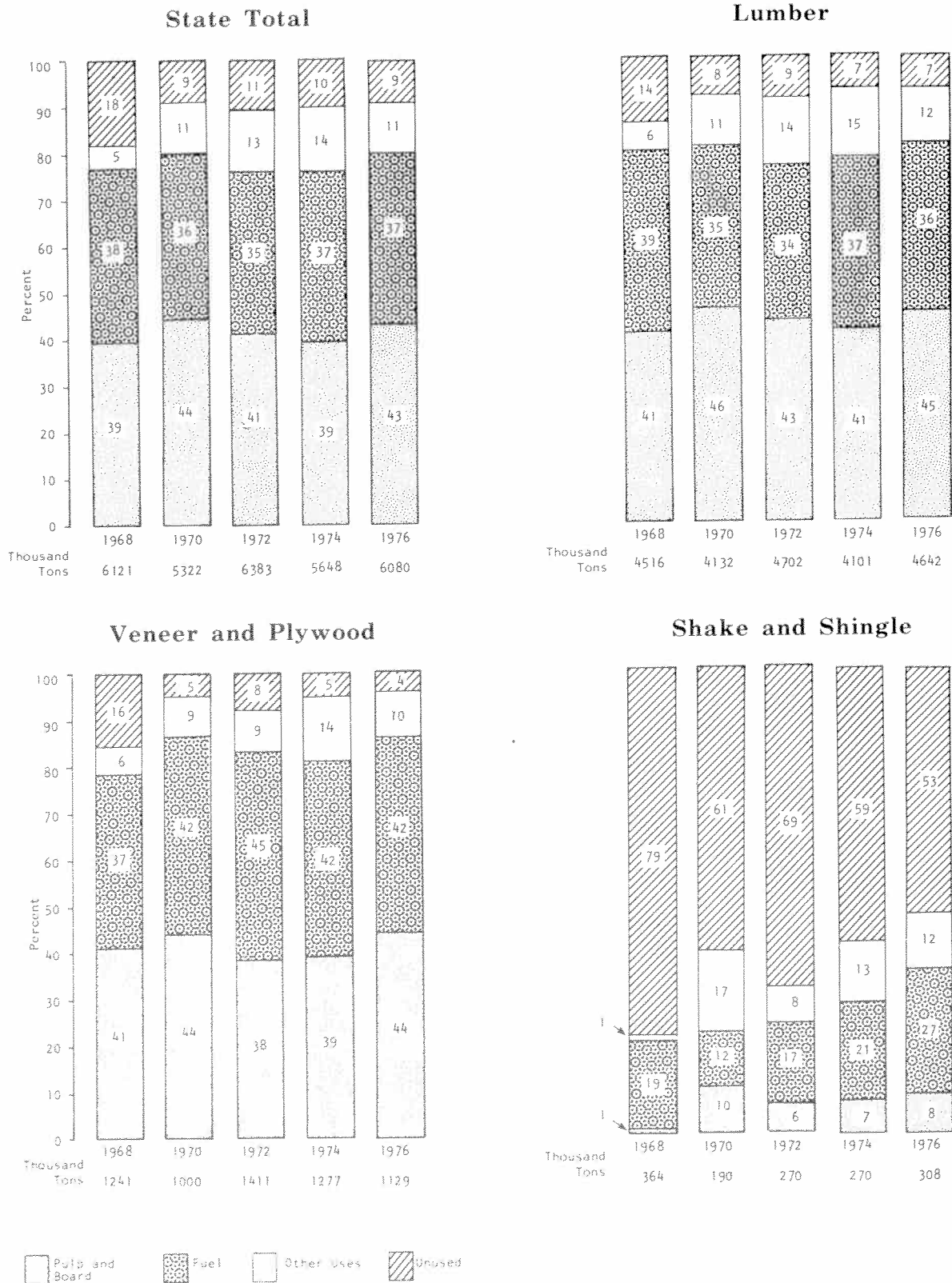


Pole, Post & Piling



National Forest
 State and Other Public
 Forest Industry
 Farmer & Misc. Private

Production and Disposition of Wood and Bark Residue by Use and by Industry (Percent)



1976 HIGHLIGHTS

Industry Characteristics

- 592 mills† total:

Type of Mill	Number of Mills	Single Shift Capacity
Sawmills	175	12.1 MMBF
Veneer & Plywood	36	6.2 MMSF (% Basis)
Pulp & Board	26	11.4 M Tons (Daily)
Log Export	81	NA
Shake & Shingle	252	21.9 M Sq.
Pole, Post and Piling	22	11.2 MMCF (yearly)

- Grays Harbor was the leading county in number of mills with 120.
- The 36 largest (Class A) sawmills had 58% of total sawmill capacity.

Wood Consumption

- 6.6 billion board feet of roundwood logs consumed.
- 157 million board feet of peeler cores, cants, blocks, bolts, and miscellaneous peeled products.
- 5.8 million tons of chips, sawdust, shavings and bark consumed by the Pulp & Board Industry; 37% from out-of-state.
- Leading counties in roundwood use were:

Grays Harbor	1,154,342 MBF
Cowlitz	854,826 MBF
Snohomish	831,449 MBF

More wood was consumed in each of these counties than in the Central Washington and Inland Empire Economic Areas combined.

†For ease of presentation the term "mill" is used for all types of primary processing plants although it is recognized that some are better described by other terms such as export operations or facilities and pole and piling yards.

- Roundwood use by industry:

Sawmills	45%
Log Export	32%
Veneer & Plywood	10%
Pulp & Board	8%
Shake & Shingle	4%
Pole, Post & Piling	1%

- 84% of total wood used by Pulp & Board was in the form of chips, sawdust, and shavings.
- 89% of all logs used were from sound timber.
- 36% of the roundwood volume was Douglas fir; 37%, hemlock; 11%, western redcedar.
- Only 3% of all logs were imported, mostly from Oregon.
- 54% of the logs came from private forest-industry-owned timberlands; 12% from State; 19% from National Forests.
- 46% of the National Forest logs came from the Gifford Pinchot and Olympic National Forests.

Residues

- 6.1 million tons of wood and bark residues were generated by:

Type of Mill	Percent	Million Tons
Sawmills	76	4.64
Veneer & Plywood	19	1.13
Shake & Shingle	5	0.31

- 79% of all residue was wood; 21% was bark. 93% of wood residues and 82% of the bark were used. 554,273 tons (wood and bark) were unused.
- 54% of wood residue went to Pulp & Board; 31% to fuel; 8% other uses; and 7% was unused.
- Residue-producing industries averaged 1.55 tons of residue per 1000 board feet of logs consumed (1.22 tons of wood, 0.33 tons of bark).

AN OVERVIEW OF THE INDUSTRY

THE TIMBER ECONOMY

The Washington timber economy rebounded to previous prosperous levels in 1976, after falling 16% in the 1974-75 period. The value of Washington forest products is over \$2.5 billion. Washington remains one of the leading states in terms of wood products and roundwood consumption, with about 9 percent of the nation's roundwood produced in the State. Also, 11.8 percent of the nation's softwood lumber was produced in the State. In addition, the State produced 10.3 percent of the nation's softwood plywood, about 7.5 percent of the nation's pulpwood consumption, and exported 62.5 percent of the nation's softwood logs.

Nationally, 1976 was a robust year for the forest products industries. Federal monies to stimulate residential construction became available. Lower interest rates encouraged established families to purchase new, larger housing. New families were, however, increasingly attracted to multiple dwellings or older homes requiring improvements because of insufficient equity and the cost of new residential housing.

New home construction in Washington State began a steady rate of increase in mid-1975 which continued throughout 1976. New home construction, according to the Department of Commerce's *Construction Review*, increased by 32 percent over the previous year to 43,367 new residences in 1976. This is a significant improvement over the low of 27,111 units constructed in 1974.

The increase in the consumption of building materials which resulted from the increased construction was a stimulant to the economic health of the State and the Nation. Changes from 1975 to 1976 for the State were:†

- Plywood production up 9.9% to 1.894 billion square feet ^{3/8}" basis.
- Softwood lumber production up 17.9% to 3.661 billion board feet.
- Log export shipments up 23.7% to 1.974 billion board feet.

- Chip export shipments up 30.3% to 1.135 million cords.
- Pulpwood consumption up 9.8% to 5.572 million cords.

Despite the improved production, employment†† in lumber and wood products (SIC 24) responded more slowly, reaching 50,900 in 1976 (up 8 percent for the year from 1975). Employment in the paper and allied products industries (SIC 26) rebounded from the 1975 average monthly low of 16,500 to 17,400 for 1976—an increase of 5.8 percent. These data compare with 1976 national employment increases of 7.9 percent for lumber and wood products and 4.5 percent for paper and allied products.

Washington total timber harvest (Figure 1) for 1975 was 6.2 billion board feet, a decrease of 20.8 percent from the 1973 high of 7.8 billion board feet††† — the largest recorded harvest since 1929. The 1976 state timber harvest is estimated at 6.9 billion board feet.

Log use by Washington mills is shown graphically in Figure 2. In developing the graph, final units of production were converted to log equivalents, Scribner scale. The Pole, Post and Piling Industry is not shown due to graphic limitations, but its high-value products contribute to the total value of the wood products industry.

INDUSTRY CHARACTERISTICS

Change is the byword of the forest products industry. With costs increasing and a changing market, mills turned to greater and more innovative uses of residue. There were changes in species mix and mill equipment. Environmental considerations and regulations now reach all

†Production figures beyond this tabulation are based on survey results and not adjusted to Bureau of Census data.

††Employment and wage data reported to the Employment Security Department on quarterly tax reports by employers subject to the Washington Employment Security Act. Timber industry employment (SIC 24 and 26) does not include some segments, such as longshoremen or truckers, not entirely attributable to the timber industry.

†††"1975 Timber Harvest Report," State of Washington Department of Natural Resources, 104 pp., illus.

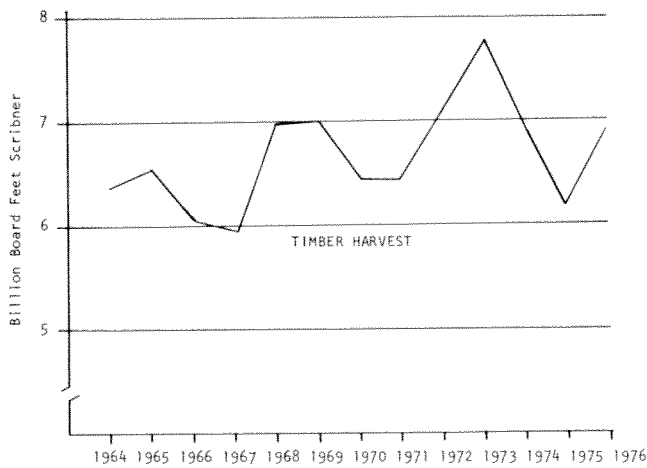
aspects of the industry, and mills are adapting to the new requirements. International markets are changing the outlook of the industry as mills look to foreign countries as potential consumers.

The wood industry is divided into six segments for purposes of description in this report: Lumber (primarily sawmill), Veneer and Plywood,† Pulp and Board, Log Export, Shake and Shingle, and Pole, Post and Piling. Each segment is unique in its raw material requirements, production

†The Veneer and Plywood Industry discussed herein consists mainly of mills producing softwood veneer and plywood. However, a few of these mills do use relatively small volumes of local hardwoods — largely black cottonwood.

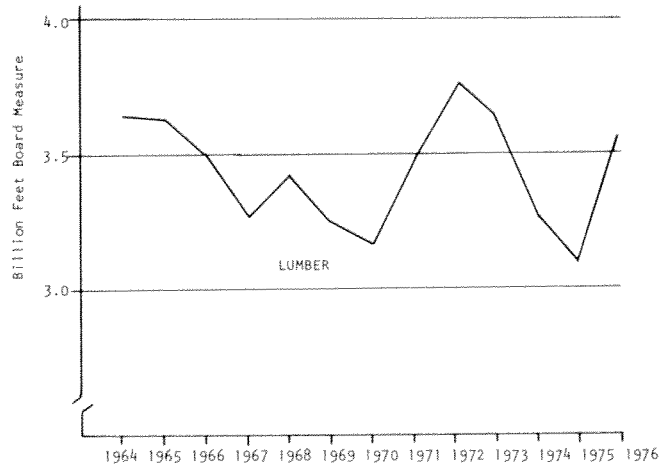
techniques, and marketing procedures. An attempt was made to present data from each industry independently where data was sufficient to avoid disclosure of confidential information from individual operations. Counties which had fewer than three operations were combined with others. Economic Areas are illustrated in Figure 3. In all cases data were grouped in order to maximize the identity of geographic origin. Where possible these groupings have remained the same as that used in previous Surveys to allow comparison. Comparisons within segments or Economic Areas can quickly be obtained by using Tables 1-10.

Figure 1.—Output of Major Timber Products for Washington, 1964-1976

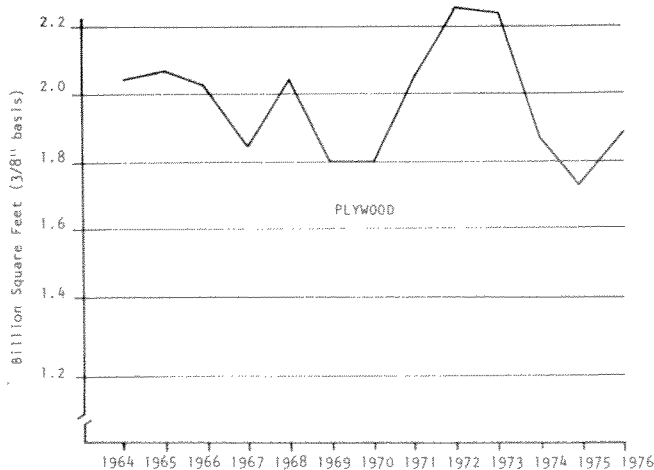


Source: State of Washington Department of Natural Resources.

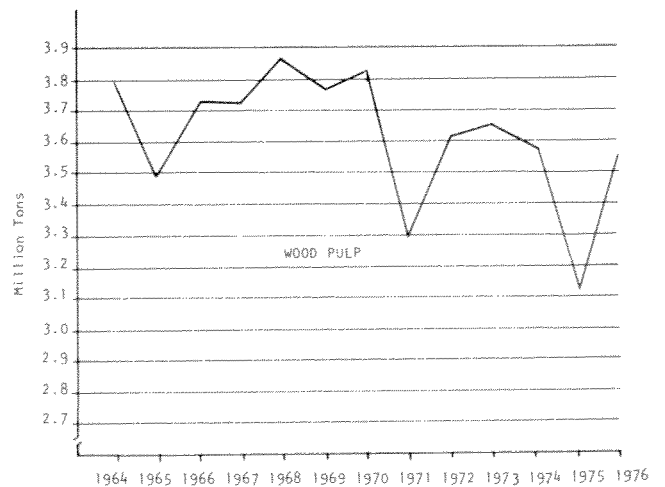
Note: 1976 estimated.



Source: Western Wood Products Association



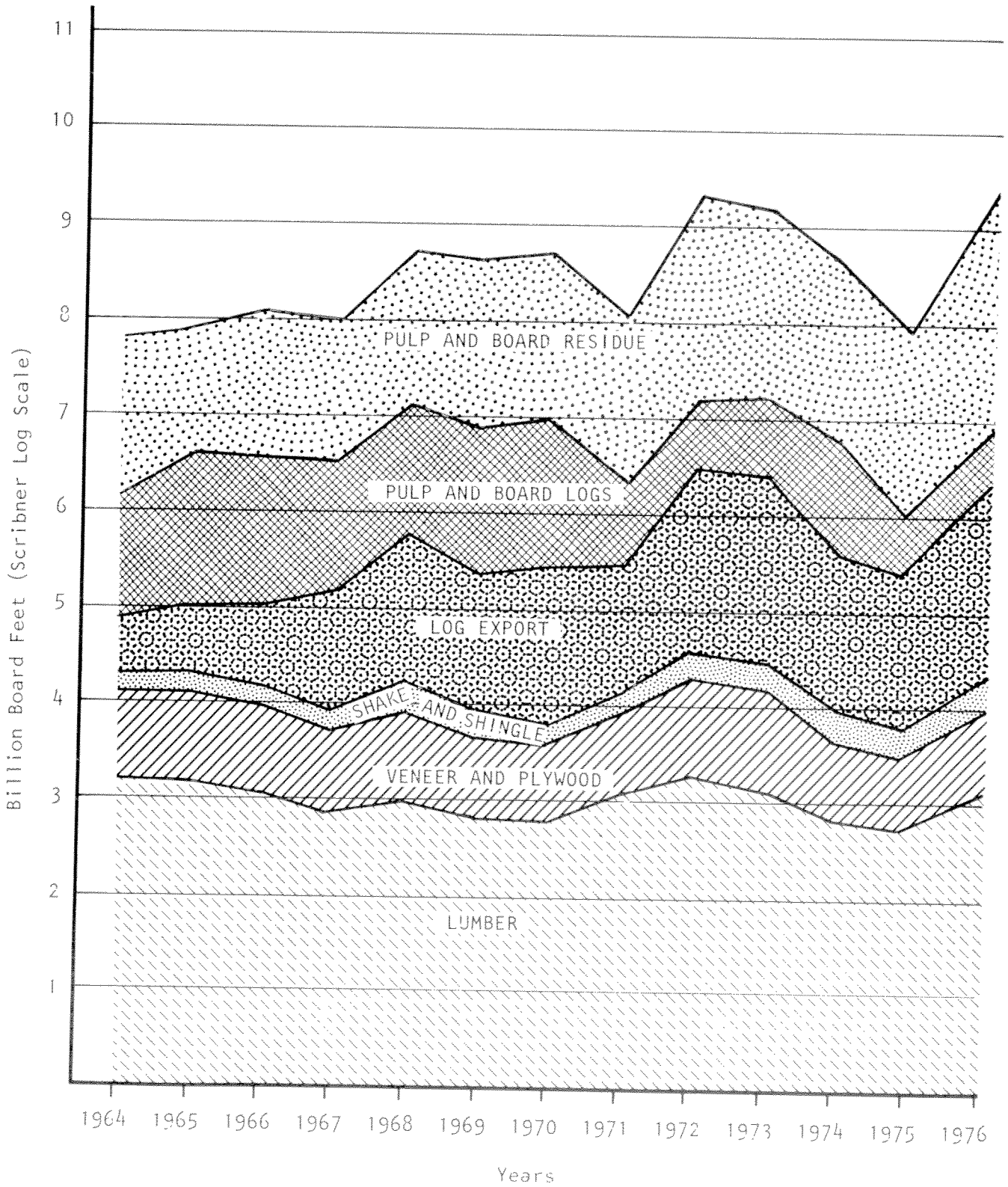
Source: American Plywood Association



Source: Northwest Pulp & Paper Association; Current Industrial Reports, (Pulp, Paper, and Board - M26A).

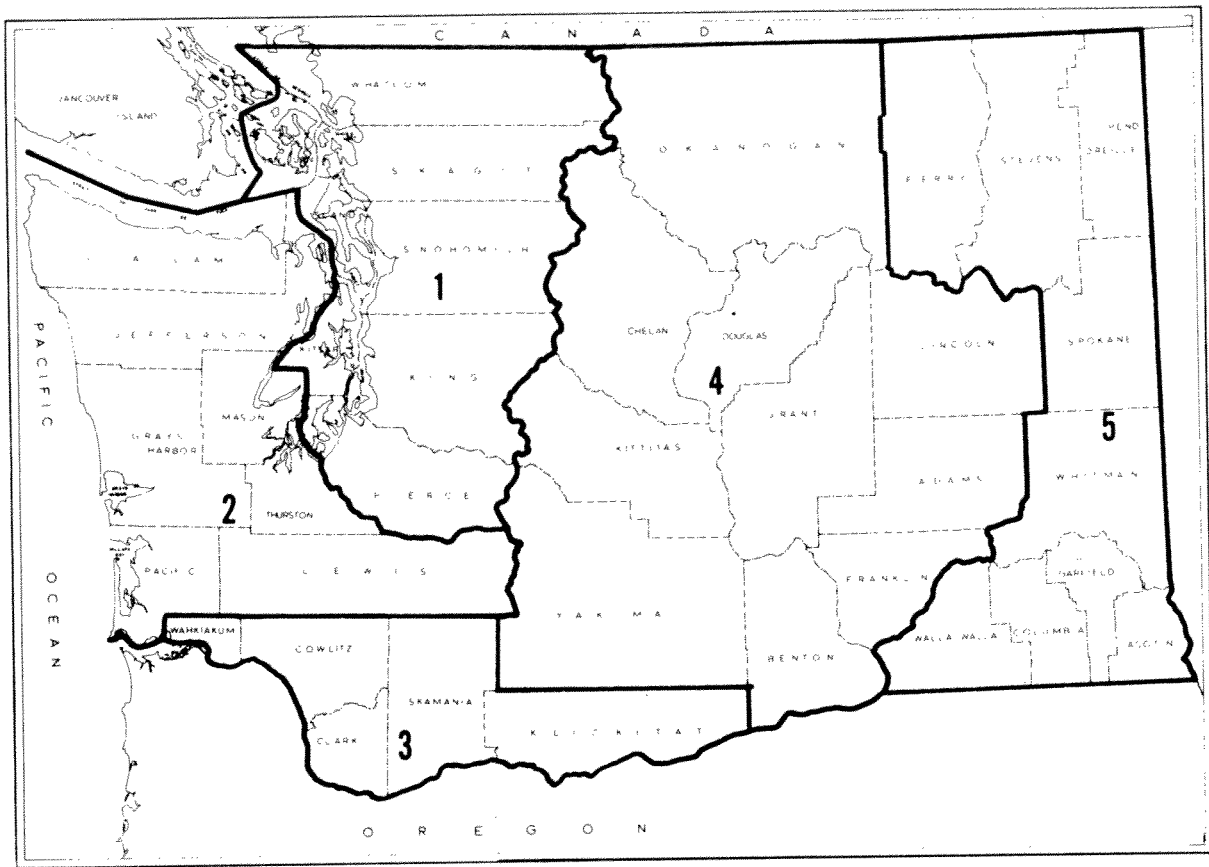
Note: 1976 estimated.

Figure 2.—Washington Wood Use by Major Forest Industries,† 1964-1976
 (Converted to Log Equivalent of Final Product)



†Pole, Post and Piling Industry volume less than 100 million board feet.

Figure 3.—Washington Mill Survey Five Economic Areas Encompassing the Thirty-nine Counties



The five Economic Areas used in this report to show regional consumption of wood and regional production of wood products are:

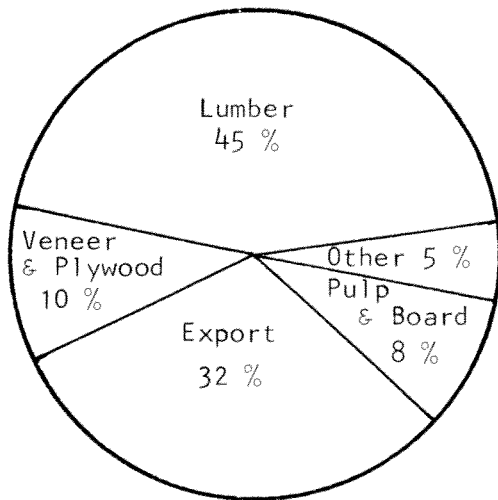
1. Puget Sound
2. Olympic Peninsula
3. Lower Columbia
4. Central Washington
5. Inland Empire

The Thirteen Economic Regions previously used by the State of Washington Office of Program Planning and Fiscal Management to subdivide the above five economic areas are no longer used.

WOOD CONSUMPTION

During 1976, Washington's primary forest products industries consumed about 6.6 billion board feet of logs,† 157 million board feet of other wood, and 5.8 million tons of wood and bark residue. Sound logs made up 89 percent of the total roundwood, with sawmills consuming the greatest portion (47 percent). The remaining 11% of the roundwood (utility or cull material) was consumed mainly by the Pulp and Board Industry (66 percent). Figure 4 illustrates the total log consumption by industry segment.

Figure 4.—Log Consumption by Type of Industry



The 5.8 million tons of wood residues consumed by the Pulp and Board Industry consisted of mill residues and material from roundwood chipping plants. This volume is equivalent to 2.9 billion board feet of round logs. Thus, total wood consumption of the forest products industry can be expressed as the equivalent of 9.5 billion board feet (Scribner) for 1976.

The forest products industries relied on a number of ownerships for their log supplies but met over half the demand from their own lands.

†Scribner log rule has been used to express board foot volume of logs. In some cases, it has been used to provide a board foot equivalent for chips, cordwood, and other materials commonly measured in units, tons, pieces, etc.

Ownership	Log Supply Percent
State	12
National Forest	19
Bureau of Land Management	++
Other Public	6
<hr/>	
Total Public	37
Forest	Own Wood Supply 26 Other Wood Supply 28
Industry	
Farmer & Misc. Private	9
<hr/>	
Total Private	63
All Owners	100

++Less than 0.5 percent.

The log flow from the National Forests came from the following forests:

National Forest	National Forest Log Flow Percent
Gifford Pinchot	25
Mt. Baker—Snoqualmie	23
Olympic	21
Wenatchee	12
Okanogan	8
Colville	6
Other	5
<hr/>	
All National Forests	100

Ownership dependency can be expressed on an individual mill basis by showing those that obtain more than two-thirds of their logs from a single ownership class.

Ownership	Number of Mills Two-Thirds Dependent
State	22
National Forest	57
Bureau of Land Management	3
Other Public	28
<hr/>	
Total Public	110
Forest	Own Wood Supply 33 Other Wood Supply 112
Industry	
Farmer & Misc. Private	82
<hr/>	
Total Private	227
All Owners	337

At the state level, Douglas fir (36%) and hemlock (37%)† were the dominant species consumed by the industry during 1976. In Western Washington, the three major species in order of importance were hemlock, Douglas fir, and western redcedar. Douglas fir and ponderosa pine were the major species in Eastern Washington.

Most segments of the industry are able to use a number of species; however, two segments are very limited. The Pole, Post and Piling Industry is 95 percent dependent on Douglas fir and western redcedar; the Shake and Shingle Industry is almost exclusively dependent on western redcedar.

Washington's timberlands supplied 97 percent of the industry's log demand. Oregon contributed nearly 2 percent, with most (87 percent) of this volume being consumed in the Lower Columbia Area.†† The remainder came from British Columbia, Idaho, Montana, and the Mid-West.

RESIDUES

Production

The Sawmill, Veneer and Plywood, and the Shake and Shingle segments of the industry generated 6.1 million tons of wood and bark residues in 1976. They produce most of the residue, and are the segments for which residue data were developed for this report. Those residues are an important source of raw material for pulp and related industries.

†Western hemlock and mountain hemlock have been combined under the generic designation of hemlock in this report.

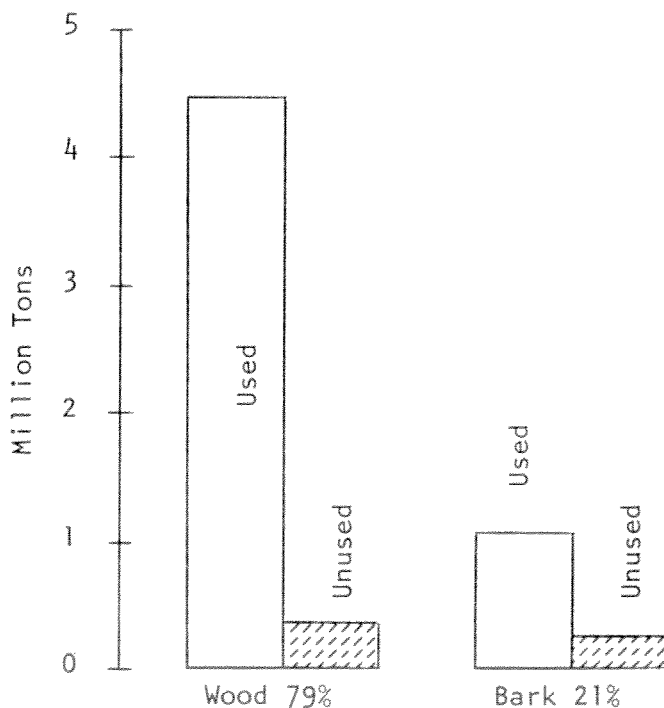
††Although Klickitat County lies east of the Cascade Range, it has been included in the Lower Columbia Area and is considered part of Western Washington for purposes of this report.

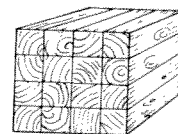
Utilization

A significant achievement of the forest products industry has been the relatively high level of utilization of wood residues. Only 7 percent were unused in 1976.

Wood Residue Disposition	Percent
Pulp & Board	54
Fuel	31
Other Uses	8
Unused	7
<hr/>	
All Wood Residue	100

Figure 5.—Relative and Absolute Residue Volume





LUMBER INDUSTRY

MILL CHARACTERISTICS

Primary Operation

Only those sawmills that engaged in primary processing (consumed roundwood) were included in the survey. Data were also gathered on the non-roundwood consumed by these mills (Table 18).

Size-Class

The 175 sawmills in 1976 were classified by size-class based on maximum production for a single shift.

Mill Size-Class	Capacity per Single Shift MBF Lumber Tally
A	120+
B	80-119
C	40-79
D	less than 40

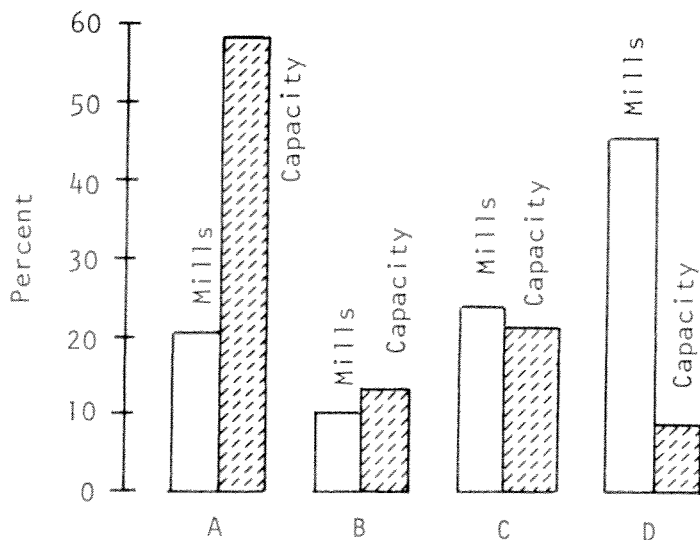
Table 11 gives the number of sawmills per size-class in each county. Snohomish County ranked highest with 23 mills. Among the five Economic Areas, the Puget Sound Area was first with 55 mills.

Production Capacity

Single shift capacity in 1976 was over 12 million board feet, a 3-percent increase over 1974.

The number of Class D mills decreased by 12 in 1976 with a capacity decrease of

Figure 6.—Percent of Sawmills by Size-Class and Percent of Total Shift Capacity



6 percent from 1974. Class C mills decreased by 4 mills, and single shift capacity fell 5 percent. The number of Class B mills remained unchanged at 17, but capacity declined 2 percent. The number of Class A mills showed the only increase (4 mills) and capacity increased 10 percent.

This increase was the result of the addition of new mills, as well as the movement of one mill from Class B to A.

Equipment

Planers, chippers, and barkers were used by more than half the sawmills during 1976 (Table 13). Only 20 percent of the mills had burners and 36 percent operated kilns.

The percent of mills having various types of equipment is shown below.

Equipment	Mill Size-Class				All
	A	B	C	D	
	percent				
Planer	86	82	73	56	69
Chipper	94	100	90	22	61
Barker	97	100	85	15	57
Kiln	72	41	44	15	36
Burner	11	35	32	15	20

Information on size and type of headrig is presented in Table 15. Production by type of headrig showed band saws with the most (72%), chipping saws next (16%), followed by circular saws (5%), gang saws (4%) and scragg saws (3%). Sixty percent of mill size-class D production was from circular saws. Band saws accounted for 70% of size-class A production, 81% of size-class B, 80% of size-class C and 24% of size-class D.

Site and Ownership Tenure

Mill Size-Class	Over 10 Years	
	Under Present Ownership	At Present Site
	percent	
A	61	78
B	35	88
C	54	78
D	60	75
All Mills	57	78

Many size-class D mills are portable and move from site to site. Some may have closed temporarily during 1976.

Operating Days

The normal five-day work week results in about 250 annual operating days. Operation of Washington sawmills in 1976 ranged from an average of 52 days for size-class D mills in the Central Washington Area to 265 days for size-class B mills in the Central Washington Area (Table 17).

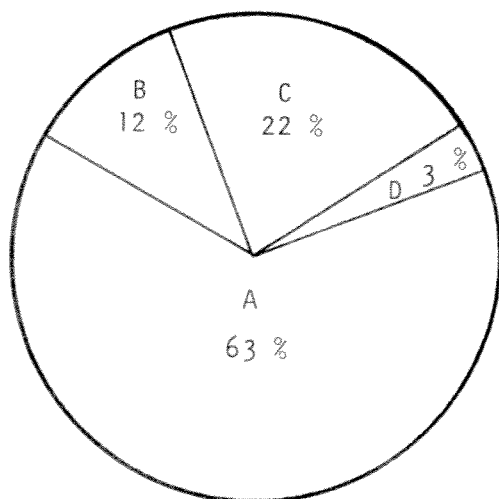
Mill Size-Class	Average Days of Operation 1976	Percent Increase From 1974
A	234	3
B	237	6
C	215	3
D	149	8
All Mills	190	7

WOOD CONSUMPTION

Raw Materials

Resaw and planing mills were not included in this survey; only mills that consumed roundwood logs were included. However, 3 percent of the 3.1 billion board feet of wood consumed by mills surveyed was not in log form (peeler cores and cants). The logs consumed were 94 percent sound and 6 percent utility grade (Table 18).

Figure 7.—Sawmill Log Consumption by Mill Size-Class (Table 18)



Age

Young growth timber less than 100 years old contributed almost 45 percent of the sawmills' log consumption during 1976. Tables 19 and 20 show the age of timber consumed by mill size-class and by county.

Mill Size-Class ¹	Young Growth Percent
A	43
B	43
C	48
D	74
All Mills	45

¹Refer to Table 19 for size-class combinations.

The use of young growth by Area also shows wide variation.

Economic Area	Young Growth Percent
Puget Sound	53
Olympic Peninsula	51
Lower Columbia	33
Central Washington	22
Inland Empire	62
Total State	45

Ownership

Sawmills relied on public timberlands for 37 percent of their logs.

Ownership	Log Supply Percent
State	6
National Forest	26
Bureau of Land Management	†
Other Public	5
Total Public	37
Forest Industry	38
Farmer & Misc. Private	14
Total Private	63
All Owners	100

†Less than 0.5 percent.

A breakdown of log sources by mill size-class shows that medium-size mills are most dependent on public timber.

Mill Size-Class ¹	Forest Industry		All Public
	Own Wood Supply	Other Wood Supply percent	
A	53	11	32
B	8	16	57
C	19	20	46
D	6	15	13
All Mills	38	14	37

¹Refer to Table 22 for size-class combinations.

Public timberlands supplied the Central Washington, Inland Empire and Olympic Peninsula Area mills with 74, 54 and 45 percent of their logs respectively. Comparable figures for Lower Columbia and Puget Sound Area mills are 22 and 24 percent. Ninety percent of the mills more than two-thirds dependent on Farmer and Miscellaneous Private ownership are size-class D mills. Dependency data as shown in Table 24 are useful in evaluating the effects of timber supply policies on the industry.

Ownership	Mills More Than Two-Thirds Dependent on a Single Type of Ownership percent
State	--
National Forest	16
Bureau of Land Management	--
Other Public	2
Total Public	18
Forest Industry	Own Wood Supply 9 Other Wood Supply 9
Farmer & Misc. Private	34
Total Private	52
All Owners	70

Species

During 1976 sawmills used 46% Douglas fir logs and 26% western hemlock logs (Table 25). Figure 8 illustrates the species variation by Economic Areas.

The two leading species consumed in each of the Economic Areas were:

Puget Sound—Douglas fir, hemlock
Olympic—hemlock, Douglas fir
Lower Columbia—Douglas fir, hemlock
Central Washington—ponderosa pine, Douglas fir
Inland Empire—Douglas fir, ponderosa pine

Minimum Log Diameter

Economic Area	Mills Accepting Logs with Small-End Diameters Under Six Inches percent
Puget Sound	36
Olympic Peninsula	36
Lower Columbia	46
Central Washington	38
Inland Empire	31
Total State	37

The percentage of mills accepting small logs increased in Western Washington and decreased in Eastern Washington since 1974.

Imports

Washington timberlands supplied almost 98 percent of the logs consumed; 1 percent came from Oregon and nearly all the remainder from Idaho and British Columbia.

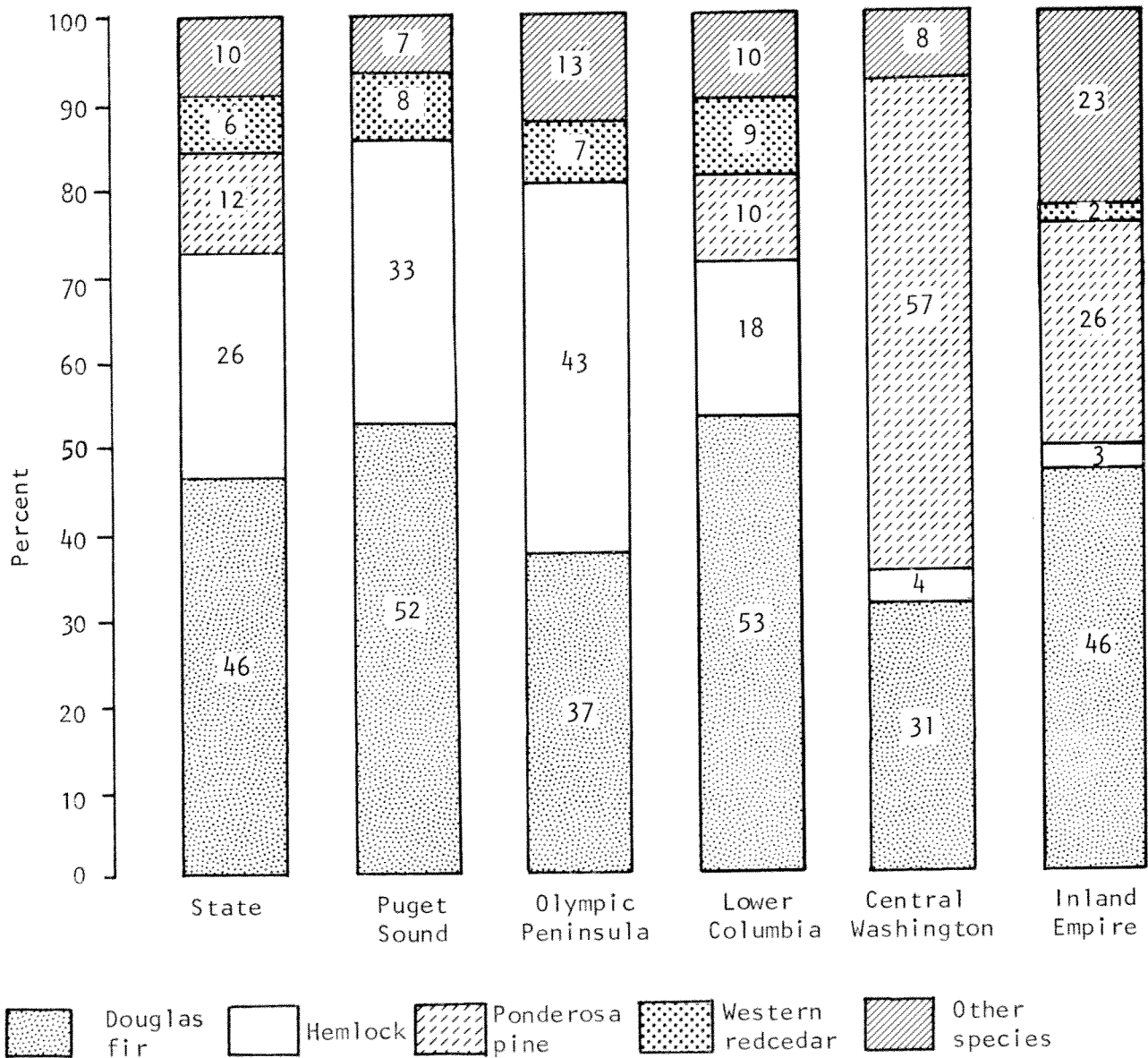
PRODUCTION

Lumber

Sawmills in the State of Washington produced 3.8 billion board feet of lumber during 1976. Lumber produced by the 175 primary sawmills surveyed was 23 percent rough and 43 percent green as opposed to 77 percent surfaced and 57 percent dried.

Economic Area	Lumber Production Percent
Puget Sound	35
Olympic Peninsula	23
Lower Columbia	21
Central Washington	12
Inland Empire	9
Total State	100

Figure 8.—Sawmill Log Consumption by Species and Area



Residues

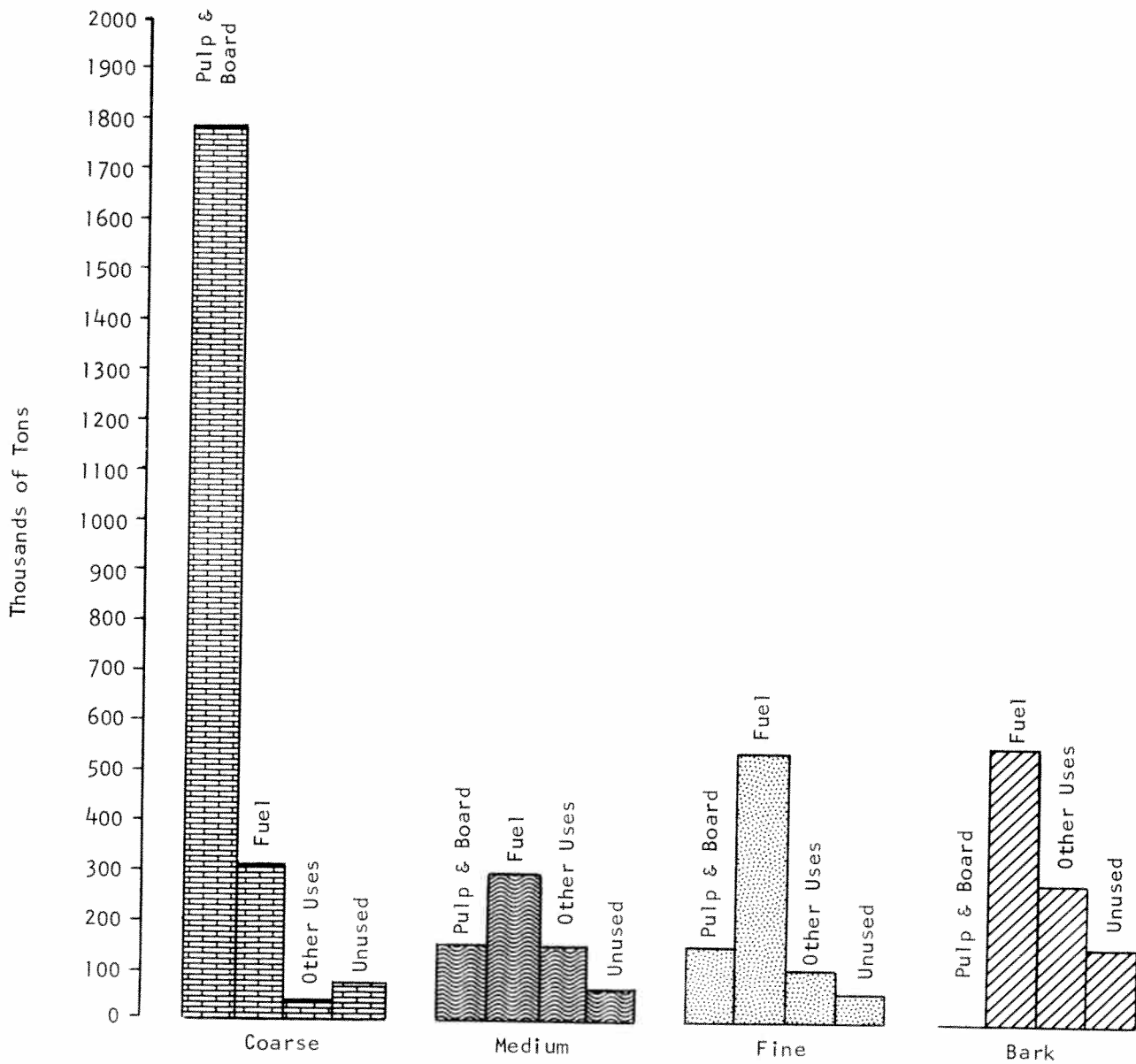
Production of 3.8 billion board feet of lumber resulted in 4.6 million tons of residue (Table 31) classified as coarse (slabs, edgings, trim), medium (shavings), fine (sawdust), and bark. Wood residue, excluding bark, made up 3.7 million tons of the total, approaching one ton for every 1,000 board feet produced.

Uses of residue include: raw material for

the Pulp and Board Industry, fuel for industry and the community, animal bedding, gardening, landscaping and mulch. These and other uses consumed 93 percent of all residue produced by sawmills (Figure 9).

Unused residue was generally burned (but not as a source of fuel), left in the woods (by portable mills), or dumped near the mill site.

Figure 9.—Type and Disposition of Sawmill Residues



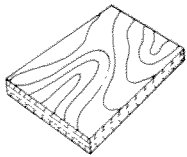
Mill Size-Class	Wood Residue Use			
	Pulp & Board	Other		
		Fuel	Uses	Unused
percent				
A	62	30	7	1
B ¹	48	39	8	5
C ²	49	28	8	15
D	22	35	19	24
All Mills	56	31	8	5

Mill Size-Class	Bark Residue Use			
	Pulp & Board	Other		
		Fuel	Uses	Unused
percent				
A	--	61	32	7
B ¹	--	54	26	20
C ²	--	47	18	35
D	†	46	13	41
All Mills	†	57	28	15

¹Class B includes Class D for Central Washington and Class A for Inland Empire (See Footnote 2 for exclusion).

²Class C includes Class B for Lower Columbia.

†Less than 0.5 percent.



VENEER AND PLYWOOD INDUSTRY

MILL CHARACTERISTICS

Facilities

The 36 veneer and plywood mills surveyed were located in each of the State's Economic Areas and in 19 of the 39 counties. All but 5 of the mills were located in Western Washington (Table 37). Grays Harbor and Lewis Counties, with a total of nine mills, contributed to making the Olympic Peninsula the leading Area in the State (15 mills).

Production Capacity

Table 38 shows the production capacity per shift for each type of mill by county.

Economic Area	Average Shift Capacity per Mill† MSF ³ / ₈ " Basis
Puget Sound	252
Olympic Peninsula	137
Lower Columbia	166
Central Washington	190
Inland Empire	125
Total State	171

†Includes Veneer and Layup, Veneer-only, and Layup-only.

Veneer-only mills had a lower average shift capacity than other types of mills.

Mill Type	Average Shift Capacity MSF ³ / ₈ " Basis	Number of Mills
Veneer & Layup	204	21
Veneer-only	114	10
Layup-only	148	5
All Types	171	36

Equipment

Tables 39 and 40 present statistics on log utilization with respect to lathe diameter limits and size of cores produced. Many mills could handle logs at least five feet in diameter. Core diameters ranged from five to eight inches in practically all mills. About 47 percent of the core material was

used as a source of chips for the Pulp and Board Industry, and the remaining 53 percent for other purposes such as lumber, fuel and posts. About 83 percent of the mills used veneer chippers during 1976 while only 17 percent used burners (Table 41).

Site and Ownership Tenure

Ninety-two percent of the mills had been in their present site and 72 percent under the same ownership for more than 10 years.

Operating Days

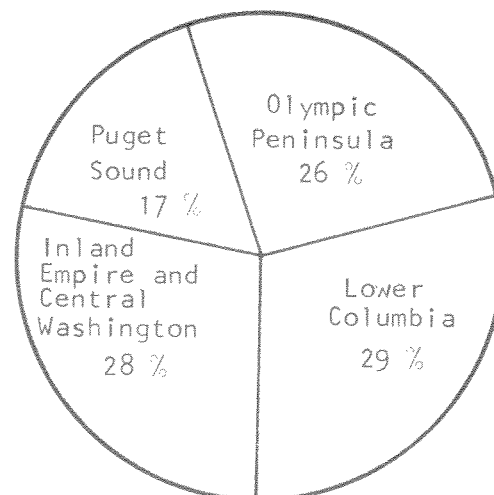
Operation during 1976 averaged 253 days for all types of mills. Averages for each type of mill by Area are shown in Table 43.

WOOD CONSUMPTION

Raw Material

The Veneer and Plywood Industry consumed 646 million board feet of logs during 1976. Utility grade (cull logs) accounted for 47 percent of this volume (Table 44). Utility consumption by Area varied from 9 percent in Lower Columbia to none in Central Washington and Inland Empire.

Figure 10.—Veneer and Plywood Log Consumption by Economic Area



Age

Timber more than 100 years old made up 64 percent of the logs used. Use of old growth varied from 47 percent in the Puget Sound Area to 77 percent in the Olympic Peninsula Area.

Ownership

Public lands were the source of 63 percent of the logs consumed by the industry, with National Forest lands being the greatest single source (Table 47).

Economic Area	Source of Logs	
	National Forest Lands	Forest Industry Own Wood Supply
Puget Sound	54	33
Olympic Peninsula	52	13
Lower Columbia	57	29
Central Washington and Inland Empire	33	30
Total State	49	26

The Forest Industry's own land contributed the major portion of wood consumed from private timberlands.

Although those two sources provided the majority of logs, many other ownerships contributed to the total.

Ownership	Logs Supplied Percent
State	6
National Forest Bureau of Land Management	49
Other Public	†
	8
<hr/>	
Total Public	63
Forest	Own Wood Supply
Industry	
Farmer & Misc. Private	Other Wood Supply
	4
	7
<hr/>	
Total Private	37
All Owners	100

†Less than 0.5 percent.

Table 6 shows the dependency of individual mills on each ownership class, indicating that 16 mills were at least two-thirds dependent on National Forest timber and 3 mills were similarly dependent on private timber.

Species

Fifty-nine percent of the logs used by the industry were Douglas fir (Table 48). Second in importance was hemlock with 17 percent. The Lower Columbia Area used 65 percent Douglas fir and 17 percent hemlock. In Eastern Washington true fir and other softwoods ranked second in importance to Douglas fir. Eighty-four percent of the utility volume used by the industry was Douglas fir and hemlock.

Imports

Only one Area acquired logs from outside the State. About 5 percent of the Lower Columbia Area's consumption came from Oregon (Table 3). Statewide log imports were approximately 1 percent of the total log consumption.

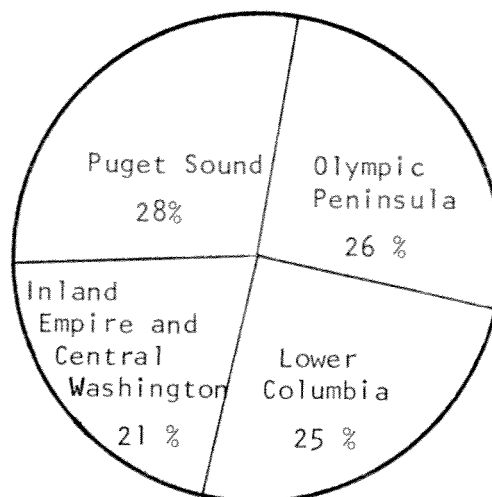
In addition to logs, the industry consumed 410,380,000 square feet of $\frac{3}{8}$ -inch veneer more than it produced during 1976. Converted to Scribner log scale this is equivalent to about 178 million board feet or 22 percent of the industry's total wood consumption. This veneer may originate from inventory reductions or it may be imported from out-of-state.

PRODUCTION

Veneer and Plywood

During 1976 the individual mills produced 2,086,048,000 square feet ($\frac{3}{8}$ -inch

Figure 11.—Plywood Production by Economic Area



basis) of plywood. They also produced 478,659,000 square feet (3/8-inch basis) of veneer that was converted to plywood by mills other than where it was produced.

Residues

Residue resulting from the manufacture of veneer and plywood amounted to 1.1 million tons (Table 50). Use of residue is important to the industry and the environment; 96 percent of all residue was reported to have been used. Unused material consisted partly of volume disposed of for hazard reduction.

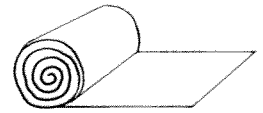
Wood residue accounted for 80 percent of all residues; bark made up the remaining 20 percent. Four classifications of wood residue were identified: Cores; coarse (log trim, roundup and veneer clip, spur trim); medium (panel trim, reject veneer); and fine (sander dust). Coarse, medium and fine residues were 98 percent used; 2 percent unused.

Residue Type	Residue Use			
	Pulp & Board	Fuel	Other Uses	Unused
	percent			
Cores	47	3	50	--
Coarse	77	21	--	2
Medium	4	88	7	1
Fine	2	94	4	--
All Wood	54	35	10	1
Bark	3	72	10	15
All Residue	44	42	10	4

Production and disposition of residue by Economic Area is presented in Tables 51 and 52.

Data Change

The method of reporting veneer and plywood mill capacity was changed in the 1974 survey. While the new method of reporting capacity is apparent in Table 38, the figure given in the "Highlights" section is compatible with the 1972 and 1974 data.



PULP AND BOARD INDUSTRY

MILL CHARACTERISTICS

Facilities

Each operation at a multiple plant facility is considered a separate mill.

Twenty-six mills were identified (8 sulfite, 8 sulfate, 4 groundwood, 4 semi-chemical, 2 board). Operations were located in 12 counties. The leading county was Cowlitz with 6 mills; the leading Areas were Puget Sound and Lower Columbia with 9 mills each (Table 54).

Production Capacity

Daily pulp production capacity was 11,382 tons. Three-fifths of all mills were either sulfite or sulfate and accounted for 82 percent of the daily pulp capacity (Table 55).

Economic Area	Percent of Pulp Capacity
Puget Sound	31
Olympic Peninsula	20
Lower Columbia	42
Inland Empire	7
All	100

Site and Ownership Tenure

All of the mills had occupied their present sites for more than 10 years, and most (23 mills) for more than 20. As shown in Table 56, 22 of the 26 mills had been under the present ownership for over 10 years.

Operating Days

The average number of operating days declined from 1974 to 1976 with the exception of the Inland Empire Economic Area.

Economic Area	Average Number of Operating Days	
	Pulp	Board
Puget Sound	317	254
Olympic Peninsula	343	---
Lower Columbia	319	225
Inland Empire	337	---
Total State	325	240

WOOD CONSUMPTION

Raw Material

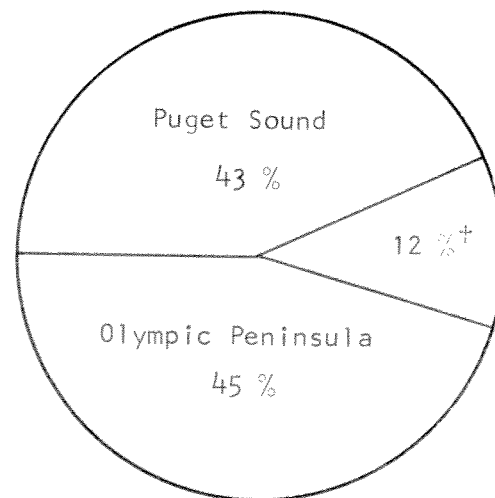
The industry consumed 545 million board feet of roundwood and 5.8 million tons of chips, sawdust, shavings, bark and wastepaper. This is the equivalent of approximately 6.9 million bone dry tons of wood. Eighty-four percent of the raw material consumed by the industry was in the form of chips and other residues; the remainder was roundwood. The percentage of the consumption in each area was:

Economic Area	Chips from Round-Mill Residue wood	
	percent	
Puget Sound	29	21
Olympic Peninsula	52	33
Lower Columbia & Inland Empire†	85	4
Total State	59	16
Million Bone Dry Tons	4.1	1.1

†Combined to avoid disclosure

The Pulp and Board Industry is the biggest user of utility grade (cull) logs; these constituted 85% of this industry's 1976 roundwood consumption.

Figure 12.—Percent of Roundwood Consumed by Economic Area



† Lower Columbia and Inland Empire

Roundwood Age

Table 60 shows roundwood consumption by age class for each Area. Old growth timber accounted for 74 percent of the roundwood consumed.

Ownership

Private timber holdings supplied 75 percent of the total roundwood consumed (Table 61).

Ownership	Log Supply Percent
State	11
National Forest	10
Bureau of Land Management	†
Other Public	4
<hr/>	
Total Public	25
Forest	Own Wood Supply 56
Industry	
Farmer & Misc. Private	5
<hr/>	
Total Private	75
All Owners	100

†Less than 0.5 percent.

Not one mill was more than one-third dependent on public timberlands, while 7 were more than two-thirds dependent on private timberlands.

Species

Roundwood Species Consumed	Percent
Hemlock	68
Hardwoods	9
Douglas fir	5
True firs	14
Spruce	2
Other softwoods	2
Western redcedar	†
<hr/>	
Total	100

†Less than 0.5 percent

Utility grade hemlock accounted for 68 percent of the industry's utility volume; 63% of the hemlock was consumed in the Olympic Peninsula Area.

Origin

Most (89%) of the roundwood came from within the State. The remaining 11% was imported from Oregon, Idaho, British Columbia and Montana. The mills of the Lower Columbia and Inland Empire Areas imported 66% of their logs from Oregon (Table 3).

Residues

Chips and other residue constituted the major source of raw material for the industry. Washington supplied 63 percent of the chips, sawdust and shavings; the balance came from Oregon, British Columbia, Idaho, and Montana.

Residue Type	Origin			
	Wash.	Ore.	B.C.	Idaho
	percent			
Chips				
Residue	64	25	2	5
Roundwood	62	†	24	7
Sawdust and shavings	46	52	2	--
All Types	63	21	7	5

†Less than 1 percent

Recycling

Pulp mills used nearly 50 thousand tons of wastepaper in 1976. Wastepaper was less than one percent of the total of wood chips and other residue consumed by pulp and board mills.

1974 Coding Error

Errors were made in the 1974 consumption figures for Lower Columbia and Inland Empire (Table 57). Correct totals beginning with "Other Total" and reading to the right are: 2,576,497; 2,079,723; 198,306; 223,318; 52,686 and 22,464. With these new totals the State Totals should read 4,813,267; 3,131,696; 1,255,484; 309,395; 72,773 and 43,919.

LOG EXPORT INDUSTRY



INDUSTRY CHARACTERISTICS

The 81 log export operations reported in this survey principally represent trading companies, using 10 public port areas in Washington. The greatest number of operations are located in the Puget Sound Area (37). Forty percent (32 operations) are in the Olympic Peninsula.

Over eighty percent of the operations had used the present site for at least five years. Export trading companies exhibited a stable ownership pattern.

Since ports handle a variety of material, the Log Export Industry's average days of operation and production capacity cannot be meaningfully quantified.

LOG CONSUMPTION

Export shipments totaled 2.1 billion board feet in 1976, making the Export Industry second only to the Lumber Industry in log consumption in the State. Export Industry log consumption is considered to be equivalent to log export shipments for the year 1976. As shown in

Figure 13.—Log Export by Economic Area

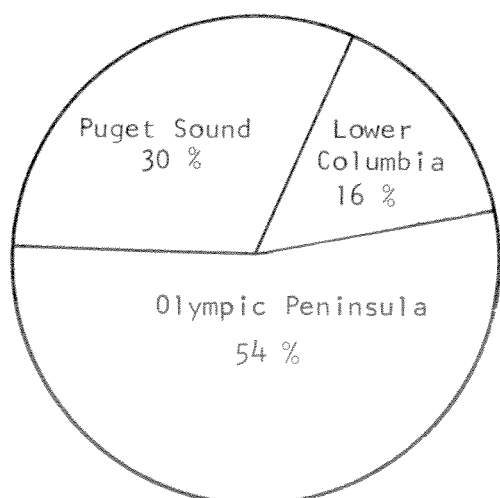


Figure 13, the Olympic Peninsula was the leading area.

Essentially all of the export volume was sound logs. About 69 percent of the logs were from old growth timber.

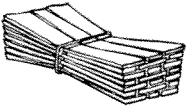
Ownership	Log Supply Percent
State	25
National Forest	2
Other Public	4
<hr/>	
Total Public	31
Forest Industry	60
Farmer & Misc. Private	9
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Total Private	69
All Owners	100

Over 80 percent of the operations were more than two-thirds dependent for supplies on a single ownership class. **Forty-three** of the 81 operations were more than two-thirds dependent on Forest Industry lands, 10 on other private lands, and 11 on State land.

Log export operations consumed more hemlock and spruce than any other industry segment.

Species	Log Supply Percent
Hemlock	58
Douglas fir	29
Western redcedar	7
Spruce	2
All other	4
<hr/>	
Total All Species	100

Washington's timberlands supplied practically all (98 percent) of the logs exported from the State. Logs originating in Oregon and British Columbia were moved through the Lower Columbia and Puget Sound Areas respectively.



SHAKE AND SHINGLE INDUSTRY

MILL CHARACTERISTICS

There were 252 shake, shingle, and hip and ridge mills in operation during 1976. Sixty-six percent (167) of the mills were located in the Olympic Peninsula Area; over half of these (88) were in Grays Harbor County.

The single shift capacity of Shake and Shingle Industry mills operating in 1976 was 21,905 squares which is equivalent to approximately 2,190,500 board feet Scribner log scale.

The large number of one- and two-man operations reflects the small investment needed to establish a shake or shingle mill or to reopen an inactive one.

Forty percent of the mills operated burners to dispose of waste residue; in contrast, 27 mills used chippers. Because of the small volume of material handled by the average mill, many mills found it uneconomic to recover their residues.

Forty-two percent of the mills had been in operation at their present site for 5 years or less, and 53 percent had been under present ownership for 5 years or less. More than 28 percent of the mills operating in 1976 had been in their present location or under their present ownership for more than 10 years.

Days of operation averaged 183 during 1976.

WOOD CONSUMPTION

Industry consumption during 1976 was 287 million board feet of logs and the equivalent of 49 million board feet in blocks, bolts and other material.

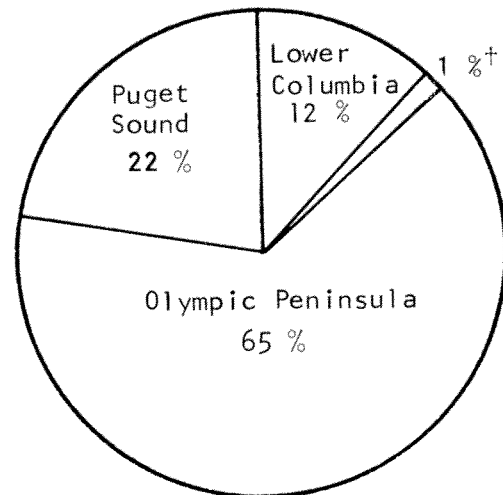
Wood consumption was predominantly from sound logs (78 percent).

Utility grade (cull) logs accounted for 7 percent and other materials for 15 percent of the total wood consumption.

Western redcedar is the most important species in Washington State suitable for the manufacture of shakes and shingles. In the 1976 survey, western redcedar was used almost exclusively. Product specifications further limit the consumption almost entirely to old growth (97 percent). No

other segment of the forest products industry must rely so heavily on a single species or age class.

Figure 14.—Shake and Shingle Roundwood Consumption by Economic Area



⁺ Central Washington & Inland Empire

Considering the species dependency, it was not surprising that the industry obtained its wood supply from many ownership classes.

Ownership	Log Supply Percent
State	9
National Forest	13
Bureau of Land Management	--
Other Public	18
<hr/>	
Total Public	40
Forest	Own Wood Supply 8 Other Wood Supply 42
Industry	
Farmer & Misc. Private	
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Total Private	60
<hr/>	
All Owners	100

During 1976 about 45 percent of the individual mills obtained more than two-thirds of their log supply from a single ownership class — 41 mills from public sources, 72 from private sources.

Almost 97 percent of the industry's log consumption came from timberlands in Washington. Small quantities came from British Columbia and Idaho, and some came from Oregon.

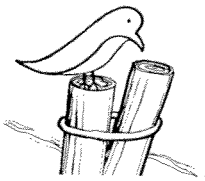
PRODUCTION AND RESIDUES

Total production amounted to 3,790,547 squares, of which 75 percent were shakes, 23 percent were shingles, and 2 percent were hip and ridge and shims. This production created 308,497 bone dry tons of residue composed of 71 percent wood (classified 38 percent coarse, 62 percent fine) and 29 percent bark. As mentioned earlier, recovery of residue is uneconomical

for many mills and accounts for the high percentage of unused material.

Use	Residue Type and Distribution		
	Coarse	Fine	Bark
	percent		
Pulp	24	1	3
Fuel	19	32	28
Other	11	14	11
<u>Unused</u>	<u>46</u>	<u>53</u>	<u>58</u>
All	100	100	100

The Central Washington-Inland Empire Area mills used 93 percent of their residues.



POLE, POST AND PILING INDUSTRY

INDUSTRY CHARACTERISTICS

The smallest segment of the forest products industry in Washington State (22 mills) had over 81 percent of its operations located in Western Washington.

The reported annual production capacity for 1976 was 67 million board feet, coupled with a 39-million board foot treatment capacity. The industry rarely uses the board foot unit. Cubic feet, lineal feet, or pieces are the more common units of measure, but data for this report have been converted to board foot units for purposes of comparison.

Most of the operations had barkers which, considering the products, were almost essential. Of the 22 mills, 13 had facilities for treating wood. One mill reported using waterborne salts treatment. All others used pentachlorophenol with different carrier and/or creosote. Penta was used by 11 of the 13 treatment operations.

The constant demand for its products plus a limited geographic availability of suitable quality roundwood have enabled the Pole, Post and Piling Industry to achieve a high degree of stability. Over eighty percent of the operations had been under the same ownership more than 10 years.

The industry averaged 179 days of general operation, with treatment facilities operating an average of 184 days.

WOOD CONSUMPTION

Total wood consumption during 1976 was 46,098,000 board feet.

Log consumption was composed entirely of sound material, a quality requirement of the industry. However, because of size, the post volume has been classified under the utility log column of consumption in Table 76.

Young growth timber was the source of 84 percent of the logs used by the industry.

Table 6 shows the dependency of individual operations on each class of

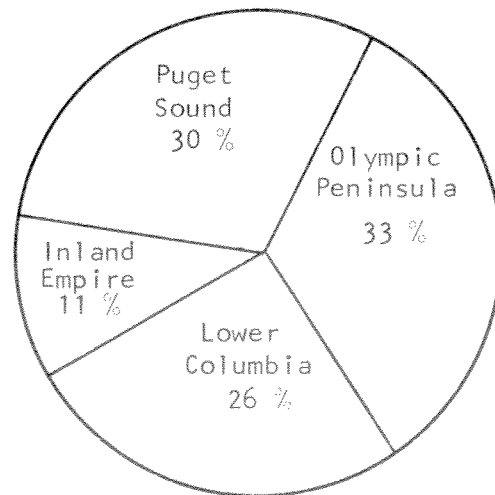
ownership. One operation was two-thirds dependent on Other Public timber. Nine operations were at least two-thirds dependent on Forest Industry or other private timberlands.

Ownership	Log Supply Percent
State	10
National Forest	5
Other Public	10
<hr/>	
Total Public	25
Forest Industry	12
Farmer & Misc. Private	35
	28
<hr/>	
Total Private	75
All Owners	100

Douglas fir and western redcedar, used principally for poles and piling, accounted for 95 percent of the total log consumption. These two species possess the strength and durability needed for the industry's products.

Washington's timberlands supplied 82 percent of the industry's needs, with most of the out-of-state supply coming from Oregon.

Figure 15.—Pole, Post and Piling Wood Consumption by Economic Area



HARDWOOD INDUSTRY

NOTE: The following information was extracted from the data in previous sections and is included here for your convenience.

INTRODUCTION

Processing of hardwood is an important, growing segment of the Washington wood products industry. Many different species including alder, maple, birch, and cottonwood are processed by sawmills, plywood and veneer mills, and pulp mills as well as other specialty plants. Their finished products are shipped throughout the United States for use in furniture, other specialty products and pulp. The market for hardwood chips is also growing in Washington as well as abroad.

INDUSTRY CHARACTERISTICS

In 1976 there were twelve sawmills, one veneer and plywood operation and four pulp mills using hardwoods for over 90% of their log and chip consumption. All mills using hardwood were located in the following counties.

County	Sawmills		Plywood & Veneer		Pulp	
	Number of Mills and Dependency on Hardwood					
	Under 90%	90% +	Under 90%	90% +	Under 90%	90% +
Clallam	1	1	-	-	1	-
Clark	2	-	-	-	1	-
Cowlitz	2	1	-	-	2	2
Grays Harbor	-	1	2	-	1	-
Jefferson	1	-	-	-	-	-
King	1	-	-	-	-	-
Lewis	1	2	1	-	-	-
Mason	-	1	-	-	-	-
Pierce	2	-	2	-	1	-
Skagit	-	1	-	-	-	1
Snohomish	1	5	-	1	2	-
Stevens	1	-	-	-	-	-
Thurston	1	-	-	-	-	-
Whatcom	1	-	-	-	-	1
Total	14	12	5	1	8	4

The number of sawmills in Washington dependent upon hardwood for at least

two-thirds of their consumption has remained relatively constant during the last eight years at 16 to 17 sawmills.

WOOD CONSUMPTION

Hardwood log consumption by mills in Washington in 1976 was 194,777,000 board feet Scribner. An additional 312,496 bone dry tons of hardwood chips were consumed by the Pulp Industry.

Industry	Hardwood Log Consumption percent
Sawmills	70
Veneer and Plywood	4
Pulp and Board	25
Export	1
Total Industry	100

In 1976, 137,621,000 board feet of hardwood were consumed by sawmills, or almost 5 percent of their all-species consumption. This was an increase of 79 percent in hardwood consumption from 1970. Sawmills more than two-thirds dependent on hardwoods used 90 percent of the 137.6 million board feet of logs consumed. Most of these mills were small in size. Over 98% of the 137.6 million board feet was processed in C and D size mills. Approximately 18% of the log volume was utility logs.

The Veneer and Plywood Industry in Washington consumed 7,240,000 board feet of Western hardwoods, or approximately 1% of their total log consumption. All of the consumption was in the Puget Sound Area of Western Washington.

The Pulp Industry consumed 48,612,000 board feet of hardwood logs in 1976 (9% of their all-species log consumption). Utility grade logs accounted for 83% of their total hardwood log consumption. The volume of hardwood chips consumed was 312,496 BDT, or 6% of the pulp mills' total chip volume.

Hardwood log export shipments from Washington totaled 1,304,000 board feet in 1976, or less than 0.1 percent of total shipments.

Hardwood Supply

Snohomish, Cowlitz, and Lewis Counties accounted for over half of the hardwood supplied to sawmills that were 90%+ dependent upon hardwood in 1976. Of the 123,889,000 board feet consumed by these mills in 1976, the following counties supplied these percentages:

County	Percent
Snohomish	20
Cowlitz	19
Lewis	15
Grays Harbor	8
Skagit	6
Thurston	6
Wahkiakum	5
Clallam	5
Mason	3
King	2
Other	3
Out-of-State	8
Total	100

Ownership

The hardwood consumed by sawmills 90%+ dependent on hardwoods came largely from the Farmer and Miscellaneous Private ownership group.

Sawmill Hardwood Log Consumption Mills 90%+ Dependent on Hardwoods

Ownership	Volume MBF Scribner	Log Supply Percent
State	13,319	10.8
National Forest	0	--
Other Public	30	†
Total Public	13,349	10.8
Forest	17,904	14.5
Industry	32,329	26.1
Farmer and Misc. Private	60,307	48.6
Total Private	110,540	89.2
All Owners	123,889	100.0

†Less than 0.05 percent.

Hardwood Harvest

Data is not yet available for the volume of hardwoods harvested in 1976. The *1975 Timber Harvest Report* published by the State of Washington Department of Natural Resources gives the following species harvested in 1975:

Species	1975 Harvest MBF, Scribner	Species Percent
Alder	143,420	91.5
Cottonwood	6,401	4.1
Bigleaf maple	1,881	1.2
Other species	5,087	3.2
Total	156,789	100.0

Of the above total, 147,000 board feet was harvested in Eastern Washington. Yakima and Chelan Counties supplied 80% of this total.

APPENDIX

MEASUREMENT UNITS

Scribner is the only board-foot scale used in this report. Some mills are using more than one scale, and some are using cubic scale, although there appears to be no strong shift toward the use of cubic measurement.

Lumber, veneer and plywood mills relied almost entirely on Scribner scale. Pulp and board mills used tons, cords, and cubic measure as well as board-foot scale. Although the export, shake and shingle, and pole, post and piling mills made extensive use of Scribner scale, they also reported a variety of other measurement units—cords, bolts, pieces, shake blocks, squares, lineal feet, etc.

Board foot is the unit of measure used in this report for all wood consumption with the exception of purchased or transferred veneer consumed by plywood mills (square feet, $\frac{3}{8}$ -inch basis) and chips and other residue consumed by pulp mills (bone dry tons).

Board foot lumber tally is the unit of measure used for lumber production, square feet $\frac{3}{8}$ -inch basis for plywood and veneer production, square (10' x 10' area coverage) for shake and shingle production, board foot Scribner for log export shipments and for pole, post and piling production.

Bolts, pieces, and shake blocks were generally converted to Scribner scale by the operator. Other measurements were converted as follows:

Unit Conversions Used in This Report

LUMBER INDUSTRY

1.2 board feet
lumber tally = 1 board foot, Scribner (Approximately)

VENEER AND PLYWOOD

2.3 square feet
($\frac{3}{8}$ -inch basis) = 1 board foot, Scribner

1 square foot
($\frac{3}{8}$ -inch basis) = 0.885 square meters
(1mm basis)

1,130 square feet
($\frac{3}{8}$ -inch basis) = 1 cubic meter

PULP AND BOARD

1 cord = 500 board feet = 2.41 cubic meters (S.W.E.)†

1 short ton = 500 board feet = 0.907 metric tons

200 cubic foot units = 1 bone dry ton = 0.907 metric tons

1 bone dry unit = 1.2 bone dry tons = 1.088 metric tons

SHAKE AND SHINGLE

10 squares†† = 1,000 board feet = 4.7 cubic meters (S.W.E.)†

POLE, POST AND PILING

1 cubic foot = 6 board feet

ALL INDUSTRIES

211.9 board feet = 1 cubic meter

†(S.W.E.) = solid wood equivalent.

††1 square covers 100 square feet.

MILL RESIDUES

Residue production figures in this report are calculated, not reported values. The mills were asked merely to indicate on a percentage basis the uses made of their various residues. These percentages were applied to residue estimates developed using the following residue factors:

Softwood Sawmill Residues†

Average quantity of residues developed from producing
1,000 board feet of lumber.

Item	Solid Volume††		Dry Weight
	Cubic Feet	Percent	Tons
Wood Residue			
Slabs, Edgings, Sawmill Trim	36	24.8	0.486
Planer Trim	3	2.1	0.041
Sawdust	16	11.0	0.216
Planer Shavings	16	11.0	0.216
Total Wood Residue	71	48.9	0.959
Bark	17	11.7	0.258
Lumber	57	39.4	0.864
Whole Log	145	100.0	2.081

†Based on data from Oregon mills compiled by Oregon State University, School of Forestry, in 1967, and adjusted for changes in lumber standards by James O. Howard, Resource Analyst, Pacific Northwest Forest and Range Experiment Station. Dry weights adjusted for different species mix utilized in Washington.

††Green volume.

Softwood Plywood Residues†

Average quantity of residue developed in producing the equivalent of
a thousand square feet of 3/8-inch plywood (rough basis).

Plywood Residue	Solid Volume	Dry Weight	
	Cubic Feet††	Tons	Percent
Wood Residues			
Log Trim	3.4	0.048	4.2
Cores	6.3	0.088	7.8
Veneer Clippings, Roundup and Spur Trim	19.3	0.270	23.7
Dry Trim and Layup Loss	6.3	0.088	7.8
Sander Dust	1.6	0.022	1.9
Total Wood Residue	36.9	0.516	45.4
Bark	8.8	0.132	11.6
All Residue	45.7	0.648	57.0
Plywood	34.9	0.489	43.0
Whole Log	80.6	1.137	100.0

†All residue factors except sander dust and bark from data collected via various mill studies by the Characterization and Utilization of Western Softwoods and Forest Residues Project, Pacific Northwest Forest and Range Experiment Station, and compiled by James O. Howard, Resource Analyst. Sander dust and bark factors based on data from Oregon mills compiled in 1967 by Oregon State University, School of Forestry. Because of the similarity of mills and species used, no adjustment was made in applying these data to Washington.

††Green Volume.

Shingle Mill Residues†

Average quantity of residue developed in utilizing 1,000 board feet of logs, Scribner scale, or in producing the equivalent volume of 10 squares.

Shake and Shingle Residue	Solid Volume		Dry Weight
	Cubic Feet	Percent	Tons
Shingles:			
Coarse	23	13.7	0.22
Fine	78	46.8	0.75
Bark	19	11.5	0.28
Shakes:			
Coarse	23	13.7	0.22
Fine	24	14.5	0.23
Bark	19	11.5	0.28

†From information provided by the Red Cedar Shingle Bureau.

Hardwood Sawmill Residues†

Average residue developed from producing 1,000 board feet of lumber using a narrow kerf bandsaw.

	200 cu. ft. Units	Dry Weight Tons
Chips	0.97	0.82
Bark	0.40	0.34
Sawdust	0.27	0.23

†Based on information furnished by Northwest Hardwoods, Inc.

COMPUTER PROGRAMS USED FOR THIS REPORT

The master file is built and edited by programs written in COBOL. The tabulations for the various tables and summaries were produced by separate programs which read data from versions of the master file created by different sorts. Examples of the sorts are: by area, county, mill type, size-class, and process type.

The programs to do the tabulations were written in COBOL, PL/I, SMART, and MARK IV. COBOL is the most common language used in business and administration. PL/I is a language designed to produce both administrative and scientific applications.

SMART is the assembler language

program written by Maurice F. Whitney, Office of the State of Washington Superintendent of Public Instruction. This program was used for retrieval and processing of information contained in the majority of tables in this report.

MARK IV is a file management program produced by Informatics, Inc., Van Nuys, California. Tables and reports are produced by supplying parameter cards to the program. The parameter cards determine data selection, computations, report format, data sequence, titles, etc., which will be performed against the master file records to produce the desired report.

4. Ownership (Optional)

State	_____ %	Utility logs	_____ %
Is forest service	_____ %		
BPS	_____ %		
Other Public (Indian, etc.)	_____ %		
Forest (own supply)	_____ %		
Timber (other supply)	_____ %		
Farmer & Misc. Private	_____ %		
	100 %		100 %

*Name of
National Forest _____ %

7. 1976 Lumber Production

Produced _____ \$

Green _____ %

Kiln-dried _____ %

Air-dried _____ %

100 %

8. Description of Plant Resources

Type of resource, indicate disposition as a percent

Used	Coarse	Sawdust	Shut logs	Bark
For plant fuel	_____ %	_____ %	_____ %	_____ %
Soft for fuel	_____ %	_____ %	_____ %	_____ %
For pulp (incl. export)	_____ %	_____ %	_____ %	_____ %
For board	_____ %	_____ %	_____ %	_____ %
For other purposes	_____ %	_____ %	_____ %	_____ %
Unused	_____ %	_____ %	_____ %	_____ %
Barred	_____ %	_____ %	_____ %	_____ %
Unbarred	_____ %	_____ %	_____ %	_____ %
	100 %	100 %	100 %	100 %

* Includes slabs, edgings, sawmill trim, and planer trim.

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1	4.7	17	4.7	17
2	5.3	23	5.3	23
3	5.9	29	5.9	29
4	6.5	35	6.5	35
5	7.1	41	7.1	41
6	7.7	47	7.7	47
7	8.3	53	8.3	53
8	8.9	59	8.9	59
9	9.5	65	9.5	65
10	10.1	71	10.1	71

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TECHNICAL SERVICES DIVISION

OLYMPIA, WASHINGTON 98504

The Department of Natural Resources plans to publish a Forest Products Directory listing the name and address of each plant. Also, with your permission, we would like to include the following selected information concerning your plant:

1. Basic per shift production class: under 17 MBF, 15 to 29 MBF, 30 to 39 MBF, 40 to 59 MBF, over 59 MBF.
2. Number of shifts per day
3. Species processed
4. Maximum and minimum log diameter limits
5. Type of largest head rig
6. Retail yard - yes or no

() Permission granted to place the selected information in the Directory.
() Permission granted, but do not include the circled items on the above list.

Please () send () do not send a copy of the report which will be compiled from questionnaires sent to all Washington mills in the six major segments of the wood products industry.

Thank you for your help with this questionnaire. When you have answered the questions as completely as possible, please fold this form so that our address is showing, staple it closed, and mail.

SOUND LOGS Log Definitions
Sound logs Number 3 sawlogs and better in grade (usually having the following minimum specifications: 6 inch diameter, 12 foot length, 50 lbs. ft. net scale).

UTILITY LOGS Logs having the following minimum specifications: 6 inch diameter, 12 foot length, 50 + percent gross scale chipable.

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1	4.7	17	4.7	17
2	5.3	23	5.3	23
3	5.9	29	5.9	29
4	6.5	35	6.5	35
5	7.1	41	7.1	41
6	7.7	47	7.7	47
7	8.3	53	8.3	53
8	8.9	59	8.9	59
9	9.5	65	9.5	65
10	10.1	71	10.1	71

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4. **NUMBER OF CUBIC FEET** _____ **LOGS** _____ **LOGS** _____

5. **TYPE OF LOGS** _____ **LOGS** _____

6. **TYPE OF LOGS** _____ **LOGS** _____

7. **TYPE OF LOGS** _____ **LOGS** _____

8. **TYPE OF LOGS** _____ **LOGS** _____

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16. **TYPE OF LOGS** _____ **LOGS** _____

17. **TYPE OF LOGS** _____ **LOGS** _____

18. **TYPE OF LOGS** _____ **LOGS** _____

19. **TYPE OF LOGS** _____ **LOGS** _____

20. **TYPE OF LOGS** _____ **LOGS** _____

9. **PERCENT DISTRIBUTION BY STATE OF ALL LOGS SOLD OR TRANSFERRED**

Washington _____ %

Oregon _____ %

British Columbia _____ %

Idaho _____ %

California _____ %

Other _____ %

The Department of Natural Resources plans to publish a Forest Products Directory listing the name and address of each plant. Also, with your permission, we would like to include the following selected information concerning your plant:

1. Daily per shift production rates (converted as follows: under 15 MBF, 15 to 29 MBF, 30 to 39 MBF, 40 to 49 MBF, 50 to 59 MBF, over 59 MBF.
2. Number of shifts per day.
3. Species processed.
4. Maximum and minimum log diameter (inches).
5. Type of plant.
6. Lathe and press equipment.
7. Retail yard - yes or no.

If permission granted, please place the selected information in the directory. Please () send. () do not send a copy of the report which will be compiled from questionnaires sent to all Washington mills in the six major segments of the wood products industry.

Thank you for your help with this questionnaire. When you have answered the questions as completely as possible, please fill this form so that our address is shipping, staple it closed, and mail.

Scale and Conversion Comments

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PULP AND BOARD MILL QUESTIONNAIRE

O.H.B. No. 040-S-77002
Expiration Date 9/30/77

WASHINGTON FOREST INDUSTRY SURVEY 1976

PULP AND BOARD MILL QUESTIONNAIRE

(Information on individual plants will be held confidential)

FOR OFFICE USE ONLY

1. Mill Identity
 Firm name _____
 Address _____
 Street or P. O. Box _____
 City _____ State _____ Zip Code _____
 Mill Location _____ City _____ County _____

Prepared by _____ Phone # _____
 Date _____

2. Mill Characteristics
 A. OPERATION (Use a different form for each type of operation)
 PULP MILL _____
 BOARD MILL _____
 Sulfate _____
 Sulfite _____
 Groundwood _____
 Disk refiner _____
 Drum refiner _____
 Semichemical _____

B. PRODUCTION CAPACITY
 _____ BD Tons/24 hrs.
 _____ units if different _____
 Specify basis: 1-2" _____, 3/4" _____
 1/8" _____

C. Mill Production in 1976
 Newsprint _____ tons
 Bleached papers _____ tons
 Unbleached (not newsprint) _____ tons
 Market pulp _____ BD tons
 Other paper products _____ tons
 Hardwood _____ million sq. ft./yr. basis
 Particleboard _____ million sq. ft./yr. basis
 Insulation board _____ million sq. ft./yr. basis

D. Days operated during 1976 _____
 E. Years mill has been in present location _____
 Under present ownership _____

3. Wood Consumption During 1976
 (Percent of sound logs from dead trees _____ %)
 a. Sound logs* _____,000 board feet gross scale
 b. Utility logs* _____,000 board feet gross scale
 c. Cordwood _____ cords

INCLUDE ONLY MATERIAL USED IN THE PULPING PROCESS;
 DO NOT INCLUDE MATERIAL USED AS FUEL.

3. Wood Consumption During 1976 (cont.)

	VOLUME	specify units used
d. Chips from mill residue (sawmill, plywood and veneer)	_____	specify units used
e. Chips from other sources (offsite roundwood chipping plants)	_____	specify units used
f. Sawdust	_____	specify units used
g. Shavings	_____	specify units used
h. Bark	_____	specify units used
i. Wastepaper	_____	specify units used
j. Total tons of hog fuel	_____	specify units used

4. Consumption by Species During 1976

Species	Sound logs	Utility logs	Chips
Douglas fir	_____ %	_____ %	_____ %
Hemlock	_____ %	_____ %	_____ %
True firs	_____ %	_____ %	_____ %
Spruce	_____ %	_____ %	_____ %
Ponderosa pine	_____ %	_____ %	_____ %
Lodgepole pine	_____ %	_____ %	_____ %
Western redcedar	_____ %	_____ %	_____ %
Other softwoods	_____ %	_____ %	_____ %
Western hardwoods	_____ %	_____ %	_____ %
Other hardwoods	_____ %	_____ %	_____ %
	100 %	100 %	100 %

5. Origin of Wood Consumed During 1976

a. State or Province of Origin	Roundwood	Chips
Washington	_____ %	_____ %
Oregon	_____ %	_____ %
Idaho	_____ %	_____ %
British Columbia	_____ %	_____ %
Other	_____ %	_____ %
	100 %	100 %

The Department of Natural Resources plans to publish a Forest Products Directory listing the name and address of each plant. Also, with your permission, we would like to include the following selected information concerning your plant:

1. Daily per shift production (class converted as follows: under 15 MBF, 15 to 29 MBF, 30 to 39 MBF, 40 to 49 MBF, over 50 MBF)
2. Number of shifts per day
3. Type of product
4. Retail yard - yes or no

() Permission granted to place the selected information in the Directory.

() Permission granted, but do not include the circled items on the above list. Please () send, () do not send a copy of the report which will be compiled from questionnaires sent to all Washington mills in the six major segments of the wood products industry.

Thank you for your help with this questionnaire. When you have answered the questions as completely as possible, please fold this form so that our address is showing, staple it closed, and mail.

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6. Daily Production:

Shakes _____ squares or _____ bundles

Shingles _____ squares or _____ bundles

Flap & ridge _____ squares or _____ bundles

Other _____ squares or _____ bundles

7. Disposition of Residue _____ Type of residue, indicate disposition as a percent

USED	ComFase	Sawdust	By-Prod
For plant fuel	_____ %	_____ %	_____ %
Sold for fuel	_____ %	_____ %	_____ %
For pulp (incl. Export)	_____ %	_____ %	_____ %
For board	_____ %	_____ %	_____ %
For other purposes	_____ %	_____ %	_____ %
UNUSED	_____ %	_____ %	_____ %
Unmilled	_____ %	_____ %	_____ %
Unburned	_____ %	_____ %	_____ %
	100%	100%	100%

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17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
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- General instructions
- a. Sawlog logs-No. 3 sawlogs and better in grade (usually having the following minimum specifications: 6 inches diameter, 12 ft. length, 50 cu. ft. net scale).
 - b. Utility logs-usually having the following minimum specification of 6 inches diameter, 12 ft. length, 50 cu. ft. net scale.
 - c. Other-any other roundwood or material that does not fit into a or b.

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TECHNICAL SERVICES DIVISION

OLYMPIA, WASHINGTON 98504

POLE, POST AND PILING QUESTIONNAIRE

O.M.B. No. OMO-S-77002
Expiration Date 9/30/77

WASHINGTON FOREST INDUSTRY SURVEY 1976

POST, POLE, AND PILING QUESTIONNAIRE
(Information on individual firms will be held confidential)

1. Mill Identity

Firm name _____ Prepared by _____
 Address _____ Street or P. O. Box _____ Phone # _____
 City _____ State _____ Zip _____ Date _____
 Mill location _____ City _____ County _____
 Name of Mill Manager _____

2. Mill Characteristics

Type of wood treatment used (if any) _____
 Years mill has been in present location _____; under present ownership _____
 Total capacity _____ Treatment capacity _____
 (daily or yearly--circle one)

Specify units
 cubic ft.
 lineal ft.
 pieces

Posts _____
 Poles _____
 Piling _____
 Logs operated during 1976: Peeling _____
 Treatment _____
 Equipment operated during 1976: Barker _____ Burner _____

IMPORTANT: If capacity above is not given in MBF Scribner please complete the following:
 Average length _____ Average small end diameter _____
 Log scale used _____

Specify units
 cubic ft.
 lineal ft.
 pieces

3. Wood Consumption During 1976

Consumption _____

a. Barkie Poles _____
 b. Barkie Piling _____
 c. Posts _____

Log scale(s) used: Scribner _____ Other (specify) _____

4. Consumption by Species During 1976

Species	Sound Logs
Douglas fir _____ %	_____ %
Hemlock _____ %	_____ %
True firs _____ %	_____ %
Spruce _____ %	_____ %
Ponderosa pine _____ %	_____ %
Lodgepole pine _____ %	_____ %
Western redcedar _____ %	_____ %
Other conifers _____ %	_____ %
Western hardwoods _____ %	_____ %
Other hardwoods _____ %	_____ %
	100 %

5. Origin of Logs Consumed During 1976

a. State or Province of origin:

Washington _____ %	Sound Logs _____ %
Oregon _____ %	_____ %
Idaho _____ %	_____ %
British Columbia _____ %	_____ %
Other _____ %	_____ %
	100 %

1. Age group _____

2. Sex _____

3. Occupation _____

4. Education _____

5. Marital status _____

6. Number of children _____

7. Number of logs _____

8. Number of logs _____

9. Number of logs _____

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99. Number of logs _____

100. Number of logs _____

FROM

Please copy, if you do not send a copy of the report which will be compiled from your information sent to the Washington mills in the six major segments of the wood products industry.

Thank you for your help with this questionnaire. When you have answered the questions as fully as possible, please fold this form so that our address is showing, staple it closed, and mail.

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Table 1—Number of mills in the timber industry, by industry and area.

Economic area	All industries	Industry					
		Lumber	Veneer and plywood	Pulp and board ¹	Shake and shingle	Export ²	Pole, post and piling
Puget Sound	176	55	8	9	59	37	8
Olympic Peninsula	274	50	15	5	167	32	5
Lower Columbia	82	28	8	9	20	12	5
Central Washington	16	13	2	-	1	-	-
Inland Empire	44	29	3	3	5	-	4
Total, State	592	175	36	26	252	81	22

¹ Each pulping process at a multiplant location is considered an individual mill.

² Represents the number of identifiable operations involved in the export trade.

Washington Summary, 1976

Table 2—Primary wood consumption by mills, by type of material, area, and industry.

Economic area and industry	Roundwood			Other ¹	Residue ²
	All roundwood	Sound logs	Utility logs		
-----Thousand board feet, Scribner log rule-----					
--Tons--					
Puget Sound					
Lumber	1,052,110	978,374	73,736	26,270	--
Veneer and plywood	112,187	109,004	3,183	--	--
Pulp and board	236,040	59,180	176,860	--	1,761,768
Shake and shingle	63,517	62,677	840	9,791	--
Export	645,943	645,925	18	1,050	--
Pole, post, and piling	14,051	14,042	29	--	--
Total	2,123,848	1,869,182	254,666	37,111	1,761,768
Olympic Peninsula					
Lumber	672,119	630,094	42,025	14,476	--
Veneer and plywood	168,731	166,207	2,524	--	--
Pulp and board ³	246,175	18,000	228,175	--	1,018,701
Shake and shingle	185,452	165,216	20,236	36,383	--
Export	1,140,457	1,138,050	2,407	--	--
Pole, post, and piling	15,000	14,976	24	--	--
Total	2,427,934	2,132,543	295,391	50,859	1,018,701
Lower Columbia					
Lumber	636,178	608,835	27,343	13,099	--
Veneer and plywood	186,030	169,014	17,016	--	--
Pulp and board ⁴	62,937	5,000	57,937	--	2,980,688
Shake and shingle	35,184	33,544	1,640	1,932	--
Export	329,612	329,612	--	--	--
Pole, post, and piling	11,895	11,835	60	--	--
Total	1,261,836	1,157,840	103,996	15,031	2,980,688
Central Washington					
Lumber	366,140	363,276	2,864	53,237	--
Veneer and plywood	178,587	178,587	--	--	--
Total	544,727	541,863	2,864	53,237	--
Inland Empire					
Lumber	274,430	234,539	39,891	--	--
Shake and shingle ⁵	2,466	225	2,241	595	--
Pole, post, and piling	5,152	3,103	2,049	--	--
Total	282,048	237,867	44,181	595	--
Total, State					
Lumber	3,000,977	2,815,118	185,859	107,082	--
Veneer and plywood	645,535	622,812	22,723	--	--
Pulp and board	545,152	82,180	462,972	--	5,761,157
Shake and shingle	286,619	261,662	24,957	48,701	--
Export	2,116,012	2,113,587	2,425	1,050	--
Pole, post and piling	46,098	43,936	2,162	--	--
Total	6,640,393	5,939,295	701,098	156,833	5,761,157

¹ Includes peeler cores, cants used by sawmills, blocks, boards, bolts used by shake and shingle mills, and miscellaneous peeled products used by pole, post, and piling mills, and poles exported.

² Includes residues from the sawmill, veneer and plywood, and shake and shingle industries, chips from roundwood chipping plants, and wastepaper.

³ Includes 135,675 MBF of cordwood.

⁴ Inland Empire combined with Lower Columbia to avoid disclosure.

⁵ Inland Empire combined with Central Washington to avoid disclosure.

⁶ Central Washington combined with Inland Empire to avoid disclosure.

**Table 3—Log flows to mills by state or country of log origin, area, and industry.
(Thousand board feet, Scribner log rule)**

Economic area and industry	Origin					
	All	Washington	Oregon	Idaho	British Columbia	Other
Puget Sound						
Lumber	1,052,110	1,040,107	--	2,400	8,803	800
Veneer and plywood	112,187	112,187	--	--	--	--
Pulp and board	236,040	224,769	--	2,938	6,456	1,877
Shake and shingle	63,517	57,236	--	--	17	--
Export	645,943	632,679	--	1,045	12,024	195
Pole, post, and piling	14,051	12,405	1,646	--	--	--
Total	2,123,848	2,079,383	1,646	6,400	33,547	2,872
Olympic Peninsula						
Lumber	672,119	670,319	1,320	--	480	--
Veneer and plywood	168,731	168,731	--	--	--	--
Pulp and board	246,175	242,419	--	--	3,756	--
Shake and shingle	185,452	184,730	--	--	722	--
Export	1,140,457	1,140,457	--	--	--	--
Pole, post and piling	15,000	14,980	--	--	20	--
Total	2,427,934	2,421,636	1,320	--	4,978	--
Lower Columbia						
Lumber	636,178	607,180	28,998	--	--	--
Veneer and plywood	186,030	177,329	8,701	--	--	--
Pulp and board ¹	62,937	20,400	41,337	--	--	1,200
Shake and shingle	35,184	34,030	1,154	--	--	--
Export	329,612	302,652	24,447	2,513	--	--
Pole, post and piling	11,895	6,079	5,816	--	--	--
Total	1,261,836	1,147,670	110,453	2,513	--	1,200
Central Washington						
Lumber	366,140	366,140	--	--	--	--
Veneer and plywood ²	178,587	178,587	--	--	--	--
Pulp and board	--	--	--	--	--	--
Shake and shingle ³	--	--	--	--	--	--
Export	--	--	--	--	--	--
Pole, post, and piling	--	--	--	--	--	--
Total	544,727	544,727	--	--	--	--
Inland Empire						
Lumber	274,430	255,326	13,496	5,608	--	--
Veneer and plywood ¹	--	--	--	--	--	--
Pulp and board ¹	--	--	--	--	--	--
Shake and shingle ³	2,466	1,668	--	798	--	--
Export	--	--	--	--	--	--
Pole, post and piling	5,152	4,181	--	847	--	124
Total	282,048	261,175	13,496	7,253	--	124
Total, State						
Lumber	3,000,977	2,939,072	43,814	8,008	9,283	800
Veneer and plywood	645,535	636,834	8,701	--	--	--
Pulp and board	545,152	487,588	41,337	2,938	10,212	3,077
Shake and shingle	286,619	277,664	1,154	815	6,986	--
Export	2,116,012	2,075,788	24,447	3,558	12,024	195
Pole, post, and piling	46,098	37,645	7,462	847	20	124
Total	6,640,393	6,454,591	126,915	16,166	38,525	4,196

¹ Inland Empire combined with Lower Columbia to avoid disclosure.

² Inland Empire and Central Washington combined to avoid disclosure.

³ Central Washington combined with Inland Empire to avoid disclosure.

Table 4—Log flows to mills by county and out-
(Thousand board feet,

Economic area and county of use	Total	Economic area and county of origin						
		Puget Sound						
		Island and San Juan	King	Kitsap	Pierce	Skagit	Snohomish	Whatcom
Puget Sound								
Island, and San Juan ¹	7,490	7,490	--	--	--	--	--	--
King	251,472	30	106,708	274	22,462	1,600	20,274	--
Kitsap	54,527	--	--	16,377	375	--	--	--
Pierce	721,973	6,340	117,856	17,460	230,432	--	11,637	--
Skagit	155,440	2,818	3,290	--	--	75,534	29,047	12,343
Snohomish	831,449	21,360	104,247	--	48,842	126,131	224,222	23,981
Whatcom	101,497	1,805	4,517	--	--	44,460	6,746	32,339
Total	2,123,848	39,843	336,618	34,111	302,111	247,725	291,926	68,663
Olympic Peninsula								
Clallam	565,707	--	--	--	--	--	--	--
Grays Harbor and Pacific ¹	1,291,355	--	--	7,880	--	--	--	--
Jefferson	37,099	--	--	--	--	--	--	--
Lewis and Thurston ¹	342,761	--	--	7,540	68,132	--	--	--
Mason	191,012	--	--	228	376	--	--	--
Total	2,427,934	--	--	15,648	68,508	--	--	--
Lower Columbia								
Clark	185,435	--	--	--	--	--	--	--
Cowlitz and Wahkiakum ¹	858,966	--	--	--	--	--	--	--
Klickitat and Skamania ¹	217,435	--	--	--	--	--	--	--
Total	1,261,836	--	--	--	--	--	--	--
Central Washington								
Chelan	69,397	--	--	--	--	--	--	--
Okanogan	134,079	--	--	--	--	--	--	--
Yakima, Kittitas, and Lincoln ¹	256,560	--	--	--	--	--	--	--
Total	460,036	--	--	--	--	--	--	--
Inland Empire								
Asotin, Columbia and Walla Walla ¹	43,386	--	--	--	--	--	--	--
Ferry	71,151	--	--	--	--	--	--	--
Pend Oreille	19,497	--	--	--	--	--	--	--
Spokane	34,206	--	--	--	--	--	--	--
Stevens	198,499	--	--	--	--	--	--	--
Total	366,739	--	--	--	--	--	--	--
Total, State	6,640,393	39,843	336,618	49,759	370,619	247,725	291,926	68,663

¹ Combined to avoid disclosure.

of-state origins, and by area and county of use.
Scribner log rule)

Economic area and county of origin											
Olympic Peninsula							Lower Columbia				
Clallam	Grays Harbor	Jefferson	Lewis	Mason	Pacific	Thurston	Clark	Cowlitz	Klickitat	Skamania	Wahkiakum
--	--	--	--	--	--	--	--	--	--	--	--
8,410	18,295	17,317	29,367	8,343	10,004	--	--	--	--	--	--
7,961	3,611	21,128	103	4,603	--	30	--	--	--	--	--
33,408	4,892	4,227	170,645	30,252	4,494	44,942	--	--	--	3,843	--
9,744	1,935	6,736	--	2,350	88	--	--	--	--	--	--
13,541	6,752	7,667	158,225	8,662	32,192	29,716	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--
73,074	35,485	57,075	358,340	54,210	46,778	74,688	--	--	--	3,843	--
363,976	1,371	195,882	--	--	--	--	--	--	--	--	--
9,599	549,664	288,175	17,665	8,078	396,186	8,714	--	--	--	--	5,394
8,086	1,157	27,856	--	--	--	--	--	--	--	--	--
3,960	11,588	182	154,759	17,430	3,302	54,343	--	7,019	--	5,590	4,950
--	19,358	--	152	165,982	2,050	2,866	--	--	--	--	--
385,621	583,138	512,095	172,576	191,490	401,538	65,923	--	7,019	--	5,590	10,344
--	--	--	2,601	--	4,200	--	6,644	8,174	1,717	96,411	17,300
--	3,654	--	124,580	--	9,919	--	37,039	589,572	39	38,412	6,460
--	--	--	--	--	--	--	--	2,491	54,663	102,236	--
--	3,654	--	127,181	--	14,119	--	43,683	600,237	56,419	237,059	23,760
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	1,918	--	--
--	--	--	--	--	--	--	--	--	1,918	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
458,695	622,277	569,170	658,097	245,700	462,435	140,611	43,683	607,256	58,337	246,492	34,104

Washington Summary, 1976

Table 4 (Continued)—Log flows to mills by county and out-of-state origins, and by area and county of use.
(Thousand board feet, Scribner log rule)

Economic area and county of use	Economic area and county origin													Out-of-State origin
	Central Washington					Inland Empire								
	Chelan	Kittitas	Lincoln	Okanogan	Yakima	Asotin	Columbia	Ferry	Garfield	Pend Oreille	Spokane	Stevens	Walla Walla	
Puget Sound														
Island, and San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kitsap	--	6,353	--	--	--	--	--	--	--	--	--	--	--	2,035
King	--	--	--	--	--	--	--	--	--	--	--	--	--	339
Pierce	--	23,193	--	--	261	--	--	--	--	--	--	--	--	18,091
Skagit	--	--	--	3,960	--	--	--	--	--	--	--	--	--	7,595
Snohomish	7,125	5,806	--	--	1,000	--	--	--	--	--	--	--	--	11,980
Whatcom	--	7,196	--	--	--	--	--	--	--	--	--	--	--	4,424
Total	7,125	42,548	--	3,960	1,261	--	--	--	--	--	--	--	--	44,464
Olympic Peninsula														
Clallam	--	--	--	--	--	--	--	--	--	--	--	--	--	4,478
Grays Harbor and Pacific	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Jefferson	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lewis and Thurston	--	--	--	--	2,146	--	--	--	--	--	--	--	--	1,820
Mason	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	2,146	--	--	--	--	--	--	--	--	6,298
Lower Columbia														
Clark	--	--	--	--	--	--	--	--	--	--	--	--	--	48,388
Cowlitz and Wahkiakum	--	--	--	--	--	--	--	--	--	--	--	--	--	49,291
Klickitat and Skamania	--	--	--	--	41,557	--	--	--	--	--	--	--	--	16,488
Total	--	--	--	--	41,557	--	--	--	--	--	--	--	--	114,167
Central Washington														
Chelan	69,397	--	--	--	--	--	--	--	--	--	--	--	--	--
Kittitas, Lincoln and Yakima	1,330	51,325	5,799	--	144,001	--	--	49,288	--	--	--	2,899	--	--
Okanogan	--	--	--	126,901	--	--	--	7,178	--	--	--	--	--	--
Total	70,727	51,325	5,799	126,901	144,001	--	--	56,466	--	--	--	2,899	--	--
Inland Empire														
Asotin, Columbia and Walla Walla	--	--	--	--	--	14,400	12,205	--	295	--	--	--	590	15,896
Ferry	--	--	--	17,650	--	--	--	38,326	--	--	2,500	12,675	--	--
Pend Oreille	--	--	--	--	--	--	--	--	--	11,996	--	6,586	--	915
Spokane	--	--	--	--	--	--	--	134	--	3,314	17,263	9,738	--	3,757
Stevens	--	--	99	--	--	--	--	59,158	--	5,907	11,139	121,891	--	305
Total	--	--	99	17,650	--	14,400	12,205	97,618	295	21,217	30,902	150,890	590	20,873
Total, State	77,852	93,873	5,898	148,511	188,965	14,400	12,205	154,084	295	21,217	30,902	153,789	590	185,802

1 Combined to avoid disclosure.

Table 5—Log flows to mills from National Forests, by area and industry.
(Thousand board feet, Scribner log rule)

Economic Area ¹	All National Forests	Mt. Baker -Snoqualmie	Colville	Gifford Pinchot	Kaniksu	Okanogan	Olympic	Wenatchee	Umatilla	Out-of-State National Forests
Puget Sound	340,736	247,506	--	21,639	--	--	50,407	19,055	--	2,129
Olympic Peninsula	347,097	40,102	--	95,303	--	--	211,659	--	--	33
Lower Columbia	200,050	--	--	182,541	--	--	--	--	--	17,509
Central Washington	223,506	--	5,953	--	--	85,066	--	121,881	--	10,606
Inland Empire	117,626	--	66,214	--	1,153	17,853	--	301	27,489	4,616
Total, State	1,229,015	287,608	72,167	299,483	1,153	102,919	262,066	141,237	27,489	34,893
Industry										
Lumber	771,190	117,092	65,547	150,797	92	82,998	206,486	100,140	27,489	20,549
Veneer and Plywood	313,489	79,933	5,953	137,166	--	19,888	25,050	40,345	--	5,154
Pulp and Board	54,758	29,676	--	1,428	--	--	14,805	--	--	8,849
Shake and Shingle	37,118	19,523	49	3,231	792	33	13,137	302	--	51
Export	50,307	41,334	--	6,284	--	--	2,239	450	--	--
Pole, Post and Piling	2,153	50	618	577	269	--	349	--	--	290
Total, All Industries	1,229,015	287,608	72,167	299,483	1,153	102,919	262,066	141,237	27,489	34,893

¹ Note combinations made in Table 7 are also used here to avoid disclosure.

Table 6—Number of mills dependent upon ownerships, by area and industry.

Economic area and industry	National Forest			State			Bureau of Land Management			Other public			Forest Industry			Farmer & miscellaneous private									
	01-32			33-66			67-100			01-32			33-66			67-100									
	01-32	33-66	67-100	01-32	33-66	67-100	01-32	33-66	67-100	01-32	33-66	67-100	01-32	33-66	67-100	01-32	33-66	67-100							
Puget Sound	34	13	4	33	21	1	55	--	--	52	2	1	--	38	9	3	5	30	15	7	3	15	7	10	23
Lumber	3	--	1	6	2	--	8	--	--	6	2	--	--	5	2	--	1	5	2	1	--	2	5	1	2
Veneer and plywood	7	2	--	7	2	--	9	--	--	8	1	--	--	3	--	4	2	4	3	--	--	7	1	1	--
Pulp and board	35	10	8	49	6	2	59	--	--	56	2	1	--	58	1	--	2	36	8	2	13	45	4	5	5
Shake and shingle	31	4	2	23	6	4	37	--	--	37	--	--	--	35	2	--	--	10	3	3	21	27	4	--	6
Export	6	2	--	4	3	1	8	--	--	6	2	--	--	4	3	1	--	3	1	4	--	--	3	3	2
Pole, post, and piling	116	31	15	122	40	8	176	--	--	165	5	1	1	143	17	8	8	88	32	17	39	99	20	21	36
Total	32	8	3	33	16	1	50	--	--	44	4	--	2	39	3	5	3	32	7	6	5	22	10	1	17
Olympic Peninsula	4	5	--	8	6	1	15	--	--	14	--	1	--	10	4	1	--	10	5	--	--	9	5	--	1
Lumber	3	2	--	3	2	--	5	--	--	4	1	--	--	2	--	2	1	3	2	--	--	3	2	--	1
Veneer and plywood	139	17	8	142	16	6	167	--	--	134	4	7	22	164	2	--	1	115	5	8	39	155	5	2	5
Pulp and board	32	--	--	10	9	6	32	--	--	27	3	1	1	30	1	1	--	8	8	3	13	18	8	3	3
Shake and shingle	2	2	1	3	2	--	5	--	--	5	--	--	--	4	1	--	--	3	--	--	2	2	1	--	2
Export	212	34	12	199	51	14	274	--	--	228	12	8	26	249	11	9	5	171	27	17	59	209	31	6	28
Pole, post, and piling	19	2	2	16	12	--	26	2	--	25	2	1	--	17	2	1	8	16	4	1	7	15	8	--	5
Total	1	--	1	3	5	--	7	1	--	8	--	--	--	6	1	--	1	4	3	1	--	4	4	--	--
Lower Columbia	11	1	--	11	1	--	11	--	--	11	1	--	--	11	--	--	10	1	1	--	11	1	--	--	--
Lumber	17	1	--	18	1	1	20	--	--	20	--	--	--	18	--	--	2	13	--	--	6	20	--	--	--
Veneer and plywood	11	1	--	9	1	2	12	--	--	12	--	--	--	11	1	--	--	1	1	1	9	9	2	--	1
Pulp and board	4	1	--	3	2	--	5	--	--	4	--	--	1	3	1	--	1	1	1	1	2	1	4	--	--
Shake and shingle	63	6	3	60	22	3	81	4	--	80	3	1	1	66	5	1	13	45	10	5	25	60	19	--	6
Export	4	1	5	10	3	--	13	--	--	7	4	1	1	5	7	1	--	10	2	1	--	6	5	1	1
Pole, post, and piling	--	--	2	--	2	--	2	--	--	--	2	--	--	--	2	--	--	--	--	--	--	--	--	--	--
Total	4	1	7	3	10	5	15	--	--	7	6	1	1	5	9	1	--	11	3	1	--	7	6	1	1
Central Washington	14	4	2	21	8	--	26	3	--	25	2	2	--	23	4	2	--	22	6	--	1	5	11	--	13
Lumber	1	2	--	1	2	--	1	2	--	1	--	2	--	1	--	2	--	3	--	--	--	1	2	--	--
Veneer and plywood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pulp and board	4	--	--	6	--	--	6	--	--	6	--	--	--	6	--	--	--	5	--	--	--	1	5	1	--
Shake and shingle	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Export	2	2	--	2	1	1	1	2	1	1	3	--	--	2	1	1	--	4	--	--	--	3	--	1	--
Pole, post, and piling	21	8	2	11	30	11	34	7	1	33	5	4	--	32	5	5	--	34	6	--	2	14	14	1	13
Total	103	28	16	113	60	2	170	5	--	153	14	5	3	122	25	12	16	110	34	15	16	63	41	12	59
Lumber	9	7	4	18	17	1	33	3	--	29	4	2	1	22	9	3	2	20	13	2	--	20	13	2	1
Veneer and plywood	21	5	--	21	5	--	25	1	--	23	3	--	--	16	--	6	4	17	6	--	3	21	4	1	--
Pulp and board	195	28	16	215	23	9	252	--	--	216	6	7	23	246	3	--	3	169	13	11	59	225	10	7	10
Shake and shingle	74	5	2	42	16	12	81	--	--	76	3	1	1	76	4	1	--	19	12	7	43	54	14	3	10
Export	14	7	1	12	8	2	19	2	1	16	5	--	1	13	6	2	1	11	2	5	4	6	8	4	4
Pole, post, and piling	416	80	39	421	129	26	580	11	1	513	35	15	29	495	47	24	26	349	78	40	125	389	90	29	84
Total																									

1 Inland Empire has been combined with Lower Columbia to avoid disclosure.

2 Inland Empire and Central Washington combined to avoid disclosure.

3 Includes five layup-only mills.

Table 7—Log consumption by mills, by ownership and area.
(Thousand board feet, Scribner log rule)

Economic area and industry	All owners	State	National Forest	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Lumber	1,052,110	62,897	184,527	--	5,933	486,807	190,380	121,566
Veneer and plywood	112,187	749	60,428	--	1,811	37,229	3,444	8,526
Pulp and board	236,040	10,949	28,877	--	1,000	130,518	50,196	14,500
Shake and shingle	63,517	9,528	22,638	--	1,072	134	10,824	19,321
Export	645,943	97,287	44,023	--	--	27,000	414,657	62,976
Pole, post, and piling	14,051	1,824	243	--	150	1,335	4,686	5,813
Total	2,123,848	183,234	340,736	--	9,966	683,023	674,187	232,702
Olympic Peninsula								
Lumber	672,119	56,878	228,870	--	17,414	218,851	93,050	57,056
Veneer and plywood	168,731	16,590	87,113	--	8,108	22,585	14,147	20,188
Pulp and board	246,175	47,919	17,481	--	18,300	132,068	20,612	9,795
Shake and shingle	185,452	14,046	12,760	--	51,602	754	96,828	9,462
Export	1,140,457	392,788	--	--	80,587	12,871	537,930	116,281
Pole, post, and piling	15,000	1,010	873	--	--	33	8,340	4,744
Total	2,427,934	529,231	347,097	--	176,011	387,162	770,907	217,526
Lower Columbia								
Lumber	636,178	36,341	78,572	1,895	23,494	380,980	101,109	13,787
Veneer and plywood	186,030	10,807	106,215	1,527	--	53,105	8,448	5,928
Pulp and board ¹	62,937	1,800	8,400	1,800	1,200	43,200	5,337	1,200
Shake and shingle	35,184	1,140	540	--	--	20,394	13,110	--
Export	329,612	28,818	6,284	--	--	12,568	261,381	20,561
Pole, post, and piling	11,895	263	39	--	4,523	3,428	2,840	802
Total	1,261,836	79,169	200,050	5,222	29,217	513,675	392,225	42,278
Central Washington								
Lumber	366,140	7,632	163,773	--	99,354	42,425	17,776	35,180
Veneer and plywood ²	178,587	8,397	59,733	1,701	44,237	52,833	2,118	9,568
Pulp and board	--	--	--	--	--	--	--	--
Shake and shingle ³	--	--	--	--	--	--	--	--
Export	--	--	--	--	--	--	--	--
Pole, post, and piling	--	--	--	--	--	--	--	--
Total	544,727	16,029	223,506	1,701	143,591	95,258	19,894	44,748
Inland Empire								
Lumber	274,430	16,384	115,448	805	14,357	26,017	10,549	90,870
Veneer and plywood ²	--	--	--	--	--	--	--	--
Pulp and board ¹	--	--	--	--	--	--	--	--
Shake and shingle ³	2,466	--	1,180	--	--	--	300	986
Export	--	--	--	--	--	--	--	--
Pole, post, and piling	5,152	1,411	998	--	124	648	488	1,483
Total	282,048	17,795	117,626	805	14,481	26,665	11,337	93,339
Total, State								
Lumber	3,000,977	180,132	771,190	2,700	160,552	1,155,080	412,864	318,459
Veneer and plywood	645,535	36,543	313,489	3,228	54,156	165,752	28,157	44,210
Pulp and board	545,152	60,668	54,758	1,800	20,500	305,786	76,145	25,495
Shake and shingle	286,619	24,714	37,118	--	52,674	21,282	121,062	29,769
Export	2,116,012	518,893	50,307	--	80,587	52,439	1,213,968	199,818
Pole, post, and piling	46,098	4,508	2,153	--	4,797	5,444	16,354	12,842
Total	6,640,393	825,458	1,229,015	7,728	373,266	1,705,783	1,868,550	630,593

¹ Inland Empire combined with Lower Columbia to avoid disclosure.

² Inland Empire combined with Central Washington to avoid disclosure.

³ Central Washington combined with Inland Empire to avoid disclosure.

Washington Summary, 1976

Table 8—Log consumption by mills, by species and area.
(Thousand board feet, Scribner log rule)

Economic area and industry	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods ¹	Hardwoods
Puget Sound										
Lumber	1,052,110	548,514	342,348	22,282	5,579	2,631	2,211	80,431	2,763	45,351
Veneer and plywood	112,187	46,617	42,820	623	7,269	302	--	6,023	1,963	6,570
Pulp and board	236,040	12,260	112,943	59,576	4,046	--	--	400	9,383	37,432
Shake and shingle	63,517	--	--	--	--	--	--	63,319	198	--
Export	645,943	276,714	291,624	34,377	12,251	230	--	12,455	16,988	1,304
Pole, post, and piling	14,051	8,739	--	--	--	--	--	5,312	--	--
Total	2,123,848	892,844	789,735	116,858	29,145	3,163	2,211	167,940	31,295	90,657
Olympic Peninsula										
Lumber	672,119	246,892	289,139	20,201	14,139	--	--	48,983	--	52,765
Veneer and plywood	168,731	94,849	31,827	10,010	4,264	320	--	25,291	1,500	670
Pulp and board	246,175	540	231,335	7,079	7,041	--	--	--	--	180
Shake and shingle	185,452	--	--	--	--	--	--	185,129	323	--
Export	1,140,457	472,195	775,147	18,830	26,574	--	--	140,964	6,747	--
Pole, post, and piling	15,000	7,956	--	--	--	--	--	7,044	--	--
Total	2,427,934	522,432	1,327,448	56,120	52,018	320	--	407,411	8,570	53,615
Lower Columbia										
Lumber	636,178	335,993	111,678	24,760	8	65,224	--	58,262	800	39,453
Veneer and plywood	186,030	120,033	31,808	7,859	--	8,691	--	17,639	--	--
Pulp and board ²	62,937	14,428	24,859	8,800	2,200	--	--	--	1,650	11,000
Shake and shingle	35,184	--	--	--	--	--	--	35,184	--	--
Export	329,612	161,675	158,380	980	--	--	1,257	4,864	2,456	--
Pole, post, and piling	11,895	11,724	--	--	--	--	--	128	43	--
Total	1,261,836	643,853	326,725	42,399	2,208	73,915	1,257	116,077	4,949	50,453
Central Washington										
Lumber	366,140	114,125	15,851	19,942	3,449	207,479	948	1,732	2,614	--
Veneer and plywood ³	178,587	119,107	--	21,594	3,541	14,253	1,757	--	18,335	--
Pulp and board	--	--	--	--	--	--	--	--	--	--
Shake and shingle ⁴	--	--	--	--	--	--	--	--	--	--
Export	--	--	--	--	--	--	--	--	--	--
Pole, post and piling	--	--	--	--	--	--	--	--	--	--
Total	544,727	233,232	15,851	41,536	6,990	221,732	2,705	1,732	20,949	--
Inland Empire										
Lumber	274,430	125,853	9,828	24,992	7,011	71,305	6,659	4,796	23,934	52
Veneer and plywood ³	--	--	--	--	--	--	--	--	--	--
Pulp and board ²	--	--	--	--	--	--	--	--	6	--
Shake and shingle ⁴	2,466	--	--	--	--	--	--	--	--	--
Export	--	--	--	--	--	--	--	--	--	--
Pole, post and piling	5,152	--	--	--	--	--	2,015	2,904	233	--
Total	282,048	125,853	9,828	24,992	7,011	71,305	8,674	10,160	24,173	52
Total, State										
Lumber	3,000,977	1,371,377	768,844	112,177	30,186	346,639	9,818	194,204	30,111	137,621
Veneer and plywood	645,535	380,606	106,455	40,086	15,074	23,566	1,757	48,953	21,798	7,240
Pulp and board	545,152	27,228	369,137	75,455	13,287	--	--	400	11,033	48,612
Shake and shingle	286,619	--	--	--	--	--	--	286,092	527	--
Export	2,116,012	610,584	1,225,451	54,187	38,825	230	1,257	1,483	158,283	1,304
Pole, post, and piling	46,098	28,419	--	--	--	--	2,015	15,388	276	--
Total	6,367,893	2,418,214	2,469,587	281,905	97,372	370,435	14,847	703,320	89,936	194,777

¹ Mostly western larch, but some western white pine, Alaska yellow cedar, and others. For Pulp and Board, includes ponderosa pine and lodgepole pine.

² Inland Empire combined with Lower Columbia to avoid disclosure.

³ Inland Empire and Central Washington combined to avoid disclosure.

⁴ Central Washington combined with Inland Empire to avoid disclosure.

Table 9—Production and disposition of wood and bark residues, by area and industry.
(Tons, dry weight)

Economic area and residue-producing industry	All residues	Wood residue						Bark residue										
		All wood	Used ¹			Miscellaneous	Unused	All bark	Used ¹			Miscellaneous	Unused					
			Total	Pulp and board	Fuel				Total	Pulp and board	Fuel							
Puget Sound																		
Lumber	1,585,643	1,257,250	704,368	377,637	155,717	19,528	328,393	324,191	77	137,777	186,337	4,202						
Veneer and plywood	209,163	173,144	47,505	114,242	11,397	--	35,959	33,821	--	33,821	--	2,138						
Shake and shingle	72,968	51,487	5,142	7,806	7,143	31,396	21,481	5,365	--	2,577	2,388	16,116						
Total	1,867,774	1,481,881	757,015	499,685	174,257	50,924	385,833	363,377	77	174,575	188,725	22,456						
Olympic Peninsula																		
Lumber	1,045,149	817,169	782,237	493,947	37,174	34,932	227,980	195,084	--	161,186	33,898	32,896						
Veneer and plywood	310,130	248,571	248,571	143,225	80,302	25,044	61,568	46,256	--	43,405	2,851	15,312						
Shake and shingle	204,498	146,498	71,133	15,702	19,306	75,365	59,000	22,915	2,478	13,710	6,727	35,085						
Total	1,559,786	1,212,238	1,101,941	651,874	81,524	110,297	347,548	264,255	2,478	218,301	43,476	83,293						
Lower Columbia																		
Lumber	975,468	777,337	746,035	592,359	38,118	31,302	198,131	148,066	--	127,024	21,042	50,065						
Veneer and plywood	335,819	267,771	180,057	61,539	26,115	--	68,039	68,039	5,940	61,029	1,070	958						
Shake and shingle	29,614	20,366	17,495	1,645	837	2,931	9,248	8,290	--	8,111	179	--						
Total	1,340,892	1,065,474	1,031,241	684,061	65,070	34,233	275,418	224,395	5,940	196,164	22,291	51,023						
Central Washington																		
Lumber	610,940	477,829	458,628	248,048	181,655	18,811	132,601	126,608	--	105,549	21,059	5,993						
Veneer and plywood	274,365	218,151	204,098	119,347	59,133	14,053	56,214	39,783	--	27,463	17,320	16,431						
Shake and shingle	--	--	--	--	--	--	--	--	--	--	--	--						
Total	885,405	695,980	662,726	367,395	240,788	32,864	188,815	166,391	--	128,012	38,379	22,424						
Inland Empire																		
Lumber	426,045	334,250	295,233	123,654	103,431	18,148	91,795	34,159	--	26,189	7,370	57,636						
Veneer and plywood	--	914	835	--	93	742	503	476	--	58	408	27						
Shake and shingle	1,417	--	--	--	--	--	--	--	--	--	--	--						
Total	427,462	335,164	296,068	123,654	103,524	18,890	92,298	34,635	--	26,257	8,378	57,663						
Total, State																		
Lumber	4,642,345	3,663,445	3,469,855	2,071,376	1,120,397	193,590	978,906	828,108	77	557,725	270,306	150,767						
Veneer and plywood	1,129,417	907,637	893,584	460,134	315,276	14,053	221,780	187,899	5,940	160,718	21,241	23,887						
Shake and shingle	308,497	219,265	109,494	22,489	58,977	109,771	89,232	37,046	2,478	24,866	9,702	34,186						
Total	6,080,259	4,790,347	4,472,933	2,583,999	1,494,650	317,414	1,289,912	1,053,053	8,495	743,309	301,249	236,859						

¹ Used residues were not necessarily consumed in the economic area in which they were produced.

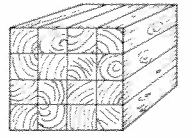
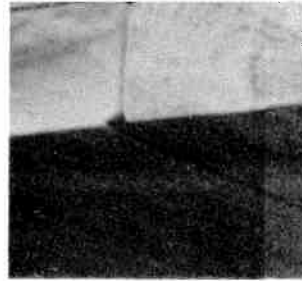
² Inland Empire combined with Central Washington to avoid disclosure.

³ Central Washington combined with Inland Empire to avoid disclosure.

**Table 10—Log consumption by timber age, area, and industry.
(Thousand board feet, Scribner log rule)**

Economic area and industry	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound			
Lumber	1,052,110	493,887	558,223
Veneer and plywood	112,187	52,309	59,878
Pulp and board	236,040	169,719	66,321
Shake and shingle	63,517	59,477	4,040
Export	645,943	492,932	153,011
Post, pole and piling	14,051	2,773	11,278
Total	2,123,848	1,271,097	852,751
Olympic Peninsula			
Lumber	672,119	330,613	341,506
Veneer and plywood	168,731	130,314	38,417
Pulp and board	246,175	222,221	23,954
Shake and shingle	185,452	181,705	3,747
Export	1,140,457	709,565	430,892
Post, pole and piling	15,000	1,845	13,155
Total	2,427,934	1,576,263	851,671
Lower Columbia			
Lumber	636,178	425,730	210,448
Veneer and plywood	186,030	101,120	84,910
Pulp and board ¹	62,937	9,587	53,350
Shake and shingle	35,184	33,491	1,693
Export	329,612	262,869	66,743
Post, pole and piling	11,895	1,345	10,550
Total	1,261,836	834,142	427,694
Central Washington			
Lumber	366,140	284,991	81,149
Veneer and plywood ²	178,587	129,359	49,228
Pulp and board	--	--	--
Shake and shingle ³	--	--	--
Post, pole and piling	--	--	--
Total	544,727	414,350	130,377
Inland Empire			
Lumber	274,430	103,323	171,107
Veneer and plywood ²	--	--	--
Pulp and board ¹	--	--	--
Shake and shingle ³	2,466	2,321	145
Post, pole and piling	5,152	1,591	3,561
Total	282,048	107,235	174,813
Total, State			
Lumber	3,000,977	1,638,544	1,362,433
Veneer and plywood	645,535	413,102	232,433
Pulp and board	545,152	401,527	143,625
Shake and shingle	286,619	276,994	9,625
Export	2,116,012	1,465,366	650,646
Post, pole and piling	46,098	7,554	38,544
Total	6,640,393	4,203,087	2,437,306

¹ Inland Empire combined with Lower Columbia to avoid disclosure.
² Inland Empire combined with Central Washington to avoid disclosure.
³ Central Washington combined with Inland Empire to avoid disclosure.



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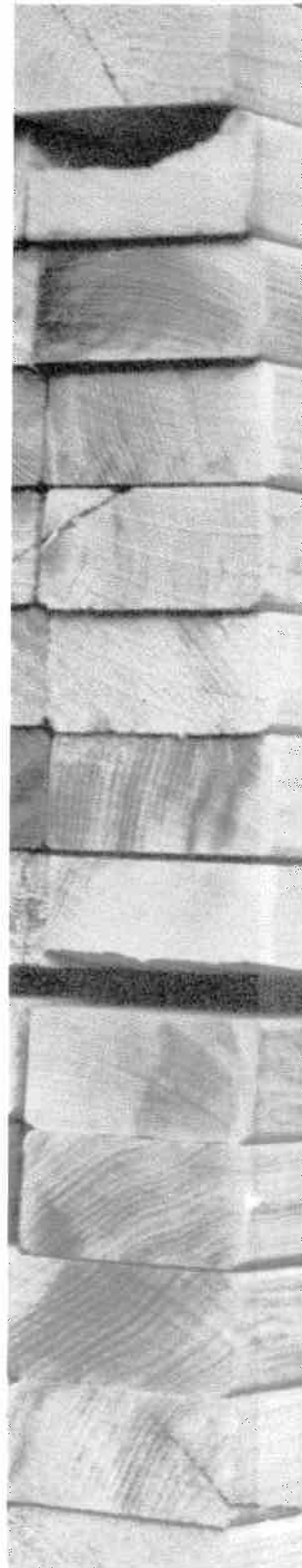


Table 11—Number of sawmills by mill size-class, area, and county.

Economic area and county	• All classes	Mill size-class ¹			
		D	C	B	A
Puget Sound					
Island	2	1	1	--	--
King	11	5	1	2	3
Kitsap	2	1	--	--	1
Pierce	12	4	2	1	5
San Juan	1	1	--	--	--
Skagit	2	1	--	--	1
Snohomish	23	12	6	3	2
Whatcom	2	1	1	--	--
Total	55	26	11	6	12
Olympic Peninsula					
Clallam	8	7	--	--	1
Grays Harbor	8	3	2	--	3
Jefferson	4	3	1	--	--
Lewis	11	2	4	2	3
Mason	8	4	2	--	2
Pacific	2	--	--	--	2
Thurston	9	8	--	1	--
Total	50	27	9	3	11
Lower Columbia					
Clark	7	4	2	--	1
Cowlitz	10	2	2	2	4
Skamania	4	--	2	--	2
Wahkiakum	2	2	--	--	--
Klickitat	5	1	3	--	1
Total	28	9	9	2	8
Central Washington					
Chelan	3	--	2	1	--
Kittitas	1	--	1	--	--
Lincoln	1	--	--	--	1
Okanogan	5	2	1	--	2
Yakima	3	--	1	1	1
Total	13	2	5	2	4
Inland Empire					
Asotin	1	--	1	--	--
Columbia	1	1	--	--	--
Ferry	8	5	1	1	1
Pend Oreille	3	2	1	--	--
Spokane	2	1	--	1	--
Stevens	12	7	4	1	--
Walla Walla	2	1	--	1	--
Total	29	17	7	4	1
Total, State	175	81	41	17	36

¹ Mill size-classes identified as follows: Class A Mills = 120,000 + board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

**Table 12—Installed single shift capacity by mill size-class, area, and county.
(Thousand board feet, lumber tally)**

Economic area and county	Total capacity	Mill size-class ¹			
		D	C	B	A
Puget Sound					
Island	44	4	40	--	--
King	749	64	75	175	435
Kitsap	210	30	--	--	180
Pierce	1,084	16	143	80	845
San Juan	4	4	--	--	--
Skagit	153	28	--	--	125
Snohomish	1,695	145	325	300	925
Whatcom	110	35	75	--	--
Total	4,049	326	658	555	2,510
Olympic Peninsula					
Clallam	248	88	--	--	160
Grays Harbor	684	69	120	--	495
Jefferson	99	29	70	--	--
Lewis	953	13	230	180	530
Mason	715	65	150	--	500
Pacific	350	--	--	--	350
Thurston	266	156	--	110	--
Total	3,315	420	570	290	2,035
Lower Columbia					
Clark	260	20	115	--	125
Cowlitz	1,475	30	150	165	1,130
Skamania	439	--	139	--	300
Wahkiakum	12	12	--	--	--
Klickitat	363	25	188	--	150
Total	2,549	87	592	165	1,705
Central Washington					
Chelan	225	--	135	90	--
Kittitas	50	--	50	--	--
Lincoln	150	--	--	--	150
Okanogan	342	7	60	--	275
Yakima	305	--	60	85	160
Total	1,072	7	305	175	585
Inland Empire					
Asotin	50	--	50	--	--
Columbia	8	8	--	--	--
Ferry	330	35	55	100	140
Pend Oreille	95	25	70	--	--
Spokane	116	6	--	110	--
Stevens	392	112	195	85	--
Walla Walla	116	35	--	81	--
Total	1,107	221	370	376	140
Total, State	12,092	1,061	2,495	1,561	6,975

¹ Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

Washington Sawmills, 1976

Table 13—Number of sawmills with selected equipment, by mill size-class and area.

Economic area and mill size-class ¹	Barker	Chipper	Planer	Burner	Kiln
Puget Sound					
D	4	7	18	--	4
C	10	9	8	1	4
B	6	6	3	--	2
A	11	12	12	--	10
Total	31	34	41	1	20
Olympic Peninsula					
D	5	7	12	4	5
C	5	7	6	3	3
B	3	3	3	2	--
A	11	9	9	1	6
Total	24	26	30	10	14
Lower Columbia					
D	1	2	4	--	2
C	8	9	6	1	4
B	2	2	2	--	--
A	8	8	6	1	5
Total	19	21	18	2	11
Central Washington					
D	--	--	--	--	--
C	5	5	4	3	3
B	2	2	2	1	2
A	4	4	3	1	4
Total	11	11	9	5	9
Inland Empire					
D	2	2	11	8	1
C	7	7	6	5	4
B	4	4	4	3	3
A	1	1	1	1	1
Total	14	14	22	17	9
Total, State					
D	12	18	45	12	12
C	35	37	30	13	18
B	17	17	14	6	7
A	35	34	31	4	26
Total	99	106	120	35	63

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board feet capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

Table 14—Number of sawmills with selected equipment, by area and county.

Economic area and county	Barker	Chipper	Planer	Burner	Kiln
Puget Sound					
Island	1	1	1	1	--
King	6	6	9	--	4
Kitsap	1	1	2	--	2
Pierce	7	9	9	--	4
San Juan	--	--	1	--	--
Skagit	2	2	2	--	2
Snohomish	13	14	16	--	7
Whatcom	1	1	1	--	1
Total	31	34	41	1	20
Olympic Peninsula					
Clallam	2	3	5	2	2
Grays Harbor	4	3	5	1	2
Jefferson	1	1	3	2	--
Lewis	9	9	9	4	5
Mason	3	5	4	--	3
Pacific	2	2	2	--	2
Thurston	3	3	2	1	--
Total	24	26	30	10	14
Lower Columbia					
Clark	3	3	6	--	2
Cowlitz	9	9	6	--	4
Klickitat	4	4	4	1	3
Skamania	3	4	2	1	2
Wahkiakum	--	1	--	--	--
Total	19	21	18	2	11
Central Washington					
Chelan	3	3	3	2	3
Kittitas	1	1	--	--	--
Lincoln	1	1	1	1	1
Okanogan	3	3	2	1	2
Yakima	3	3	3	1	3
Total	11	11	9	5	9
Inland Empire					
Asotin	1	1	1	--	1
Columbia	--	--	--	--	--
Ferry	3	3	5	7	2
Pend Oreille	1	1	2	1	1
Spokane	1	1	2	--	1
Stevens	6	6	10	7	3
Walla Walla	2	2	2	2	1
Total	14	14	22	17	9
Total, State	99	106	120	35	63

Table 15—Number of sawmills by headrig type and size, area, and mill size-class.

Economic area and mill size-class	Circular saw				Band saw				Gang saw				Chipping saw				Scragg double cut saw					
	2 ft.		4 ft.		6 ft.		8 ft.		10 ft.		2 ft.		3 ft.		4 ft.		2 ft.		3 ft.		4 ft.	
	4 ft.	6 ft.	8 ft.	10 ft.	4 ft.	6 ft.	8 ft.	10 ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.		
Forest States																						
D	4	13	6	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C	--	1	2	--	5	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B	1	--	--	--	2	1	1	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--
A	--	--	--	--	3	3	1	2	--	--	1	--	--	5	--	--	--	1	--	--	--	--
Total	5	14	8	--	13	4	5	3	3	1	1	--	5	--	2	--	--	2	--	--	--	--
Olympic Peninsula																						
D	1	11	6	1	--	2	--	--	--	--	1	2	--	--	--	--	--	5	--	--	1	1
C	--	2	--	--	3	--	3	1	--	--	--	--	--	--	--	--	--	2	--	--	--	--
B	--	--	1	--	2	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A	--	--	--	--	2	7	1	--	--	--	1	--	4	--	--	--	--	1	--	--	--	--
Total	1	13	7	1	6	10	4	1	1	2	2	--	5	--	2	--	8	--	1	--	1	1
Lower Columbia																						
D	--	5	1	2	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
C	--	--	--	--	1	4	1	1	--	--	--	--	--	--	--	--	--	2	--	--	--	--
B	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A	--	--	--	--	3	3	1	1	1	1	--	3	--	--	--	--	--	--	--	--	--	--
Total	--	5	2	2	4	9	2	2	2	1	--	5	--	5	--	2	--	2	--	--	2	--
Central Washington																						
D	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C	--	--	--	--	2	2	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1	--
B	--	--	--	--	--	2	--	--	--	--	--	2	--	--	--	--	--	--	--	--	1	--
A	--	--	--	--	3	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1	1	--	--	5	5	--	--	2	2	--	2	--	1	--	1	--	1	--	1	--	--
Inland Empire																						
D	1	9	6	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C	--	3	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B	--	--	1	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
A	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1	12	7	--	5	2	1	--	--	--	--	--	--	1	--	1	--	1	--	1	--	--
Totally State																						
D	7	39	19	3	4	2	--	--	--	1	2	--	1	--	2	--	5	--	1	--	5	1
C	--	5	3	--	12	7	8	2	2	--	--	--	3	--	--	--	6	--	--	3	--	--
B	1	--	2	--	6	5	1	1	1	--	--	--	--	--	--	2	--	--	--	--	--	--
A	--	--	--	--	11	15	3	3	3	4	1	--	12	--	--	--	3	--	--	--	--	--
Total	5	45	24	3	33	30	12	6	6	16	3	--	14	--	2	--	14	--	1	--	14	1

Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.
 NOTE: Sizes of headrigs are upper limits. Thus the 6-foot size class includes saws 4 1/2 through 7 1/2 inches.

Table 16—Number of sawmills by tenure of present ownership, years of site occupancy, and mill size-class.

Present mill size-class ¹	Site occupancy (years)	All mills	Tenure of present mill ownership (years)				
			0-2	3-5	6-10	11-20	21+
D	0 - 2	1	1	--	--	--	--
	3 - 5	4	1	3	--	--	--
	6 - 10	15	--	1	13	1	--
	11 - 20	28	2	--	3	22	1
	21+	33	3	3	2	4	21
	Total	81	7	7	18	27	22
C	0 - 2	3	3	--	--	--	--
	3 - 5	2	1	1	--	--	--
	6 - 10	4	--	--	3	--	1
	11 - 20	10	1	2	--	7	--
	21+	22	2	2	4	5	9
	Total	41	7	5	7	12	10
B	0 - 2	--	--	--	--	--	--
	3 - 5	1	--	1	--	--	--
	6 - 10	1	--	1	--	--	--
	11 - 20	2	--	1	--	1	--
	21+	13	2	4	2	--	5
	Total	17	2	7	2	1	5
A	0 - 2	3	3	--	--	--	--
	3 - 5	2	--	2	--	--	--
	6 - 10	3	--	--	3	--	--
	11 - 20	6	--	--	--	6	--
	21+	22	4	2	--	1	15
	Total	36	7	4	3	7	15
Total, State	0 - 2	7	7	--	--	--	--
	3 - 5	9	2	7	--	--	--
	6 - 10	23	--	2	19	1	1
	11 - 20	46	3	3	3	36	1
	21+	90	11	11	8	10	50
	Total	175	23	23	30	47	52

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

Table 17—Average number of operating days by area and mill size-class.

Economic area and mill size-class ¹	Average number of operating days per year	Economic area and mill size-class ¹	Average number of operating days per year
Puget Sound		Central Washington	
D	159	D	52
C	217	C	222
B	232	B	265
A	236	A ²	251
Average	195	Average	211
Olympic Peninsula		Inland Empire	
D	175	D	114
C	207	C	250
B	227	B	234
A	224	A ²	--
Average	195	Average	165
Lower Columbia		Total, State	
D	133	D	149
C	190	C	215
B	246	B	237
A	237	A	234
Average	189	Average	190

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Central Washington and Inland Empire Class A mills combined to avoid disclosure.

**Table 18—Type of wood consumed, by area and mill size-class.
(Thousand board feet)**

Economic area and mill size- class ¹	All wood	Roundwood			Other	
		All roundwood	Sound logs	Utility logs	Peeler cores	Cants
		----- Scribner log rule -----			----- Lumber tally -----	
Puget Sound						
D	36,441	36,396	36,088	308	--	45
C	135,479	114,179	101,722	12,457	--	21,300
B	115,007	115,007	92,150	22,857	--	--
A	791,453	786,528	748,414	38,114	2,791	2,134
Total	1,078,380	1,052,110	978,374	73,736	2,791	23,479
Olympic Peninsula						
D	43,068	39,754	31,929	7,825	--	3,314
C	125,261	125,111	98,118	26,993	150	--
B	62,400	53,400	52,200	1,200	--	9,000
A	455,866	453,854	447,847	6,007	2,012	--
Total	686,595	672,119	630,094	42,025	2,162	12,314
Lower Columbia						
D	4,068	4,068	3,043	1,025	--	--
C and B ²	199,767	198,645	193,147	5,498	1,122	--
A	445,442	433,465	412,645	20,820	4,067	7,910
Total	649,277	636,178	608,835	27,343	5,189	7,910
Central Washington						
C	89,993	89,993	87,144	2,849	--	--
B and D ²	67,464	67,464	67,449	15	--	--
A	261,920	208,683	208,683	--	--	53,237
Total	419,377	366,140	363,276	2,864	--	53,237
Inland Empire						
D	19,322	19,322	19,221	101	--	--
C	121,565	121,565	97,065	24,500	--	--
B and A ²	133,543	133,543	118,253	15,290	--	--
Total	274,430	274,430	234,539	39,891	--	--
Total, State						
D	102,899	99,540	90,281	9,259	--	3,359
C ³	672,065	649,493	577,196	72,297	1,272	21,300
B ⁴	378,414	369,414	330,052	39,362	--	9,000
A	1,954,681	1,882,530	1,817,589	64,941	8,870	63,281
Total	3,108,059	3,000,977	2,815,118	185,859	10,142	96,940

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

⁴ Total for Class B includes Class D for Central Washington, and includes Class A for Inland Empire (See footnote 3 for exclusion).

**Table 19—Age of logs consumed, by area and mill size-class.
(Thousand board feet, Scribner log rule)**

Economic area and mill size- class ¹	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound			
D	36,396	8,383	28,013
C	114,179	38,936	75,243
B	115,007	79,369	35,638
A	786,528	367,199	419,329
Total	1,052,110	493,887	558,223
Olympic Peninsula			
D	39,754	8,048	31,706
C	125,111	58,261	66,850
B	53,400	11,550	41,850
A	453,854	252,754	201,100
Total	672,119	330,613	341,506
Lower Columbia			
D	4,068	2,050	2,018
C and B ²	198,645	148,755	49,890
A	433,465	274,925	158,540
Total	636,178	425,730	210,448
Central Washington			
C	89,993	55,220	34,773
B and D ²	67,464	58,323	9,141
A	208,683	171,448	37,235
Total	366,140	284,991	81,149
Inland Empire			
D	19,322	7,832	11,490
C	121,565	34,947	86,618
B and A ²	133,543	60,544	72,999
Total	274,430	103,323	171,107
Total, State			
D	99,540	26,313	73,227
C ³	649,493	336,119	313,374
B ⁴	369,414	209,786	159,628
A	1,882,530	1,066,326	816,204
Total	3,000,977	1,638,544	1,362,433

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

⁴ Total for Class B includes Class D for Central Washington and Class A for Inland Empire.

**Table 20—Log consumption by timber age, area, and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound			
Island, Kitsap and San Juan ¹	60,291	200	60,091
King	206,092	144,899	61,193
Pierce	275,869	90,008	185,861
Skagit and Whatcom ¹	60,069	9,180	50,889
Snohomish	449,789	249,600	200,189
Total	1,052,110	493,887	558,223
Olympic Peninsula			
Clallam	55,683	39,641	16,042
Grays Harbor and Pacific ¹	242,656	143,301	99,355
Jefferson	31,328	18,736	12,592
Mason	145,034	82,181	62,853
Thurston	52,719	7,388	45,331
Lewis	144,699	39,366	105,333
Total	672,119	330,613	341,506
Lower Columbia			
Clark	49,472	15,732	33,740
Cowlitz and Wahkiakum ¹	431,562	291,929	139,633
Klickitat	111,510	78,697	32,813
Skamania	43,634	39,372	4,262
Total	636,178	425,730	210,448
Central Washington ¹			
Chelan and Kittitas ¹	83,704	63,169	20,535
Okanogan and Lincoln ¹	151,476	135,433	16,043
Yakima	130,960	86,389	44,571
Total	366,140	284,991	81,149
Inland Empire			
Asotin, Columbia and Walla Walla ¹	43,386	15,399	27,987
Ferry	71,151	38,320	32,831
Pend Oreille and Spokane ¹	49,256	26,023	23,233
Stevens	110,637	23,581	87,056
Total	274,430	103,323	171,107
Total, State	3,000,977	1,638,544	1,362,433

¹ Combined to avoid disclosure.

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Table 21—Log inventory changes, log consumption, and apparent log receipts by area.
(Thousand board feet, Scribner log rule)

Economic area	Log Inventory			1976 log consumption	Apparent 1976 log receipts
	January 1, 1976	December 31, 1976	Net change		
Puget Sound	128,977	147,421	+18,444	1,052,110	1,070,554
Olympic Peninsula	58,127	88,381	+30,254	672,119	702,373
Lower Columbia	76,080	90,235	+14,155	636,178	650,333
Central Washington	91,971	111,618	+19,647	366,140	385,787
Inland Empire	54,251	62,333	+ 8,082	274,430	282,512
Total, State	409,406	499,988	+90,582	3,000,977	3,091,559

**Table 22—Ownership origin of logs consumed, by area and mill size-class.
(Thousand board feet, Scribner log rule)**

Economic area and mill size- class ¹	All owners	State	National Forest	Bureau of Land Management	Other Public	Forest Industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
D	36,396	1,534	1,836	--	--	2,265	4,067	26,694
C	114,179	9,591	27,270	--	5,733	8,676	18,580	44,329
B	115,007	14,126	43,232	--	200	11,980	32,770	12,699
A	786,528	37,646	112,189	--	--	463,886	134,963	37,844
Total	1,052,110	62,897	184,527	--	5,933	486,807	190,380	121,566
Olympic Peninsula								
D	39,754	1,924	934	--	624	2,021	7,392	26,859
C	125,111	27,239	20,526	--	12,573	20,280	25,732	18,761
B	53,400	10,800	25,800	--	--	--	16,680	120
A	453,854	16,915	181,610	--	4,217	196,550	43,246	11,316
Total	672,119	56,878	228,870	--	17,414	218,851	93,050	57,056
Lower Columbia								
D	4,068	10	--	--	--	1,593	1,953	512
C and B ²	198,645	21,500	13,621	1,895	23,334	59,726	68,006	10,563
A	433,465	14,831	64,951	--	160	319,661	31,150	2,712
Total	636,178	36,341	78,572	1,895	23,494	380,980	101,109	13,787
Central Washington								
C	89,993	1,713	51,639	--	3,898	15,287	7,915	9,541
B and D ³	67,464	--	10,621	--	41,501	8,019	7,243	80
A	208,683	5,919	101,513	--	53,955	19,119	2,618	25,559
Total	366,140	7,632	163,773	--	99,354	42,425	17,776	35,180
Inland Empire								
D	19,322	707	5,390	30	40	27	1,057	12,071
C	121,565	8,677	54,167	775	14,317	18,058	7,208	18,363
B and A ²	133,543	7,000	55,891	--	--	7,932	2,284	60,436
Total	274,430	16,384	115,448	805	14,357	26,017	10,549	90,870
Total, State								
D	99,540	4,175	8,160	30	664	5,906	14,469	66,136
C ³	649,493	68,720	167,223	2,670	59,855	122,027	127,441	101,557
B ⁴	369,414	31,926	135,544	--	41,701	27,931	58,977	73,335
A	1,882,530	75,311	460,263	--	58,332	999,216	211,977	77,431
Total	3,000,977	180,132	771,190	2,700	160,552	1,155,080	412,864	318,459

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

⁴ Total for Class B includes Class D for Central Washington, and includes Class A for Inland Empire (See footnote 3 for exclusion).

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Table 23—Ownership origin of logs consumed, by area and county.
(Thousand board feet, Scribner log rule)

Economic area and county	All owners	State	National forest	Bureau of Land Management	Other Public	Forest Industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Island, Kitsap and San Juan ¹	60,291	2,565	10,260	--	--	32,114	13,362	1,990
King	206,092	12,338	35,060	--	4,866	124,164	20,036	9,628
Pierce	275,869	9,438	31,383	--	500	91,950	105,177	37,421
Skagit and Whatcom ¹	60,069	12,937	15,740	--	--	1,818	10,720	18,854
Snohomish	449,789	25,619	92,084	--	567	236,761	41,085	53,673
Total	1,052,110	62,897	184,527	--	5,933	486,807	190,380	121,566
Olympic Peninsula								
Clallam	55,683	12,732	31,636	--	54	2,021	4,814	4,426
Grays Harbor and Pacific ¹	242,656	2,914	13,982	--	15,113	158,840	43,530	8,277
Jefferson	31,328	17,861	2,748	--	--	--	8,398	2,321
Mason	145,034	750	109,131	--	--	25,933	4,350	4,870
Thurston	52,719	10,925	10,800	--	--	--	15,050	15,944
Lewis	144,699	11,696	60,573	--	2,247	32,057	16,908	21,218
Total	672,119	56,878	228,870	--	17,414	218,851	93,050	57,056
Lower Columbia								
Clark	49,472	5,071	27,011	--	--	1,453	13,603	2,334
Cowlitz and Wahkiakum ¹	431,562	4,372	3,000	--	--	340,746	75,044	8,400
Klickitat	111,510	21,095	22,151	--	23,334	32,541	10,212	2,177
Skamania	43,634	5,803	26,410	1,895	160	6,240	2,250	876
Total	636,178	36,341	78,572	1,895	23,494	380,980	101,109	13,787
Central Washington								
Chelan and Kittitas ¹	83,704	--	32,513	--	3,899	23,306	15,158	8,828
Okanogan and Lincoln	151,476	6,977	65,178	--	46,101	7,336	--	25,884
Yakima	130,960	655	66,082	--	49,354	11,783	2,618	468
Total	366,140	7,632	163,773	--	99,354	42,425	17,776	35,180
Inland Empire								
Asotin, Columbia, and Walla Walla ¹	43,386	947	31,989	--	240	1,001	2,284	6,925
Ferry	71,151	1,525	52,295	30	--	1,000	1,050	15,251
Pend Oreille and Spokane ¹	49,256	--	12,542	--	520	6,171	--	30,023
Stevens	110,637	13,912	18,622	775	13,597	17,845	7,215	38,671
Total	274,430	16,384	115,448	805	14,357	26,017	10,549	90,870
Total, State	3,000,977	180,132	771,190	2,700	160,552	1,155,080	412,864	318,459

¹ Combined to avoid disclosure.

Table 24—Number of mills dependent upon ownerships, by area and mill size-class.

Economic area and mill size-class ¹	National Forest		State		Bureau of Land Management		Other Public		Forest Industry		Farmer and miscellaneous	
	0 1-32 33-66 67-100		0 1-32 33-66 67-100		0 1-32 33-66 67-100		0 1-32 33-66 67-100		0 1-32 33-66 67-100		0 1-32 33-66 67-100	
	Own wood supply	Other wood supply	Own wood supply	Other wood supply	Own wood supply	Other wood supply	Own wood supply	Other wood supply	Own wood supply	Other wood supply	Own wood supply	Other wood supply
Puget Sound												
D	21	5	--	--	26	--	--	26	--	22	3	1
C	6	3	1	1	11	--	8	2	1	6	3	2
B	2	2	--	4	6	--	6	--	2	2	1	1
A	3	3	3	1	12	--	12	--	4	1	8	2
Total	34	13	4	4	55	--	52	2	1	38	9	3
Olympic Peninsula												
D	24	3	--	6	27	--	24	2	--	1	26	--
C	4	2	2	1	9	--	8	--	1	7	3	--
B	1	1	--	2	3	--	3	--	--	3	--	--
A	3	2	1	5	11	--	9	2	--	3	3	2
Total	32	8	3	7	50	--	44	4	--	2	39	3
Lower Columbia												
D	9	--	--	8	9	--	9	--	--	6	--	--
C & B ²	7	1	1	2	9	2	9	1	1	8	1	1
A	3	1	1	3	8	--	7	1	--	3	1	1
Total	19	2	2	5	26	2	25	2	1	17	2	1
Central Washington												
C	4	1	2	2	5	--	3	2	--	2	2	1
B & D ²	3	--	1	0	4	--	3	--	1	3	1	--
A	1	--	2	1	4	--	1	2	1	--	4	--
Total	4	1	5	3	13	--	7	4	1	5	7	1
Inland Empire												
D	12	--	1	4	16	1	16	1	--	16	1	--
C	1	3	--	3	5	2	4	1	2	5	--	2
B & A ³	1	1	1	2	5	--	5	--	--	2	3	--
Total	14	4	2	9	26	3	25	2	2	23	4	2
Total, State												
D	66	8	1	4	78	1	75	3	--	1	70	4
C	18	10	6	9	39	4	32	6	4	29	6	5
B ⁴	7	4	2	5	18	--	17	--	1	13	5	--
A	12	6	7	10	35	--	29	5	1	10	10	5
Total	103	28	16	28	170	5	153	14	5	122	25	12

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.
² Combined to avoid disclosure.
³ Total for Class C includes Class B for Lower Columbia.
⁴ Total for Class B includes Class D for Central Washington, and includes Class A for Inland Empire (See footnote 3 for exclusion).

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**Table 25—Log consumption by species, area, and mill size-class.
(Thousand board feet, Scribner log rule)**

Economic area and mill size-class ¹	All species	Douglas Fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound										
D	36,396	9,811	1,366	38	2	215	--	16,610	--	8,354
C	114,179	35,989	9,742	4,685	152	--	--	26,614	--	36,997
B	115,007	29,465	58,648	13,459	410	410	205	10,800	1,610	--
A	786,528	473,249	272,592	4,100	5,015	2,006	2,006	26,407	1,153	--
Total	1,052,110	548,514	342,348	22,282	5,579	2,631	2,211	80,431	2,763	45,351
Olympic Peninsula										
D	39,754	16,811	411	11	--	--	--	14,756	--	7,765
C	125,111	10,241	22,499	18,491	--	--	--	28,880	--	45,000
B	53,400	47,280	3,360	--	--	--	--	2,760	--	--
A	453,854	172,560	262,869	1,699	14,139	--	--	2,587	--	--
Total	672,119	246,892	289,139	20,201	14,139	--	--	48,983	--	52,765
Lower Columbia										
D	4,068	1,496	15	--	8	38	--	1,988	--	523
C and B ²	198,645	30,344	4,068	12,740	--	65,186	--	49,307	--	37,000
A	433,465	304,153	107,595	12,020	--	--	--	6,957	800	1,930
Total	636,178	335,993	111,678	24,760	8	65,224	--	58,262	800	39,453
Central Washington										
C	89,993	40,815	8,608	8,813	2,794	24,853	293	1,732	2,085	--
B and D ²	67,464	12,227	7,243	--	--	47,465	--	--	529	--
A	208,683	61,083	--	11,129	655	135,161	655	--	--	--
Total	366,140	114,125	15,851	19,942	3,449	207,479	948	1,732	2,614	--
Inland Empire										
D	19,322	7,536	210	3,171	771	6,935	76	244	327	52
C	121,565	63,198	6,533	9,310	5,432	26,731	4,402	3,952	2,007	--
B and A ²	133,543	55,119	3,085	12,511	808	37,639	2,181	600	21,600	--
Total	274,430	125,853	9,828	24,992	7,011	71,305	6,659	4,796	23,934	52
Total, State										
D	99,540	35,654	2,002	3,220	781	7,188	76	33,598	327	16,594
C ³	649,493	180,587	51,450	54,039	8,378	116,770	4,695	110,485	4,092	118,997
B ⁴	369,414	144,091	72,336	25,970	1,218	85,514	2,386	14,160	23,739	--
A	1,882,530	1,011,045	643,056	28,948	19,809	137,167	2,661	35,961	1,953	1,930
Total	3,000,977	1,371,377	768,844	112,177	30,186	346,639	9,818	194,204	30,111	137,621

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

⁴ Total for Class B includes Class D for Central Washington, and includes Class A for Inland Empire (See footnote 3 for exclusion).

Table 26—Log consumption by species, area, and type of material.
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound	978,374	521,639	307,836	21,547	5,569	2,606	2,206	79,282	2,695	34,994
Sound Utility	73,736	26,875	34,512	735	10	25	5	1,149	68	10,357
Total	1,052,110	548,514	342,348	22,282	5,579	2,631	2,211	80,431	2,763	45,351
Olympic Peninsula	630,094	239,095	278,214	14,741	14,130	--	--	43,249	--	40,665
Sound Utility	42,025	7,797	10,925	5,460	9	--	--	5,734	--	12,100
Total	672,119	246,892	289,139	20,201	14,139	--	--	48,983	--	52,765
Lower Columbia	608,835	324,142	101,585	22,510	5	64,592	--	56,213	800	38,988
Sound Utility	27,343	11,851	10,093	2,250	3	632	--	2,049	--	465
Total	636,178	335,993	111,678	24,760	8	65,224	--	58,262	800	39,453
Central Washington	363,276	113,143	15,321	19,852	3,406	206,543	948	1,454	2,609	--
Sound Utility	2,864	982	530	90	43	936	--	278	5	--
Total	366,140	114,125	15,851	19,942	3,449	207,479	948	1,732	2,614	--
Inland Empire	234,539	112,145	5,025	23,445	3,297	61,555	5,375	4,758	18,889	50
Sound Utility	39,891	13,708	4,803	1,547	3,714	9,750	1,284	38	5,045	2
Total	274,430	125,853	9,828	24,992	7,011	71,305	6,659	4,796	23,934	52
Total, State	2,815,118	1,310,164	707,981	102,095	26,407	335,296	8,529	184,956	24,993	114,697
Sound Utility	185,859	61,213	60,863	10,082	3,779	11,343	1,289	9,248	5,118	22,924
Total	3,000,977	1,371,377	768,844	112,177	30,186	346,639	9,818	194,204	30,111	137,621

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Table 27—Log consumption by species, area, and county.
(Thousand board feet, Scribner log rule)

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound										
Island, Kitsap and San Juan ¹	60,291	48,580	11,590	38	--	--	--	83	--	--
King	206,092	68,192	98,998	13,549	2	--	--	24,149	1,200	2
Pierce	275,869	155,675	91,830	4,715	5,425	2,416	2,211	5,973	1,563	6,057
Skagit and Whatcom ¹	60,069	27,678	16,668	1,236	152	--	--	5,196	--	9,139
Snohomish	449,789	248,385	123,262	2,744	--	215	--	45,030	--	30,153
Total	1,052,110	548,514	342,348	22,282	5,579	2,631	2,211	80,431	2,763	45,351
Olympic Peninsula										
Clallam	55,683	8,853	35,145	11	--	--	--	9,765	--	1,909
Grays Harbor and Pacific ¹	242,656	60,303	145,444	1,699	14,139	--	--	20,471	--	600
Jefferson	31,328	1,870	16,492	10,991	--	--	--	1,965	--	10
Mason	145,034	71,582	60,016	--	--	--	--	9,690	--	3,746
Thurston	52,719	49,482	664	--	--	--	--	1,823	--	750
Lewis	144,699	54,802	31,378	7,500	--	--	--	5,269	--	45,750
Total	672,119	246,892	289,139	20,201	14,139	--	--	48,983	--	52,765
Lower Columbia										
Clark	49,472	35,920	5,627	4,970	--	--	--	2,900	--	55
Cowlitz and Wahkiakum ¹	431,562	249,710	88,410	--	8	--	--	54,036	--	39,398
Klickitat	111,510	23,509	8,650	15,074	--	63,077	--	1,200	--	--
Skamania	43,634	26,854	8,991	4,716	--	2,147	--	126	800	--
Total	636,178	335,993	111,678	24,760	8	65,224	--	58,262	800	39,453
Central Washington										
Chelan and Kittitas ¹	83,704	33,945	15,149	5,681	1,989	23,249	293	1,498	1,900	--
Okanogan and Lincoln ¹	151,476	56,303	--	--	571	94,590	--	--	12	--
Yakima	130,960	23,877	702	14,261	889	89,640	655	234	702	--
Total	366,140	114,125	15,851	19,942	3,449	207,479	948	1,732	2,614	--
Inland Empire										
Asotin, Columbia and Walla Walla ¹	43,386	14,183	4,800	9,674	4,874	8,274	1,581	--	--	--
Ferry	71,151	37,604	--	1,365	5	10,110	5	735	21,327	--
Pend Oreille and Spokane ¹	49,256	15,699	4,885	4,991	693	18,948	1,062	1,245	1,733	--
Stevens	110,637	58,367	143	8,962	1,439	33,973	4,011	2,816	874	52
Total	274,430	125,853	9,828	24,992	7,011	71,305	6,659	4,796	23,934	52
Total, State	3,000,977	1,371,377	768,844	112,177	30,186	346,639	9,818	194,204	30,111	137,621

¹ Combined to avoid disclosure.

**Table 28—Production and disposition of wood and bark residues, by area and mill size-class.
(Tons, dry weight)**

Economic area and mill size- class ¹	All Residues			Wood Residue			Bark Residue		
	Total	Used ²	Unused	Total	Used ²	Unused	Total	Used ²	Unused
Puget Sound									
D	52,328	48,321	4,007	40,343	37,594	2,749	11,985	10,727	1,258
C	177,344	157,621	19,723	141,796	125,017	16,779	35,548	32,604	2,944
B	185,685	185,685	--	152,184	152,184	--	33,501	33,501	--
A	1,170,286	1,170,286	--	922,927	922,927	--	247,359	247,359	--
Total	1,585,643	1,561,913	23,730	1,257,250	1,237,722	19,528	328,393	324,191	4,202
Olympic Peninsula									
D	50,932	31,290	19,642	38,988	24,998	13,990	11,944	6,292	5,652
C	190,216	155,316	34,900	156,217	135,275	20,942	33,999	20,041	13,958
B	86,312	80,766	5,546	68,764	68,764	--	17,548	12,002	5,546
A	717,689	709,949	7,740	553,200	553,200	--	164,489	156,749	7,740
Total	1,045,149	977,321	67,828	817,169	782,237	34,932	227,980	195,084	32,896
Lower Columbia									
D	4,357	4,013	344	3,735	3,603	132	622	410	212
C and B ³	327,225	306,561	20,664	272,542	262,639	9,903	54,683	43,922	10,761
A	643,886	583,527	60,359	501,060	479,793	21,267	142,826	103,734	39,092
Total	975,468	894,101	81,367	777,337	746,035	31,302	198,131	148,066	50,065
Central Washington									
C	148,904	131,299	17,605	116,090	104,461	11,629	32,814	26,838	5,976
B and D ³	96,246	89,047	7,199	75,839	68,657	7,182	20,407	20,390	17
A	364,890	364,890	--	285,510	285,510	--	79,380	79,380	--
Total	610,040	585,236	24,804	477,439	458,628	18,811	132,601	126,608	5,993
Inland Empire									
D	25,420	12,037	13,383	19,682	11,547	8,135	5,738	490	5,248
C	175,873	78,384	97,489	137,472	74,302	63,170	38,401	4,082	34,319
B and A ⁴	224,752	188,971	35,781	177,096	159,384	17,712	47,656	29,587	18,069
Total	426,045	279,392	146,653	334,250	245,233	89,017	91,795	34,159	57,636
Total, State									
D	133,037	95,661	37,376	102,748	77,742	25,006	30,289	17,919	12,370
C ⁵	1,019,562	829,181	190,381	824,117	701,694	122,423	195,445	127,487	67,958
B ⁶	592,995	544,469	48,526	473,883	448,989	24,894	119,112	95,480	23,632
A	2,896,751	2,828,652	68,099	2,262,697	2,241,430	21,267	634,054	587,222	46,832
Total	4,642,345	4,297,963	344,382	3,663,445	3,469,855	193,590	978,900	828,108	150,792

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000 - 119,000, C = 40,000 - 79,000, D = less than 40,000.

² Used residues were not necessarily consumed in the economic area in which they were produced.

³ Combined to avoid disclosure.

⁴ Total for Class C includes Class B for Lower Columbia.

⁵ Total for Class B includes Class D for Central Washington and Class A for Inland Empire (see footnote 4 for exclusion).

Table 29—Production and disposition of wood
(Tons, dry)

Economic area and mill size class ¹	All types							Coarse ¹					
	Total	Total used ²	Pulp	Board	Fuel	Misc.	Unused	Total	Total used ²	Pulp	Board	Fuel	Misc.
Puget Sound													
D	40,343	37,594	5,388	--	21,236	10,970	2,749	24,481	21,937	4,812	--	12,599	4,526
C	141,796	125,017	33,394	--	72,496	19,127	16,779	82,639	70,120	33,394	--	36,455	271
B	152,184	152,184	88,986	--	43,316	19,882	--	105,832	105,832	85,098	--	19,785	949
A	922,927	922,927	561,713	14,887	240,589	105,738	--	550,760	550,760	509,876	--	32,979	7,905
Total	1,257,250	1,237,722	689,481	14,887	377,637	155,717	19,528	763,712	748,649	633,180	--	101,818	13,651
Olympic Peninsula													
D	38,988	24,998	9,968	--	11,704	3,326	13,990	24,955	15,431	6,514	--	8,018	899
C	156,217	135,275	104,136	--	20,814	10,325	20,942	108,799	103,002	90,787	--	9,580	2,635
B	68,764	68,764	36,300	--	25,120	7,344	--	35,846	35,846	35,846	--	--	--
A	553,200	553,200	326,947	15,596	194,478	16,179	--	319,851	319,851	289,480	--	30,371	--
Total	817,169	782,237	477,351	15,596	252,116	37,174	34,932	489,451	474,130	422,627	--	47,969	3,534
Lower Columbia													
D	3,735	3,603	828	--	2,214	561	132	2,533	2,401	828	--	1,573	--
C & B ⁶	272,542	262,639	176,990	6,982	77,214	1,453	9,903	190,095	180,192	157,815	--	22,377	--
A	501,060	479,793	312,831	4,728	126,130	36,104	21,267	294,226	294,226	262,278	--	31,948	--
Total	777,337	746,035	490,649	11,710	205,558	38,118	31,302	486,854	476,819	420,921	--	55,898	--
Central Washington													
C	116,090	104,461	26,792	3,510	45,245	28,914	11,629	67,032	66,239	26,792	--	21,353	18,194
B & D ⁶	75,839	68,657	39,446	--	29,200	11	7,182	41,688	41,654	29,510	--	12,136	8
A	285,510	285,510	149,731	28,569	107,210	--	--	162,145	162,145	141,234	--	20,911	--
Total	477,439	458,628	215,969	32,079	181,655	28,925	18,811	270,865	270,038	197,536	--	54,300	18,202
Inland Empire													
D	19,682	11,547	6,340	--	659	4,548	8,135	11,725	7,372	6,340	--	568	464
C	137,472	74,302	55,155	--	15,901	3,246	63,170	78,439	49,389	42,421	--	6,968	--
B & A ⁶	177,096	159,384	62,159	--	86,871	10,354	17,712	97,349	97,349	62,159	--	35,190	--
Total	334,250	245,233	123,654	--	103,431	18,148	89,017	187,513	154,110	110,920	--	42,726	464
Total, State													
D	102,748	77,742	22,524	--	35,813	19,405	25,006	63,694	47,141	18,494	--	22,758	5,889
C ⁷	824,117	701,694	396,467	10,492	231,670	63,065	122,423	527,004	468,942	351,209	--	96,633	21,100
B ⁸	473,883	448,989	226,891	--	184,507	37,591	24,894	280,715	280,681	212,613	--	67,111	957
A	2,262,697	2,241,430	1,351,222	63,780	668,407	158,021	21,267	1,326,982	1,326,982	1,202,868	--	116,209	7,905
Total	3,663,445	3,469,855	1,997,104	74,272	1,120,397	278,082	193,590	2,198,395	2,123,746	1,785,184	--	302,711	35,851

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Used residues were not necessarily consumed in the economic area in which they were produced.

³ Slabs, edgings, trim, and spur ends.

⁴ Shavings.

⁵ Sawdust.

⁶ Combined to avoid disclosure.

⁷ Total for class C includes class B for lower Columbia.

⁸ Total for class B includes class D for Central Washington and Class A for Inland Empire (see footnote 7 for exclusion).

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residues, by area and mill size-class.
weight)

Unused	Medium ⁴							Fine ⁵						
	Total	Total used ²	Pulp	Board	Fuel	Misc.	Unused	Total	Total used ²	Pulp	Board	Fuel	Misc.	Unused
2,544	5,819	5,819	279	--	3,650	1,890	--	10,043	9,838	297	--	4,987	4,554	205
12,519	23,471	22,399	--	--	14,612	7,787	1,072	35,686	32,498	--	--	21,429	11,069	3,188
--	18,303	18,303	--	--	7,285	11,018	--	28,049	28,049	3,888	--	16,246	7,915	--
--	165,054	165,054	19,246	351	71,600	73,857	--	207,113	207,113	32,591	14,536	136,010	23,976	--
15,063	212,647	211,575	19,525	351	97,147	94,552	1,072	280,891	277,498	36,776	14,536	178,572	47,514	3,393
9,524	3,265	2,743	913	--	1,098	732	522	10,768	6,824	2,541	--	2,588	1,695	3,944
5,797	18,955	12,579	5,400	--	785	6,394	6,376	28,463	19,694	7,949	--	10,449	1,296	8,769
--	15,714	15,714	130	--	12,560	3,024	--	17,204	17,204	324	--	12,560	4,320	--
--	102,253	102,253	13,370	9,012	75,766	4,105	--	131,096	131,096	24,097	6,584	88,341	12,074	--
15,321	140,187	133,289	19,813	9,012	90,209	14,255	6,898	187,531	174,818	34,911	6,584	113,938	19,385	12,713
132	164	164	--	--	--	164	--	1,038	1,038	--	--	641	397	--
9,903	36,349	36,349	5,736	6,982	22,480	1,151	--	46,098	46,098	13,439	--	32,357	302	--
--	84,336	63,069	22,543	4,728	14,531	21,267	21,267	122,498	122,498	28,010	--	79,651	14,837	--
10,035	120,849	99,582	28,279	11,710	37,011	22,582	21,267	169,634	169,634	41,449	--	112,649	15,536	--
793	21,584	15,515	--	3,510	9,665	2,340	6,069	27,474	22,707	--	--	14,327	8,380	4,767
34	17,064	13,500	9,936	--	3,564	--	3,564	17,087	13,503	--	--	13,500	3	3,584
--	56,908	56,908	8,497	28,569	19,842	--	--	56,457	66,457	--	--	66,457	--	--
827	95,556	85,923	18,433	32,079	33,071	2,340	9,633	111,018	102,667	--	--	94,284	8,383	8,351
4,353	3,153	1,844	--	--	1	1,843	1,309	4,804	2,331	--	--	90	2,241	2,473
29,050	26,884	11,604	5,391	--	4,606	1,607	15,280	32,149	13,309	7,343	--	4,327	1,639	18,840
--	39,846	30,990	--	--	26,210	4,780	8,856	39,901	31,045	--	--	25,471	5,574	8,856
33,403	69,883	44,438	5,391	--	30,817	8,230	25,445	76,854	46,685	7,343	--	29,888	9,454	30,169
16,553	12,401	10,570	1,192	--	4,749	4,629	1,831	26,653	20,031	2,838	--	8,306	8,887	6,622
58,062	127,243	98,446	16,527	10,492	52,148	19,279	28,797	169,870	134,306	28,731	--	82,889	22,686	35,564
34	90,927	78,507	10,066	--	49,619	18,822	12,420	102,241	89,801	4,212	--	57,777	17,812	12,440
--	408,551	387,284	63,656	42,660	181,739	99,229	21,267	527,184	527,184	84,698	21,120	370,459	50,887	--
74,649	639,122	574,807	91,441	53,152	288,255	141,959	64,315	825,928	771,302	120,479	21,120	529,431	100,272	54,626

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Table 30—Production and disposition of bark residues, by area and mill size-class.
(Tons, dry weight)

Economic area and mill size- class ¹	All bark	Used ²					Unused
		Total	Pulp	Board	Fuel	Miscellaneous	
Puget Sound							
D	11,985	10,727	77	--	7,585	3,065	1,258
C	35,548	32,604	--	--	15,080	17,524	2,944
B	33,501	33,501	--	--	18,472	15,029	--
A	247,359	247,359	--	--	96,640	150,719	--
Total	328,393	324,191	77	--	137,777	186,337	4,202
Olympic Peninsula							
D	11,944	6,292	--	--	5,802	490	5,652
C	33,999	20,041	--	--	17,461	2,580	13,958
B	17,548	12,002	--	--	12,002	--	5,546
A	164,489	156,749	--	--	125,921	30,828	7,740
Total	227,980	195,084	--	--	161,186	33,898	32,896
Lower Columbia							
D	622	410	--	--	300	110	212
C and B ³	54,683	43,922	--	--	41,291	2,631	10,761
A	142,826	103,734	--	--	85,433	18,301	39,092
Total	198,131	148,066	--	--	127,024	21,042	50,065
Central Washington							
C	32,814	26,838	--	--	15,276	11,562	5,976
B and D ³	20,407	20,390	--	--	10,893	9,497	17
A	79,380	79,380	--	--	79,380	--	--
Total	132,601	126,608	--	--	105,549	21,059	5,993
Inland Empire							
D	5,738	490	--	--	263	227	5,248
C	38,401	4,082	--	--	3,411	671	34,319
B and A ³	47,656	29,587	--	--	22,515	7,072	18,069
Total	91,795	34,159	--	--	26,189	7,970	57,636
Total, State							
D	30,289	17,919	77	--	13,950	3,892	12,370
C ⁴	195,445	127,487	--	--	92,519	34,968	67,958
B ⁵	119,112	95,480	--	--	63,882	31,598	23,632
A	634,054	587,222	--	--	387,374	199,848	46,832
Total	978,900	828,108	77	--	557,725	270,306	150,792

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Used residues were not necessarily consumed in the economic area in which they were produced.

³ Combined to avoid disclosure.

⁴ Total for Class C includes Class B for Lower Columbia.

⁵ Total for Class B includes Class D for Central Washington and Class A for Inland Empire (See footnote 4 for exclusion).

**Table 31—Production and disposition of wood and bark residues, by area and county.
(Tons, dry weight)**

Economic area and county	All residues			Wood residue			Bark residue		
	Total	Used ¹	Unused	Total	Used ¹	Unused	Total	Used ¹	Unused
Puget Sound									
Island, Kitsap and San Juan ²	119,879	111,516	8,363	94,013	87,797	6,216	25,866	23,719	2,147
King	304,466	304,421	45	237,381	237,368	13	67,085	67,053	32
Pierce	377,317	377,148	169	304,742	304,677	65	72,575	72,471	104
Skagit and Whatcom ²	93,109	89,926	3,183	72,331	70,180	2,151	20,778	19,746	1,032
Snohomish	690,872	678,902	11,970	548,783	537,700	11,083	142,089	141,202	887
Total	1,585,643	1,561,913	23,730	1,257,250	1,237,722	19,528	328,393	324,191	4,202
Olympic Peninsula									
Clallam	85,646	81,077	4,569	66,014	62,526	3,488	19,632	18,551	1,081
Grays Harbor and Pacific ²	336,956	330,736	6,220	262,434	258,521	3,913	74,522	72,215	2,307
Jefferson	73,308	54,851	18,457	66,005	54,256	11,749	7,303	595	6,708
Lewis	216,802	201,581	15,221	161,893	161,893	--	54,909	39,688	15,221
Mason	251,198	237,170	14,028	196,353	187,534	8,819	54,845	49,636	5,209
Thurston	81,239	71,906	9,333	64,470	57,507	6,963	16,769	14,399	2,370
Total	1,045,149	977,321	67,828	817,169	782,237	34,932	227,980	195,084	32,896
Lower Columbia									
Clark	76,972	76,972	--	60,083	60,083	--	16,889	16,889	--
Cowlitz and Wahkiakum ²	658,201	597,498	60,703	529,636	508,237	21,399	128,565	89,261	39,304
Klickitat	168,612	147,948	20,664	132,300	122,397	9,903	36,312	25,551	10,761
Skamania	71,683	71,683	--	55,318	55,318	--	16,365	16,365	--
Total	975,468	894,101	81,367	777,337	746,035	31,302	198,131	148,066	50,065
Central Washington									
Chelan and Kittitas ²	139,589	123,294	16,295	108,892	95,706	13,186	30,697	27,588	3,109
Okanogan and Lincoln ²	217,535	209,819	7,716	169,384	164,552	4,832	48,151	45,267	2,884
Yakima	252,916	252,123	793	199,163	198,370	793	53,753	53,753	--
Total	610,040	585,236	24,804	477,439	458,628	18,811	132,601	126,608	5,993
Inland Empire									
Asotin, Columbia and Walla Walla ²	65,004	55,513	9,491	51,139	50,842	297	13,865	4,671	9,194
Ferry	109,640	84,443	25,197	86,300	81,139	5,161	23,340	3,304	20,036
Pend Oreille and Spokane	89,830	62,981	26,849	70,686	50,837	19,849	19,144	12,144	7,000
Stevens	161,571	76,455	85,116	126,125	62,415	63,710	35,446	14,040	21,406
Total	426,045	279,392	146,653	334,250	245,233	89,017	91,795	34,159	57,636
Total, State	4,542,345	4,297,963	344,382	3,663,445	3,469,855	193,590	978,900	828,108	150,792

¹ Used residues were not necessarily consumed in the area or county in which produced.

² Combined to avoid disclosure.

Washington Sawmills, 1976

Table 32—Production and disposition
(Tons, dry)

Economic area and county	All types							Coarse ¹						
	Total	Total used ²	Pulp	Board	Fuel	Other	Unused	Total	Total used ³	Pulp	Board	Fuel	Other	Unused
Puget Sound														
Island, Kitsap and San Juan ⁴	94,013	87,797	86,116	--	1,566	115	6,216	52,839	48,455	47,430	--	1,025	--	4,384
King	237,381	237,368	126,574	--	101,998	8,796	13	135,904	135,891	122,686	--	13,149	56	13
Pierce	304,742	304,677	186,733	--	117,795	149	65	194,837	194,830	185,733	--	8,997	--	7
Skagit and Whatcom	72,331	70,180	12,902	351	21,117	35,810	2,151	48,444	40,336	13,902	--	19,529	7,905	2,108
Snohomish	548,783	537,700	277,156	14,536	135,161	110,847	11,083	337,688	329,137	263,429	--	60,218	5,690	8,551
Total	1,257,250	1,237,722	689,481	14,887	377,637	155,717	19,528	763,712	748,649	633,180	--	101,818	13,651	15,063
Olympic Peninsula														
Cllalam	66,014	62,526	35,180	--	26,646	700	3,488	40,108	37,897	33,725	--	3,794	378	2,211
Grays Harbor and Pacific ⁵	262,434	258,521	123,957	--	114,746	19,818	3,913	152,224	149,620	111,070	--	36,410	2,140	2,604
Jefferson	66,005	54,286	52,000	--	2,062	194	11,749	54,268	53,319	52,000	--	1,199	160	949
Mason	196,353	187,534	109,397	15,596	62,005	536	8,819	111,972	107,587	107,571	--	16	--	4,385
Thurston	64,470	57,507	24,515	--	31,338	1,654	6,953	34,873	29,701	24,515	--	4,857	329	5,172
Lewis	161,893	161,893	132,302	--	15,319	14,272	--	96,006	96,006	93,746	--	1,733	527	--
Total	817,169	782,237	477,351	15,596	252,116	37,174	34,932	489,451	474,130	422,627	--	47,969	3,534	15,321
Lower Columbia														
Clark	60,083	60,083	40,682	--	18,365	1,036	--	35,023	35,023	34,780	--	243	--	--
Cowlitz and Wahkiakum ⁶	529,636	508,237	351,531	4,728	115,085	36,893	21,399	343,472	343,340	307,659	--	36,281	--	132
Skamania	55,318	55,318	34,180	--	21,138	--	--	34,180	34,180	34,180	--	--	--	--
Klickitat	132,300	122,397	64,256	6,982	50,970	189	9,903	74,179	64,276	44,902	--	19,374	--	9,903
Total	777,337	746,035	490,649	11,710	205,558	38,118	31,302	486,854	476,819	420,921	--	55,898	--	10,035
Central Washington														
Chelan & Kittitas	108,892	95,706	38,324	--	49,123	8,259	13,186	62,706	62,706	38,324	--	21,253	3,129	--
Okanogan & Lincoln	169,384	154,552	106,796	--	57,745	11	4,832	98,356	98,322	98,299	--	15	8	34
Yakima	199,163	198,370	70,849	32,079	74,787	20,655	793	105,803	109,010	60,913	--	33,032	15,065	793
Total	477,439	458,628	215,969	32,079	181,655	28,925	18,811	270,865	270,038	197,536	--	54,300	18,202	827
Inland Empire														
Asotin, Columbia and Walla Walla	51,139	50,842	38,906	--	3,908	8,028	297	25,321	28,110	27,899	--	211	--	211
Ferry	86,300	81,139	47,329	--	28,460	5,350	5,161	47,678	47,587	47,329	--	253	--	96
Pend Oreille & Spokane	70,686	50,837	5,940	--	44,380	517	19,849	39,105	29,025	4,213	--	24,390	422	10,080
Stevens	126,125	62,415	31,479	--	26,683	4,253	63,710	72,409	49,393	31,479	--	17,872	42	23,016
Total	334,250	245,233	123,654	--	103,431	18,148	89,017	187,513	154,110	110,920	--	42,726	464	33,403
Total, State	3,663,445	3,469,855	1,997,104	74,272	1,120,397	278,682	193,590	2,198,395	2,123,746	1,785,184	--	302,711	35,851	74,649

¹ Coarse residue includes slabs, edgings, sawmill trim and planer trim.

² Medium residue is planer shavings.

³ Fine residue is sawdust.

⁴ Used residues were not necessarily consigned in the economic area in which they were produced.

⁵ Combined to avoid disclosure.

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of wood residues, by area and county.
weight)

Total	Medium ²						Fine ³						
	Total used ¹	Pulp	Board	Fuel	Other	Unused	Total	Total used ¹	Pulp	Board	Fuel	Other	Unused
19,517	19,482	19,246	--	180	56	35	21,657	19,860	19,440	--	361	59	1,797
45,311	45,311	--	--	37,010	8,301	--	56,166	56,166	3,888	--	51,839	439	--
48,062	48,062	--	--	48,048	14	--	61,843	61,785	--	--	61,650	135	58
12,491	12,491	--	351	250	11,890	--	17,396	17,353	--	--	1,338	16,015	43
87,266	86,229	279	--	11,659	74,291	1,037	123,829	122,334	13,448	14,536	63,484	30,866	1,495
212,647	211,575	19,525	351	97,147	94,552	1,072	280,891	277,498	36,776	14,536	178,672	47,514	3,393
9,469	9,145	--	--	9,116	29	324	16,437	15,484	1,455	--	13,736	293	953
47,819	46,955	1,890	--	40,960	4,105	864	62,391	61,946	10,997	--	37,376	13,573	445
5,623	439	--	--	428	11	5,184	6,114	498	--	--	475	23	5,616
37,949	37,423	913	9,012	27,037	461	526	46,432	42,524	913	6,584	34,952	75	3,908
12,798	12,790	--	--	12,560	230	--	16,807	15,016	--	--	13,921	1,995	1,791
26,537	26,537	17,010	--	108	9,419	--	39,350	39,350	21,546	--	13,478	4,326	--
140,187	133,289	19,813	9,012	90,209	14,255	6,898	187,531	174,818	34,911	6,584	113,938	19,385	12,713
10,705	10,705	1,604	--	8,165	936	--	14,355	14,355	4,298	--	9,957	100	--
75,297	54,030	18,337	4,728	9,411	21,554	21,267	110,867	110,867	26,135	--	69,393	15,339	--
7,128	7,128	--	--	7,128	--	--	14,010	14,010	--	--	14,010	--	--
27,719	27,719	8,338	6,982	12,307	92	--	30,402	30,402	11,016	--	19,289	97	--
120,849	99,582	28,279	11,710	37,011	22,582	21,267	169,634	169,634	41,449	--	112,649	15,536	--
20,485	13,229	--	--	13,229	--	7,256	25,701	19,771	--	--	14,641	5,130	5,930
30,716	28,339	8,497	--	19,842	--	2,377	40,312	37,891	--	--	37,888	3	2,421
44,355	44,355	9,936	32,079	--	2,340	--	45,005	45,005	--	--	41,755	3,250	--
95,556	85,923	18,433	32,079	33,071	2,340	9,633	111,018	102,667	--	--	94,284	8,383	8,351
11,210	11,210	5,391	--	2,175	3,644	--	11,608	11,522	5,616	--	1,522	4,384	86
19,980	16,768	--	--	14,163	2,605	2,312	19,542	16,789	--	--	14,044	2,745	2,753
15,553	10,068	--	--	9,995	73	5,485	16,028	11,744	1,727	--	9,995	22	4,284
24,040	6,392	--	--	4,484	1,908	17,648	29,676	6,630	--	--	4,327	2,303	23,046
69,883	44,438	5,391	--	30,817	8,230	25,445	76,854	46,685	7,343	--	29,888	9,454	30,169
639,122	574,807	91,441	53,152	288,255	141,959	64,315	825,928	771,302	120,479	21,120	529,431	100,272	54,626

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Table 33—Production and disposition of bark residues, by area and county.
(Tons, dry weight)

Economic area and county	All bark	Used ¹					Unused
		Total	Pulp	Board	Fuel	Miscellaneous	
Puget Sound							
Island, Kitsap and San Juan ²	25,866	23,719	--	--	23,719	--	2,147
King	67,085	67,053	--	--	43,948	23,105	32
Pierce	72,575	72,471	--	--	44,532	27,939	104
Skagit and Whatcom ²	20,778	19,746	--	--	3,533	16,213	1,032
Snohomish	142,089	141,202	77	--	22,045	119,080	887
Total	328,393	324,191	77	--	137,777	186,337	4,202
Olympic Peninsula							
Clallam	19,632	18,551	--	--	18,470	81	1,081
Grays Harbor and Pacific ²	74,522	72,215	--	--	41,371	30,844	2,307
Jefferson	7,303	595	--	--	568	27	6,708
Mason	54,845	49,636	--	--	49,636	--	5,209
Thurston	16,769	14,399	--	--	14,033	366	2,370
Lewis	54,909	39,688	--	--	37,108	2,580	15,221
Total	227,980	195,084	--	--	161,186	33,898	32,896
Lower Columbia							
Clark	16,889	16,889	--	--	14,335	2,554	--
Cowlitz and Wahkiakum ²	128,565	89,261	--	--	72,321	16,940	39,304
Skamania	16,365	16,365	--	--	14,817	1,548	--
Klickitat	36,312	25,551	--	--	25,551	--	10,761
Total	198,131	148,066	--	--	127,024	21,042	50,065
Central Washington							
Chelan and Kittitas ²	30,697	27,588	--	--	21,460	6,128	3,109
Okanogan and Lincoln ²	48,151	45,267	--	--	45,263	4	2,884
Yakima	53,753	53,753	--	--	38,826	14,927	--
Total	132,601	126,608	--	--	105,549	21,059	5,993
Inland Empire							
Asotin, Columbia and Walla Walla ²	13,865	4,671	--	--	103	4,568	9,194
Ferry	23,340	3,304	--	--	129	3,175	20,036
Pend Oreille and Spokane	19,144	12,144	--	--	11,938	206	7,000
Stevens	35,446	14,040	--	--	14,019	21	21,406
Total	91,795	34,159	--	--	26,189	7,970	57,636
Total, State	978,900	828,108	77	--	557,725	270,306	150,792

¹ Used residues were not necessarily consumed in the economic area in which they were produced.

² Combined to avoid disclosure.

**Table 34—Degree of lumber manufacture, by area and mill size-class.
(Thousand board feet, lumber tally)**

Economic area and mill size- class ¹	Green	Kiln-dried	Air-dried	Total	Rough	Surfaced
Puget Sound						
D	38,013	8,099	384	46,496	19,560	26,936
C	111,161	51,175	2,628	164,964	56,302	108,662
B	78,189	51,664	--	129,853	45,113	84,740
A	410,989	590,816	--	1,001,805	208,505	793,300
Total	638,352	701,754	3,012	1,343,118	329,480	1,013,638
Olympic Peninsula						
D	41,912	7,688	250	49,850	34,741	15,109
C	77,178	54,600	--	131,778	44,022	87,756
B	79,648	--	--	79,648	6,900	72,748
A	260,127	346,801	--	606,928	133,538	473,390
Total	458,865	409,089	250	868,204	219,201	649,003
Lower Columbia						
D	4,659	100	45	4,804	4,041	763
C and B ²	106,384	101,935	5,100	213,419	49,141	164,278
A	224,057	333,064	10,000	567,121	176,682	390,439
Total	335,100	435,099	15,145	785,344	229,864	555,480
Central Washington						
C	71,984	48,203	7,008	127,195	27,789	99,406
B and D ²	16,605	62,168	330	79,103	107	78,996
A	--	254,438	--	254,438	44,210	210,228
Total	88,589	364,809	7,338	460,736	72,106	388,630
Inland Empire						
D	12,252	200	9,793	22,245	7,645	14,600
C	80,792	57,731	10,316	148,839	24,382	124,457
B and A ²	27,709	140,081	16,931	184,721	246	184,475
Total	120,753	198,012	37,040	355,805	32,273	323,532
Total, State						
D	96,836	16,087	10,472	123,395	65,987	57,408
C ³	447,499	313,644	25,052	786,195	201,636	584,559
B ⁴	202,151	253,913	17,261	473,325	52,366	420,959
A	895,173	1,525,119	10,000	2,430,292	562,935	1,867,357
Total	1,641,659	2,108,763	62,785	3,813,207	882,924	2,930,283

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board-foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

⁴ Total for Class B includes Class D for Central Washington and includes Class A for Inland Empire (See footnote 3 for exclusion).

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**Table 35—Lumber production by headrig type, mill size-class, and area.
(Thousand board feet, lumber tally)**

Economic area and mill size-class ¹	All types	Circular saw	Band saw	Gang saw	Chipping saw	Scragg double cut saw
Puget Sound						
D	46,496	20,644	25,852	--	--	--
C	164,964	29,542	134,622	--	--	800
B	129,853	18,000	103,853	8,000	--	--
A	1,001,805	--	587,294	52,000	308,364	54,147
Total	1,343,118	68,186	851,621	60,000	308,364	54,947
Olympic Peninsula						
D	49,850	27,550	2,600	5,900	--	13,800
C	131,778	13,520	113,178	--	4,000	1,080
B	79,648	1,500	78,148	--	--	--
A	606,928	--	415,496	22,910	153,197	15,325
Total	868,204	42,570	609,422	28,810	157,197	30,205
Lower Columbia						
D	4,804	3,990	--	--	814	--
C and B ²	213,419	2,750	199,746	--	8,250	2,673
A	567,121	--	485,533	7,500	74,088	--
Total	785,344	6,740	685,279	7,500	83,152	2,673
Central Washington						
C	127,195	--	101,428	--	23,751	2,016
B and D ²	79,103	107	77,346	--	1,650	--
A	254,438	--	214,895	39,543	--	--
Total	460,736	107	393,669	39,543	25,401	2,016
Inland Empire						
D	22,245	21,445	800	--	--	--
C	148,839	46,500	82,306	--	20,033	--
B and A ²	184,721	12,308	122,663	--	20,500	29,250
Total	355,805	80,253	205,769	--	40,533	29,250
Total, State						
D	123,395	73,629	29,252	5,900	814	13,800
C ³	786,195	92,312	631,280	--	56,034	6,569
B ⁴	473,325	31,915	382,010	8,000	22,150	29,250
A	2,430,292	--	1,703,218	121,953	535,649	69,472
Total	3,813,207	197,856	2,745,760	135,853	614,647	119,091

¹ Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

² Combined to avoid disclosure.

³ Total for Class C includes Class B for Lower Columbia.

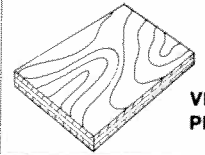
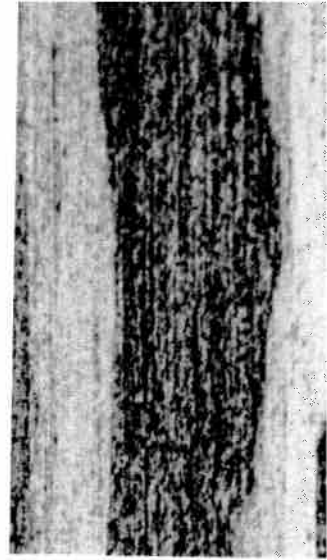
⁴ Total for Class B includes Class D for Central Washington and includes Class A for Inland Empire (See footnote 3 for exclusion).

Table 36—Lumber production by headrig type, area, and county.
(Thousand board feet, lumber tally)

Economic area and county	All types	Circular saw	Band saw	Gang saw	Chipping saw	Scragg double cut saw
Puget Sound						
Island, Kitsap and San Juan ¹	100,265	2,265	7,200	--	90,000	800
King	260,026	20,035	187,991	52,000	--	--
Pierce	329,259	24,381	162,486	8,000	80,245	54,147
Skagit and Whatcom ¹	80,539	4,000	59,539	--	17,000	--
Snohomish	573,029	17,505	434,405	--	121,119	--
Total	1,343,118	68,186	851,621	60,000	308,364	54,947
Olympic Peninsula						
Clallam	76,104	12,630	38,548	--	24,366	560
Grays Harbor and Pacific ¹	288,847	1,000	217,982	22,910	46,955	--
Jefferson	28,305	4,305	24,000	--	--	--
Mason	214,965	20,990	142,419	--	49,876	1,680
Thurston	77,806	1,518	58,148	5,500	--	12,640
Lewis	182,177	2,127	128,325	400	36,000	15,325
Total	868,204	42,570	609,422	28,810	157,197	30,205
Lower Columbia						
Clark	66,456	460	45,253	--	20,743	--
Cowlitz and Wahkiakum ¹	513,275	3,080	467,796	--	42,099	300
Klickitat	140,755	3,200	129,305	--	8,250	--
Skamania	64,858	--	42,925	7,500	12,060	2,373
Total	785,344	6,740	685,279	7,500	83,152	2,673
Central Washington						
Chelan and Kittitas ¹	118,986	--	91,569	--	25,401	2,016
Okanogan and Lincoln ¹	186,632	107	146,982	39,543	--	--
Yakima	155,118	--	155,118	--	--	--
Total	460,736	107	393,669	39,543	25,401	2,016
Inland Empire						
Asotin, Columbia and Walla Walla ¹	53,739	7,599	46,140	--	--	--
Ferry	90,469	25,469	35,750	--	--	29,250
Pend Oreille and Spokane ¹	74,202	479	73,723	--	--	--
Stevens	137,395	46,706	50,156	--	40,533	--
Total	355,805	80,253	205,769	--	40,533	29,250
Total, State	3,813,207	197,856	2,745,760	135,853	614,647	119,091

¹ Combined to avoid disclosure.

VENEER & PLYWOOD



VENEER & PLYWOOD



Table 37—Number of veneer and plywood mills by type, area, and county.

Economic area and county	All types	Veneer only	Layup only	Veneer and layup
Puget Sound				
King	2	--	--	2
Pierce	3	--	1	2
Skagit	1	--	--	1
Snohomish	1	1	--	--
Whatcom	1	--	--	1
Total	8	1	1	6
Olympic Peninsula				
Clallam	1	--	--	1
Grays Harbor	5	1	1	3
Jefferson	1	1	--	--
Mason	1	--	--	1
Thurston	3	1	2	--
Lewis	4	3	--	1
Total	15	6	3	6
Lower Columbia				
Clark	2	--	--	2
Cowlitz	2	--	--	2
Skamania	3	2	--	1
Klickitat	1	--	--	1
Total	8	2	--	6
Central Washington				
Okanogan	1	--	--	1
Yakima	1	--	--	1
Total	2	--	--	2
Inland Empire				
Spokane	1	--	1	--
Stevens	2	1	--	1
Total	3	1	1	1
Total, State	36	10	5	21

Washington Veneer and Plywood Mills, 1976

Table 38—Installed single shift capacity by type of mill, area, and county.

Economic area and county	Type of Operation			
	Veneer only	Layup only	Veneer and Layup	
			Veneer	Layup
Puget Sound				
King	--	--	350	447
Pierce	--	111	135	550
Skagit	--	--	88	600
Snohomish	60	--	--	--
Whatcom	--	--	180	250
Total	60	111	753	1,847
Olympic Peninsula				
Clallam	--	--	300	150
Grays Harbor	240	225	180	465
Jefferson	100	--	--	--
Mason	--	--	320	42
Thurston	50	280	--	--
Lewis	370	--	130	130
Total	760	505	930	787
Lower Columbia				
Clark	--	--	375	355
Cowlitz	--	--	480	490
Skamania	185	--	100	100
Klickitat	--	--	200	200
Total	185	--	1,155	1,145
Central Washington				
Okanogan	--	--	190	190
Yakima	--	--	190	190
Total	--	--	380	380
Inland Empire				
Spokane	--	122	--	--
Stevens	136	--	152	117
Total	136	122	152	117
Total, State	1,141	738	3,370	4,276

Table 39—Number of mills by lathe log diameter limit, and area.

Economic area	Lathe log diameter limit							
	Layup only	20-29	30-39	40-49	50-59	60-69	70-79	80+
Puget Sound	1	--	--	1	--	2	--	4
Olympic Peninsula	3	--	1	2	1	1	2	5
Lower Columbia	--	--	--	1	--	1	2	4
Central Washington	--	--	--	1	1	--	--	--
Inland Empire	1	--	--	2	1	--	--	--
Total, State	5	--	1	7	3	4	4	13

Table 40—Number of mills by minimum core size produced, and area.

Economic area	Diameter of cores (inches)									No lathe or core
	3	4	5	6	7	8	9	10	10+	
Puget Sound	--	--	1	2	3	--	--	--	1	1
Olympic Peninsula	--	1	3	4	1	2	--	--	--	4
Lower Columbia	--	1	2	--	1	3	1	--	--	--
Central Washington	--	--	2	--	--	--	--	--	--	--
Inland Empire	--	--	2	1	--	--	--	--	--	--
Total, State	--	2	10	7	5	5	1	--	1	5

Washington Veneer and Plywood Mills, 1976

Table 41—Number of mills having selected equipment, by area and county.

Economic area and county	4-foot lathe	8-foot lathe	Slicer	Veneer chipper	Core chipper	Cold press	Hot press	Burner
Puget Sound								
King	--	2	1	2	2	1	2	--
Pierce	2	2	--	2	--	--	3	--
Skagit	1	1	--	1	--	1	1	--
Snohomish	1	--	--	1	1	1	--	--
Whatcom	1	1	--	1	1	--	1	--
Total	5	6	1	7	4	3	7	--
Olympic Peninsula								
Clallam	1	1	--	1	1	--	1	1
Grays Harbor	2	2	--	4	2	1	3	--
Jefferson	--	1	--	1	1	--	--	1
Mason	--	--	--	1	1	--	1	1
Thurston	1	--	--	--	--	2	2	--
Lewis	4	2	--	4	3	1	1	2
Total	8	6	--	11	8	4	8	5
Lower Columbia								
Clark	2	2	--	2	1	--	2	--
Cowlitz	--	2	--	2	1	--	2	--
Skamania	2	2	--	3	2	1	1	--
Klickitat	--	1	--	1	1	--	1	--
Total	4	7	--	8	5	1	6	--
Central Washington								
Okanogan	1	1	--	1	1	--	1	--
Yakima	1	1	--	1	1	--	1	--
Total	2	2	--	2	2	--	2	--
Inland Empire								
Spokane	--	--	--	--	--	--	1	--
Stevens	--	2	--	2	2	--	1	1
Total	--	2	--	2	2	--	2	1
Total, State	19	23	1	30	21	8	25	6

Table 42—Number of mills by tenure of present ownership, by area, and years of site occupancy.

Economic area and site occupancy (years)	All mills	Tenure of present mill ownership (years)				
		0-2	3-5	6-10	11-20	21+
Puget Sound						
11-20	1	--	--	--	1	--
21+	7	--	--	1	--	6
Total	8	--	--	1	1	6
Olympic Peninsula						
6-10	1	--	--	1	--	--
11-20	6	--	--	2	4	--
21+	8	1	--	--	2	5
Total	15	1	--	3	6	5
Lower Columbia						
11-20	4	--	1	--	3	--
21+	4	--	--	--	1	3
Total	8	--	1	--	4	3
Central Washington						
3-5	1	1	--	--	--	--
11-20	1	--	--	--	1	--
Total	2	1	--	--	1	--
Inland Empire						
6-10	1	--	--	1	--	--
11-20	2	--	--	2	--	--
Total	3	--	--	3	--	--
Total, State						
3-5	1	1	--	--	--	--
6-10	2	--	--	2	--	--
11-20	14	--	1	4	9	--
21+	19	1	--	1	3	14
Total	36	2	1	7	12	14

Washington Veneer and Plywood Mills, 1976

Table 43—Average number of operating days, by type of mill and area.

Economic area	Veneer only	Layup only	Veneer and layup
Puget Sound	260	241	260
Olympic Peninsula	239	296	251
Lower Columbia	246	--	254
Central Washington	--	--	252
Inland Empire	235	240	236
Total, State	242	274	254

**Table 44—Log consumption by type of material and area.
(Thousand board feet, Scribner log rule)**

Economic	Total roundwood	Sound logs	Utility logs
Puget Sound	112,187	109,004	3,183
Olympic Peninsula	168,731	166,207	2,524
Lower Columbia	186,030	169,014	17,016
Central Washington and Inland Empire ¹	178,587	178,587	--
Total, State	645,535	622,812	22,723

¹ Combined to avoid disclosure.

**Table 45—Log consumption by timber age and area.
(Thousand board feet, Scribner log rule)**

Economic area	All age groups	Old Growth (100+ years)	Young growth (less than 100 years)
Puget Sound	112,187	52,309	59,878
Olympic Peninsula	168,731	130,314	38,417
Lower Columbia	186,030	101,120	84,910
Central Washington and Inland Empire ¹	178,587	129,359	49,228
Total, State	645,535	413,102	232,433

¹ Combined to avoid disclosure.

**Table 46—Log inventory changes, log consumption, and apparent log receipts, by area.
(Thousand board feet, Scribner log rule)**

Economic area	Log inventory			1976 log consumption	Apparent 1976 log receipts
	January 1, 1976	December 31, 1976	Net change		
Puget Sound	53,275	41,939	-11,336	112,187	100,851
Olympic Peninsula	40,176	35,772	- 4,404	168,731	164,327
Lower Columbia	70,128	51,068	-19,060	186,030	166,970
Central Washington and Inland Empire ¹	53,867	51,613	- 2,254	178,587	176,333
Total, State	217,446	180,392	-37,054	645,535	608,481

¹ Combined to avoid disclosure.

Washington Veneer and Plywood Mills, 1976

Table 47—Ownership origin of logs consumed, by area and county.
(Thousand board feet, Scribner log rule)

Economic area and county	All owners	State	National Forest	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
King and Pierce ¹	59,987	--	20,312	--	526	30,179	1,944	7,026
Skagit, Snohomish, and Whatcom ¹	52,200	749	40,116	--	1,285	7,050	1,500	1,500
Total	112,187	749	60,428	--	1,811	37,229	3,444	8,526
Olympic Peninsula								
Clallam, Jefferson and Mason ¹	71,355	6,653	40,750	--	--	16,195	7,757	--
Grays Harbor	29,000	2,817	14,797	--	8,108	1,800	--	1,478
Lewis	58,376	6,120	31,566	--	--	4,590	6,390	9,710
Thurston	10,000	1,000	--	--	--	--	--	9,000
Total	168,731	16,590	87,113	--	8,108	22,585	14,147	20,188
Lower Columbia								
Clark and Cowlitz ¹	123,739	5,197	57,510	--	--	53,105	4,450	3,477
Skamania and Klickitat ¹	62,291	5,610	48,705	1,527	--	--	3,998	2,451
Total	186,030	10,807	106,215	1,527	--	53,105	8,448	5,928
Central Washington and Inland Empire								
Okanogan, Yakima, Spokane and Stevens ¹	178,587	8,397	59,733	1,701	44,237	52,833	2,118	9,568
Total, State	645,535	36,543	313,489	3,228	54,156	165,752	28,157	44,210

¹ Combined to avoid disclosure.

**Table 48—Log consumption by species, area, and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound										
King and Pierce	59,987	28,215	13,191	623	7,269	302	--	6,023	794	3,570
Skagit, Snohomish, and Whatcom ¹	52,200	18,402	29,629	--	--	--	--	--	1,169	3,000
Total	112,187	46,617	42,820	623	7,269	302	--	6,023	1,963	6,570
Olympic Peninsula										
Clallam, Jefferson, and Mason ¹	71,355	46,277	5,510	2,000	4,054	--	--	13,514	--	--
Grays Harbor	29,000	1,718	14,418	--	210	120	--	10,541	1,500	493
Lewis	58,376	36,854	11,899	8,010	--	200	--	1,236	--	177
Thurston	10,000	10,000	--	--	--	--	--	--	--	--
Total	168,731	94,849	31,827	10,010	4,264	320	--	25,291	1,500	670
Lower Columbia										
Clark and Cowlitz ¹	123,739	87,311	14,222	2,708	--	1,960	--	17,538	--	--
Skamania and Klickitat ¹	62,291	32,722	17,586	5,151	--	6,731	--	101	--	--
Total	186,030	120,033	31,808	7,859	--	8,691	--	17,639	--	--
Central Washington and Inland Empire										
Okanogan, Yakima, Spokane and Stevens ¹	178,587	119,107	--	21,594	3,541	14,253	1,757	--	18,335	--
Total, State	645,535	380,606	106,455	40,086	15,074	23,566	1,757	48,953	21,798	7,240

¹ Combined to avoid disclosure.

Washington Veneer and Plywood Mills, 1976

Table 49—Log consumption by species, area, and type of material.
(Thousand board feet, Scribner log rule)

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Lodgepole pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound										
King and Pierce	59,987	28,215	13,191	623	7,269	302	--	6,023	794	3,570
Skagit, Snohomish, and Whatcom ¹	52,200	18,402	29,629	--	--	--	--	--	1,169	3,000
Total	112,187	46,617	42,820	623	7,269	302	--	6,023	1,963	6,570
Olympic Peninsula										
Clallam, Jefferson, and Mason ¹	71,355	46,277	5,510	2,000	4,054	--	--	13,514	--	--
Grays Harbor	29,000	1,718	14,418	--	210	120	--	10,541	1,500	493
Lewis	58,376	36,854	11,899	8,010	--	200	--	1,236	--	177
Thurston	10,000	10,000	--	--	--	--	--	--	--	--
Total	168,731	94,849	31,827	10,010	4,264	320	--	25,291	1,500	670
Lower Columbia										
Clark and Cowlitz ¹	123,739	87,311	14,222	2,708	--	1,960	--	17,538	--	--
Skamania and Klickitat ¹	62,291	32,722	17,586	5,151	--	6,731	--	101	--	--
Total	186,030	120,033	31,808	7,859	--	8,691	--	17,639	--	--
Central Washington and Inland Empire										
Okanogan, Yakima, Spokane and Stevens ¹	178,587	119,107	--	21,594	3,541	14,253	1,757	--	18,335	--
Total, State	645,535	380,606	106,455	40,086	15,074	23,566	1,757	48,953	21,798	7,240

¹ Combined to avoid disclosure.

Table 50—Production and disposition of wood and bark residues, by area and county.
(Tons, dry weight)

Economic area and county	All residues				Wood residue				Bark residue			
	Total	Used ¹	Unused	Total	Used ¹	Unused	Total	Used ¹	Unused	Total	Used ¹	Unused
Puget Sound												
King and Pierce ²	128,431	127,514	917	106,993	106,993	--	21,438	20,521	917			
Skagit, Snohomish, and Whatcom ²	80,672	79,451	1,221	66,151	66,151	--	14,521	13,300	1,221			
Total	209,103	206,965	2,138	173,144	173,144	--	35,959	33,821	2,138			
Olympic Peninsula												
Clallam, Jefferson, and Mason ²	103,804	102,748	1,056	81,710	81,710	--	22,094	21,038	1,056			
Grays Harbor	77,129	77,129	--	64,451	64,451	--	12,678	12,678	--			
Lewis	101,582	87,326	14,256	77,954	77,954	--	23,628	9,372	14,256			
Thurston	27,624	27,624	--	24,456	24,456	--	3,168	3,168	--			
Total	310,139	294,827	15,312	248,571	248,571	--	61,568	46,256	15,312			
Lower Columbia												
Clark and Cowlitz ²	228,366	228,366	--	183,431	183,431	--	44,935	44,935	--			
Skamania and Klickitat ²	107,444	107,444	--	84,340	84,340	--	23,104	23,104	--			
Total	335,810	335,810	--	267,771	267,771	--	68,039	68,039	--			
Central Washington and Inland Empire												
Okanogan, Yakima, Spokane, and Stevens ²	274,365	243,881	30,484	218,151	204,098	14,053	56,214	39,783	16,431			
Total, State	1,129,417	1,081,483	47,934	907,637	893,584	14,053	221,780	187,899	33,881			

¹ Used residues were not necessarily consumed in the area or county in which produced.

² Combined to avoid disclosure.

Washington Veneer and Plywood Mills, 1976

Table 51—Production and disposition of wood residues, by area and county.
(Tons, dry weight)

Economic area and county	All types						Coarse and medium ²						Fine ³					
	Total	Total used ¹	Pulp and board	Fuel	Misc.	Unused	Total	Total used ¹	Pulp and board	Fuel	Misc.	Unused	Total	Total used ¹	Pulp and board	Fuel	Misc.	Unused
Puget Sound																		
King and Pierce ⁴	106,993	106,993	32,568	65,666	8,759	--	99,272	99,272	32,568	57,945	8,759	--	7,721	7,721	--	7,721	--	--
Skagit, Snohomish, and Whatcom ⁴	66,151	66,151	14,937	48,576	2,638	--	61,854	61,854	14,937	44,279	2,638	--	4,297	4,297	--	4,297	--	--
Total	173,144	173,144	47,505	114,242	11,397	--	161,126	161,126	47,505	102,224	11,397	--	12,018	12,018	--	12,018	--	--
Olympic Peninsula																		
Clallam, Jefferson, and Mason ⁴	81,710	81,710	41,641	27,789	12,280	--	78,959	78,959	41,641	25,038	12,280	--	2,751	2,751	--	2,751	--	--
Grays Harbor ⁴	64,451	64,451	29,522	30,613	4,316	--	59,360	59,360	29,522	25,522	4,316	--	5,091	5,091	--	5,091	--	--
Lewis ⁴	77,954	77,954	62,318	7,188	8,448	--	77,954	77,954	62,318	7,188	8,448	--	--	--	--	--	--	--
Thurston ⁴	24,456	24,456	9,744	14,712	--	--	21,514	21,514	9,744	11,770	--	--	2,942	2,942	--	2,942	--	--
Total	248,571	248,571	143,225	80,302	25,044	--	237,787	237,787	143,225	69,518	25,044	--	10,784	10,784	--	10,784	--	--
Lower Columbia																		
Clark and Cowlitz ⁴	183,431	183,431	112,646	47,640	23,145	--	174,387	174,387	112,646	40,311	21,430	--	9,044	9,044	--	7,329	1,715	--
Skamania and Klickitat ⁴	84,340	84,340	67,411	13,959	2,970	--	81,685	81,685	66,412	12,303	2,970	--	2,655	2,655	999	1,656	--	--
Total	267,771	267,771	180,057	61,599	26,115	--	256,072	256,072	179,058	52,614	24,400	--	11,699	11,699	999	8,985	1,715	--
Central Washington and Inland Empire																		
Okanogan, Yakima, Spokane and Stevens ⁴	218,151	204,098	119,347	59,133	25,618	14,053	210,739	196,686	119,347	51,721	25,618	14,053	7,412	7,412	--	7,412	--	--
Total, State	907,637	893,584	490,134	315,276	88,174	14,053	865,724	851,671	489,135	276,077	86,459	14,053	41,913	41,913	999	39,199	1,715	--

¹ Used residues were not necessarily consumed in the area or county in which produced.
² Coarse residue includes log trim, cores, veneer clippings, rejected veneer, roundup, spur trim.
³ Fine residue includes sawdust and sander dust.
⁴ Combined to avoid disclosure.

**Table 52—Production and disposition of bark residues, by area and county.
(Tons, dry weight)**

Economic area and county	All bark	Total used	Used ¹			Unused
			Pulp and board	Fuel	Other	
Puget Sound						
King and Pierce ²	21,438	20,521	--	20,521	--	917
Skagit, Snohomish, and Whatcom ²	14,521	13,300	--	13,300	--	1,221
Total	35,959	33,821	--	33,821	--	2,138
Olympic Peninsula						
Clallam, Jefferson, and Mason ²	22,094	21,038	--	21,038	--	1,056
Grays Harbor	12,678	12,678	--	12,678	--	--
Lewis	23,628	9,372	--	9,372	--	14,256
Thurston	3,168	3,168	--	317	2,851	--
Total	61,568	46,256	--	43,405	2,851	15,312
Lower Columbia						
Clark and Cowlitz ²	44,935	44,935	--	43,865	1,070	--
Skamania and Klickitat ²	23,104	23,104	5,940	17,164	--	--
Total	68,039	68,039	5,940	61,029	1,070	--
Central Washington and Inland Empire ²						
Okanogan, Yakima, Spokane and Stevens ²	56,214	39,783	--	22,463	17,320	16,431
Total, State	221,780	187,899	5,940	160,718	21,241	33,881

¹ Used residues were not necessarily consumed in the area or county in which produced.

² Combined to avoid disclosure.

Washington Veneer and Plywood Mills, 1976

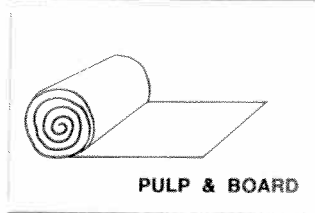
Table 53—Veneer and plywood production, by area and county.
(Thousand square feet, 3/8-inch basis)

Economic area and county	Veneer	Plywood ²
Puget Sound		
King and Pierce ¹	501	378,792
Skagit, Snohomish and Whatcom ¹	10,000	195,308
Total	10,501	574,100
Olympic Peninsula		
Clallam, Jefferson, and Mason ¹	100,176	125,050
Grays Harbor	58,630	231,440
Lewis	124,000	60,000
Thurston	24,400	133,754
Total	307,206	550,244
Lower Columbia		
Clark and Cowlitz ¹	7,525	411,097
Skamania and Klickitat ¹	60,450	120,700
Total	67,975	531,797
Central Washington and Inland Empire		
Okanogan, Yakima, Spokane and Stevens ¹	92,977	429,907
Total	92,977	429,907
Total, State	478,659	2,086,048

¹ Combined to avoid disclosure.

² Includes hardwood and softwood faced plywood.

PULP & BOARD



PULP & BOARD

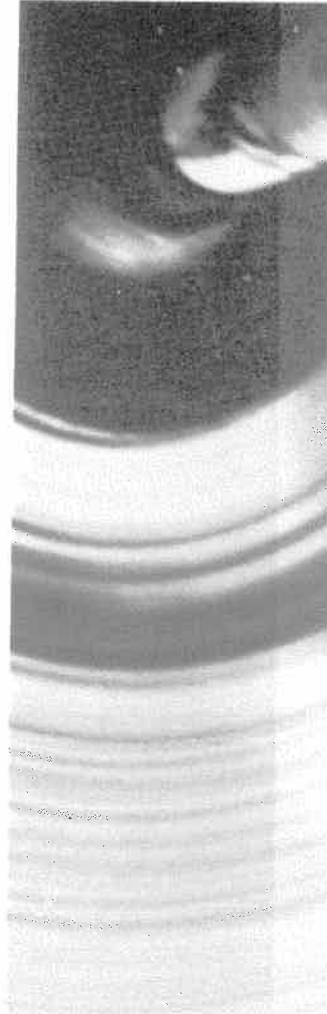


Table 54—Number of pulp and board mills, by type and county.

Economic area and county	All mills	Type of pulp mill				Type of board Mill		
		Sulfite	Sulfate	Groundwood	Semichemical	Hardboard	Insulation board	Particle board
Puget Sound								
Pierce	2	--	1	1	--	--	--	--
Skagit	2	1	--	--	--	1	--	--
Snohomish	3	1	1	1	--	--	--	--
Whatcom	2	1	--	--	1	--	--	--
Total	9	3	2	2	1	1	--	--
Olympic Peninsula								
Clallam	2	1	--	1	--	--	--	--
Grays Harbor	2	2	--	--	--	--	--	--
Jefferson	1	--	1	--	--	--	--	--
Mason	--	--	--	--	--	--	--	--
Total	5	3	1	1	--	--	--	--
Lower Columbia								
Clark	3	1	2	--	--	--	--	--
Cowlitz	6	1	2	--	2	--	--	1
Total	9	2	4	--	2	--	--	1
Inland Empire								
Spokane	1	--	--	1	--	--	--	--
Walla Walla	2	--	1	--	1	--	--	--
Total	3	--	1	1	1	--	--	--
Total, State	26	8	8	4	4	1	--	1

Washington Pulp and Board Mills, 1976

Table 55—Installed 24-hour capacity by type of mill, area, and county.
(Tons)

Economic area and county	Type of Pulp Mill					Type of Board Mill	
	All mills	Sulfite	Sulfate	Groundwood	Semichemical	Hardboard 1/8" basis	Particle board 3/4" basis
	- - - - - Bone dry tons - - - - -					- - - Millions square feet - - -	
Puget Sound							
Pierce	1,339	--	914	425	--	--	--
Skagit	140	140	--	--	--	50	--
Snohomish	1,460	850	350	260	--	--	--
Whatcom	555	509	--	--	46	--	--
Total	3,494	1,499	1,264	685	46	50	--
Olympic Peninsula							
Clallam	986	441	--	545	--	--	--
Grays Harbor	896	896	--	--	--	--	--
Jefferson	384	--	384	--	--	--	--
Mason	--	--	--	--	--	--	--
Total	2,266	1,337	384	545	--	--	--
Lower Columbia							
Clark	1,600	440	1,160	--	--	--	--
Cowlitz	3,222	184	2,636	--	402	--	8
Total	4,822	624	3,796	--	402	--	8
Inland Empire							
Spokane	80	--	--	80	--	--	--
Walla Walla	720	--	450	--	270	--	--
Total	800	--	450	80	270	--	--
Total, State	11,382	3,460	5,894	1,310	718	50	8

Table 56—Number of mills by tenure of present ownership and years of site occupancy.

Mill type and site occupancy (years)	Tenure of present ownership (years)				
	0-2	3-5	6-10	11-20	21+
Sulfite					
11-20	--	--	--	1	--
21+	--	--	2	1	4
Sulfate					
11-20	--	--	--	1	--
21+	--	--	--	1	6
Groundwood					
21+	--	--	1	--	3
Semichemical					
6-10	--	--	--	--	--
11-20	--	--	--	1	--
21+	--	--	--	1	2
Hardboard					
21+	--	--	1	--	--
Particle					
21+	--	--	--	1	--
Total	--	--	4	7	15

Table 57—Average number of operating days by area.

Economic area	Pulp	Board
Puget Sound	317	254
Olympic Peninsula	343	--
Lower Columbia	319	225
Inland Empire	337	--
Total, State	325	240

Washington Pulp and Board Mills, 1976

Table 58—Mill production¹ by type of product, area, and type of operation.

Economic Area	Type of Product					
	All Products	Newsprint	Bleached Paper	Unbleached	Other paper	Market Pulp
	--- air dry tons ---					
Puget Sound	812,565	130,700	--	--	101,000	580,865
Olympic Peninsula	674,768	75,150	167,418	112,054	12,011	308,135
Lower Columbia ² and Inland Empire	1,753,895	27,858	654,284	893,339	30,739	147,675
Total, State	3,241,228	233,708	821,702	1,005,393	143,750	1,036,675
Type of Operation						
Total, State						
Sulfite	931,334	--	85,700	--	101,000	744,634
Sulfate	1,726,851	--	652,972	806,166	42,750	224,963
Ground wood	583,043	233,708	83,030	199,227	--	67,073
Total	3,241,228	233,708	821,702	1,005,393	143,750	1,036,675

¹ Board not included to avoid disclosure.

² Combined to avoid disclosure.

Table 59—Type of wood consumed by area.

Economic area	Roundwood			Other ³					
	Total	Sound logs	Utility logs ¹	Total	Chips		Sawdust	Shavings and bark	Waste-paper
					From mill residue	From roundwood chipping mill			
	Thousand board feet, --- Scribner log rule ---			----- Tons -----					
Puget Sound	236,040	59,180	176,860	1,761,768	637,026	1,124,742	--	--	--
Olympic Peninsula	246,175	18,000	228,175	1,018,701	792,243	175,761	46,763	3,154	780
Lower Columbia & Inland Empire ²	62,937	5,000	57,937	2,980,688	2,639,947	4,000	280,877	7,040	48,824
Total, State	545,152	82,180	462,972	5,761,157	4,069,216	1,304,503	327,640	10,194	49,604

¹ Includes cordwood: 135,675 from Olympic Peninsula

² Combined to avoid disclosure.

³ Errors were made in the 1974 consumption of Lower Columbia and Inland Empire. Correct totals beginning with "Other Total" and reading to the right are: 2,576,497; 2,079,723; 198,306; 223,318; 52,686 and 22,464. With these new totals the State Totals should read 4,813,267; 3,131,696; 1,255,484; 309,395; 72,773 and 43,919.

Washington Pulp and Board Mills, 1976

**Table 60—Log consumption by timber age and area.
(Thousand board feet, Scribner log rule)**

Economic area	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound	236,040	169,719	66,321
Olympic Peninsula	246,175	222,221	23,954
Lower Columbia and Inland Empire ¹	62,937	9,587	53,350
Total, State	545,152	401,527	143,625

¹ Combined to avoid disclosure.

**Table 61—Ownership origin of logs consumed, by area and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All owners	State	National Forest	Bureau of Land Management	Other public	Forest Industry		Farmer miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Pierce and Snohomish ¹	157,152	8,000	28,877	--	--	103,930	13,345	3,000
Skagit and Whatcom ¹	78,888	2,949	--	--	1,000	26,588	36,851	11,500
Total	236,040	10,949	28,877	--	1,000	130,518	50,196	14,500
Olympic Peninsula								
Clallam, Jefferson and Grays Harbor ¹	246,175	47,919	17,481	--	18,300	132,068	20,612	9,795
Total	246,175	47,919	17,481	--	18,300	132,068	20,612	9,795
Lower Columbia & Inland Empire ¹								
Clark, Cowlitz, Spokane and Walla Walla ¹	62,937	1,800	8,400	1,800	1,200	43,200	5,337	1,200
Total	62,937	1,800	8,400	1,800	1,200	43,200	5,337	1,200
Total, State	545,152	60,668	54,758	1,800	20,500	305,786	76,145	25,495

¹ Combined to avoid disclosure.

Washington Pulp and Board Mills, 1976

Table 62—Roundwood and chip consumption by species, area, and type of material.
(Log consumption: Thousand board feet, Scribner log rule)
(Chip consumption: Bone dry tons)

Economic area and type of material	All species	Douglas fir	Hemlock	True fir	Spruce	Western redcedar	Other softwoods	Hardwoods ¹
Puget Sound								
Sound logs	59,180	400	31,865	18,571	--	400	--	7,944
Utility logs	176,860	11,860	81,078	41,005	4,046	--	9,383	29,488
Total logs	236,040	12,260	112,943	59,576	4,046	400	9,383	37,432
Chips ⁴	1,761,769	422,966	670,660	319,000	45,822	2,294	213,567	87,460
Olympic Peninsula								
Sound logs	18,000 ²	540	16,740	--	540	--	--	180
Utility logs	228,175 ²	--	214,595	7,079	6,501	--	--	--
Total logs	246,175	540	231,335	7,079	7,041	--	--	180
Chips ⁴	968,004	213,395	617,944	13,501	17,568	38,236	--	67,360
Lower Columbia & Inland Empire ³								
Sound logs	5,000	--	5,000	--	--	--	--	--
Utility logs	57,937	14,428	19,859	8,800	2,200	--	1,650	11,000
Total logs	62,937	14,428	24,859	8,800	2,200	--	1,650	11,000
Chips ⁴	2,643,946	1,370,616	250,103	192,913	29,146	--	642,571	158,597
Total, State								
Sound logs	82,180	940	53,605	18,571	540	400	--	8,124
Utility logs	462,972	26,288	315,532	56,884	12,747	--	11,033	40,488
Total logs	545,152	27,228	369,137	75,455	13,287	400	11,033	48,612
Chips ⁴	5,373,719	2,006,977	1,538,707	525,414	92,536	40,530	856,138	313,417

¹ Alder, maple and cottonwood.

² Includes 135,675 MBF of cordwood.

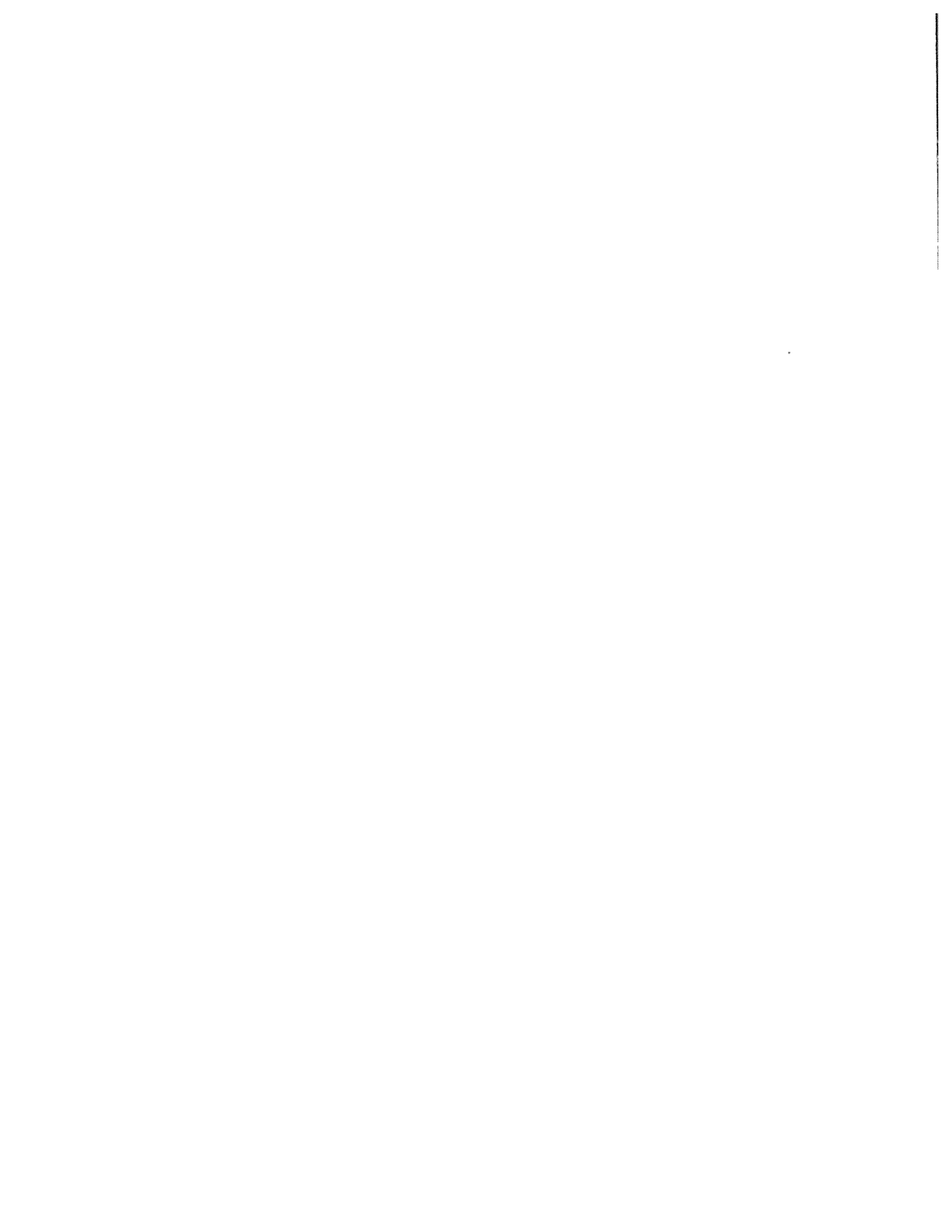
³ Combined to avoid disclosure.

⁴ Includes both residue chips and chips from off-site chipping plants - volume in BDT.

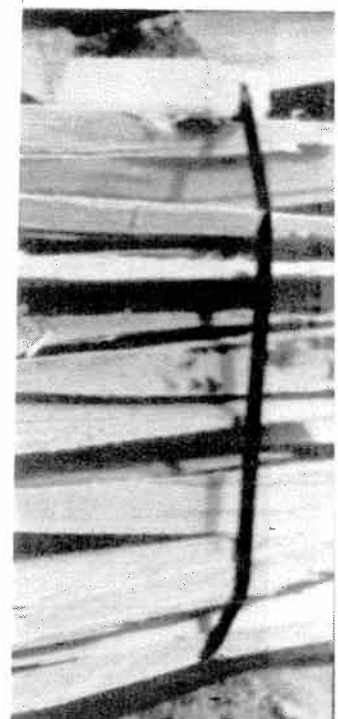
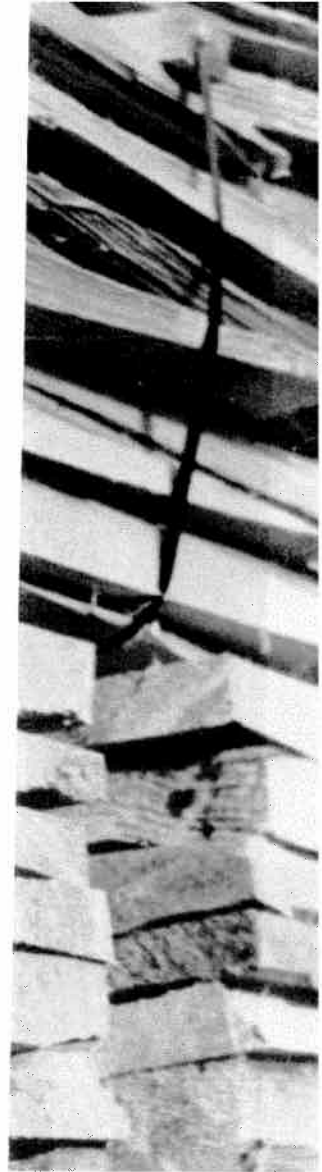
Table 63—Residue and off-site roundwood chip consumption, by state of origin and area.
(Tons, dry weight)

Economic area and type of material	Total volume	Washington	Oregon	Idaho	British Columbia	Other
Puget Sound						
Chip residue	637,026	507,560	--	46,440	69,894	13,132
Chip roundwood	1,124,743	722,966	4,582	85,391	227,999	83,805
Sawdust and shavings	--	--	--	--	--	--
Bark	--	--	--	--	--	--
Total	1,761,769	1,230,526	4,582	131,831	297,893	96,937
Olympic Peninsula						
Chip residue	792,243	781,342	--	2,088	8,813	--
Chip roundwood	175,761	89,871	--	--	85,890	--
Sawdust and shavings	49,917	43,370	--	--	6,547	--
Bark	--	--	--	--	--	--
Total	1,017,921	914,583	--	2,088	101,250	--
Lower Columbia & Inland Empire ¹						
Chip residue	2,639,946	1,326,484	1,024,322	166,242	7,306	115,592
Chip roundwood	4,000	1,080	1,880	280	--	760
Sawdust and shavings	287,917	112,799	175,118	--	--	--
Bark	--	--	--	--	--	--
Total	2,931,863	1,440,363	1,201,320	166,522	7,306	116,322
Total, State						
Chip residue	4,069,215	2,615,386	1,024,322	214,770	86,013	128,724
Chip roundwood	1,304,504	813,917	6,462	85,671	313,889	84,565
Sawdust and shavings	337,834	156,169	175,118	--	6,547	--
Bark	--	--	--	--	--	--
Total	5,711,553	3,585,472	1,205,902	300,441	406,449	213,289

¹ Combined to avoid disclosure.



SHAKE & SHINGLE



Washington Shake and Shingle Mills, 1976

Table 64—Number of shake and shingle mills and their operating characteristics by county.

Economic Area and County	Number of Mills	Total Single Shift capacity ¹ (Squares)			Average Number Operating days/year
		Shake	Shingle	Other	
Puget Sound					
King and Kitsap ²	5	201	60	6	
Pierce	5	288	40	31	
Skagit	23	2,175	423	83	
Snohomish	23	1,093	623	12	
Whatcom	3	85	20	9	
Total	59	3,842	1,166	141	192
Olympic Peninsula					
Clallam	46	3,702	1,298	29	
Grays Harbor	88	6,059	1,117	772	
Jefferson	6	185	--	39	
Lewis	16	543	72	--	
Mason	3	180	50	20	
Pacific	8	723	430	3	
Total	167	11,392	2,967	863	181
Lower Columbia					
Clark	6	65	48	20	
Cowlitz	9	702	145	78	
Wahkiakum	5	110	109	5	
Total	20	877	302	103	182
Central Washington and Inland Empire ²	6	198	40	14	169
Total State	252	16,309	4,475	1,121	183

¹ Normally eight hours but some mills operate other than eight hours in a shift.

² Combined to avoid disclosure, includes Chelan, Pend Oreille, and Stevens Counties.

Washington Shake and Shingle Mills, 1976

Table 65—Number of shake and shingle mills with selected equipment, by area and county.

Economic area and county	Chipper	Barker	Burner
Puget Sound			
King	--	--	2
Kitsap	--	--	--
Pierce	2	--	1
Skagit	2	1	12
Snohomish	2	--	9
Whatcom	--	--	3
Total	6	1	27
Olympic Peninsula			
Clallam	4	--	24
Grays Harbor	4	--	34
Jefferson	--	--	1
Lewis	2	--	9
Mason	1	--	--
Pacific	3	--	2
Thurston	--	--	--
Total	14	--	70
Lower Columbia			
Clark	2	--	--
Cowlitz	3	--	--
Wahkiakum	1	--	2
Total	6	--	2
Central Washington & Inland Empire			
Pend Oreille	1	--	1
Chelan & Stevens ¹	--	--	1
Total	1	--	2
Total, State	27	1	101

¹ Combined to avoid disclosure.

Table 66—Number of shake and shingle mills by tenure of present ownership and years of site occupancy.

Type of mill and site occupancy (years)	All mills	Tenure of present mill ownership (years)				
		0-2	3-5	6-10	11-20	21+
Shake and shingle						
0-2	58	55	2	1	--	--
3-5	49	7	41	1	--	--
6-10	47	6	6	34	1	--
11-20	75	6	7	9	53	--
21+	23	1	3	--	3	16
Total	252	75	59	45	57	16

Washington Shake and Shingle Mills, 1976

**Table 67—Type of wood consumed, by area and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All types	Sound logs	Utility logs	Other
Puget Sound				
King and Kitsap ¹	3,771	3,760	--	11
Pierce	2,843	1,400	--	1,443
Skagit	41,901	35,732	500	5,669
Snohomish	24,178	21,405	190	2,583
Whatcom	615	380	150	85
Total	73,308	62,677	840	9,791
Olympic Peninsula				
Clallam	60,915	41,800	7,701	11,414
Grays Harbor	111,606	84,149	6,487	20,970
Jefferson	2,513	1,496	275	742
Lewis	5,858	2,780	1,233	1,845
Mason	4,522	--	4,129	393
Thurston	--	--	--	--
Pacific	36,421	34,991	411	1,019
Total	221,835	165,216	20,236	36,383
Lower Columbia				
Clark	1,466	724	280	462
Cowlitz	31,730	30,200	740	790
Wahkiakum	3,920	2,620	620	680
Total	37,116	33,544	1,640	1,932
Central Washington and Inland Empire ¹				
Chelan, Pend Oreille and Stevens	3,061	225	2,241	595
Total	3,061	225	2,241	595
Total, State	335,320	261,662	24,957	48,701

¹ Combined to avoid disclosure

**Table 68—Ownership origin of logs consumed, by area and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All owners	State	National Forest	Bureau of Land Management	Other public	Forest Industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
King and Kitsap ¹	3,761	42	62	--	--	--	214	3,443
Pierce	1,400	--	--	--	--	--	500	900
Skagit	36,230	3,945	10,966	--	460	--	6,017	14,842
Snohomish	21,596	5,541	11,540	--	612	134	3,633	136
Whatcom	530	--	70	--	--	--	460	--
Total	63,517	9,528	22,638	--	1,072	134	10,824	19,321
Olympic Peninsula								
Clallam	49,501	7,633	5,288	--	2,704	--	27,644	6,232
Grays Harbor	90,636	6,100	5,510	--	48,210	754	27,339	2,723
Jefferson	1,771	--	--	--	--	--	1,771	--
Lewis	4,013	313	1,962	--	288	--	1,427	23
Mason	4,129	--	--	--	--	--	4,129	--
Pacific	35,402	--	--	--	400	--	34,518	484
Total	185,452	14,046	12,760	--	51,602	754	96,828	9,462
Lower Columbia								
Clark	1,004	100	200	--	--	204	500	--
Cowlitz	30,940	1,040	340	--	--	20,190	9,370	--
Wahkiakum	3,240	--	--	--	--	--	3,240	--
Total	35,184	1,140	540	--	--	20,394	13,110	--
Central Washington and Inland Empire ¹								
Chelan, Pend Oreille and Stevens	2,466	--	1,180	--	--	--	300	986
Total	2,466	--	1,180	--	--	--	300	986
Total, State	286,619	24,714	37,118	--	52,674	21,282	121,062	29,769

¹ Combined to avoid disclosure.

Washington Shake and Shingle Mills, 1976

Table 69—Production and disposition of wood and bark residues, by area and county.
(Tons, dry weight)

Economic area and county	All Residues			Wood Residues			Bark Residues		
	Total	Used ¹	Unused	Total	Used ¹	Unused	Total	Used ¹	Unused
Puget Sound									
King and Kitsap ²	3,262	50	3,212	2,144	33	2,111	1,118	17	1,101
Pierce	1,941	1,285	656	1,534	923	611	407	362	45
Skagit	42,758	14,958	27,800	29,702	11,762	17,940	13,056	3,196	9,860
Snohomish	24,344	9,006	15,338	17,633	7,216	10,417	6,711	1,790	4,921
Whatcom	663	157	506	474	157	317	189	--	189
Total	72,968	25,456	47,512	51,487	20,091	31,396	21,481	5,365	16,116
Olympic Peninsula									
Clallam	63,145	25,299	37,846	46,531	18,768	27,763	16,614	6,531	10,083
Grays Harbor	100,657	47,343	53,314	71,092	34,842	36,250	29,565	12,501	17,064
Jefferson	1,482	1,244	238	1,069	876	193	413	368	45
Lewis	5,040	1,407	3,633	3,427	1,024	2,403	1,613	383	1,230
Mason	2,355	998	1,357	1,607	998	609	748	--	748
Pacific	31,819	17,757	14,062	22,772	14,625	8,147	9,047	3,132	5,915
Total	204,498	94,048	110,450	146,498	71,133	75,365	58,000	22,915	35,085
Lower Columbia									
Clark	1,180	1,004	176	937	775	162	243	229	14
Cowlitz	24,249	24,147	102	16,154	16,086	68	8,095	8,061	34
Wahkiakum	4,185	574	3,611	3,275	574	2,701	910	--	910
Total	29,614	25,725	3,889	20,366	17,435	2,931	9,248	8,290	958
Central Washington and Inland Empire ²									
Chelan, Pend Oreille and Stevens	1,417	1,311	106	914	835	79	503	476	27
Total	1,417	1,311	106	914	835	79	503	476	27
Total, State	308,497	146,540	161,957	219,265	109,494	109,771	89,232	37,046	52,186

¹ Used residues were not necessarily consumed in the economic area in which they were produced.

² Combined to avoid disclosure.

Table 70--Production and disposition of wood residues, by area and county.
(Tons, dry weight)

Economic area and county	All Types												
	Coarse						Fine						
	Total used	Pulp & board	Fuel	Misc.	Unused	Total	Total used	Pulp & board	Fuel	Misc.	Unused	Total	
Puget Sound													
King & Kitsap	2,144	33	10	23	2,111	880	10	8	2	870	1,264	21	1,241
Pierce	1,534	983	63	632	611	568	375	228	84	193	966	548	418
Skiagit	29,702	11,762	2,542	4,141	17,940	11,733	6,827	4,969	1,087	571	15,106	3,570	12,834
Snohomish	17,633	7,216	5,079	2,190	10,417	5,897	2,123	1,582	541	3,774	11,736	5,093	6,643
Whatcom	474	157	--	157	317	181	65	--	65	116	293	92	201
Total	51,487	20,091	7,806	7,143	31,396	19,259	9,200	2,905	1,263	10,059	32,228	10,891	5,880
Olympic Peninsula													
Clallam	46,531	18,768	3,484	13,322	1,962	27,763	5,959	2,328	653	10,408	30,164	12,809	17,355
Grays Harbor	71,092	34,842	5,485	17,378	11,979	36,250	13,833	4,112	5,531	15,296	41,963	21,009	6,448
Jefferson	1,069	876	--	286	590	193	147	--	147	266	569	463	324
Lewis	3,427	1,024	--	108	916	2,403	1,667	538	53	485	1,760	486	1,274
Mason	1,607	958	524	58	416	609	589	524	58	7	954	409	545
Pacific	22,772	14,625	6,209	4,573	3,443	8,147	7,693	1,128	52	304	15,079	7,236	3,391
Total	146,498	71,133	36,125	19,306	75,365	56,009	28,721	13,783	7,904	27,288	90,489	42,412	12,272
Lower Columbia													
Clark	937	725	339	436	162	322	294	165	129	28	615	481	134
Cowlitz	16,154	16,086	1,371	14,514	101	6,530	6,497	1,371	5,078	48	9,628	9,589	39
Wahkiakum	3,275	574	274	300	2,701	946	351	274	77	595	2,329	223	2,106
Total	20,366	17,435	14,953	837	2,931	7,798	7,142	5,243	254	556	12,568	10,293	583
Central Washington and Inland Empire													
Chelan, Pinal, Okanogan and Stevens	914	835	93	742	79	452	414	93	321	38	462	421	41
Total, State	219,265	109,494	22,489	58,977	28,028	109,771	83,518	145,477	20,460	16,145	8,872	64,017	19,156

End block trim, spalts.

1 Sulfites and sawdust.

2 Used residues were not necessarily consumed in the economic area in which they were produced.

3 Combined to avoid disclosure.

Washington Shake and Shingle Mills, 1976

Table 71—Production and disposition of bark residues, by area and county.
(Tons, dry weight)

Economic area and county	Bark					Unused
	Total	Total used ²	Pulp and board	Fuel	Miscellaneous	
Puget Sound						
King and Kitsap ¹	1,118	17	--	--	17	1,101
Pierce	407	362	--	290	72	45
Skagit	13,056	3,196	--	916	2,280	9,860
Snohomish	6,711	1,790	--	1,771	19	4,921
Whatcom	189	--	--	--	--	189
Total	21,481	5,365	--	2,977	2,388	16,116
Olympic Peninsula						
Clallam	16,614	6,531	1,338	4,703	490	10,083
Grays Harbor	29,565	12,501	588	7,333	4,580	17,064
Jefferson	413	368	--	169	199	45
Lewis	1,613	383	--	69	314	1,230
Mason	748	--	--	--	--	748
Pacific	9,047	3,132	552	1,436	1,144	5,915
Total	58,000	22,915	2,478	13,710	6,727	35,085
Lower Columbia						
Clark	243	229	--	50	179	14
Cowlitz	8,095	8,061	--	8,061	--	34
Wahkiakum	910	--	--	--	--	910
Total	9,248	8,290	--	8,111	179	958
Central Washington and Inland Empire ¹						
Chelan, Pend Oreille and Stevens	503	476	--	68	408	27
Total	503	476	--	68	408	27
Total, State	89,232	37,046	2,478	24,866	9,702	52,186

¹ Combined to avoid disclosure.

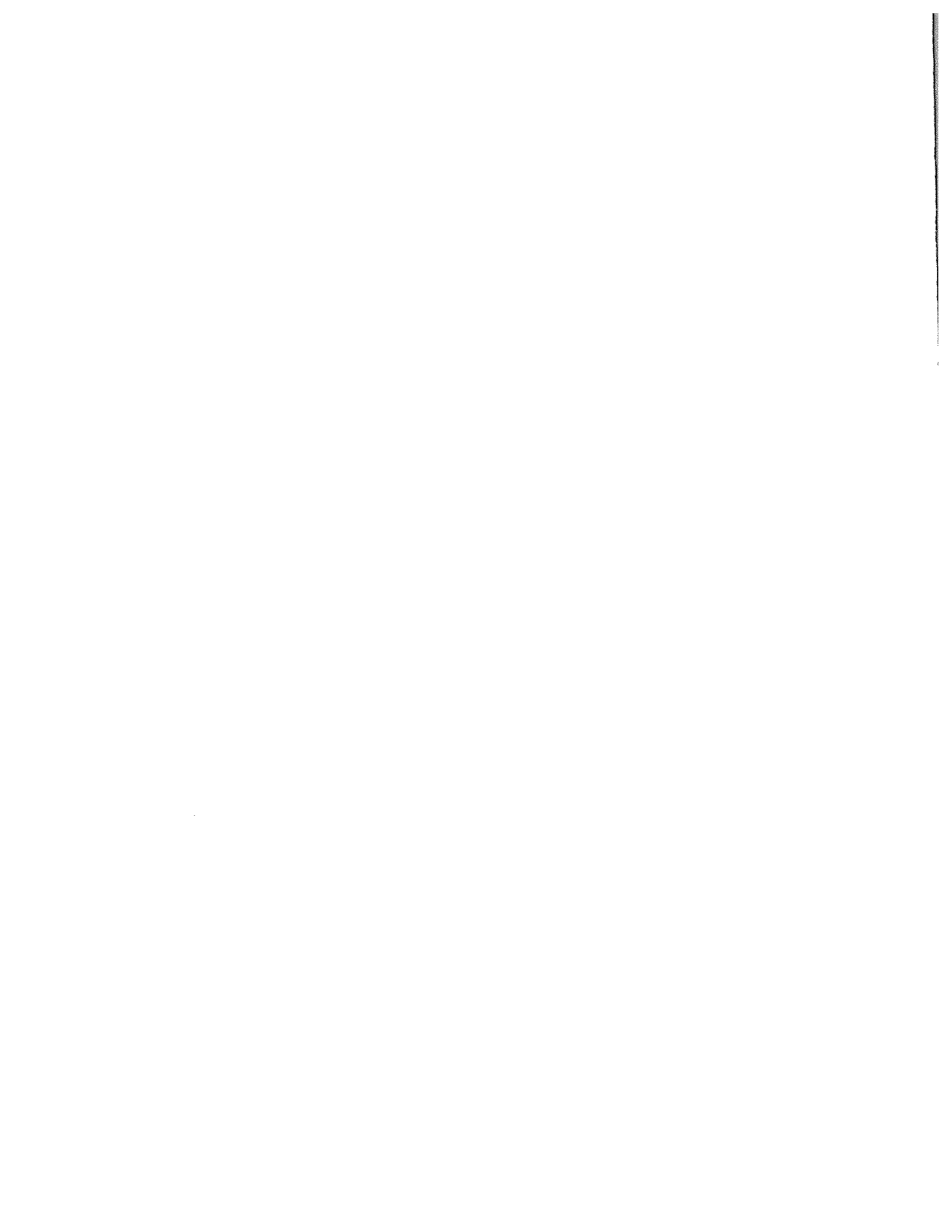
² Used residues were not necessarily consumed in the economic area in which they were produced.

Table 72—Mill production by product type, area, and county.

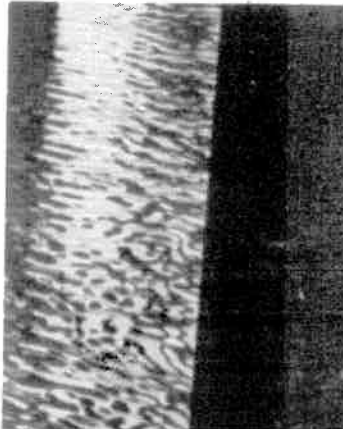
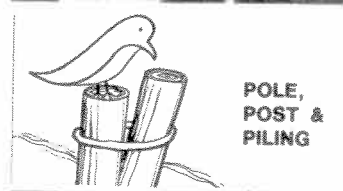
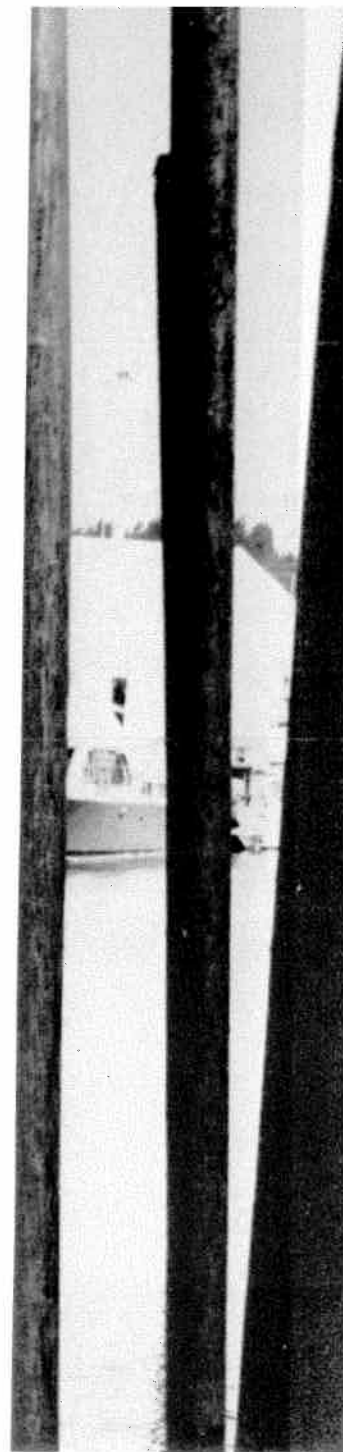
Economic Area and County	Shakes	Shingles	Other ²
-----Squares-----			
Puget Sound			
King and Kitsap ¹	33,462	6,573	10
Pierce	17,051	1,000	5,043
Skagit	418,163	108,855	6,313
Snohomish	158,668	109,177	224
Whatcom	6,099	2,023	80
Total	633,443	227,628	11,670
Olympic Peninsula			
Clallam	492,829	249,159	1,863
Grays Harbor	1,080,690	178,156	65,198
Jefferson	19,460	--	3,275
Lewis	68,622	7,797	--
Mason	24,457	5,200	25
Pacific	215,092	134,668	400
Total	1,901,150	574,980	70,761
Lower Columbia			
Clark	9,280	3,800	1,535
Cowlitz	243,097	53,384	369
Wahkiakum	13,250	24,997	750
Total	265,627	82,181	2,654
Central Washington and Inland Empire ¹			
Chelan,			
Stevens and			
Pend Oreille	20,453	--	--
Total	20,453	--	--
Total, State	2,820,673	884,789	85,085

¹ Combined to avoid disclosure.

² Other includes such products as hip and ridge shakes, wedges, etc.



POLE, POST & PILING



Washington Pole, Post and Piling Mills, 1976

Table 73—Number of pole, post and piling mills and their operating characteristics by area.

Economic area	Number of mills	Yearly Installed capacity MBF ²		Average number of operating days in 1976	
		Total	Treatment	Peeling	Treatment
Puget Sound	8	26,566	21,615	202 (7) ¹	199 (6)
Olympic Peninsula	5	17,800	200	152 (5)	23 (1)
Lower Columbia	5	14,247	10,651	186 (5)	209 (3)
Central Washington & Inland Empire	4	8,537	6,558	182 (3)	182 (3)
Total, State	22	67,150	39,024	179 (20)	184 (13)

¹ Number of mills.

² Thousand board feet, Scribner log rule.

Washington Pole, Post and Piling Mills, 1976

Table 74—Number of pole, post and piling mills by tenure of present ownership and years of site occupancy.

Years of site occupancy	Total	Tenure of present mill ownership years				
		0-2	3-5	6-10	11-20	20+
Pole, post, and piling						
3-5	1	--	1	--	--	--
6-10	2	--	--	1	1	--
11-20	8	--	--	1	7	--
21+	11	--	--	1	2	8
Total	22	--	1	3	10	8

Table 75—Number of pole, post and piling mills with selected equipment, by area and county.

Economic area and county	Number of mills	Chipper	Barker	Burner
Puget Sound				
King	1	--	--	--
Kitsap	2	--	2	--
Pierce	1	--	1	--
Skagit	1	--	--	--
Snohomish	2	--	2	--
Whatcom	1	--	1	--
Total	8	--	6	--
Olympic Peninsula				
Clallam	1	--	1	--
Lewis	1	--	--	--
Mason	1	--	1	--
Thurston	2	--	--	--
Total	5	--	2	--
Lower Columbia				
Clark	2	--	--	--
Cowlitz	3	--	3	--
Total	5	--	3	--
Inland Empire				
Spokane	1	--	1	--
Stevens	3	--	3	1
Total	4	--	4	1
Total, State	22	--	15	1

Table 76—Log consumption by species, area, and type of material.
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Lodgepole pine	Western redcedar	Other softwoods
Puget Sound					
Sound	14,022	8,721	--	5,301	--
Utility ¹	29	18	--	11	--
Total	14,051	8,739	--	5,312	--
Olympic Peninsula					
Sound	14,976	7,935	--	7,041	--
Utility ¹	24	21	--	3	--
Total	15,000	7,956	--	7,044	--
Lower Columbia					
Sound	11,835	11,714	--	78	43
Utility ¹	60	10	--	50	--
Total	11,895	11,724	--	128	43
Inland Empire					
Sound	3,103	--	--	2,882	221
Utility ¹	2,049	--	2,015	22	12
Total	5,152	--	2,015	2,904	233
Total, State					
Sound	43,936	28,370	--	15,302	264
Utility ¹	2,162	49	2,015	86	12
Total	46,098	28,419	2,015	15,388	276

¹ Utility volume for pole, post and piling industry is only post volume.

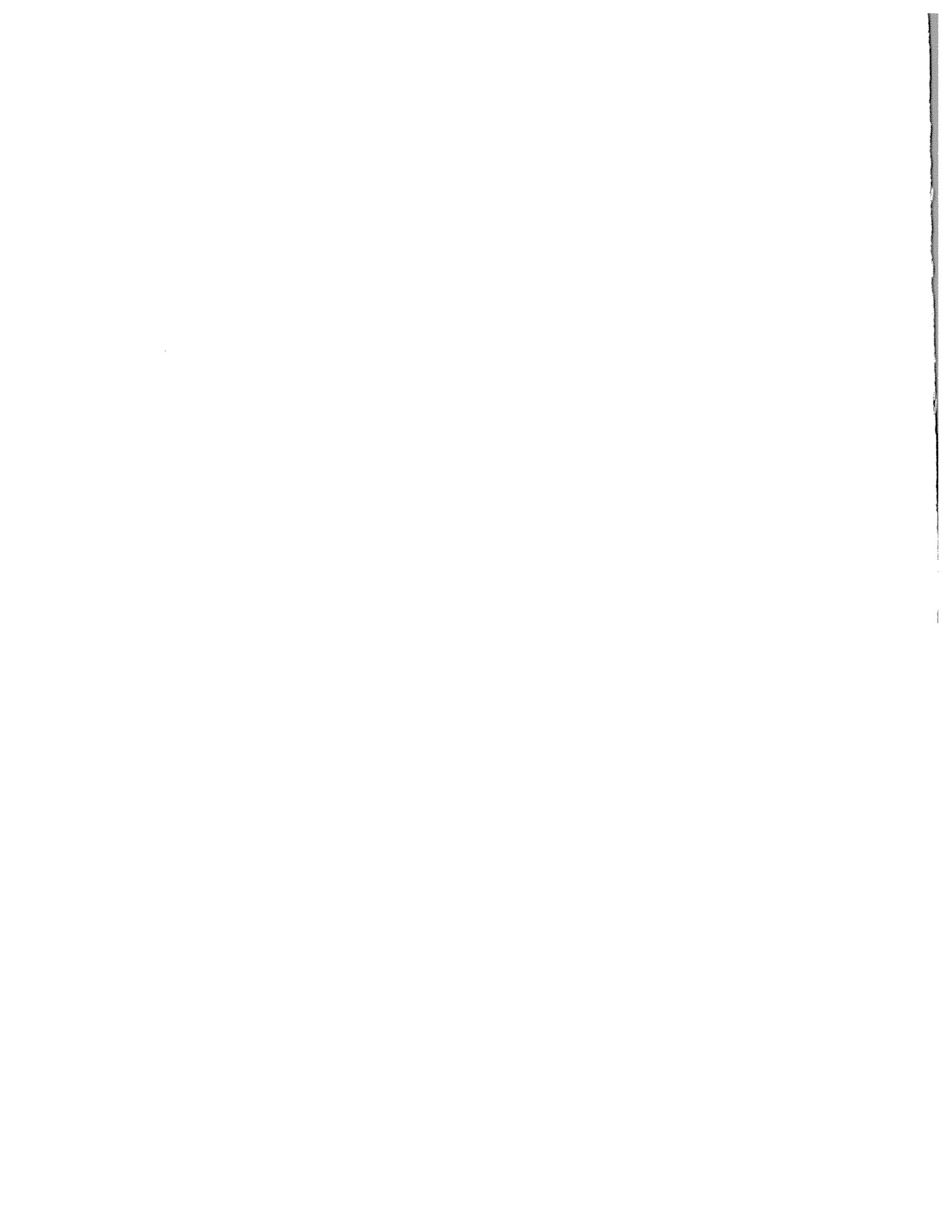
Washington Pole, Post and Piling Mills, 1976

Table 77—Ownership origin of logs consumed, by area and type of material.
(Thousand board feet, Scribner log rule)

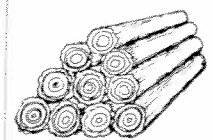
Economic area and type of material	All owners	State	National Forest	Bureau of Land Management	Other public	Forest Industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound	14,022	1,814	243	--	150	1,325	4,685	5,805
Sound Utility	29	10	--	--	--	10	1	8
Total	14,051	1,824	243	--	150	1,335	4,686	5,813
Olympic Peninsula	14,976	1,003	859	--	--	32	8,338	4,744
Sound Utility	24	7	14	--	--	1	2	--
Total	15,000	1,010	873	--	--	33	8,340	4,744
Lower Columbia	11,835	263	39	--	4,523	3,420	2,793	797
Sound Utility	60	--	--	--	--	8	47	5
Total	11,895	263	39	--	4,523	3,428	2,840	802
Inland Empire	3,103	531	643	--	--	643	486	800
Sound Utility	2,049	880	355	--	124	5	2	683
Total	5,152	1,411	998	--	124	648	488	1,483
Total, State	43,936	3,611	1,784	--	4,673	5,420	16,302	12,146
Sound Utility	2,162	897	369	--	124	24	52	696
Total	46,098	4,508	2,153	--	4,797	5,444	16,354	12,842

Table 78—Mill production, by product type and area.

Economic Area	Shipments		
	Treated	Untreated	Total
Puget Sound	11,062	3,541	14,603
Olympic Peninsula	102	11,913	12,015
Lower Columbia	9,327	3,879	13,206
Central Washington and Inland Empire	4,515	500	5,015
Total, State	25,006	19,833	44,839



LOG EXPORT



LOG
EXPORT



Table 79—Number of export operations and type of logs exported by county.

Port of Export		Number of Operations	Volume of Wood Exported			
Economic area and Port	County		Sound logs	Utility logs	Poles ²	Total
			-(Thousand board feet, Scribner log scale)-----			
Puget Sound						
Anacortes and Bellingham ¹	Skagit Whatcom	3	28,891	--	--	28,891
Everett and Seattle ¹	Snohomish King	16	254,379	10	--	254,389
Tacoma	Pierce	18	362,655	8	1,050	363,713
TOTAL		37	645,925	18	1,050	646,993
Olympic Peninsula						
Grays Harbor	Grays Harbor	17	802,161	--	--	802,161
Olympia	Thurston	6	71,100	--	--	71,100
Port Angeles	Clallam	9	264,789	2,407	--	267,196
TOTAL		32	1,138,050	2,407	--	1,140,457
Lower Columbia						
Longview and Vancouver ¹	Cowlitz Clark	12	329,612	--	--	329,612
Total, State		81	2,113,587	2,425	1,050 ²	2,117,062 ²

¹ Combined to avoid disclosure.

² Pole volume included in this table total only but excluded in other tables.

Table 80—Number of export operations by tenure of present ownership and years of site occupancy.

Years of Site Occupancy (Years)	All mills	Tenure of Present Ownership				
		0-2	3-5	6-10	11-20	21+
0-2	4	Distribution of tenure not available for export operations				
3-5	11					
6-10	31					
11-20	32					
21+	3					
Total	81					

Washington Log Export Operations, 1976

Table 81—Log flows to ports, by area and county.
(Thousand board feet, Scribner log rule)

Economic area and county of origin	Port and County of Export						
	Anacortes & Bellingham ¹	Everett & Seattle ²	Grays Harbor ³	Longview & Vancouver ⁴	Olympia ⁵	Port Angeles ⁶	Tacoma ⁷
Puget Sound							
King	--	50,349	--	--	--	--	95,728
Kitsap	--	--	--	--	3,706	--	7,674
Pierce	--	8,801	--	--	57,672	--	118,666
San Juan	--	20,288	--	--	--	--	--
Skagit	25,775	32,936	--	--	--	--	--
Snohomish	--	99,594	--	--	--	--	7,019
Whatcom	1,104	534	--	--	--	--	--
Total	26,879	212,502	--	--	61,378	--	229,087
Olympic Peninsula							
Clallam	--	10,520	8,660	--	626	132,077	1,510
Grays Harbor	--	--	283,076	--	--	--	--
Jefferson	--	4,292	261,053	--	--	135,119	--
Lewis	--	17,077	4,168	46,799	--	--	80,893
Mason	--	--	--	--	--	--	1,864
Pacific	--	--	245,204	3,345	--	--	--
Thurston	--	--	--	--	6,950	--	25,218
Total	--	31,889	802,161	50,144	7,576	267,196	109,485
Lower Columbia							
Clark	--	--	--	30,680	--	--	--
Cowlitz	--	--	--	203,383	--	--	--
Klickitat	--	--	--	--	--	--	--
Skamania	--	--	--	16,445	--	--	--
Wahkiakum	--	--	--	2,000	--	--	--
Total	--	--	--	252,508	--	--	--
Central Washington							
Kittitas	--	405	--	--	--	--	22,171
Okanogan	--	--	--	--	2,146	--	261
Yakima	--	--	--	--	--	--	--
Total	--	405	--	--	2,146	--	22,432
Inland Empire							
Spokane	--	--	--	--	--	--	--
Stevens	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--
State, Total	26,879	244,796	802,161	302,652	71,100	267,196	361,004
Outside Washington	2,012	9,593	--	26,960	--	--	1,659
Total	28,891	254,389	802,161	329,612	71,100	267,196	362,663

¹ Skagit and Whatcom Counties

⁴ Cowlitz and Clark Counties

⁷ Pierce County

² Snohomish and King Counties

⁵ Thurston County

³ Grays Harbor County

⁶ Clallam County

Washington Log Export Operations, 1976

**Table 82—Log consumption by species, area, and county.
(Thousand board feet, Scribner log rule)**

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	Western redcedar	Other softwoods	Hardwoods
Puget Sound									
King and Snohomish ¹	254,389	87,993	117,774	18,262	11,467	230	7,515	9,898	1,250
Pierce	362,663	181,944	154,643	16,115	784	--	4,716	4,407	54
Skagit and Whatcom ¹	28,891	6,777	19,207	--	--	--	224	2,683	--
Total	645,943	276,714	291,624	34,377	12,251	230	12,455	16,988	1,304
Olympic Peninsula									
Clallam	267,196	19,776	214,592	3,554	10,482	--	17,090	1,702	--
Grays Harbor	802,161	121,170	538,488	1,389	16,092	--	122,701	2,321	--
Thurston	71,100	31,249	22,067	13,887	--	--	1,173	2,724	--
Total	1,140,457	172,195	775,147	18,830	26,574	--	140,964	6,747	--
Lower Columbia									
Clark and Cowlitz ¹	329,612	161,675	158,380	980	--	--	4,864	3,713	--
Total	329,612	161,675	158,380	980	--	--	4,864	3,713	--
Total, State	2,116,012	610,584	1,225,151	54,187	38,825	230	158,283	27,448	1,304

¹Combined to avoid disclosure.

