

1980 WASHINGTON MILL SURVEY

WOOD CONSUMPTION AND MILL CHARACTERISTICS

by

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Loren Gee

Division of Management Services

**WASHINGTON MILL SURVEY SERIES
REPORT NO. 7**

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**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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Brian J. Boyle

Commissioner of Public Lands

ACKNOWLEDGMENTS

Appreciation is expressed to the major forest industry associations for their support of this study and to the individual mill owners and operators who provided the data for this report.

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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 1980. It documents the findings of the seventh in a series of biennial surveys regarding mill characteristics, wood flow and the input of raw materials into the state's six 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 1980 statistics were obtained from a mail survey with telephone follow-up conducted in 1981. Firms contacted were based on the most up-to-date mailing list that could be compiled.

Since this survey was a 100-percent canvas, no sampling error is involved.

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

However, in a few cases some data had to be estimated based on extrapolation from previous reportings. Log imports to the State of Washington from Crown lands in British Columbia are included in the out-of-state National Forest category. In total, this report is believed to provide the best and most reliable estimate of the status of the wood-using industries in the State of Washington as of 1980.

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 1980 as well as some recent trend information.

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

ABBREVIATIONS

BF = board feet

M = thousand

MBF = thousand board feet Scribner

MMBF = million board feet Scribner

SF = square feet

MSF = thousand square feet 3/8 inch basis

MMSF = million square feet 3/8 inch basis

Square = 100 square feet

M sq. = thousand squares

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(Between the Seven Washington Mill Survey Reports†)
Report Year and Table Number

1980 and 1978	1976	1974	1972 and 1970	1968	1980 and 1978	1976	1974	1972 and 1970	1968
1	1	1	1	1†	41	42	41	39	36
2	2,26†,76†	2,25,74†	2,24,72†	2†,23,67†	42	43	42	40	37
3	3	3	3	3†	43	44	43	41	38
4	4	4	4	4	44	45	44	42	39
5	5	5	8†	—	45	46	45	43	40
6	6	6,47,60,72	5,45,58,70	5,42,55,66	46	47	46	44	41
7	7,61,77†	7,70,59	6,68,57	64,54	47	48,49	48,49†	46,47†	43,44†
8	8,76†	8,75,74†	7,73,72†	6†,67†	48	50	50	48	45
9	9	9	8	7	49	51	51	49	46
10	10,60	69†,58	67†,56	63†,53	50	52	52	50	47
11	11	10	9	8	51	53	—	—	—
12	12	11	10	9	52	54	53	51	48
13	13	12	11	10	53	55	54	52	49
14	14	13	12	11	54	56	55	53	50†
15	15	14	13	12	55	57	56	54	51
16	16	15	14	13	56	58	—	—	—
17	17	16	15	14	57	59	57	55†	52†
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22	22	21	20	19	62	66	66	64	60
23	23	22	21	20	63	67	68	66	62
24	24	23	22	21	64	68	71†	69†	65†
25	25	24	23	22	65	69	78	76	69
26	27	26	25	24	66	70	79	77	70
27	28	27	26	25	67	71	80	78	71
28	29	28	28	26	68	72	81†	79†	—
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33	34	33	32	—	73	79	68†	66†	62†
34	35	34	—	—	74	80	66	64	60
35	36	35	—	—	75	81	—	—	—
36	37	36	34	31	76	82	73†	71†	68†
37	38	37	35	32	77	7†	70†	68†	64†
38	39	38	36	34	—	—	76	74	—
39	40	39	37	35	—	—	77	75	—
40	41	40	38	33	—	—	82	80	72

†Base year 1980

‡Contains part of the same information.

C O M P A R I S O N

1968 - 1970 - 1972 - 1974 - 1976 - 1978 - 1980

This section graphically compares data developed from the 1968, 1970, 1972, 1974, 1976, 1978 and 1980 surveys.

Number of Mills Included in the Surveys†

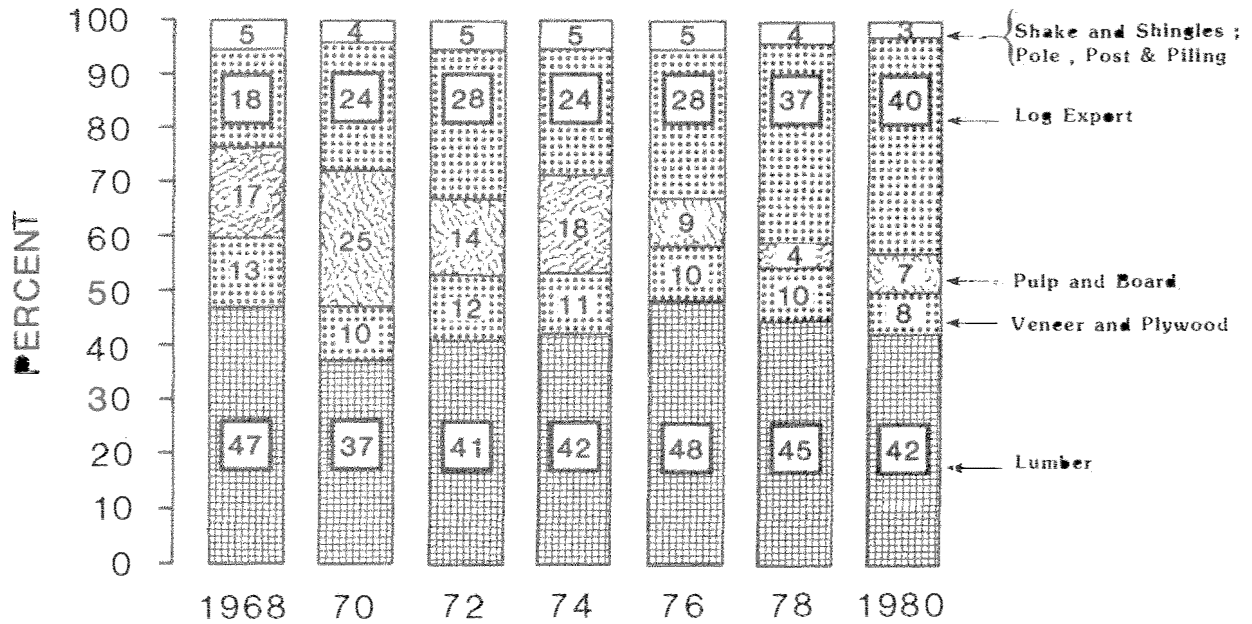
	1968	1970	1972	1974	1976	1978	1980
Sawmills	212	185	177	187	175	182	208
Veneer and Plywood	43	41	41	37	36	36	34
Pulp and Board	35	31	26	25	26	26	23
Shake and Shingle	158	172	176	205	252	337	267
Pole, Post and Piling	19	25	25	23	22	23	21
Log Export	1	1	96	90	81	160	134
Totals	467	454	541	567	592	764	687

†Only primary wood processing mills that operated during the survey year are included.
‡Not available.

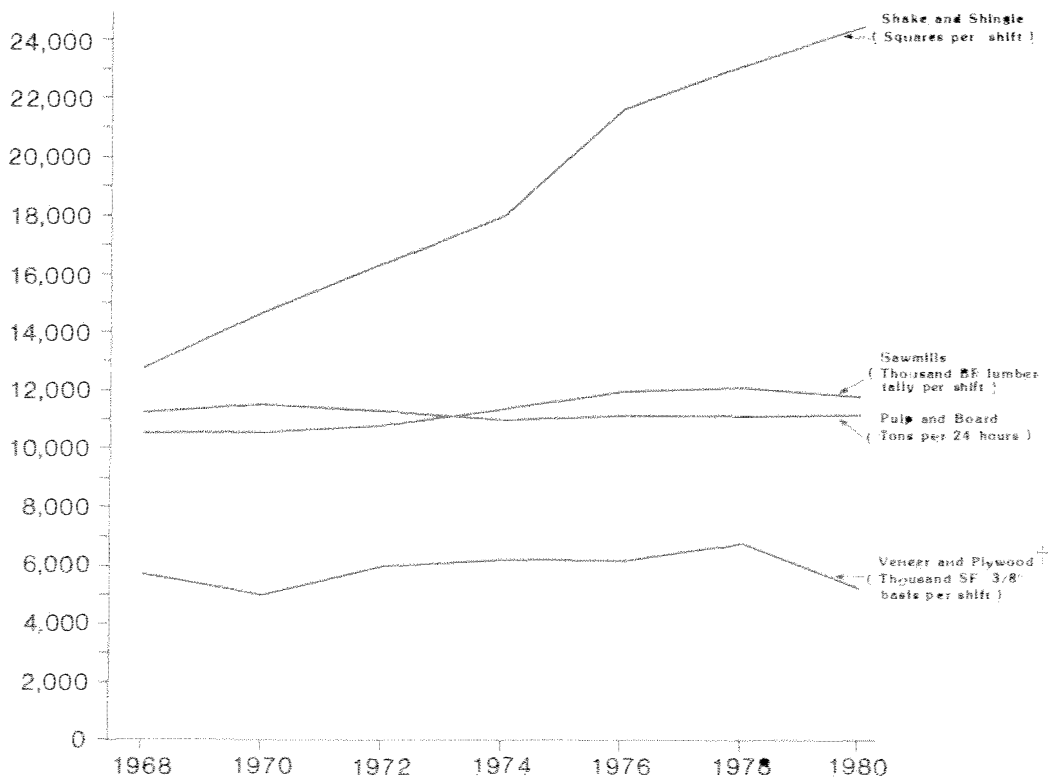
Trends

- The total number of operating facilities in the forest products industry decreased 10 percent from 1978 to 1980. The Shake and Shingle sector with a 21 percent decrease and the Log Export sector with a 16 percent decrease showed the most significant contractions.
- The Lumber sector has shown a substantial decline in roundwood consumption with a drop of 22 percent from 1978 to 1980.
- The Log Export sector continued to account for an increasing share of total log consumption, expanding by three percentage points to 40 percent since 1978. However, log export volume actually declined from 2.6 to 2.3 billion board feet Scribner from 1978 to 1980 which was an 11 percent decline.
- The use of hemlock by the Lumber sector continues to expand as a percentage of its log consumption to 32 percent of the total. Meanwhile, Douglas fir expanded as a percentage of the Log Export sector's log consumption to 43 percent.
- The number of mills more than two-thirds dependent on a single ownership class for log supply decreased from 451 in 1978 to 428 in 1980. The total number of mills more than two-thirds dependent on public ownership decreased 18 percent while on private ownerships there was no change.
- The percentage of wood and bark residues that are used continued to increase to 96 percent for all sectors in 1980. This is a four percent increase over 1976. The Lumber sector showed the greatest increase, approaching 98 percent utilization. The Veneer and Plywood sector remained the highest and had nearly 99 percent utilization.

Log Consumption by Type of Industry
(Percent)



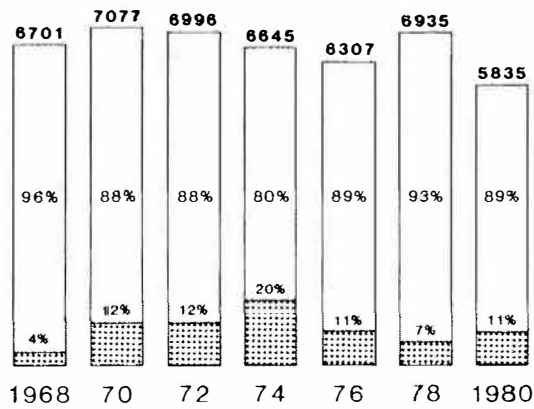
Installed Shift Capacity



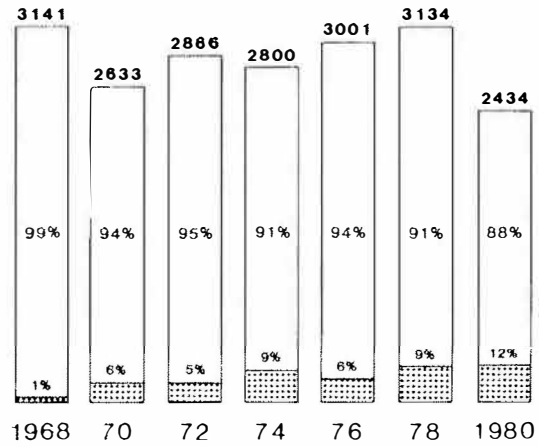
† Capacity excludes veneer capacity within a veneer and layup plant but includes layup, and veneer-only, and layup-only operations.

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

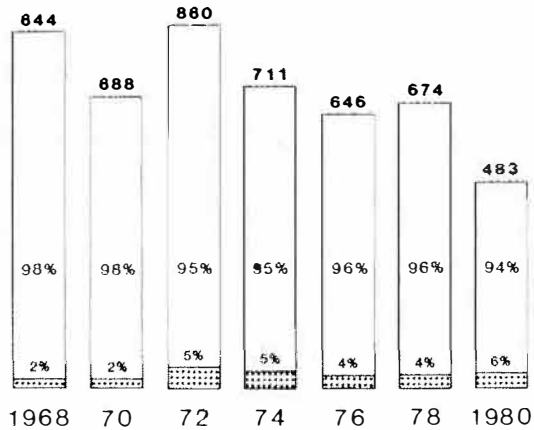
State Total



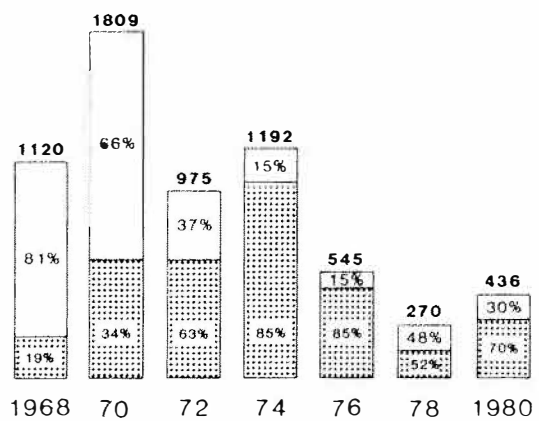
Lumber



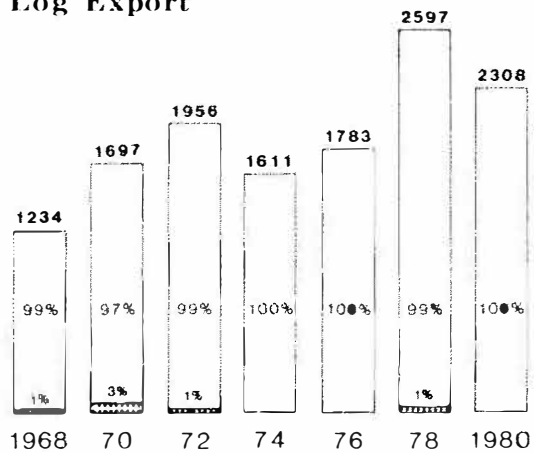
Veneer and Plywood



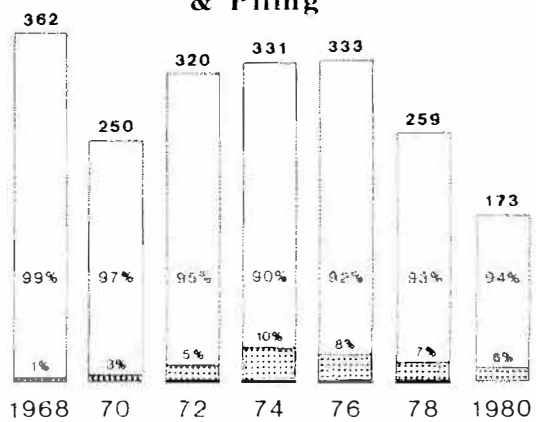
Pulp and Board



Log Export



Shake and Shingle; Pole, Post & Piling

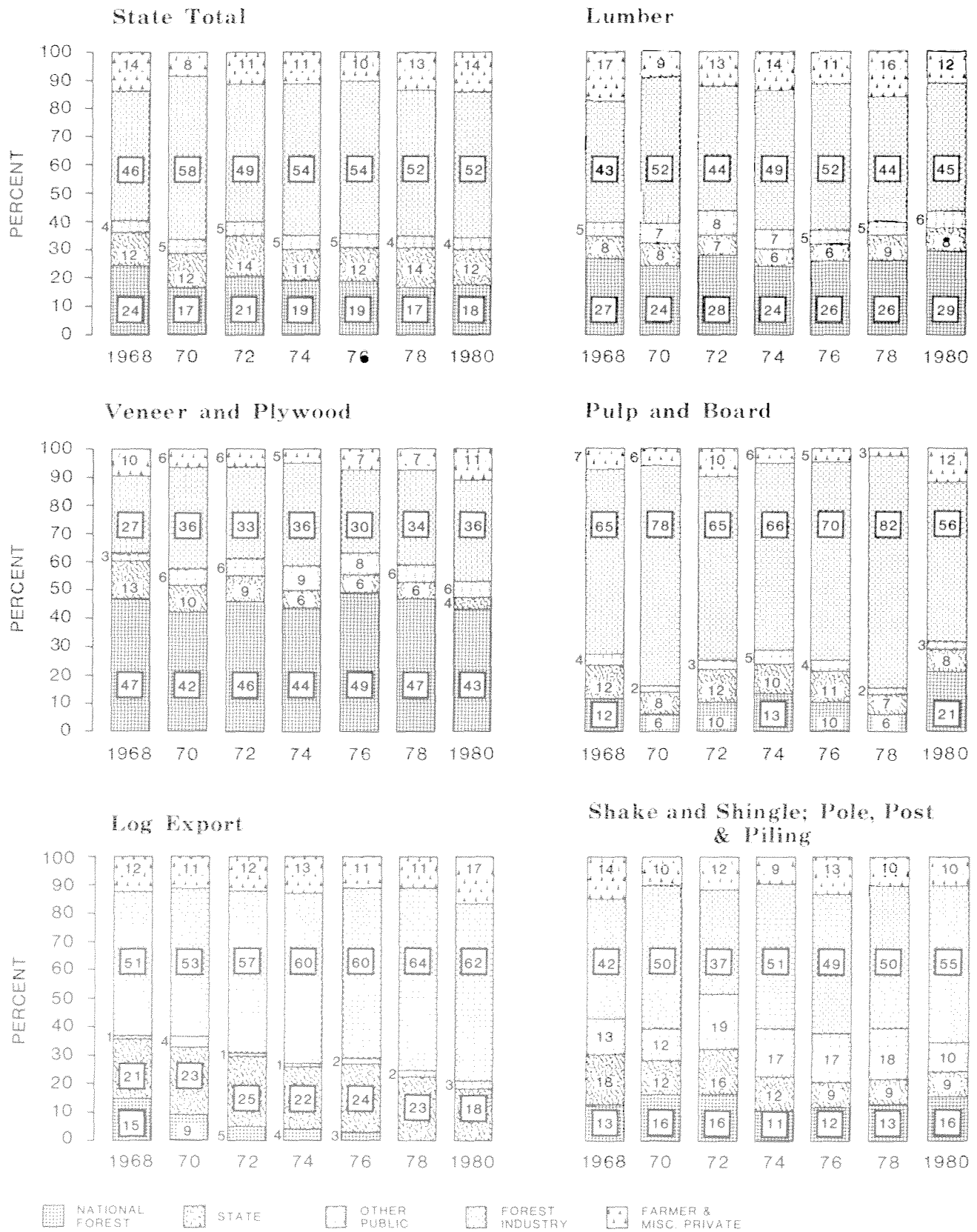


ROUNDWOOD

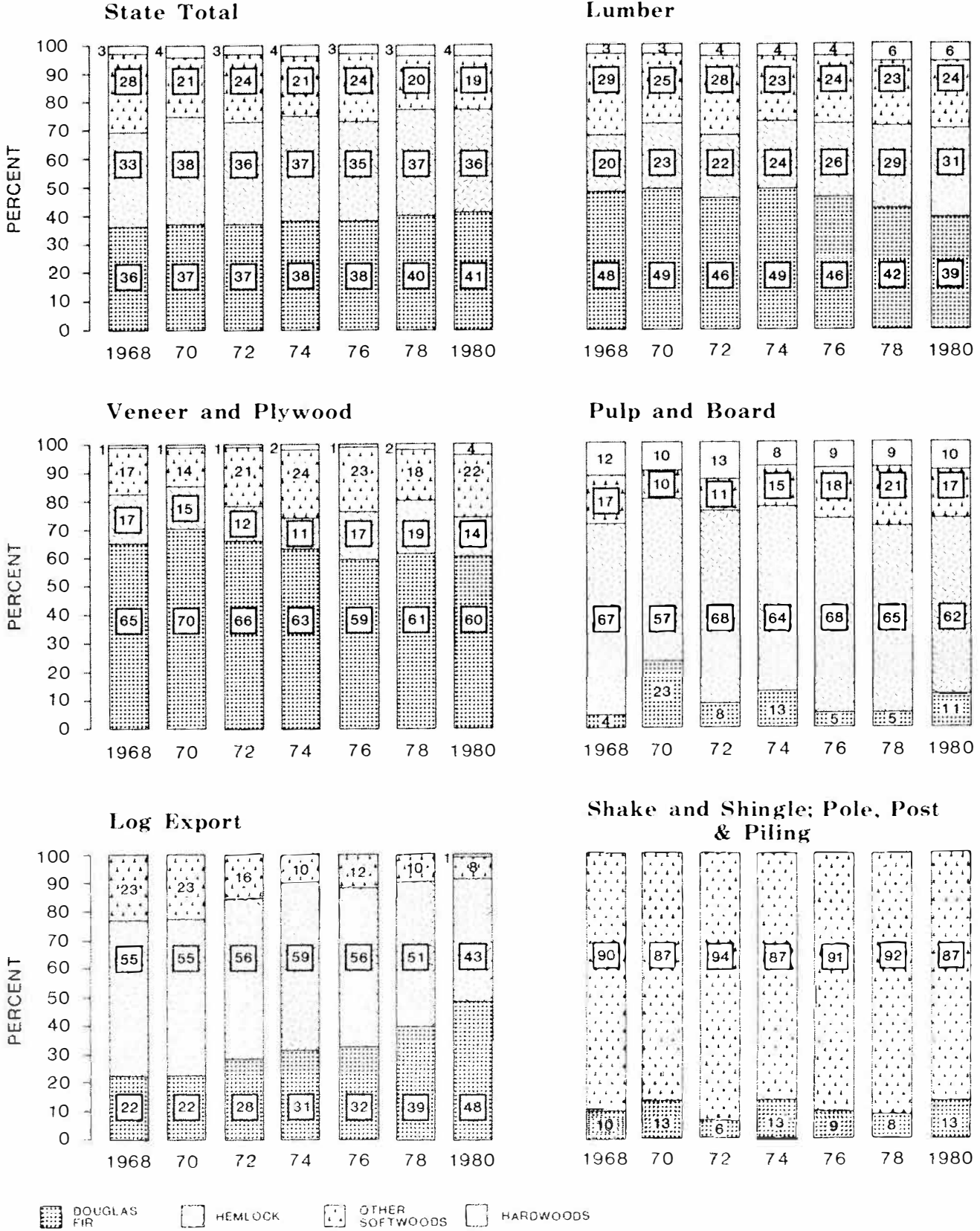


NOTE: Scale for height of bar is different for each industry. Hence visual comparison among the different industries is not valid.

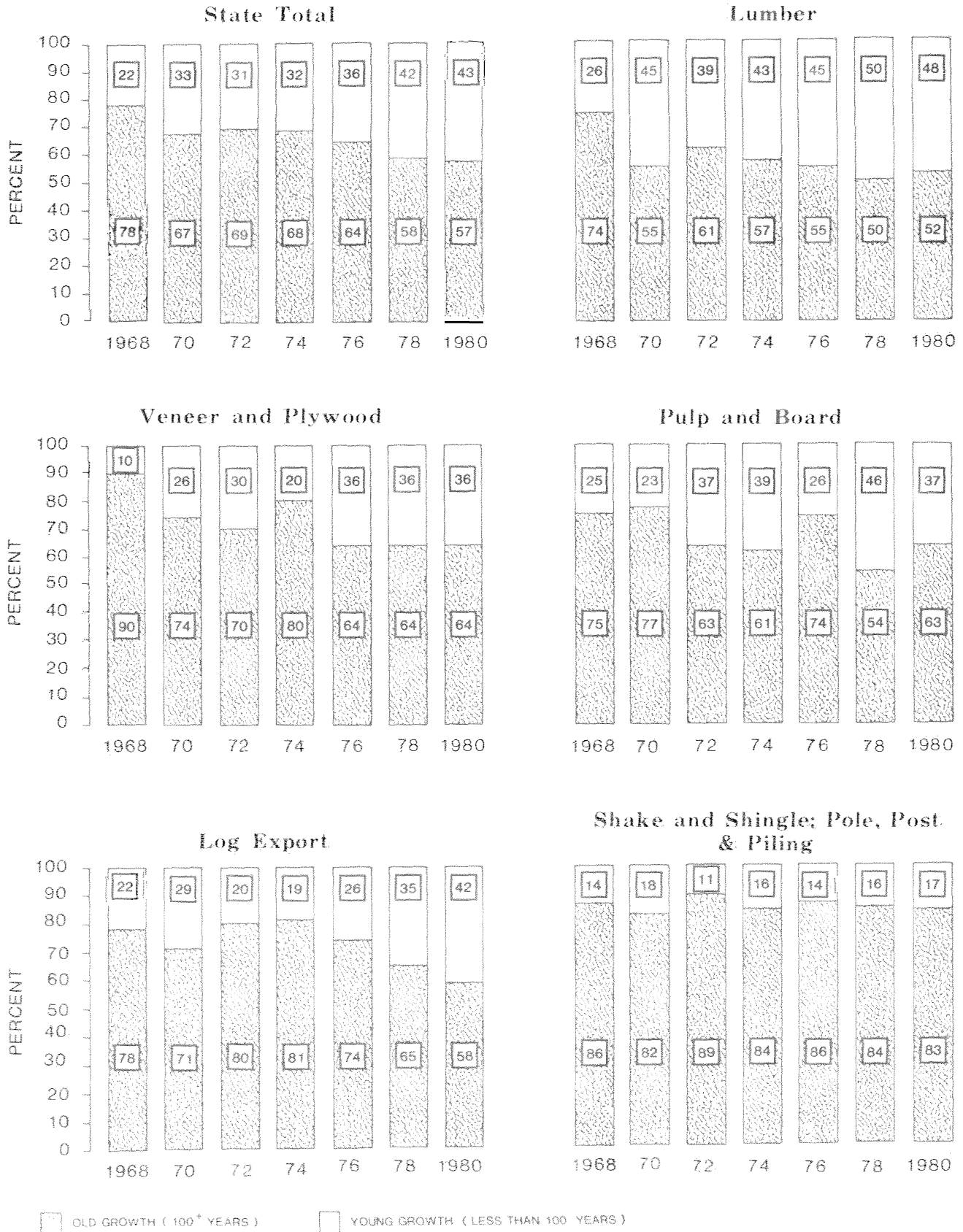
Log Consumption by Ownership Class by Industry (Percent)



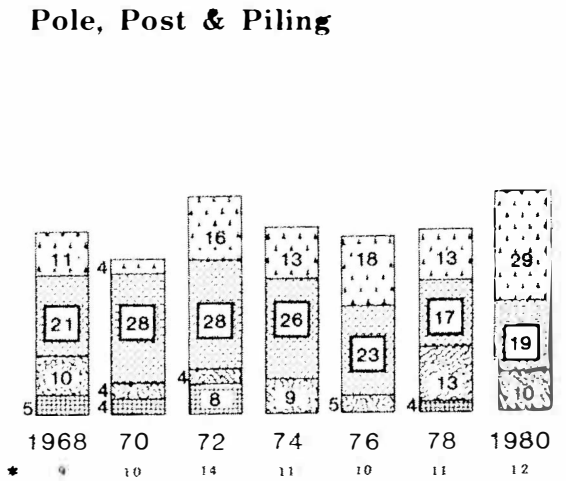
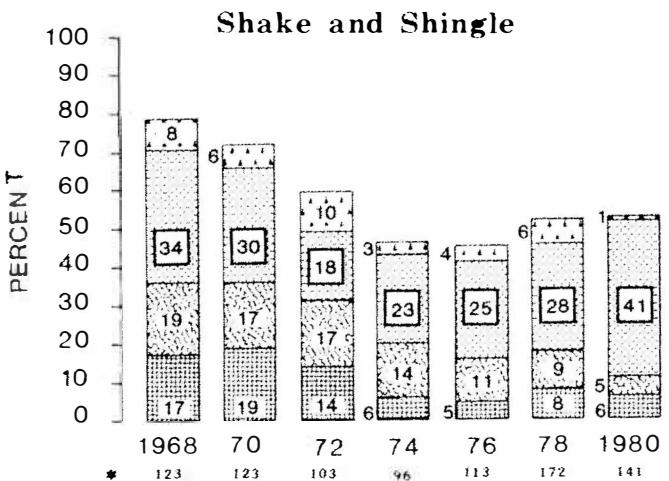
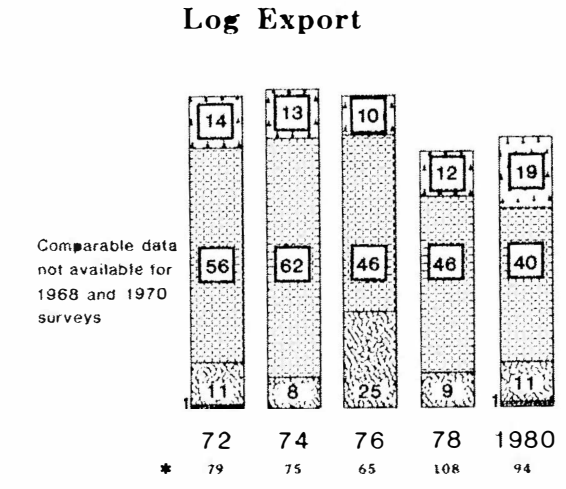
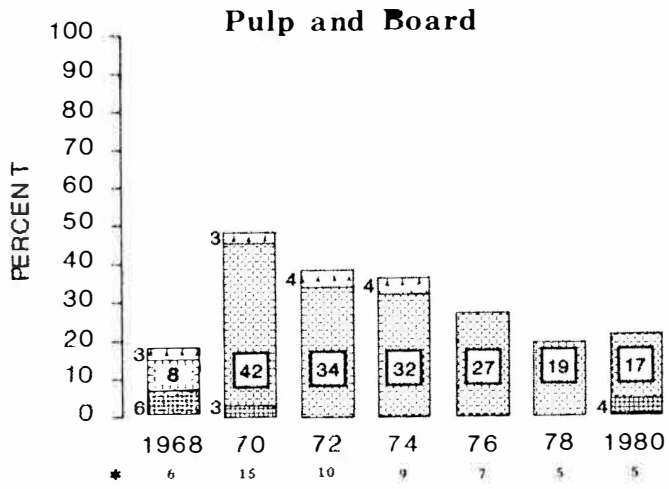
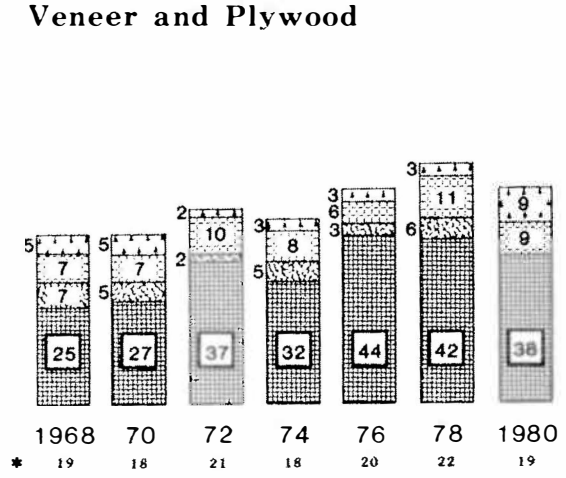
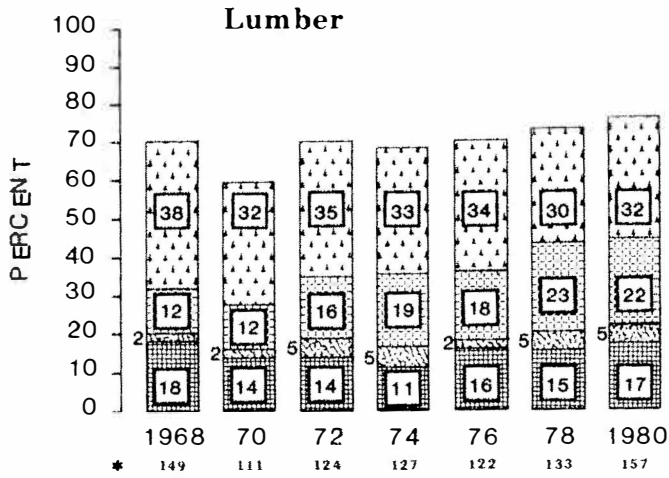
Log Consumption by Species by Industry (Percent)



Log Consumption by Timber Age Group by Industry (Percent)

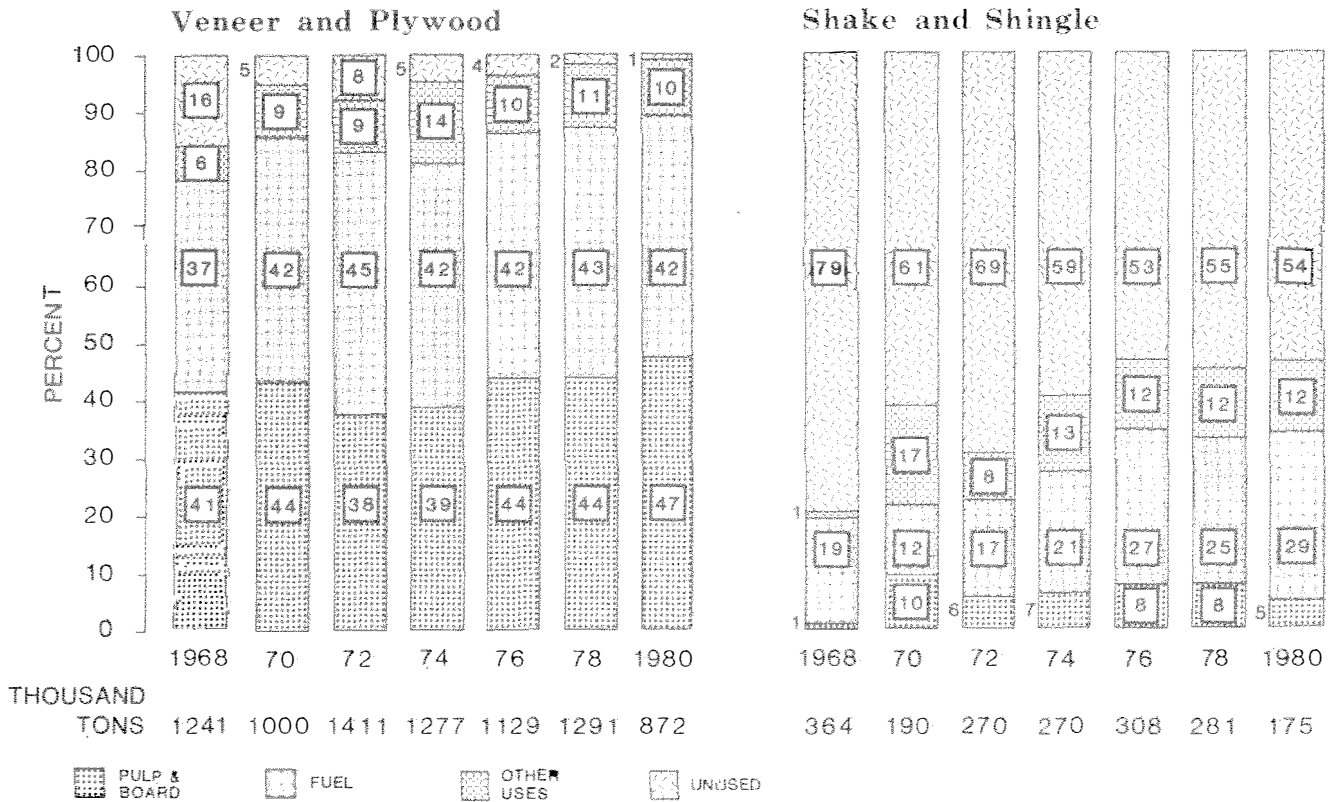
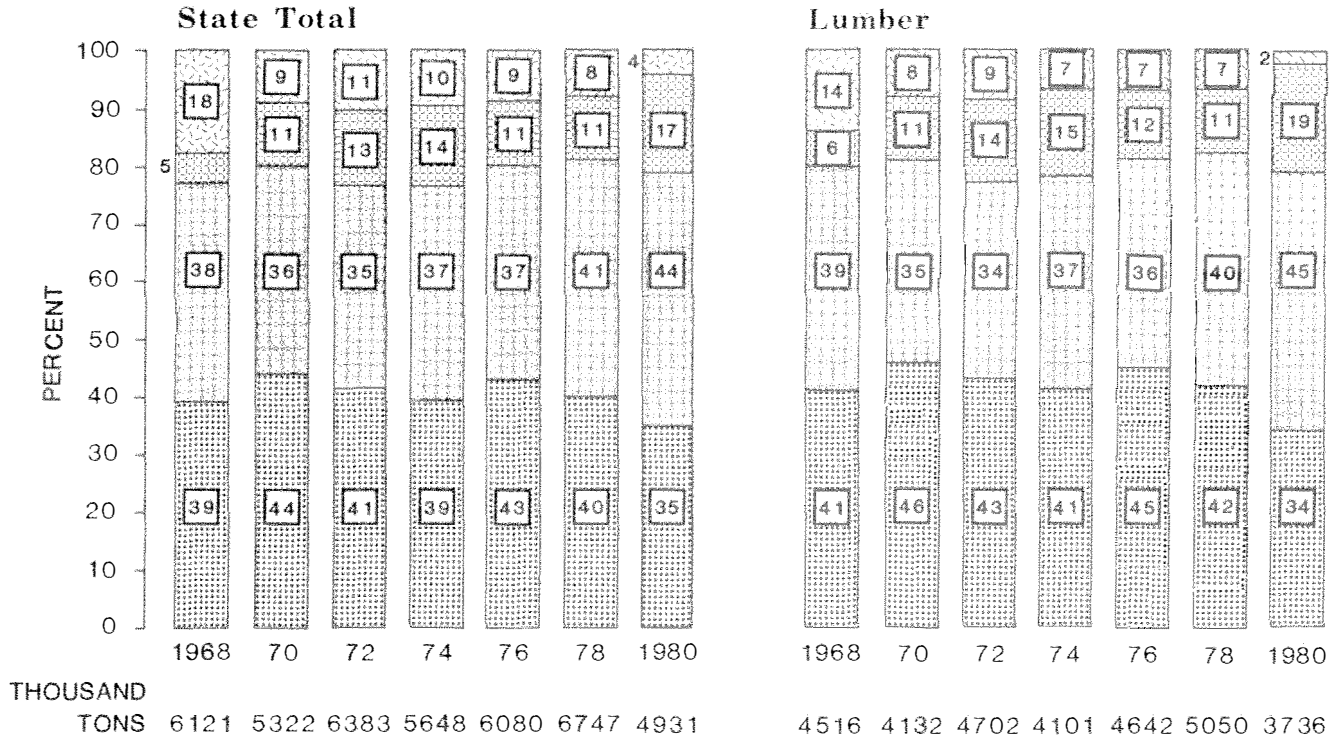


Number of Mills and Percent of Mills More than Two-Thirds Dependent on a Single Ownership Class for Logs by Industry



NATIONAL FOREST
 STATE and OTHER PUBLIC
 FOREST INDUSTRY
 FARMER & MISC. PRIVATE
 * NUMBER OF MILLS 2/3 DEPENDENT

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



1980 HIGHLIGHTS

Industry Characteristics

■ 687 mills† total:

Type of Mill	Number of Mills	Single Shift Capacity
Sawmills	208	11.9 MMBF
Veneer & Plywood	34	5.2 MMSF (¾" Basis)
Pulp	22	11.2 M Tons (Daily)
Board	1	52 MMSF (½" Basis Yearly)
Log Export	134	NA
Shake & Shingle	267	24.5 M Sq.
Pole, Post and Piling	21	47.2 MMBF (Peeling—Yearly)

- Grays Harbor was the leading county in number of mills with 132.
- The 39 largest sawmills (Class A) had 61% of the total sawmilling capacity.

Wood Consumption

- 5.8 billion board feet of roundwood logs consumed.
- 45 million board feet (log scale) of peeler cores, cants, blocks, bolts and miscellaneous peeled products consumed.
- 5.7 million tons of chips, sawdust and shavings consumed by the Pulp and Board Industry.

- Leading counties in roundwood use were:
Cowlitz.....949 MMBF
Kitsap and Pierce†.....855 MMBF
Grays Harbor and
Jefferson†813 MMBF
Snohomish.....800 MMBF

†Combined to avoid disclosure.

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

- Roundwood use by industry:
Sawmills42%
Log Export40%
Veneer & Plywood..... 8%
Pulp & Board..... 7%
Shake & Shingle 2%
Pole, Post & Piling..... 1%

- 87% of total wood used by Pulp and Board was in the form of chips, sawdust, shavings and wastepaper.
- 89% of all log volume used was from sound timber.
- 41% of the roundwood volume was Douglas fir; 36%, hemlock; 6%, western redcedar.
- 4% of all log volume was imported with slightly more than 60% of this volume from Oregon.
- 52% of the log volume came from forest-industry timberlands; 12% from State; 18% from National Forests.
- 51% of the National Forest log volume came from the Olympic and Mt. Baker-Snoqualmie National Forests.

Residues

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

Type of Mill	Percent	Million Tons
Sawmills	76	3.7
Veneer & Plywood	18	0.9
Shake & Shingle and other	6	0.3

†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.

■ 75% of all residue was wood; 25% was bark. 96% of wood residues and 94% of the bark were used. There were 196,000 tons of wood and bark unused.

■ 46% of wood residue went to Pulp and Board; 37% to fuel; 14% other uses; and 3% was unused.

AN OVERVIEW OF THE INDUSTRY

THE TIMBER ECONOMY

The Washington forest products industry was staggered by a severe slump in housing construction in the nation during 1980. This resulted primarily from high interest rates which began soaring in late 1979. As a result of depressed markets, the value of forest products produced in Washington during 1980 was \$2.9 billion, compared with \$3.8 billion in 1979.

Washington continued to rank high in the nation's Wood Products sector, having produced nearly eight percent of the nation's roundwood and 13.2 percent of the nation's softwood lumber. The state also produced 8.2 percent of the nation's softwood plywood and accounted for 70.5 percent of the nation's softwood log exports.

Nationally, 1980 was an extremely poor year for the forest products industry. Housing starts for 1980 show the extent of the decline in the economy, dropping from 1.7 million starts in 1979 to 1.3 million starts in 1980, a decline of over 23 percent. The only bright spots in the overall picture were settlement of the West Coast labor negotiations without a strike in June and deregulation of railroad rates in October.

Within the State of Washington, housing starts followed the national trend falling from 50,645 in 1979 to 2,990 in 1980, a 35 percent decline. Mount St. Helens added its fury to the industry's woes with the catastrophic volcanic eruption on May 18, 1980. Over 1.8 billion board feet of timber were damaged or destroyed within minutes. The initial eruption and subsequent eruptions dusted many logging and manufacturing operations with a fine gritty ash. The results of these various forces are apparent in production levels for the state.

Changes from 1979 to 1980 were:†

- Plywood production down 23% to 1.3 billion square feet 3/8-inch basis.
- Softwood lumber production down 17% to 3.2 billion board feet.
- Log export shipments down 18% to 2.2 billion board feet.
- Chip export shipments down 25% to 260 thousand tons.

Employment†† in lumber and wood products (SIC 24) reflected the sagging economy, dropping 12.6 percent from 1979 to 47,014 in 1980. However, employment in paper and allied products (SIC 26) increased 11.0 percent from 1979 to 17,567 in 1980. These data compare with national employment declines of 9.3 percent for lumber and wood products and 2.9 percent for paper and allied products.

Washington's total timber harvest (Figure 1) for 1980 was 5.7 billion board feet, a drop of 18 percent from the 1979 harvest level of 7.0 billion board feet.

Total wood used by Washington mills is shown graphically in Figure 2. In developing this graph final units of production were converted to log equivalents, Scribner scale. Note that Pulp and Board residue volume consumed does not represent additional timber harvest but is the use of by-products primarily from the Lumber, and Veneer

†Production figures beyond Figure 2 are based on the mill survey results.

††Employment and wage data were reported to the State of Washington Department of Employment Security in the quarterly tax reports, subject to the Washington Employment Security Act. Timber industry employment (SIC 24 and 26) did not include some workers, such as longshoremen and truckers, whose employment was not entirely attributable to the timber industry.

and Plywood sectors. The Pole, Post and Piling industry is not shown due to graphics limitations, but its high-value products make an important contribution to the total value of the wood products industry.

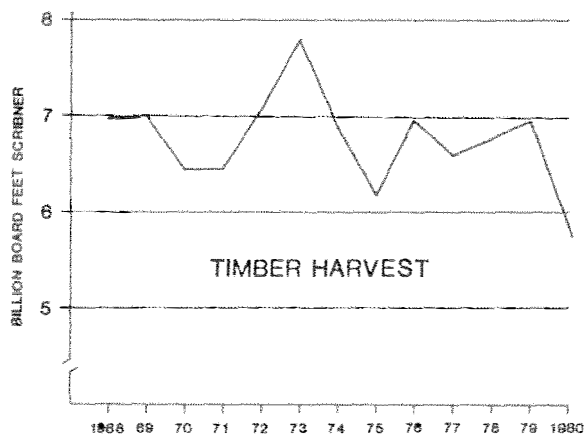
INDUSTRY CHARACTERISTICS

The forest products industry continues to adjust to changes in the resource, market and political environment. Land use planning for the roadless areas on the National Forests has progressed through the RARE II process but still remains to be resolved by Congress and the President of the United States.

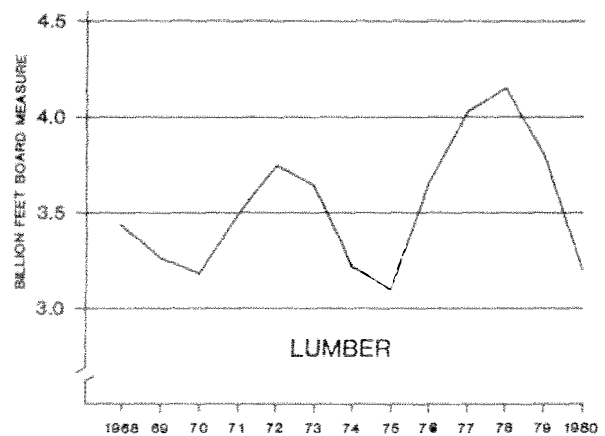
The industry is divided into six segments for purposes of description in this report: Lumber; Veneer and Plywood†; Pulp and Board; Log Export; Shake and Shingle; and Pole, Post and Piling. Where individual industry data was sufficient to avoid disclosure of confidential information, each industry sector was described separately. When fewer than three operations existed in

†The Veneer and Plywood Industry consists mainly of mills producing softwood veneer and plywood. However, a few of these mills do use small volumes of local hardwoods.

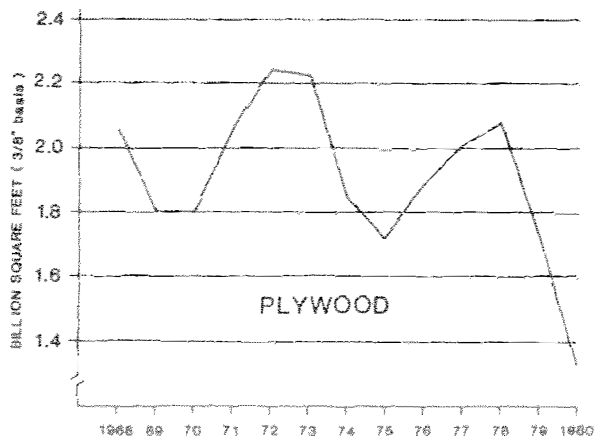
Figure 1 —Output of Major Timber Products for Washington, 1968-1980



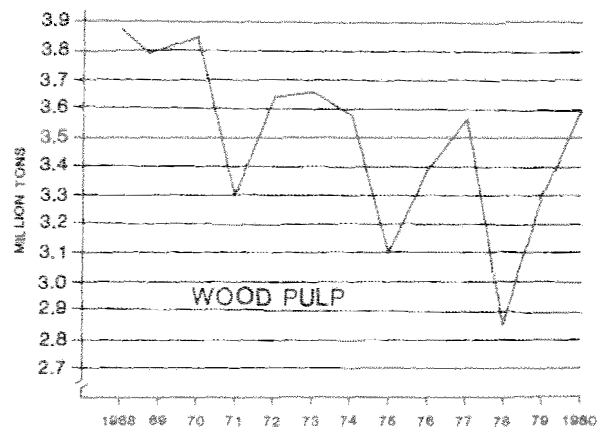
Source: STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES



Source: WESTERN WOOD PRODUCTS ASSOCIATION.



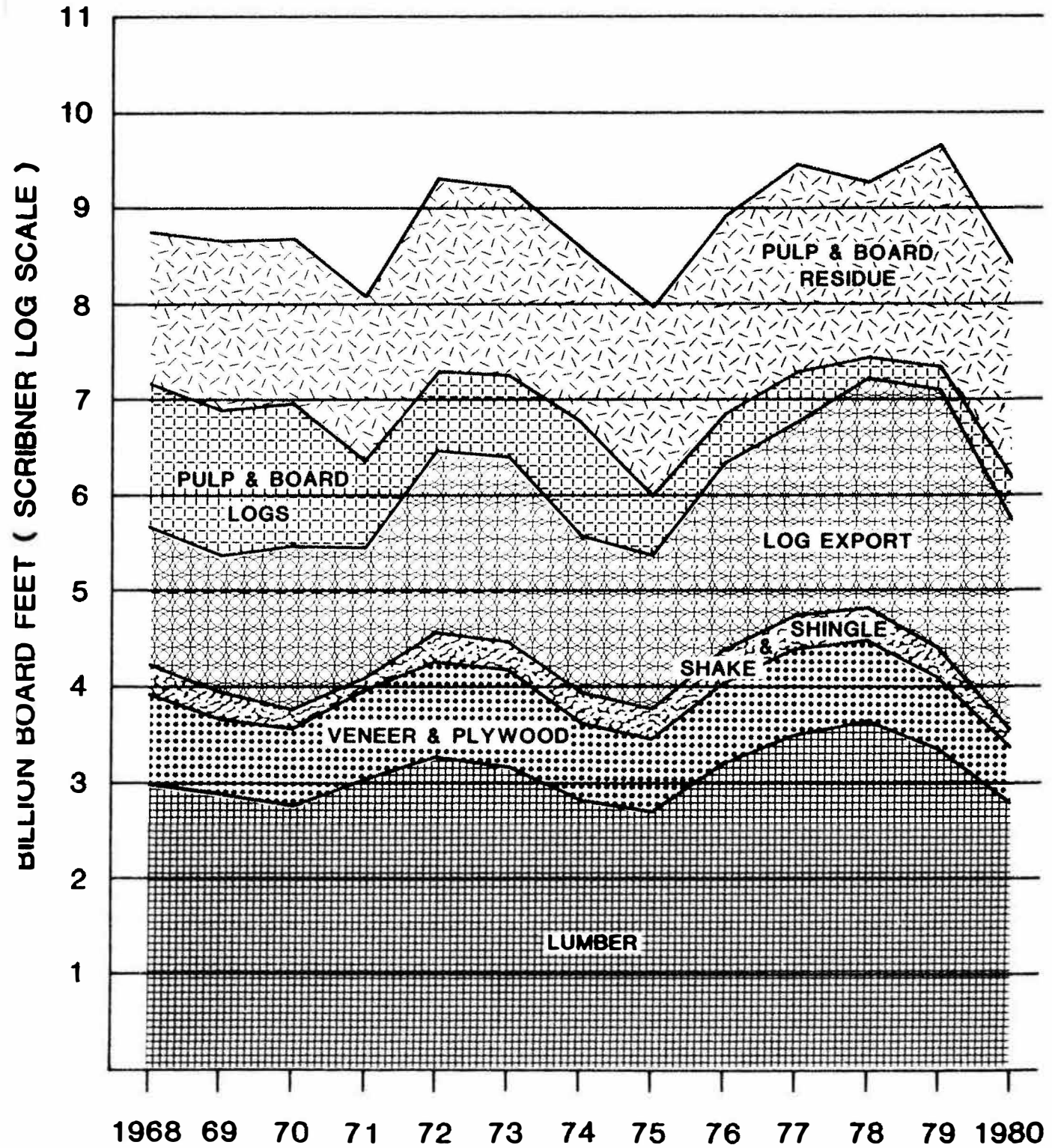
Source: AMERICAN PLYWOOD ASSOCIATION.



Source: NORTHWEST PULP & PAPER ASSOCIATION;
CURRENT INDUSTRIAL REPORTS
(Pulp, Paper, and Board - M26A).

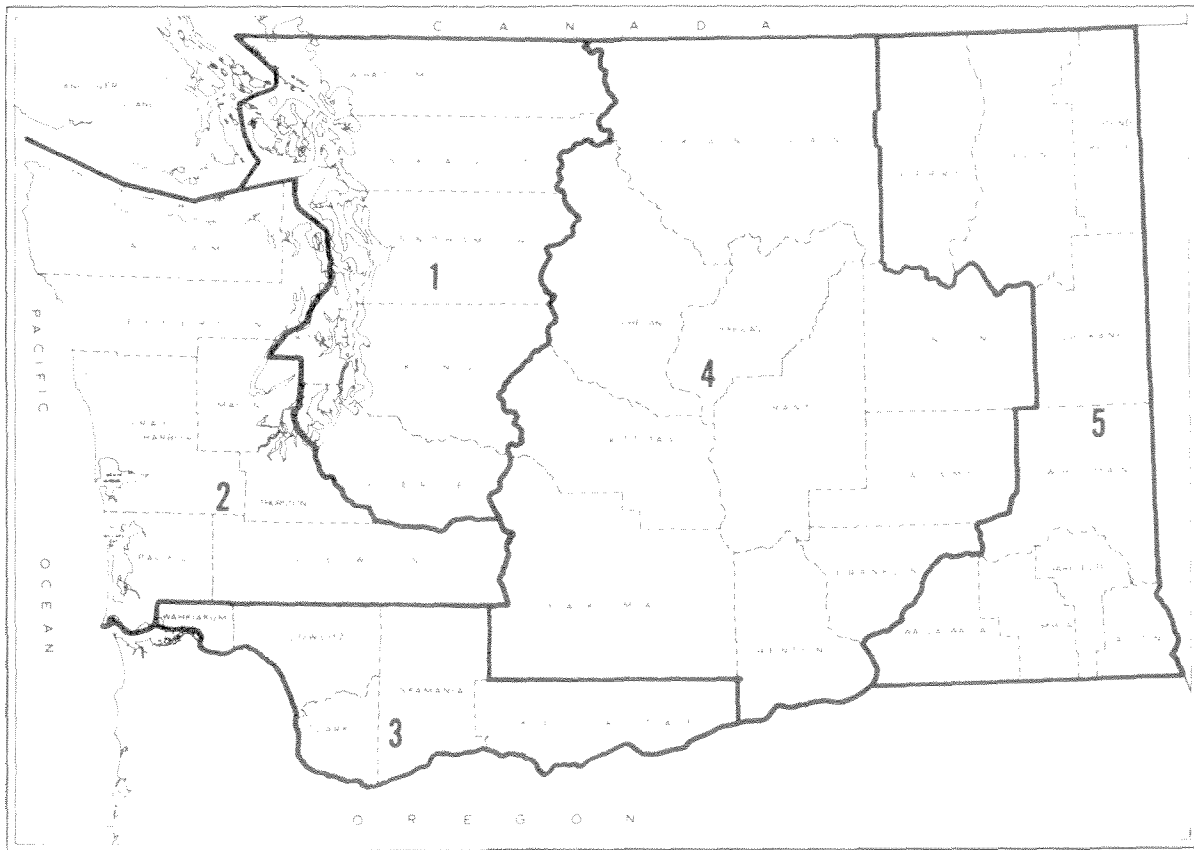
Note: 1980 estimated.

Figure 2 — Washington Wood Use by Major Forest Industries, 1968-1980†
 (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

a county, two or more counties were combined to present industry information. The data is also present for each of the five Economic Areas as delineated in Figure 3. In all cases, data were grouped to maximize the identity of geographic origin. Wherever possible, these groupings have remained the same as those used in previous surveys to allow comparisons over time. Comparisons between industry sectors and Economic Areas can most easily be made by using Tables 1-10.

WOOD CONSUMPTION

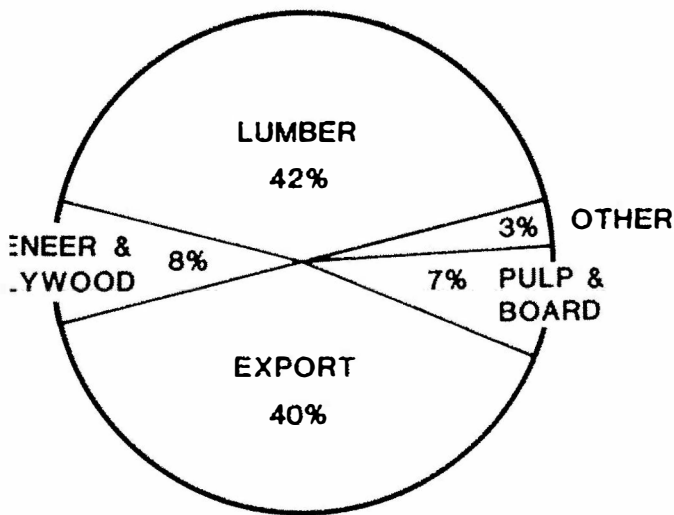
During 1980, Washington's primary forest products industries consumed about 5.8 billion board feet of logs,† 45 million board feet of other wood and 5.7 million tons of chips and

†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.

wood residue. Sound logs made up 89 percent of the total roundwood, with sawmills consuming the greatest portion (41 percent) of sound material. The remaining 11 percent of the roundwood (utility or cull material) was consumed mainly by the Pulp and Board Industry (48 percent). Figure 4 illustrates the total log consumption by industry segment.

The 5.7 million tons of chips and residues consumed by the Pulp and Board Industry consisted of mill residues and material from roundwood chipping plants as well as other fiber residues. This volume is equivalent to 2.9 billion board feet of roundwood logs. Thus, total wood consumption of the forest products industry can be expressed as the equivalent of 8.7 billion board feet (Scribner) for 1980, although most of the chips were by-products from manufacturing operations.

Figure 4 —Log Consumption by Type of Industry



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

Ownership	Log Supply Percent
State	12
National Forest	18
Bureau of Land Management	††
Other Public	4
Total Public	34
Forest	{ Own Wood Supply 23
Industry	{ Other Wood Supply 29
Farmer & Misc. Private	14
Total Private	66
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
Olympic	27
Mt. Baker—Snoqualmie	24
Gifford Pinchot	20
Wenatchee	12
Okanogan	8
Colville	4
Other	5
All National Forests	100

Dependence for timber supply by ownership class is useful information. This can be expressed by summing the number of individual mills that obtain more than two-thirds of their logs from a single ownership class. Percentages are taken as a percent of the 687 mills in the state.

Ownership	Mills Over Two-Thirds Dependent	
	Number	Percent
State	23	3.3
National Forest	65	9.5
Bureau of Land Management	—	—
Other Public	18	2.6
Total Public	106	15.4
Forest	{ Own Wood Supply 29	4.2
Industry	{ Other Wood Supply 100	27.7
Farmer & Misc. Private	103	15.0
Total Private	322	46.9
All Owners	428	62.3

At the state level, Douglas fir (41 percent) and hemlock (36 percent)† were the dominant species consumed by the industry during 1980. In Western Washington the three major species in order of importance were Douglas fir, hemlock 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 80 percent dependent on Douglas fir and western redcedar; the Shake and Shingle Industry is almost exclusively dependent on western redcedar.

Washington's timberlands supplied 96 percent of the industry's log demand. Oregon contributed 2.6 percent, with most (87 percent) of this volume being consumed in the Lower Columbia Area.††

RESIDUES

Production

The Sawmill; Veneer and Plywood; Shake and Shingle; Pole, Post and Piling; and Export segments of the industry generated 4.9 million tons of wood and bark residues in 1980. Of this amount, the Sawmill, and Veneer and Plywood sectors

†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.

provided 93 percent of the total and of their share, 98 percent was utilized.

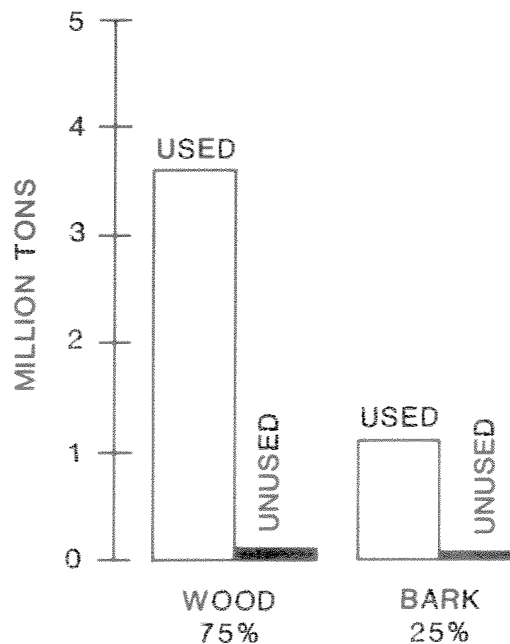
Of all residues produced, 96 percent were used. Fuel uses accounted for 2.2 million tons (44 percent) while the Pulp and Board Industry took 1.7 million tons (34 percent) of all residues.

Utilization

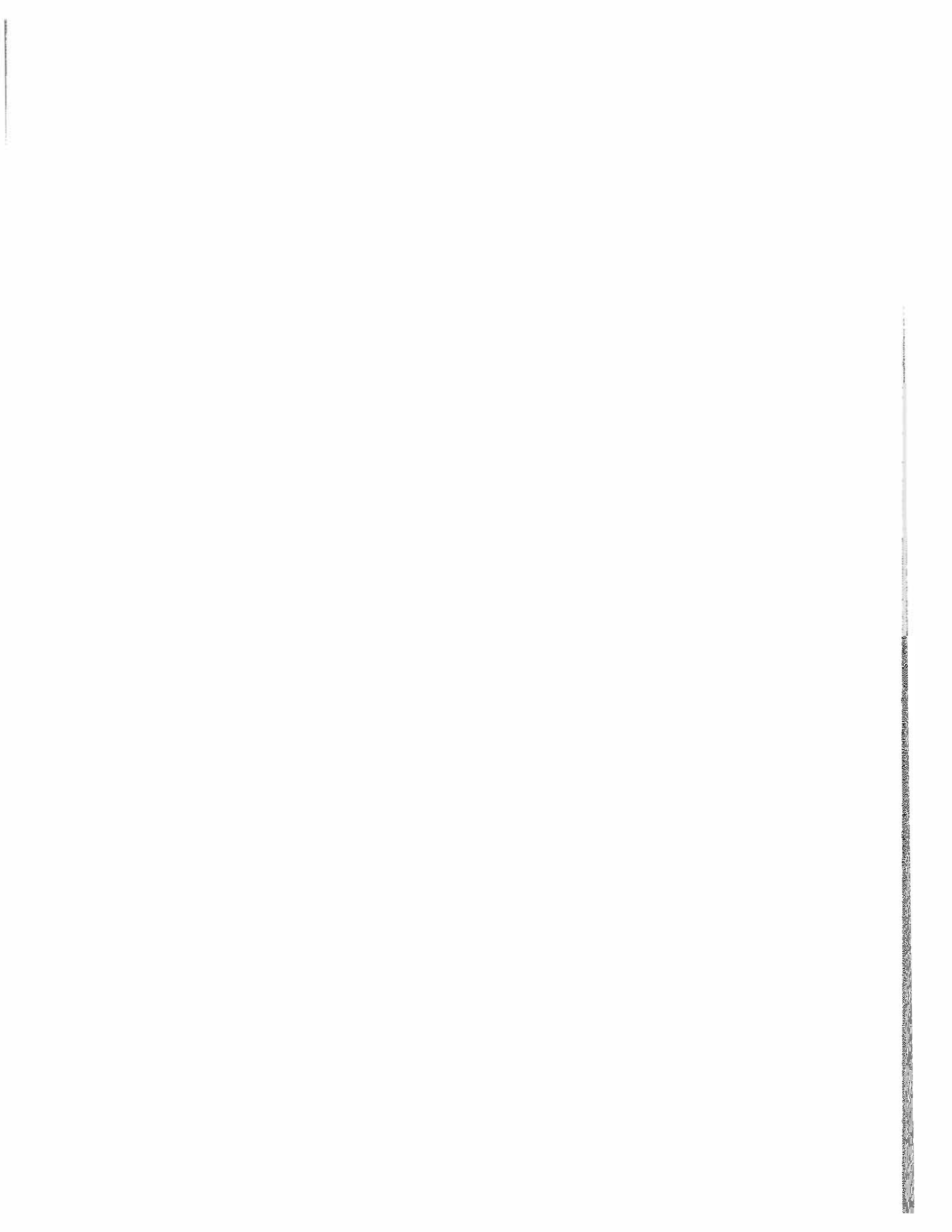
A significant achievement of the forest products industry has been the relatively high level of utilization of wood residues. Only three percent were unused in 1980.

Wood Residue Disposition	Percent
Pulp & Board	46
Fuel	37
Other Uses	14
Unused	3
All Wood Residue	100

Figure 5—Relative and Absolute Residue Volume



**1980
SUMMARY**



LUMBER INDUSTRY

MILL CHARACTERISTICS

Primary Operation

Only those sawmills that were primary processors of roundwood were included in this survey. However, data on non-roundwood consumed by these mills was also gathered and included (Table 18).

Size-Class

There were 208 sawmills operating in 1980 and these are classified by size-class, based on the maximum production for a single eight-hour shift.

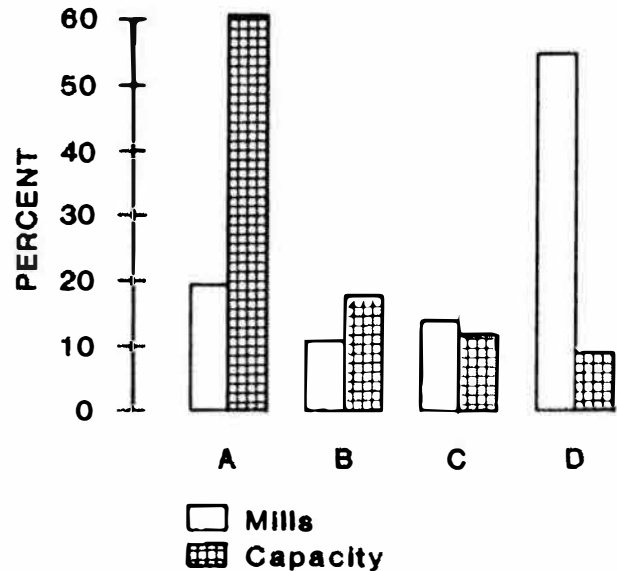
Mill Size-Class	Capacity per Single eight-hour shift MBF Lumber Tally
A	120+
B	80-119
C	40-79
D	less than 40

The 208 sawmills operating in 1980 represents an increase of 26 over those reported in 1978. The distribution of all mills by economic area, county and mill size-class is provided in Table 1. Since 1970, Snohomish County has had the most mills and continues to dominate with 23 mills in that county, followed by Clallam County with 18. Comparing the five Economic Areas, the Olympic Peninsula leads with a total of 71 mills; the Puget Sound Area is second with 67 mills. Although the number of mills has increased since 1978, the single shift capacity of 11,882 MBF represents a four percent decline.

Production Capacity

The number of Class D capacity mills increased by 26, but mill capacity declined by four percent since 1978. Class C mills continued to diminish with the loss of one mill, a three percent decrease, while capacity dropped 17 percent. Class B mills increased by one, but mill capacity declined one percent. Class A mills remain constant at 39 mills while mill capacity fell two percent.

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



Equipment

Planers and chippers were used by more than half of the sawmills during 1980 (shown in Table 13). Only 10 percent of the mills had burners, while 30 percent operated kilns. The percentage of mills having various types of equipment is shown below:

Equipment	Mill Size-Class				
	A	B	C	D	All
Planer	85	75	79	37	56
Chipper	100	96	97	21	55
Barker	92	88	86	14	47
Kiln	74	54	45	7	30
Burner	3	4	24	9	10

Information on size and type of headrig is presented in Table 15. Circular saws are most numerous with 113. However, the 83 band saws account for 76 percent of lumber produced by type of headrig (Table 35). Chipping saws were next with 13 percent, followed by circular saws with six percent and scragg saws with three percent. Band saws accounted for 80 percent of Class A production, 70 percent of Class B, 79 percent of Class C, and 35 percent of Class D (Table 34).

Mill Size-Class	Average Days of Operation 1980	Percent Decrease From 1978
A	208	14
B	223	7
C	209	14
D	111	49
All Mills	156	35

Site and Ownership Tenure

Site and ownership tenure by mill size-class are cross tabulated in Table 16. The data shows that size-class D mills have a shorter site occupancy than the larger mills. This is partially due to some size-class D mills being portable and moved from site to site.

Mill Size-Class	Over 10 Years	
	Under Present Ownership	At Present Site
	percent	
A	51	79
B	42	75
C	52	79
D	43	47
All Mills	46	61

Operating Days

The normal five-day work week results in about 250 operating days per year. In 1980, the average ranged from a low of 76 days for size-class D mills in the Inland Empire to a high of 233 days for size-class C in the Lower Columbia area (Table 17).

WOOD CONSUMPTION

Raw Materials

This survey only includes mills that consumed roundwood logs. Resaw and planing mills were not included. However, 4.8 million board feet of wood consumed by the mills surveyed were not in log form but were either from peeler cores or from cants. Eighty-eight percent of the logs consumed were sound and 12 percent were utility grade (Table 18).

Roundwood Age

Forty-eight percent of the logs consumed by sawmills during 1980 were classified as young growth timber (less than 100 years old). This is a reversal of the trend to young growth which was emerging in 1978.

Economic Area	Mill Size-Class†			
	A	B&C	D	All Mills
	—Young Growth Percent—			
Puget Sound	52	63	68	55
Olympic Peninsula	51	85	73	60
Lower Columbia	24	26	63	25
Central Washington	36	42	71	38
Inland Empire	+	46*	89	47
Total State	43	53	72	48

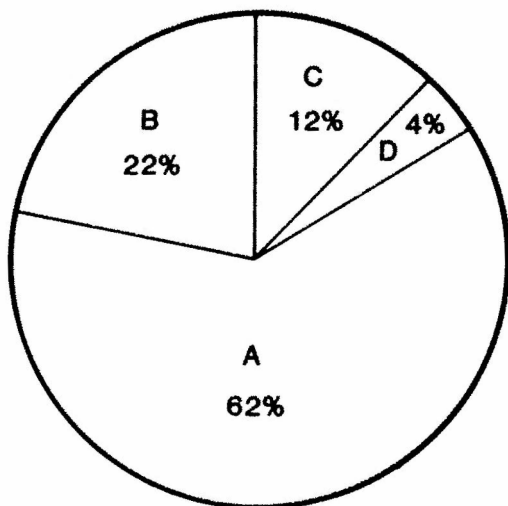
†Refer to Table 19 for size-class combinations.

Consumption by timber age, Economic Area, county and mill size-class is provided in Tables 19 and 20.

The data shows that the smaller mills are more likely to use young

growth timber. By Economic Area, the Puget Sound and Olympic Peninsula are above average in the consumption of young growth timber while the consumption of young growth in the Lower Columbia has dropped substantially since the 1978 Survey. This switch to old growth timber in the Lower Columbia Area is most likely attributable to the salvage of timber as an aftermath of the catastrophic volcanic eruption of Mount St. Helens.

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



Ownership

Sawmills relied on public timberlands for 43 percent of their logs (Table 22).

Ownership	Log Supply Percent
State	8
National Forest	29
Bureau of Land Management	†
Other Public	6
Total Public	43
Forest Industry { Own Wood Supply	36
Farmer & Misc. Private { Other Wood Supply	9
	12
Total Private	57
All Owners	100

Less than 0.5 percent.

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

Mill Size-Class†	Forest Industry		All Public
	Own Wood Supply	Other Wood Supply percent	
A	47	4	41
B	17	12	53
C	20	23	40
D	3	36	29
All Mills	36	9	43

†Refer to Table 22 for size-class combinations.

Public timberlands supplied the Central Washington, Inland Empire and Olympic Peninsula Area sawmills with 71, 54, and 50 percent of their logs, respectively (Table 22). Comparable figures for Puget Sound and Lower Columbia Area mills are 39 and 18 percent.

Ninety-two percent of the sawmills 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	2
National Forest	17
Bureau of Land Management	—
Other Public	3
Total Public	22
Forest Industry { Own Wood Supply	9
Farmer & Misc. Private { Other Wood Supply	13
	32
Total Private	54
All Owners	76

Species

During 1980, sawmills used 39 percent Douglas fir logs and 32 percent western hemlock logs (Table 25). Figure 8 illustrates the species variation by Economic Area.

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

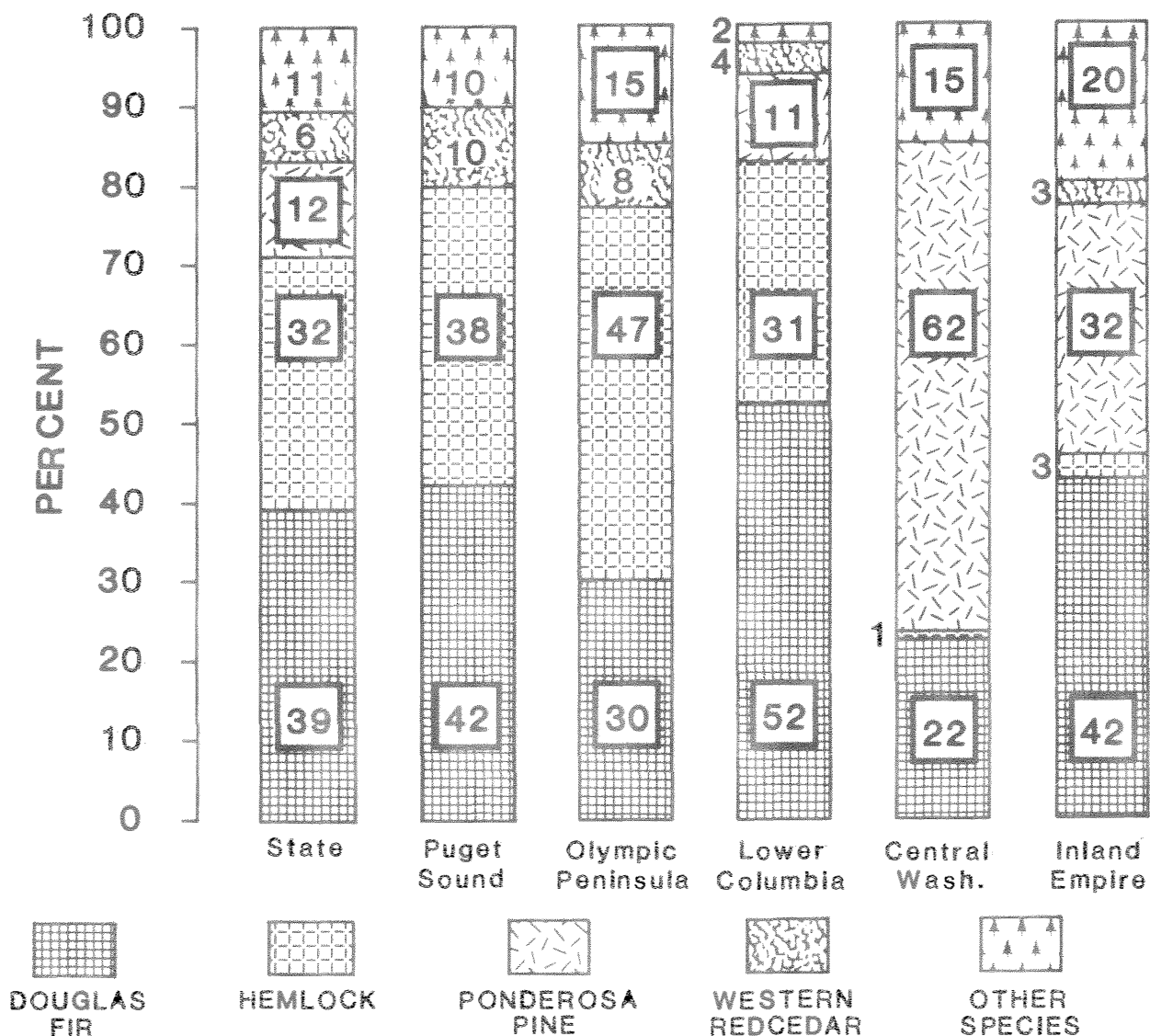
- Puget Sound - Douglas fir, hemlock
- Olympic - hemlock, Douglas fir
- Lower Columbia - Douglas fir, hemlock
- Central Washington - ponderosa pine, Douglas fir
- Inland Empire - Douglas fir, ponderosa pine

Minimum Log Diameter

Economic Area	Mills Accepting Logs with Small-End Diameters Under Six Inches percent
Puget Sound	34
Olympic Peninsula	31
Lower Columbia	32
Central Washington	33
<u>Inland Empire</u>	<u>37</u>
Total State	33

About one-third of the mills in the state accepted small diameter logs in 1980. However, in the Puget Sound, Olympic Peninsula and Central Washington

Figure 8 --Sawmill Log Consumption by Species and Area



Areas the percentages were down substantially from 1978. The Lower Columbia Area had a slight decline while the Inland Empire was the only Area to show an increase.

Imports

Washington timberlands supplied over 97 percent of the logs consumed; almost two percent came from Oregon with most of the remainder from Idaho and British Columbia (Table 3).

PRODUCTION

Lumber

Sawmills in the State of Washington produced 3.2 billion board feet of lumber during 1980. Lumber produced by the 208 primary sawmills surveyed was 27 percent rough and 50 percent green (Table 33).

Economic Area	Lumber Production Percent
Puget Sound	30
Olympic Peninsula	28
Lower Columbia	21
Central Washington	11
<u>Inland Empire</u>	<u>10</u>
Total State	100

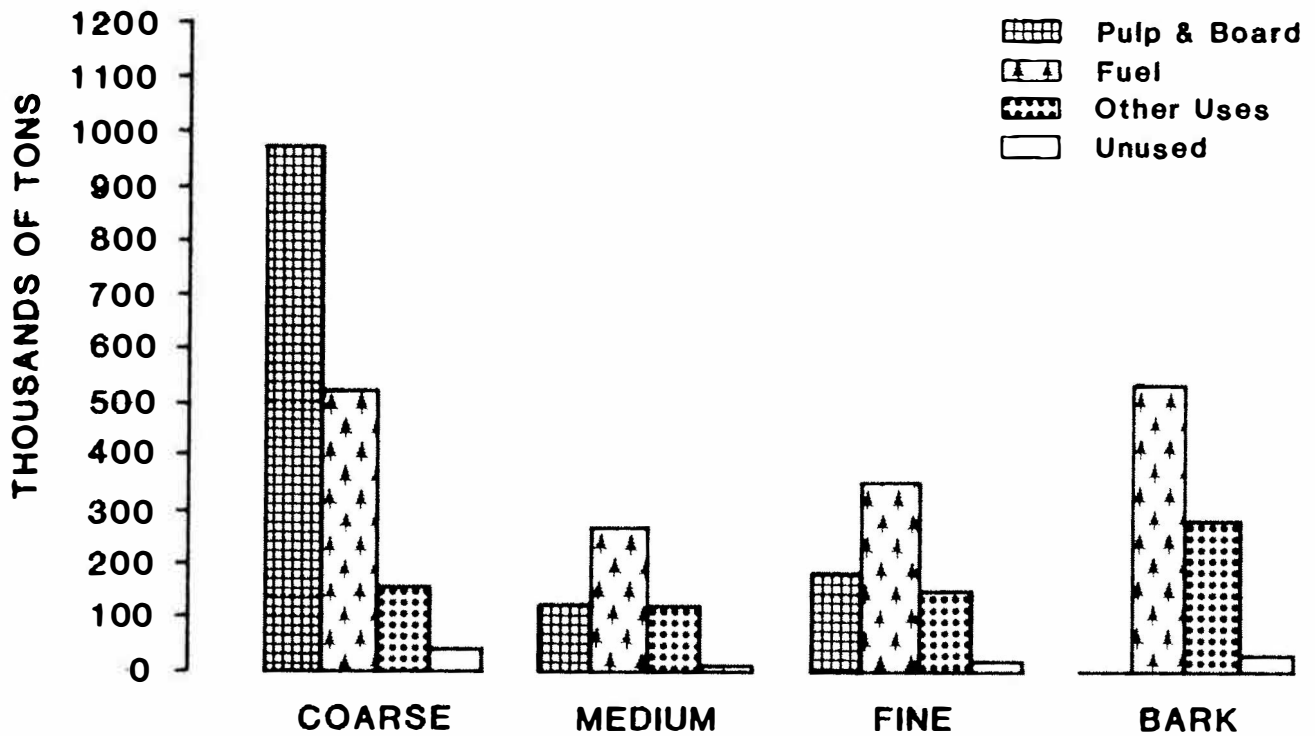
Residues

Production of 3.2 billion board feet of lumber resulted in 3.7 million tons of residue (Table 30). Bark accounted for 22 percent of the total while wood made up the balance. The wood residues are classified in three categories: coarse (slabs, edgings, trim and spur ends); medium (shavings); and fine (sawdust) in (Table 28). These wood residues made up 2.9 million tons of the total, or 0.9 tons for every 1,000 board feet of lumber produced.

Residue uses 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 98 percent of all residues 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	Fuel	Other Uses	Unused
	percent			
A	43	38	18	1
B†	44	45	8	3
C	55	37	6	2
D	24	45	16	15
All Mills	44	40	14	2

†Class B includes Class A for Inland Empire.

Mill Size-Class	Bark Residue Use			
	Pulp & Board	Fuel	Other Uses	Unused
	percent			
A	—	63	37	—
B†	—	65	26	9
C	—	67	24	9
D	—	52	35	13
All Mills	—	64	33	3

†Class B includes Class A for Inland Empire.

VENEER and PLYWOOD INDUSTRY

MILL CHARACTERISTICS

Facilities

The 34 veneer and plywood mills surveyed were distributed throughout the state's Economic Areas and in 19 of the 39 counties. All but four of the mills were located in Western Washington (Table 36). Grays Harbor and Lewis Counties, with a total of 9 mills, contributed to making the Olympic Peninsula the leading Area in the state (16 mills).

Production Capacity

Table 37 shows the production capacity per shift for each type of mill by county.

Economic Area	Average Shift Capacity per Mill†	
	MSF	% Basis
Puget Sound	173	
Olympic Peninsula	146	
Lower Columbia	132	
Central Washington	185	
<u>Inland Empire</u>	<u>150</u>	
Total State	154	

†Excludes Veneer capacity within a veneer and layup plant, but includes layup, and veneer-only, and layup-only operations.

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

Mill Type	Average Shift Capacity		Number of Mills
	MSF	% Basis	
Veneer & Layup†	161		19
Veneer-only	134		11
<u>Layup-only</u>	<u>172</u>		<u>4</u>
All Types	154		34

†Excludes veneer capacity within a veneer and layup plant

Equipment

Tables 38 and 39 present statistics on log utilization with respect to lathe diameter limits and size of

cores produced. Half of the mills could handle logs at least five feet in diameter. One mill could peel to a four-inch core diameter while another mill produced cores that fell in the 11+ inches category. The other 28 mills with peeling operations fell in the five to eight-inch core diameter range. About 53 percent of the core material was used as a source of chips for the Pulp and Board Industry, and the remaining 47 percent for other purposes such as lumber, fuel and posts. About 70 percent of the mills used veneer chippers during 1980 while only six percent used burners (Table 40).

Site and Ownership Tenure

Eighty-five percent of the mills have been at their present site and 74 percent under the same ownership for more than 10 years (Table 41).

Operating Days

Veneer-only mills operated fewer days on the average with layup-only mills second, followed closely by veneer and layup mills. Averages for each type of mill by Area are shown in Table 42.

WOOD CONSUMPTION

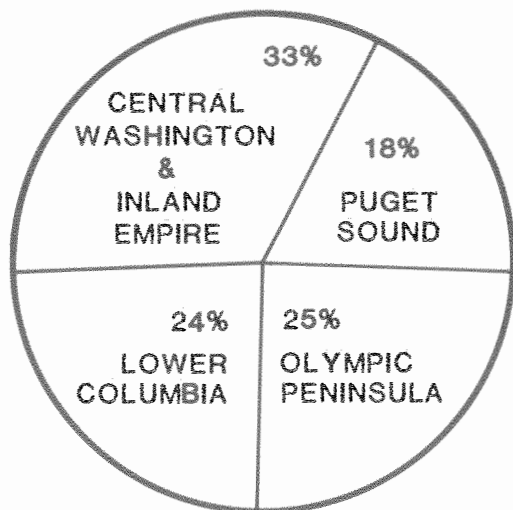
Raw Material

The Veneer and Plywood Industry consumed 483 million board feet of logs during 1980. Utility grade logs accounted for six percent of this volume (Table 43). Utility log consumption by Area varied from 13 percent in the Puget Sound to less than one percent in Central Washington and Inland Empire (Figure 10).

Roundwood Age

Timber more than 100 years old made up 64 percent of the logs used. Use of old growth varied from 45 percent in the Puget Sound and Lower Columbia Area to 89 percent in the Central Washington and Inland Empire Areas (Table 44).

Figure 10—Veneer and Plywood Log Consumption by Economic Area



Ownership	Logs Supplied Percent
State	4
National Forest	43
Bureau of Land Management	—
Other Public	6
Total Public	53
Forest Industry	{ Own Wood Supply 33
	{ Other Wood Supply 3
Farmer & Misc. Private	11
Total Private	47
All Owners	100

Table 6 shows the dependency of individual mills on each ownership class, indicating 13 mills were at least two-thirds dependent on public lands (with all of these dependent on National Forest lands) while six mills were similarly dependent on private lands.

Ownership

Public lands were the source of 53 percent of the logs consumed by the industry, with National Forest lands being the greatest single source (Table 46).

Economic Area	Source of Logs	
	National Forest Lands	Forest Industry Own Wood Supply
	percent	
Puget Sound	34	35
Olympic Peninsula	52	23
Lower Columbia	50	45
Central Washington and Inland Empire	37	29
Total State	43	33

The Forest Industry's own lands 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.

Species

Sixty percent of the logs used by the industry were Douglas fir (Table 47). Second in importance was hemlock with 14 percent. The Lower Columbia Area used 60 percent Douglas fir, 18 percent western redcedar and 18 percent hemlock. In Eastern Washington, Douglas fir was the most widely used species accounting for 73 percent of the consumption followed by true firs with 13 percent.

Imports

Two Economic Areas acquired logs from outside the state, but these imports accounted for less than one percent of the industry's log consumption. The Puget Sound Area imported the greatest volume, but it too accounted for less than one percent of its log consumption (Table 3).

In addition to logs, the industry consumed 113,214,000 square feet of 3/8-inch veneer more than it produced for sale or transfer during 1980. Converted to Scribner log scale (at 2.5 square feet per board foot) this is equivalent to about 45 million

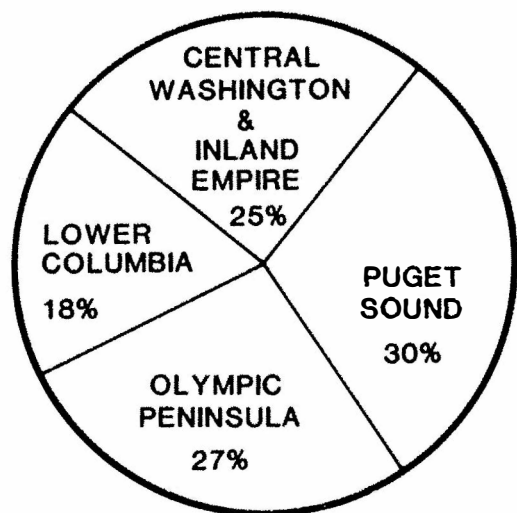
board feet or nine percent of the industry's total wood consumption. This veneer may originate from inventory reductions or it may be imported from out-of-state.

PRODUCTION

Veneer and Plywood

During 1980 the individual mills produced 1,429,373,000 square feet (3/8-inch basis) of plywood (Table 51). They also produced 484,332,000 square feet (3/8-inch basis) of veneer that was sold or transferred to other mills.

Figure 11—Plywood Production by Economic Area



Residues

Residues resulting from the manufacture of veneer and plywood amounted to 0.87 million tons and 99 percent of this volume was productively used (Table 48).

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

Residue Type	Residue Use			
	Pulp & Board	Fuel	Other Uses	Unused
	percent			
Cores	53	4	43	—
Coarse & Medium (Less Cores)	64	32	4	—
Fine	1	85	8	6
All Wood	59	30	11	†
Bark	—	90	5	5
All Residue	47	42	10	1

†Less than 0.5 percent.

Production and disposition of residues by Economic Area is presented in Tables 49 and 50.

PULP AND BOARD INDUSTRY

MILL CHARACTERISTICS

Facilities

Each operation at a multiple plant facility is considered a separate mill. Twenty-three mills were identified - five sulfite, eight sulfate, five groundwood, four semichemical and one board. Operations were located in 11 counties with Cowlitz County being the leading county with four mills. The leading area was Puget Sound with eight mills, followed by the Lower Columbia with seven mills (Table 52).

Production Capacity

Daily pulp production capacity was 11,209 tons. Of the 22 pulp mills, 13 were either sulfite or sulfate (59 percent) and they accounted for 78 percent of the daily capacity (Table 53).

Economic Area	Percent of Pulp Capacity
Puget Sound	27
Olympic Peninsula	21
Lower Columbia	44
<u>Inland Empire</u>	<u>8</u>
Total State	100

Only one board mill exists in the state and it is in the Puget Sound Economic Area. This mill has the capacity to produce 52 million square feet of 1/8 inch basis hardboard annually.

Site and Ownership Tenure

All of the mills have occupied their present sites for more than 10 years and all, except one, for more than 20 years. As shown in Table 54, all 23 mills have been under present ownership for over 10 years.

Operating Days

The average number of operating days per year for pulp mills increased between 1978 and 1980 to 349 days (Table 55).

Average Number of Operating Days

Economic Area	Pulp	Board
Puget Sound	342	131
Olympic Peninsula	355	—
Lower Columbia	347	—
<u>Inland Empire</u>	<u>358</u>	<u>—</u>
Total State	349	131

WOOD CONSUMPTION

Raw Material

The industry consumed 436 million board feet of roundwood and 5.7 million bone dry tons of chips, sawdust, shavings and wastepaper (Table 57). In total this is the equivalent of approximately 6.6 million bone dry tons of wood. Eighty-seven 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 Mill Residue —percent—	Roundwood
Puget Sound	66	17
Olympic Peninsula	44	22
Lower Columbia & <u>Inland Empire†</u>	<u>75</u>	<u>7</u>
Total State	66	13
Million Bone Dry Tons	4.3	0.9

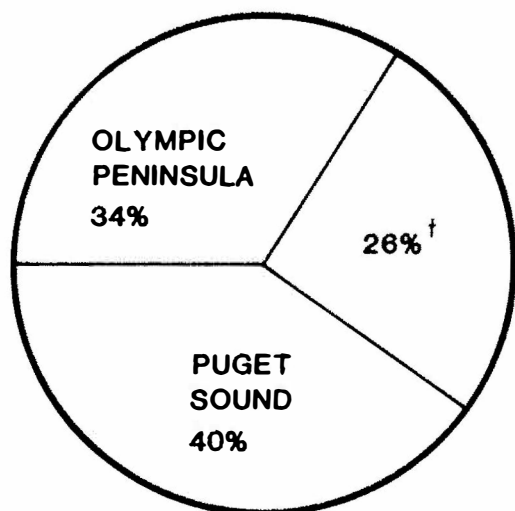
†Combined to avoid disclosure.

The Pulp and Board Industry was the largest user of utility grade (cull) logs, accounting for nearly half of all utility logs consumed in 1980 (Table 2). Within this industry, utility logs accounted for 70 percent of the roundwood consumed (Table 57).

Roundwood Age

Table 10 shows roundwood consumption by age class for each Economic Area in the state. For the Pulp and Board Industry statewide, old growth timber accounted for 63 percent of the roundwood consumed. This is nine percentage points higher than in 1978.

Figure 12 — Percent of Roundwood Consumed by Economic Area



† LOWER COLUMBIA and INLAND EMPIRE

Ownership

Private timber holdings supplied 68 percent of the total roundwood consumed (Table 7).

Ownership	Log Supply Percent
State	8
National Forest	21
Bureau of Land Management	—
Other Public	3
Total Public	32
Forest	{ Own Wood Supply 40
Industry	{ Other Wood Supply 16
Farmer & Misc. Private	12
Total Private	68
All Owners	100

One mill was more than two-thirds dependent on public timberlands. Four mills were more than two-thirds dependent on private timberlands for the logs they consumed (Table 6).

Species

Hemlock accounted for 62 percent of the industry's roundwood log consumption, with the greatest volume of hemlock being in the Olympic Peninsula Area (Table 58).

Roundwood Species Consumed	Percent
Hemlock	62
True firs	17
Douglas fir	10
Hardwoods	10
Spruce	1
Total	100

Origin

Seventy-nine percent of the roundwood consumed by the Pulp and Board Industry came from within the state. The remaining 21 percent was imported from Oregon, Idaho, British Columbia and elsewhere. The mills in the Lower Columbia Area imported 45 percent of their logs from Oregon (Table 3).

Residues

Chips and other residues constituted the major sources of raw material for the industry (Table 57).

Residue Type	Total Volume Percent
Chips	
Residue	66
Roundwood	16
Sawdust and shavings	4
Wastepaper	1
All Types	87
Logs	13
Total	100

SHAKE AND SHINGLE INDUSTRY

MILL CHARACTERISTICS

There were 267 shake, shingle and hip and ridge mills in operation during 1980 which is a decline of 21 percent from 1978. Of the total, 68 percent (183) of the mills were located in the Olympic Peninsula Area and of these, nearly half were in Grays Harbor County (Table 60).

The single shift capacity of Shake and Shingle Industry mills operating in 1980 was 24,523 squares, which is equivalent to approximately 2,452,300 board feet Scribner log scale (Table 60).

Eighty-seven mills used burners to dispose of wood residues. In contrast, 26 mills used chippers (Table 61).

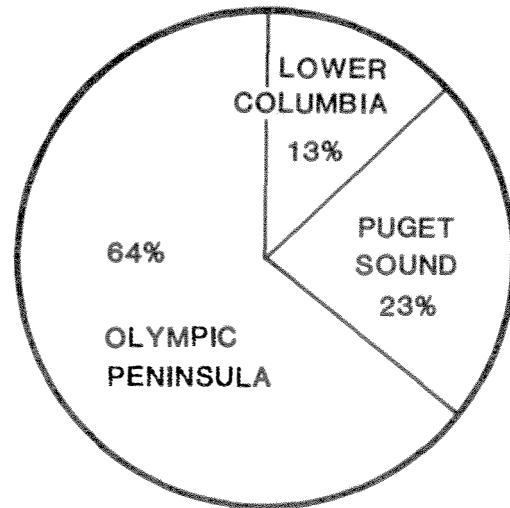
Thirty-eight percent of the mills have been in operation at their present site for five years or less, while 49 percent have been under present ownership for five years or less. Thirty-seven percent of the mills operating in 1980 have been in their present location more than 10 years, but only 25 percent have been under present ownership for more than 10 years (Table 62).

Number of days of mill operation averaged 140 during 1980 (Table 60). This is a substantial decline from the average of 219 days in 1978.

WOOD CONSUMPTION

Industry consumption during 1980 was 136 million board feet of logs and the equivalent of 41 million board feet in blocks, bolts and other material (Table 63). Of the total volume, sound logs accounted for 74 percent; utility grade (cull logs) accounted for three percent and other materials accounted for 23 percent.

Figure 13 — Shake and Shingle Roundwood Consumption by Economic Area



Western redcedar is the most important species in the State of Washington suitable for the manufacture of shakes and shingles. In the 1980 survey, western redcedar was used almost exclusively (Table 8). Product specifications further limit the consumption with 99 percent of the materials used being old growth (Table 10).

Considering the species dependency, it was not surprising that the industry obtained its log supply from many ownership classes (Table 64). However, it is noteworthy that 58 percent of the timber was from forest industry lands.

Ownership	Log Supply Percent
State	8
National Forest	19
Bureau of Land Management	—
<u>Other Public</u>	<u>12</u>
Total Public	39
Forest Industry	{ Own Wood Supply 8
	{ Other Wood Supply 50
<u>Farmer & Misc. Private</u>	<u>3</u>
Total Private	<u>61</u>
All Owners	100

During 1980, about 53 percent of the individual mills obtained more than two-thirds of their log supply from a single ownership class - 29 mills from public sources, 112 from private sources (Table 6).

Ninety-five percent of the industry's log consumption came from timberlands in Washington. Almost all of the rest came from British Columbia, with a small amount from Oregon (Table 3).

PRODUCTION AND RESIDUES

Total production amounted to 2,216,934 squares, of which 72 percent were shakes, 23 percent were shingles and five percent were hip, ridge, shims and others (Table 68). This production resulted in 175,116 bone dry tons of residues, composed of 72 percent wood and 28 percent bark (Table 65). Considering use of residues, only 46 percent were used: 49 percent of the wood residues and 39 percent of the bark. The Lower Columbia Area mills are a notable exception to the state average with 92 percent of the residues in that Area being used.

Wood residues are divided into two size classes with coarse materials accounting for 39 percent of the total and fine materials accounting for 61 percent (Table 66). Fifty-five percent of the coarse wood residues were used while 45 percent of the fine wood residues were used.

For many mills it is not economical to recover residues, with low product volume of the mill operation probably the major factor. Also, some of the residues produced by this sector are left in the woods rather than being produced at the mill sites. This occurs when the mills use blocks, bolts or boards as a raw material, rather than logs.

Use	Residue Type and Distribution		
	Coarse	Fine	Bark
	percent		
Pulp & Board	15	2	—
Fuel	24	30	34
Other	16	13	6
Unused	45	55	60
All	100	100	100

POLE, POST AND PILING INDUSTRY

INDUSTRY CHARACTERISTICS

The smallest segment of the forest products industry in the State of Washington (21 mills) had 76 percent of its operations located in Western Washington.

The reported annual peeling capacity for 1980 was 47 million board feet, coupled with 36 million board foot treatment capacity (Table 69). However, the industry rarely uses the board foot unit of measure. 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.

All of the operations had either a barker or a peeler which was essential for preparing the products (Table 71). Of the 21 mills, 11 had facilities for treating wood. One mill reported using waterborne salts treatment. Others used pentachlorophenol with different carriers and/or cresote.

From 1978 to 1980 the Pole, Post and Piling Industry declined by two operations. This is a decline of nearly nine percent and has resulted in a more concentrated industry since peeling capacity has only declined one percent. Of the 1980 mills, 71 percent of the operations have been under the same ownership more than 10 years (Table 70).

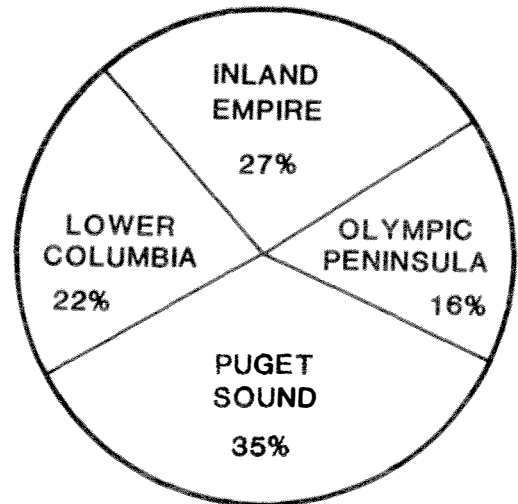
The industry averaged 177 days of peeling operation with treatment facilities operating an average of 199 days (Table 69).

WOOD CONSUMPTION

Total wood consumption during 1980 was 37,418,000 board feet with sound logs accounting for 88 percent of all log consumption (Table 2). Post volume has been classified as utility logs and

accounts for 12 percent of the total volume.

Figure 14—Pole, Post and Piling Wood Consumption by Economic Area



The Pole, Post and Piling Sector is oriented primarily to young growth timber. In 1980, 75 percent of the logs consumed were classified as young growth (Table 10).

Nearly 60 percent of the mills (12 mills) were over two-thirds dependent on a single owner class for their log supplies (Table 6). This included two operations dependent on Public timber, four operations dependent on Forest Industry timber and six operations dependent on other private timber.

Ownership	Log Supply Percent
State	15
National Forest	4
Other Public	3
<hr/>	
Total Public	22
Forest Industry	8
Farmer & Misc. Private	35
<hr/>	
Total Private	78
All Owners	100

Douglas fir and western redcedar, used principally for poles and piling, accounted for 80 percent of the total log consumption (Table 8). These two species are well suited for pole and piling uses because they possess the needed strength and durability.

Washington's timberlands supplied 86 percent of the industry's needs with 11 percent coming from Oregon and the remaining three percent from Idaho (Table 3).

LOG EXPORT INDUSTRY

INDUSTRY CHARACTERISTICS

The 134 log export operations reported in this survey represent trading companies, log brokers or other firms who ship logs from nine public port areas in the State of Washington (note that each port used by a firm is considered a separate operation). Sixty-one operations are located in the Puget Sound Area followed by the Olympic Peninsula Area with 46 (Table 73).

Fifty-three percent of the operations had used the present site for over five years (Table 74).

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

LOG CONSUMPTION

Export shipments totaled 2.3 billion board feet in 1980, making the Export Industry second only to the Lumber Industry in log consumption in the state (Table 3). The Export Industry's log consumption is considered to be equivalent to log export shipments for the year 1980.

A preponderance of the logs being exported are sound logs. Less than 0.5 percent of the export volume was utility grade logs (Table 73).

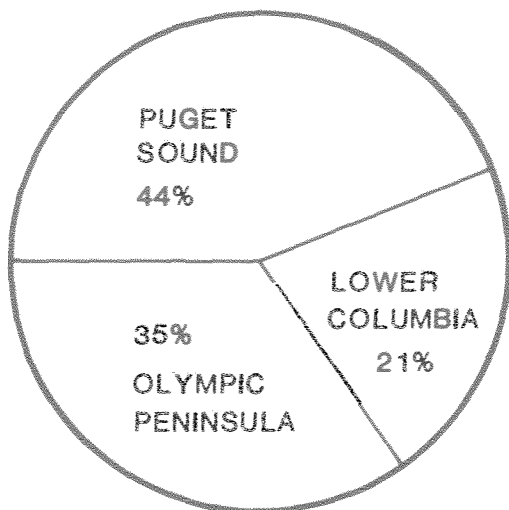
Ownership	Log Supply Percent
State	18
National Forest	†
Other Public	3
<u>Total Public</u>	<u>21</u>
Forest Industry	62
Farmer & Misc. Private	17
<u>Total Private</u>	<u>79</u>
All Owners	100

†Less than 0.5 percent.

Seventy percent of the operations were more than two-thirds dependent for supplies on a single ownership class. Fifty-three of the 134 operations were more than two-thirds dependent on Forest Industry lands, 25 on other private lands, 13 on state lands and one on National Forest lands (Table 6).

Log export operations consumed more Douglas fir, hemlock and spruce than any other industry (Table 8).

Figure 15 —Log Export by Economic Area



Species	Log Supply Percent
Douglas fir	48
Hemlock	43
True firs	3
Spruce	2
Western redcedar	2
All others	2
<u>Total All Species</u>	<u>100</u>

Washington's timberlands supplied 96 percent of the logs exported from the state (Table 3). Those logs originating in Oregon and British Columbia were primarily moved through the Lower Columbia and Puget Sound Areas, respectively.

HARDWOOD INDUSTRY

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

INTRODUCTION

Processing of hardwoods is an important segment of the Washington wood products industry with many different species, including alder, maple, birch and cottonwood processed by sawmills, veneer and plywood mills and pulp mills, as well as other specialty plants. 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 1980, there were eleven sawmills, one veneer and plywood operation, and one pulp mill using hardwoods for over 90 percent of their log and chip consumption. All mills using hardwood were located in the following counties:

County	Sawmills		Veneer & Plywood		Pulp	
	Number of Mills and Dependency on Hardwood					
	Under 90%	90% +	Under 90%	90% +	Under 90%	90% +
Clallam	2	—	—	—	—	—
Clark	1	—	—	—	1	—
Cowlitz	1	1	1	—	—	—
Grays Harbor	1	1	—	—	1	—
Jefferson	2	—	—	—	—	—
King	3	—	1	—	—	—
Kittitas	—	—	1	—	—	—
Lewis	4	3	—	—	—	—
Mason	1	1	—	—	—	—
Okanogan	1	—	—	—	—	—
Pacific	1	1	—	—	—	—
Pierce	2	—	1	—	—	—
Skagit	2	—	1	—	—	—
Snohomish	2	3	—	1	—	—
Thurston	1	—	—	—	—	—
Walla Walla	—	1	—	—	—	—
Whatcom	2	—	1	—	—	1
Total	26	11	6	1	2	1

Thirteen sawmills in Washington were dependent upon hardwoods for at least two-thirds of their consumption.

WOOD CONSUMPTION

Hardwood log consumption by mills in Washington in 1980 was 228,456,000 board feet Scribner (Table 8). In addition, 58,273 bone dry tons of hardwood chips from roundwood were consumed by the Pulp Industry.

Industry	Hardwood Log Consumption
	percent
Sawmills	63
Veneer and Plywood	9
Pulp and Board	20
Export	8
Total Industry	100

In 1980, 144,080,000 board feet of hardwoods were consumed by sawmills, or almost 6 percent of their all-species consumption. Of this amount, 95 percent of the hardwood volume consumed was by those sawmills more than two-thirds dependent on hardwoods. Over half these mills were size-class D mills. However, size-class A and B mills consumed 55 percent of the hardwood logs consumed in 1980 (Table 25).

The Veneer and Plywood Industry in Washington consumed 20,768,000 board feet of Western hardwoods or four percent of their total log consumption (Table 8). This was over 42 percent more hardwood volume consumed than in 1978.

The Pulp Industry consumed 45,160,000 board feet of hardwood logs in 1980 (10 percent of their all-species log consumption). This was an increase of 77 percent over their 1978 hardwood log consumption. In addition, this industry consumed 58 thousand bone dry tons of chips from hardwood roundwood (Table 58). This chip consumption represented over a 14-fold increase since 1978.

HARDWOOD SUPPLY

Lewis, Pacific, Snohomish and Cowlitz counties accounted for over half of the hardwood supplied to sawmills that were 90+ percent dependent upon hardwoods in 1980. Of the 129,154,000 board feet consumed by these mills in 1980, the following counties supplied these percentages (based on a proportional distribution):

County	Percent
Lewis	18
Pacific	18
Snohomish	16
Grays Harbor	9
Skagit and San Juan	9
Thurston	7
Cowlitz	6
Mason	6
Clark and Wahkiakum	3
King	2
Clallam and Jefferson	2
Out-of-State	4
<hr/> Total	<hr/> 100

OWNERSHIP

The hardwood consumed by sawmills 90+ percent dependent on hardwoods came largely from private ownership. The following table is based on a proportional distribution.

Sawmill Hardwood Log Consumption
Mills 90%+ Dependent on Hardwoods

Ownership	Volume	Log
	MBF Scribner	Supply Percent
State	15,219	12
National Forest	55	†
Other Public	1	†
<hr/> Total Public	<hr/> 15,275	<hr/> 12
Forest { Own Wood Supply	—	—
Industry { Other Wood Supply	70,192	54
Farmer and Misc. Private	43,687	34
<hr/> Total Private	<hr/> 113,879	<hr/> 88
All Owners	129,154	100

†Less than 0.05 percent.

HARDWOOD HARVEST

The *Timber Harvest Report* published by the State of Washington Department of Natural Resources lists the following species harvested in 1980.

Species	1980 Harvest MBF, Scribner	Species Percent
Alder	123,674	43
Cottonwood	11,587	4
Other species	19,819	7
Cull & Utility	134,056	46
<hr/> Total	<hr/> 289,136	<hr/> 100

Of the above total, 563,000 board feet were harvested in Eastern Washington. This is less than 0.2 percent of the statewide hardwood harvest. Of the 20 counties in Eastern Washington, Kittitas, Klickitat and Chelan combined, accounted for 72 percent of the eastside 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, 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 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

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

VENEER AND PLYWOOD

2.5 square feet = 1 board foot, Scribner
(3/8-inch basis)

1 square foot = 0.885 square meters
(3/8-inch basis) (1mm basis)

1,130 square feet = 1 cubic meter
(3/8-inch basis)

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

††One 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 Volumett		Dry Weight	Residue Type
	Cubic Feet	Percent	Tons	
Wood Residue				
Slabs, Edgings, Sawmill Trim	36	24.8	0.486	Coarse
Planer Trim	3	2.1	0.041	
Sawdust	16	11.0	0.216	Fine
Planer Shavings	16	11.0	0.216	Medium
Total Wood Residue	71	48.9	0.959	
Bark	17	11.7	0.258	Bark
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 $\frac{3}{8}$ -inch plywood (rough basis).

Plywood Residue	Solid Volume	Dry Weight		Residue Type
	Cubic Feet††	Tons	Percent	
Wood Residues				
Log Trim	3.4	0.048	4.2	Coarse
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	Medium
Sander Dust	1.6	0.022	1.9	Fine
Total Wood Residue	36.9	0.516	45.4	
Bark	8.8	0.132	11.6	Bark
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.

Item	200 cu. ft. Units	Dry Weight Tons	Residue Type
Wood Residue			
Slabs, Edgings, Sawmill Trim, and Planer Trim	0.71	0.60	Coarse
Planer Shavings	0.26	0.22	Medium
Sawdust	0.27	0.23	Fine
Bark	0.40	0.34	Bark

†Based on information furnished by Northwest Hardwoods, Inc.

SAWMILL QUESTIONNAIRE

WASHINGTON FOREST INDUSTRY SURVEY 1980
Sawmill Questionnaire

(Information on individual plants will be held confidential)

FOR OFFICE
USE ONLY

1. Mill Identity

Firm Name _____ Prepared by _____

Address _____ Name of Mill Manager _____
Street or P. O. Box _____ Phone # _____

City _____ State _____ Zip Code _____

Mill location _____ Date _____
City _____ County _____

2. Mill Characteristics

Hours per shift _____. Average number of shifts per day _____.
Maximum capacity per shift _____,000 board feet lumber tally.
Days operated during 1980 _____.

Years mill has been in present location _____.
Years under present ownership _____.

Type of Head Rig (Check those that apply)	Maximum Log Diameter (inches)	Percent of Total Production From Each Type
Circular <input type="checkbox"/>	_____	_____ %
Band <input type="checkbox"/>	_____	_____ %
Gang <input type="checkbox"/>	_____	_____ %
Chipping <input type="checkbox"/>	_____	_____ %
Scragg <input type="checkbox"/>	_____	_____ %

Equipment operated during 1980 (check those that apply)

Burner Planer Chipper Kiln Barker

Minimum diameter of log used _____ inches.

Is there a retail yard at this mill location? Yes No

3. Wood Consumption During 1980
(If not in Scribner, please indicate scale and conversion)

a. Log Consumption _____,000 board feet net scale

Percent of log consumption from dead or salvaged trees _____ %

Percent of log consumption of utility grade* _____ %

b. Peeler cores _____ (Units)

c. Cants _____ Lumber _____ Other _____ (Units)

Specify log scale used if other than Scribner and conversion factor, if appropriate: _____

*Utility logs - Less than Number 3 sawlogs in grade or having the following minimum specifications: 6 inch diameter, 12 foot length, 50+ percent gross scale chippable.

4. Total Log Inventory:

(Beginning of Year) 1/01/80 _____,000 Board feet

(End of Year) 12/31/80 _____,000 Board feet

5. Log Consumption by Species During 1980

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

6. Origin of Logs Consumed During 1980

a. State or Province of Origin

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

6. County of Origin (Washington)

From Outside Washington _____

100

7. Age Group

Old Growth (100 years +) _____

Young Growth _____

100

8. Ownership Origin

State _____

U.S. Forest Service _____

SM _____

Other Public (Indian, etc.) _____

Forest Industry Own Supply _____

Other Supply _____

Farmer & Misc. Private _____

100

*Name of National Forest _____

9. 1980 Lumber Production:

Softwood		Hardwood	
Produced _____,000 bf lumber tally		Produced _____,000 of lumber tally	
Green _____		Green _____	
Kiln-dried _____		Kiln-dried _____	
Air-dried _____		Air-dried _____	
100		100	
Surfaced _____		Surfaced _____	
Rough _____		Rough _____	
100		100	

8. Disposition of Plant Residues

Indicate residue by type as a percent:

USED	Coarse*	Sawdust	Shavings	Bark
For plant fuel _____	_____	_____	_____	_____
Sold for fuel _____	_____	_____	_____	_____
For pulp (incl. export) _____	_____	_____	_____	_____
For board _____	_____	_____	_____	_____
For other purposes _____	_____	_____	_____	_____
UNUSED				
Burned _____	_____	_____	_____	_____
Unburned _____	_____	_____	_____	_____
	100	100	100	100

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

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: 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. Species processed _____
4. Maximum and minimum log diameter limits _____
5. Type of largest head rig _____
6. Retail yard - Yes 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, enclose it in the postage paid envelope provided and mail it.

6. Ownership Origin

State _____ %

U.S. Forest Service* _____ %

BLM _____ %

Other Public (Indian, etc.) _____ %

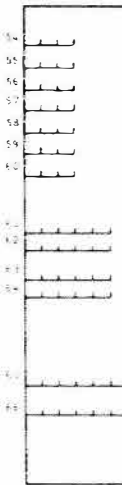
Forest Industry } Own Supply _____ % (from timberlands owned
 } Other Supply _____ % (by your company)
 } _____ % (from other forest
 } _____ % (industry timberlands)

Farmer & Misc. Private _____ %

----- 100 %

Name of National Forest _____ %

_____ %



7. 1980 Veneer and Plywood Production

Veneer for sale or transfer _____,000 sq. ft. 3/8 inch _____ 1 inch _____

Plywood _____,000 sq. ft. 3/8 inch _____ 1 inch _____

8. Disposition of Plant Residues

Indicate disposition of residue by type as a percent.

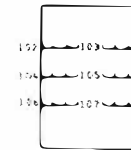
	Log trim, Spur trim, Roundup, Veneer clip	Core	Panel trim Reject veneer	Sander Dust	Bark
USED					
For plant fuel	72	62	73	75	71
Sold for fuel	72	72	72	75	74
For pulp	81	78	79	80	81
For board	86	83	84	81	86
For other purposes	81	88	85	81	91
UNUSED					
Buried	13	13	14	11	91
Unburned	17	16	16	19	11
	100	100	100	100	100

9. Percent Distribution by State of all Veneer Sold or Transferred

Washington _____ % British Columbia _____ %

California _____ % Oregon _____ %

Idaho _____ % 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 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. Species processed
4. Maximum and minimum log diameter limits
5. Type of plant
6. Lathe and press equipment
7. Retail yard - () Yes () 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, enclose it in the postage paid envelope provided and mail it.

PULP AND BOARD MILL QUESTIONNAIRE

WASHINGTON FOREST INDUSTRY SURVEY 1980
Pulp and Board Mill Questionnaire

(Information on individual plants will be held confidential)

FOR OFFICE
 USE ONLY

1. Mill Identity

Firm Name _____ Prepared by _____
 Address _____ Street or P. O. Box _____ Name of Mill Manager _____
 City _____ State _____ Zip Code _____ Phone Number _____
 Mill Location _____ Date _____
 City _____ County _____

2. Mill Characteristics

a. Operation (Use a different form for each type of operation)

PULP MILL Sulfite _____ Sulfate _____ Groundwood _____ Disk refiner _____ Drum refiner _____ Semicheical _____	BOARD MILL Hardboard _____ Particleboard _____ Insulation board _____
---	---

b. Production Capacity

_____ BD Tons/24 hrs.
 units, if different _____

_____ Million sq. ft./yr.
 Specify basis:
 1/8" _____, 1/2" _____, 3/4" _____

c. Mill Production in 1980

Newsprint _____ (tons) Bleached Papers _____ (tons) Unbleached (Not newsprint) _____ (tons) Market pulp _____ (BD tons) Other Paper Products _____ (tons)	Hardboard _____ Million sq. ft./yr. _____ basis Particleboard _____ Million sq. ft./yr. _____ basis Insulation board _____ Million sq. ft./yr. _____ basis
---	--

d. Days Operated During 1980 _____

e. Years mill has been in present location _____
 Years under present ownership _____

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3. Wood Consumption During 1980 (see page 4 for definitions)

a. Log Consumption _____,000 board feet gross scale
 Percent of sound logs from dead or salvaged trees _____
 Percent of utility logs and cordwood _____

INCLUDE ONLY MATERIALS USED IN THE PRODUCTION PROCESS IN ITEMS b-g;
 INCLUDE MATERIALS USED AS FUEL UNDER h.

VOLUME

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

4. Consumption by Species During 1980

INCLUDE ONLY MATERIALS USED IN THE PRODUCTION PROCESS.

	<u>Logs</u>	<u>Chips from Roundwood Chipping Plants</u>
Douglas fir	_____ %	_____ %
Hemlock	_____ %	_____ %
True firs	_____ %	_____ %
Spruce	_____ %	_____ %
Ponderosa pine	_____ %	_____ %
Lodgepole pine	_____ %	_____ %
Western redcedar	_____ %	_____ %
Other softwoods	_____ %	_____ %
Western hardwoods	_____ %	_____ %
Other hardwoods	_____ %	_____ %
	100 %	100 %

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5. Origin of Wood Consumed During 1980

State or Province of Origin

Washington	Logs	Chips from Roundwood Chipping Plants
Oregon	_____	_____
Idaho	_____	_____
British Columbia	_____	_____
Other	_____	_____
	100	100
Washington	Sawdust & Shavings	Bark
Oregon	_____	_____
Idaho	_____	_____
British Columbia	_____	_____
Other	_____	_____
	100	100

Ownership Origin:

State	Logs
US Forest Service*	_____
BLM	_____
Other Public (Indian, etc.)	_____
Forest	_____ (from timberlands owned by your own company)
Industry	_____ (from other forest industry timberlands)
Farmer & Misc. Private	_____
	100

*Name of National Forest _____

Age Group

Old Growth (100 Years +)	Logs
Young Growth	_____
	100

County of Origin (Washington)

_____	Logs
_____	_____
_____	_____
_____	_____
From Outside Washington	_____
	100

DEFINITIONS

Wood Consumption - Items a-h indicate the nature of the wood or fiber as it comes into your woodyard--before any processing or breakdown.

Utility Logs - Logs of lower quality than Number 3 sawlogs or usually having the following minimum specifications: 6 inches diameter, 12 foot length, 50 + percent of gross scale chipable.

Cordwood - Any log below the minimum specification stated for utility logs.

Specify log scale used if other than Scribner and conversion factor, if appropriate: _____

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:

- 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
- Species processed
- Type of plant

() 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 fully as possible, please fold this form, enclose it in the postage paid envelope and mail it.

d. Ownership Origin

State	_____ %	_____ %	_____ %
U.S. Forest Service*	_____ %	_____ %	_____ %
BLM	_____ %	_____ %	_____ %
Other Public (Indiar, etc)	_____ %	_____ %	_____ %
Forest Industry	_____ %	_____ %	_____ %
Farmer & Misc. Private	_____ %	_____ %	_____ %
	100%	100%	100%

*Name of National Forest _____

e. 1980 Production

Shakes	_____ squares or _____ bundles
Shingles	_____ squares or _____ bundles
Chip & Edge	_____ squares or _____ bundles
Other	_____ squares or _____ bundles

f. Disposition of Residue (Indicate residue by type as a percent)

USED	Coarse	Sawdust	Bark
For plant fuel	_____ %	_____ %	_____ %
Sold for fuel	_____ %	_____ %	_____ %
For pulp (incl. export)	_____ %	_____ %	_____ %
For board	_____ %	_____ %	_____ %
For other purposes	_____ %	_____ %	_____ %
UNUSED			
Burned	_____ %	_____ %	_____ %
Unburned	_____ %	_____ %	_____ %
	100%	100%	100%

General Definitions

- a. Utility logs - Logs of lower quality than Number 3 sawlogs and usually having the following minimum specifications: 6 inches diameter, 12 foot length, 50 + percent of gross scale.
- b. Other - Any other roundwood or other material (blocks, bolts, boards, etc.).

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 () 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, enclose it in the postage paid envelope and mail it.

POLE, POST AND PILING QUESTIONNAIRE

WASHINGTON FOREST INDUSTRY SURVEY 1980

Post, Pole and Piling Questionnaire

(Information on individual firms will be held confidential)

FOR OFFICE
USE ONLY

1. Mill Identity

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

2. Mill Characteristics

Type of wood treatment used (if any) _____

Years mill has been in present location _____; under present ownership _____

	<u>Peeling Capacity</u>	<u>Treatment Capacity</u>	<u>Specify Units</u>			
	daily or yearly (circle one)		000 bd. ft. Scribner	cubic ft.*	lineal ft.*	pieces**
Posts _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poles _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piling _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Days operated during 1980	Peeling _____	Treatment _____				
Equipment operated during 1980	Barker _____	Burner _____				

***IMPORTANT:** If capacity numbers above are not given in MBF Scribner, please complete the following:

Average Length _____ Average Small End Diameter _____

Log Scale Used _____

3. Wood Consumption During 1980

Consumption

Specify Units

	Consumption	000 bd. ft. Scribner	cubic ft.	lineal ft.	pieces	
a. Posts _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16 _____
b. Barkie poles _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17 _____
c. Barkie piling _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18 _____

Specify log scale used if other than Scribner and conversion factor, if appropriate: _____

4. Consumption by Species During 1980

<u>Species</u>	<u>Logs</u>	
Douglas fir _____	%	19 _____
Hemlock _____	%	20 _____
True firs _____	%	21 _____
Spruce _____	%	22 _____
Ponderosa pine _____	%	23 _____
Lodgepole pine _____	%	24 _____
Western redcedar _____	%	25 _____
Other conifers _____	%	26 _____
Western hardwoods _____	%	27 _____
Other hardwoods _____	%	28 _____
	100 %	

5. Origin of Logs Consumed During 1980

a. State or Province of Origin:

Washington _____	%	29 _____
Oregon _____	%	30 _____
Idaho _____	%	31 _____
British Columbia _____	%	32 _____
Other _____	%	33 _____
	100 %	

b. County of Origin (Washington) Logs

_____	_____ %	34
_____	_____ %	35
_____	_____ %	36
_____	_____ %	37
_____	_____ %	38
_____	_____ %	39
_____	_____ %	40
From Outside Washington	_____ %	
	100 %	

c. Age Group Logs

Old Growth (100 Years +)	_____ %	41
Young Growth	_____ %	42
	100 %	

d. Ownership Origin Logs

State	_____ %	43
U. S. Forest Service*	_____ %	44
BLM	_____ %	45
Other Public (Indian, etc.)	_____ %	46
Forest Industry	_____ %	47
Farmer and Misc. Private	_____ %	48
	100 %	

*Name of National Forest _____ %

_____ %

6. Quantity of 1980 Shipments

	<u>Treated</u>	<u>untreated</u>	<u>Specify Units</u>			
			1000 bd. ft. Scribner	cubic ft.	lineal ft.	Pieces
Posts	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poles	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piling	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Disposition of Residue

Type of Residue, indicate disposition as a percent.

	<u>Coarse (wood)</u>	<u>Bark</u>
USED		
For Pulp (incl. export)	_____ %	_____ %
For Plant Fuel	_____ %	_____ %
Sold for Fuel	_____ %	_____ %
For Board	_____ %	_____ %
For Other Purposes	_____ %	_____ %
UNUSED		
Burned	_____ %	_____ %
Unburned	_____ %	_____ %
	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. Species processed
 2. Type of Product
 3. Treatment
- () 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, enclose it in the postage paid envelope and mail it.

LOG EXPORT QUESTIONNAIRE

WASHINGTON FOREST INDUSTRY SURVEY 1980
Log Export Questionnaire

(Information on individual firms will be held confidential)

FOR OFFICE
 USE ONLY

1. Firm Identity

Firm Name _____ Prepared by _____

Address _____ Phone # _____
 Street or P. O. Box _____ Date _____

City _____ State _____ Zip Code _____

2. Port of Operation _____

IF MORE THAN ONE PORT OF OPERATION, USE ADDITIONAL FORMS THAT WILL BE SUPPLIED PROMPTLY ON REQUEST

Data below this line should relate only to the Port listed above.

3. Years firm has used this Port for log export _____

4. Quantity exported from this Port during 1980 (See page 4 for general definitions).

a. Logs _____,000 Bd. Ft.

Percent of logs from dead or salvaged trees _____%

Percent of logs utility grade _____%

b. Other _____

Specify _____

Specify log scale used if other than Scribner and conversion factor, if appropriate:

5. Export by Species During 1980

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

6. Origin of Logs Exported During 1980

a. State or Province of Origin:

Washington	_____ %
Oregon	_____ %
Idaho	_____ %
British Columbia	_____ %
Other	_____ %
Total	100 %

b. County of Origin (Washington)

_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %
From Outside Washington	_____ %
Total	100 %

10	_____
11	_____
12	_____
13	_____
14	_____
15	_____
16	_____
17	_____
18	_____
19	_____
20	_____
21	_____
22	_____
23	_____
24	_____
25	_____
26	_____
27	_____
28	_____
29	_____
30	_____
31	_____

6) Age Group

Old Growth (100 years +) _____ %

Young Growth _____ %

100 _____ %

7) Ownership Origin

State _____ %

U.S. Forest Service* _____ %

BLM _____ %

Other Public (Indian, etc.) _____ %

Forest: Own Supply _____ % (from timberlands owned by your company)

Industry: Other Supply _____ % (from other forest industry timberlands)

Farmer and Misc. Private _____ %

100 _____ %

*Name of National _____ %

_____ %

8) Residue Disposition

Percent of volume debarked before shipment _____ %

Indicate Disposition as a Percent

Bark

(5%)

For pulp (incl. export) _____ %

For plant fuel _____ %

Skid for fuel _____ %

For Board _____ %

For other purposes _____ %

UNUSED

Burned _____ %

Unburned _____ %

100 _____ %

General Definitions

- a. Utility Logs - Logs of lower quality than Number 3 sawlogs in grade, or usually having the following minimum specifications of: 6 inches diameter, 12 foot length, 50 + percent of gross scale chippable.
- b. Other - Any other roundwood.

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 fully as possible, please fold this form, enclose it in the postage paid envelope provided, and mail it.

COMPUTER PROGRAMS USED FOR THIS REPORT

The automated Mill Survey System was developed on an IBM 370/158 MVS computer at the Washington Data Processing Service Center, Olympia, Washington.

The master file was built and edited by programs written in ANSI COBOL. Each mill type has its own independent edit program and was designed so that constant changes could be made to input without impacting system functions. All corrections were made by Department of Natural Resources staff using on-line terminals. The calculations for the various tables and summaries were produced by separate ANSI COBOL programs. There are two programs for each table. One selects the data from the master file; the other program summarizes and formats the table.

The program package was designed to handle other states' data with minor modifications.

There is a complete documentation package for this system that consists of the following:

- Warnier Diagram for each program.
- Sample input documents.
- Keypunch instructions.
- File descriptions for each file.
- Data description including edit criteria for each field.
- Reasonableness edits for each input file.
- Edit Error Message tables for each input file.
- Report layouts of each Output report.
- Sample Output reports.
- Source program listings.
- Job Control Language listings for execution of system.

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	211	67	8	8	60	61	7
Olympic Peninsula	325	71	16	5	183	46	4
Lower Columbia	83	22	6	7	16	27	5
Central Washington	23	18	3	-	2	--	-
Inland Empire	45	30	1	3	6	--	5
Total, State	687	208	34	23	267	134	21

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

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

WASHINGTON SUMMARY, 1980

Table 2—Primary wood consumption 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 -----					
-- Bone -- dry tons					
Puget Sound					
Lumber	736,158	583,758	152,400	385	--
Veneer and plywood	86,969	75,290	11,679	--	--
Pulp and board	174,710	7,152	167,558	--	1,705,874
Shake and shingle	30,819	29,824	995	7,656	--
Export	1,008,012	1,001,408	6,604	500	--
Pole, post, and piling	12,961	12,912	49	--	--
Total	2,049,629	1,710,344	339,285	8,541	1,705,874
Olympic Peninsula					
Lumber	681,658	582,133	99,525	258	--
Veneer and plywood	121,521	110,997	10,524	--	--
Pulp and board	150,301	121,790	28,511	--	1,054,081
Shake and shingle	87,245	83,663	3,582	31,002	--
Export	820,148	818,206	1,942	--	--
Pole, post, and piling	5,984	5,932	52	--	--
Total	1,866,857	1,722,721	144,136	31,260	1,054,081
Lower Columbia					
Lumber	505,224	495,315	9,909	--	--
Veneer and plywood	113,417	109,494	3,923	--	--
Pulp and board ³	111,222	--	111,222	--	2,967,620
Shake and shingle	17,483	16,424	1,059	1,611	--
Export	480,046	479,086	960	--	--
Pole, post, and piling	8,354	8,313	41	--	--
Total	1,235,746	1,108,632	127,114	1,611	2,967,620
Central Washington					
Lumber	263,910	254,468	9,442	--	--
Veneer and plywood ⁴	161,269	159,679	1,590	--	--
Pulp and board	--	--	--	--	--
Shake and shingle ⁴	86	84	2	416	--
Export	--	--	--	--	--
Pole, post and piling	--	--	--	--	--
Total	425,265	414,231	11,034	416	--
Inland Empire					
Lumber	247,189	236,078	11,111	3,077	--
Veneer and plywood ⁴	--	--	--	--	--
Pulp and board ³	--	--	--	--	--
Shake and shingle ⁴	--	--	--	--	--
Export	--	--	--	--	--
Pole, post, and piling	10,119	5,685	4,434	--	--
Total	257,308	241,763	15,545	3,077	--
Total, State					
Lumber	2,434,139	2,151,752	282,387	3,720	--
Veneer and plywood	483,176	455,460	27,716	--	--
Pulp and board	436,233	128,942	307,291	--	5,727,575
Shake and shingle	135,633	129,995	5,638	40,685	--
Export	2,308,206	2,298,700	9,506	500	--
Pole, post and piling	37,418	32,842	4,576	--	--
Total	5,834,805	5,197,691	637,114	44,905	5,727,575

¹Includes peeler cores, lumber and cants used by sawmills (converted to log scale assuming 30% overrun), blocks, boards, bolts used by shake and shingle mills, and miscellaneous peeled products used by pole, post, and piling mills

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

³Lower Columbia and Inland Empire combined to avoid disclosure

⁴Inland Empire and Central Washington combined to avoid disclosure

**Table 3—Log flows to mills by state or province 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	736,158	729,120	--	--	5,517	1,521
Veneer and plywood	86,969	86,224	--	--	745	--
Pulp and board	174,710	152,469	--	18,131	4,110	--
Shake and shingle	30,819	25,293	--	--	5,526	--
Export	1,008,012	997,220	5,442	101	4,950	299
Pole, post, and piling	12,961	12,181	780	--	--	--
Total	2,049,629	2,002,507	6,222	18,232	20,848	1,820
Olympic Peninsula						
Lumber	681,658	678,701	1,256	--	1,527	174
Veneer and plywood	121,521	121,521	--	--	--	--
Pulp and board	150,301	138,097	--	--	12,204	--
Shake and shingle	87,245	86,125	399	--	721	--
Export	820,148	803,767	1,686	--	1,911	12,784
Pole, post and piling	5,984	5,984	--	--	--	--
Total	1,866,857	1,834,195	3,341	--	16,363	12,958
Lower Columbia						
Lumber	505,224	475,824	29,400	--	--	--
Veneer and plywood	113,417	112,764	653	--	--	--
Pulp and board ¹	111,222	56,000	50,350	1,624	--	3,248
Shake and shingle	17,483	17,358	125	--	--	--
Export	480,046	426,366	49,909	3,600	--	171
Pole, post, and piling	8,354	4,904	3,450	--	--	--
Total	1,235,746	1,093,216	133,887	5,224	--	3,419
Central Washington						
Lumber	263,910	263,910	--	--	--	--
Veneer and plywood ²	161,269	161,269	--	--	--	--
Pulp and board	--	--	--	--	--	--
Shake and shingle ²	86	86	--	--	--	--
Export	--	--	--	--	--	--
Pole, post, and piling	--	--	--	--	--	--
Total	425,265	425,265	--	--	--	--
Inland Empire						
Lumber	247,189	223,886	10,871	12,432	--	--
Veneer and plywood ¹	--	--	--	--	--	--
Pulp and board ¹	--	--	--	--	--	--
Shake and shingle ¹	--	--	--	--	--	--
Export	--	--	--	--	--	--
Pole, post, and piling	10,119	8,958	--	1,161	--	--
Total	257,308	232,844	10,871	13,593	--	--
Total, State						
Lumber	2,434,139	2,371,441	41,527	12,432	7,041	1,695
Veneer and plywood	483,176	481,778	653	--	745	--
Pulp and board	436,233	346,566	50,350	19,755	16,311	3,248
Shake and shingle	135,633	128,862	524	--	6,247	--
Export	2,308,206	2,227,353	57,037	3,791	6,861	13,254
Pole, post, and piling	37,418	32,927	4,230	1,161	--	--
Total	5,834,805	5,588,027	154,321	37,049	37,211	18,197

¹Inland Empire combined with Lower Columbia to avoid disclosure

²Inland Empire combined with Central Washington 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 ¹	King	Kitsap	Pierce	Skagit	Snohomish	Whatcom
Puget Sound								
Island and San Juan ¹	8,520	8,320	--	--	--	80	--	--
King	170,256	--	89,549	--	15,866	360	8,180	360
Kitsap and Pierce ¹	855,348	11,880	168,279	31,892	230,338	7,644	27,201	1,740
Skagit	82,587	299	--	--	--	46,932	5,752	18,762
Snohomish	800,466	1,087	50,119	1,257	23,289	156,241	363,978	23,904
Whatcom	132,452	--	23,359	--	--	28,646	25,247	28,592
Total	2,049,629	21,586	331,306	33,149	269,493	239,903	430,358	73,358
Olympic Peninsula								
Clallam	405,659	--	--	--	--	4,188	3,948	290
Grays Harbor and Jefferson ¹	812,507	--	110	--	1,180	22	2,877	--
Lewis	183,225	--	--	--	3,395	--	5	--
Mason	227,799	--	--	46	--	--	--	--
Pacific	110,352	--	--	--	--	--	--	--
Thurston	127,315	--	855	172	65,732	--	3,421	--
Total	1,866,857	--	965	218	70,307	4,210	10,251	290
Lower Columbia								
Clark	129,943	--	--	--	--	--	--	--
Cowlitz	948,712	--	380	--	1,603	--	344	--
Klickitat and Skamania ¹	155,212	--	--	--	--	--	--	--
Wahkiakum	1,879	--	--	--	--	--	--	--
Total	1,235,746	--	380	--	1,603	--	344	--
Central Washington								
Chelan and Kittitas ¹	77,712	--	--	--	--	--	--	--
Douglas, Lincoln and Yakima ¹	179,800	--	--	--	--	--	--	--
Okanogan	115,684	--	--	--	--	--	--	--
Total	373,196	--	--	--	--	--	--	--
Inland Empire								
Asotin and Walla Walla ¹	43,650	--	--	--	--	--	--	--
Ferry	67,664	--	--	--	--	--	--	--
Pend Oreille	12,043	--	--	--	--	--	--	--
Spokane	32,503	--	--	--	--	--	--	--
Stevens	153,517	--	--	--	--	--	--	--
Total	309,377	--	--	--	--	--	--	--
Total, State	5,834,805	21,586	332,651	33,367	341,403	244,113	440,953	73,648

¹Combined to avoid disclosure

WASHINGTON SUMMARY, 1980

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
--	--	--	--	--	--	--	--	--	--	--	--
2,500	3,561	6,900	21,719	5,090	2,374	3,072	--	--	--	--	--
9,472	3,094	35,955	161,355	27,011	1,743	45,279	--	1,425	--	--	--
148	64	1,447	450	1,559	--	--	--	445	--	--	--
22,089	5,616	10,090	64,315	9,697	10,109	12,210	--	440	237	--	--
2,466	--	649	1,644	--	--	--	--	--	--	--	--
36,675	12,335	54,141	249,483	43,357	14,226	60,561	--	2,310	237	--	--
290,470	3,599	86,287	--	3,390	--	--	--	--	--	--	--
13,849	530,873	140,081	4,021	10,654	69,462	12,577	--	2,023	1,012	742	6,753
970	4,506	--	122,648	8,064	3,871	14,803	1,710	6,607	--	12,161	2,016
--	8,121	--	1,204	203,177	14,466	762	--	--	--	--	--
1,660	16,130	--	1,358	--	91,204	--	--	--	--	--	--
408	1,618	10,181	8,421	8,171	11,200	15,028	--	1,247	--	--	--
307,257	564,847	236,549	137,652	233,456	190,203	43,170	1,710	9,877	1,012	12,903	8,769
--	--	--	200	--	6,559	200	11,260	8,561	1,624	39,371	2,437
171	7,506	1,194	60,591	171	12,528	--	17,384	685,177	232	69,715	11,760
--	--	--	--	--	--	--	--	--	38,424	71,554	--
--	--	--	--	--	77	--	--	--	--	--	1,427
171	7,506	1,194	60,791	171	19,164	200	28,644	693,738	40,280	180,640	15,624
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	10,422	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	10,422	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
344,103	584,688	291,884	447,926	276,984	223,593	103,931	30,354	705,925	51,951	193,543	24,393

Table 4(Continued)—Log flows to mills by county
(Thousand board feet,

Economic area and county of use	Economic area and					
	Central Washington					
	Chelan	Douglas	Kittitas	Lincoln	Okanogan	Yakima
Puget Sound						
Island and San Juan ¹	--	--	--	--	--	--
King	--	--	10,235	--	--	--
Kitsap and Pierce ¹	35,681	--	43,858	--	--	--
Skagit	--	--	--	729	--	--
Snohomish	12,074	--	5,233	800	7,165	--
Whatcom	97	--	--	--	--	--
Total	47,852	--	59,326	1,529	7,165	--
Olympic Peninsula						
Clallam	--	--	--	--	--	--
Grays Harbor and Jefferson ¹	66	--	--	--	--	--
Lewis	--	--	--	--	--	--
Mason	--	--	--	--	--	--
Pacific	--	--	--	--	--	--
Thurston	--	--	--	--	6	--
Total	66	--	--	--	6	--
Lower Columbia						
Clark	--	--	--	--	--	--
Cowlitz	280	--	180	--	--	--
Klickitat and Skamania ¹	--	--	--	--	--	42,306
Wahkiakum	--	--	--	--	--	--
Total	280	--	180	--	--	42,306
Central Washington						
Chelan and Kittitas ¹	63,858	--	13,627	--	227	--
Douglas, Lincoln and Yakima ¹	--	--	52,478	2,250	12,000	101,900
Okanogan	--	--	--	--	115,534	--
Total	63,858	--	66,105	2,250	127,761	101,900
Inland Empire						
Asotin and Walla Walla ¹	--	--	--	--	--	4,092
Ferry	--	--	--	--	6,408	--
Pend Oreille	--	--	--	--	9,733	--
Spokane	--	--	--	--	--	--
Stevens	--	--	--	200	--	--
Total	--	--	--	200	16,141	4,092
Total, State	112,056	--	125,611	3,979	151,073	148,298

¹Combined to avoid disclosure

WASHINGTON SUMMARY, 1980

and out-of-state origins, and by area and county of use

Scribner log rule)

county of origin								Out-of-State origin
Asotin	Columbia	Ferry	Garfield	Pend Oreille	Spokane	Stevens	Walla Walla	
--	--	--	--	--	--	--	--	120
--	--	--	--	--	977	--	--	1,390
--	--	--	--	--	--	--	--	10,524
--	--	--	--	--	--	--	--	6,000
--	--	567	--	1,600	8,516	2,400	--	7,433
--	--	97	--	--	--	--	--	21,655
--	--	664	--	1,600	9,493	2,400	--	47,122
--	--	66	--	--	411	--	--	13,487
--	--	--	--	--	--	--	--	15,728
--	--	--	--	--	--	--	--	2,569
--	--	--	--	--	--	--	--	23
--	--	--	--	--	--	--	--	855
--	--	66	--	--	411	--	--	32,662
--	--	--	--	--	--	--	--	59,731
--	--	--	--	--	--	--	--	79,496
--	--	--	--	--	--	--	--	2,928
--	--	--	--	--	--	--	--	375
--	--	--	--	--	--	--	--	142,530
--	--	300	--	--	--	450	--	--
--	--	150	--	--	--	--	--	--
--	--	450	--	--	--	450	--	--
7,040	6,272	--	6,058	--	--	--	567	19,621
--	--	54,298	--	--	--	6,958	--	--
--	--	--	--	1,785	350	--	--	175
--	--	--	--	216	27,606	513	--	4,168
--	--	71,678	--	6,489	1,000	73,650	--	500
7,040	6,272	125,976	6,058	8,490	28,956	81,121	567	24,464
7,040	6,272	127,156	6,058	10,090	38,860	83,971	567	246,778

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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	Mount Baker-Snoqualmie	Colville	Gifford Pinchot	Kaniksu	Okanogan	Olympic	Wenatchee	Umatilla	Out-of-State National Forests
Puget Sound	356,238	247,316	--	32,705	9,000	--	42,473	13,164	--	11,580
Olympic Peninsula	319,650	1,964	--	76,480	--	--	239,993	--	--	1,213
Lower Columbia	106,368	--	--	98,453	--	--	--	--	--	7,915
Central Washington	175,040	--	5,990	--	--	57,530	--	111,520	--	--
Inland Empire	87,272	--	40,830	--	48	23,386	--	--	18,684	4,324
Total, State	1,044,568	249,280	46,820	207,638	9,048	80,916	282,466	124,684	18,684	25,032
Industry										
Lumber	713,519	148,027	39,435	119,744	48	65,839	230,388	86,362	18,684	4,992
Veneer and plywood	208,177	26,499	5,940	79,693	--	15,065	42,589	37,991	--	400
Pulp and board	90,706	59,895	--	5,230	9,000	--	3,599	331	--	12,651
Shake and shingle	25,531	14,859	--	1,471	--	12	5,890	--	--	3,299
Export	4,996	--	--	1,500	--	--	--	--	--	3,496
Pole, post and piling	1,639	--	1,445	--	--	--	--	--	--	194
Total, All Industries	1,044,568	249,280	46,820	207,638	9,048	80,916	282,466	124,684	18,684	25,032

¹Note: 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 Forests				State				Bureau of Land Management				Other Public				Forest industry								Farmer & miscellaneous private											
													Dependent percent				Own wood supply				Other wood supply															
	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		0-1-32	33-66	67-100		0-1-32	33-66	67-100					
Puget Sound																																				
Lumber	43	11	3	10	45	20	1	1	66	1	--	--	61	5	--	1	49	8	2	8	41	12	7	7	27	9	4	27	3	3	--	--	3	3	--	--
Veneer and plywood	3	1	1	3	5	--	--	--	8	--	--	--	8	--	--	--	6	--	1	1	5	3	--	--	3	3	--	--	3	3	--	--	3	3	--	--
Pulp and board	6	1	--	1	5	3	--	--	8	--	--	--	8	--	--	--	5	2	1	--	6	2	--	--	6	2	--	--	6	2	--	--	6	2	--	--
Shake and shingle	34	6	8	12	48	8	4	--	50	--	--	--	60	--	--	--	59	1	--	--	36	4	1	17	51	5	3	1	51	5	3	1	51	5	3	1
Export	57	2	1	1	13	34	7	7	61	--	--	--	53	--	7	1	53	--	7	1	17	15	6	23	15	32	4	10	15	32	4	10	15	32	4	10
Pole, post, and piling	7	--	--	--	3	3	1	--	7	--	--	--	7	--	--	--	7	--	--	--	3	--	3	1	1	1	3	2	1	1	3	2	1	1	3	2
Total	150	21	13	27	122	68	13	8	210	1	--	--	185	25	--	1	179	11	11	10	168	36	19	48	193	52	14	42	193	52	14	42				
Olympic Peninsula																																				
Lumber	40	11	7	13	38	23	7	3	70	--	1	--	65	6	--	--	53	10	3	5	49	5	6	11	31	14	7	19	31	14	7	19				
Veneer and plywood	5	--	4	7	7	7	2	--	16	--	--	--	15	1	--	--	12	1	3	--	13	3	--	--	11	3	1	1	11	3	1	1				
Pulp and board	4	1	--	--	3	2	--	--	5	--	--	--	4	1	--	--	2	2	1	--	2	1	1	1	4	1	--	--	4	1	--	--				
Shake and shingle	14	24	7	3	154	19	5	5	182	1	--	--	164	6	6	7	182	--	--	1	91	5	9	78	177	3	1	2	177	3	1	2				
Export	45	--	1	--	12	17	11	6	46	--	--	--	31	14	--	1	44	--	1	1	14	8	11	13	16	19	5	6	16	19	5	6				
Pole, post, and piling	4	--	--	--	2	2	--	--	4	--	--	--	4	--	--	--	3	--	--	1	2	--	1	1	--	2	1	1	--	2	1	1				
Total	247	36	19	23	216	70	25	14	323	1	1	--	283	28	6	8	296	13	8	8	171	27	28	104	239	42	15	29	239	42	15	29				
Lower Columbia																																				
Lumber	17	1	3	1	17	5	--	--	22	--	--	--	18	3	--	1	15	3	--	4	15	1	--	6	10	5	--	7	10	5	--	7				
Veneer and plywood	2	--	2	2	4	1	1	--	6	--	--	--	5	1	--	--	3	1	--	2	6	--	--	--	3	3	--	--	3	3	--	--				
Pulp and board	8	2	--	--	8	2	--	--	10	--	--	--	10	--	--	--	7	1	--	2	8	1	--	1	9	1	--	--	9	1	--	--				
Shake and shingle	15	1	--	--	14	--	1	1	16	--	--	--	16	--	--	--	15	--	--	1	5	--	1	10	15	1	--	--	15	1	--	--				
Export	27	--	--	--	13	12	2	--	27	--	--	--	24	2	--	1	27	--	--	--	9	3	--	15	11	6	1	9	11	6	1	9				
Pole, post, and piling	5	--	--	--	2	3	--	--	5	--	--	--	4	--	--	1	3	1	1	--	2	1	1	1	--	4	--	1	--	4	--	1				
Total	74	4	5	3	58	23	4	1	86	--	--	--	77	6	--	3	70	6	1	9	45	6	2	33	48	20	1	17	48	20	1	17				
Central Washington																																				
Lumber	5	3	5	5	12	5	1	--	18	--	--	--	12	3	--	3	13	1	4	--	17	1	--	--	4	9	1	4	4	9	1	4				
Veneer and plywood	--	2	1	1	1	3	--	--	4	--	--	--	1	3	--	--	1	3	2	--	3	1	--	--	1	3	--	--	1	3	--	--				
Pulp and board	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Shake and shingle	8	--	--	--	7	1	--	--	8	--	--	--	7	--	--	1	8	--	--	--	6	--	--	2	8	--	--	--	8	--	--	--				
Export	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Pole, post, and piling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Total	13	5	6	6	20	9	1	--	30	--	--	--	28	6	--	4	27	7	6	--	26	2	--	2	13	12	1	4	13	12	1	4				
Inland Empire																																				
Lumber	13	6	5	6	20	10	--	--	29	1	--	--	24	3	2	1	24	2	2	2	23	1	1	3	8	10	3	9	8	10	3	9				
Veneer and plywood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Pulp and board	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Shake and shingle	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Export	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
Pole, post, and piling	2	3	--	--	3	1	1	--	5	--	--	--	4	--	--	1	4	1	--	--	4	1	--	--	1	1	1	2	1	1	1	2				
Total	15	9	5	6	23	11	1	--	34	1	--	--	28	3	2	2	28	3	2	2	27	2	1	3	9	11	4	11	9	11	4	11				
Total, State																																				
Lumber	118	32	23	35	132	63	9	4	205	2	1	--	180	20	2	8	154	24	11	19	145	20	16	27	80	47	16	66	80	47	16	66				
Veneer and plywood	10	3	6	13	20	11	3	--	34	--	--	--	29	5	--	--	20	3	6	3	27	7	--	--	18	12	1	8	18	12	1	8				
Pulp and board	18	4	--	1	16	7	--	--	23	--	--	--	22	1	--	--	14	5	2	2	16	4	1	2	19	4	--	--	19	4	--	--				
Shake and shingle	206	31	15	15	223	26	10	6	266	1	--	--	247	6	6	8	264	1	--	2	118	9	13	107	251	9	4	3	251	9	4	3				
Export	179	7	2	1	38	53	20	13	134	--	--	--	96	16	--	2	124	--	6	2	40	26	17	51	43	67	10	29	43	67	10	29				
Pole, post, and piling	16	3	--	--	19	9	2	--	21	--	--	--	19	--	--	2	17	2	1	1	11	2	3	3	2	8	5	6	2	8	5	6				
Total	499	75	48	65	439	181	44	23	683	3	1	--	593	68	8	16	595	35	26	29	377	68	52	190	412	137	35	103	412	137	35	103				

¹Inland Empire combined with Lower Columbia to avoid disclosure

²Inland Empire combined with Central Washington to avoid disclosure

WASHINGTON SUMMARY, 1980

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

Economic area and industry	All Owners	State	National Forest ³	Bureau of Land Management	Other Public	Forest Industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Lumber	736,158	55,791	228,477	2	2,370	277,880	105,106	66,532
Veneer and plywood	86,969	--	29,201	--	--	30,731	10,534	16,503
Pulp and board	174,710	16,811	76,550	--	--	58,008	19,375	3,966
Shake and shingle	30,819	3,237	18,070	--	--	155	6,184	3,173
Export	1,008,012	168,074	3,940	--	14,771	101,684	556,552	162,991
Pole, post, and piling	12,961	1,485	--	--	--	--	6,970	4,506
Total	2,049,629	245,398	356,238	2	17,141	468,458	704,721	257,671
Olympic Peninsula								
Lumber	681,658	92,480	245,079	350	2,438	183,855	93,202	64,254
Veneer and plywood	121,521	8,591	62,949	--	1,068	27,377	4,267	17,269
Pulp and board	150,301	13,510	3,599	--	10,798	54,979	46,801	20,614
Shake and shingle	87,245	7,236	6,967	--	16,249	3,036	52,705	1,052
Export	820,148	222,687	1,056	--	47,445	2,067	397,940	148,953
Pole, post, and piling	5,984	863	--	--	--	414	2,388	2,319
Total	1,866,857	345,367	319,650	350	77,998	271,728	597,303	254,461
Lower Columbia								
Lumber	505,224	12,054	38,299	--	40,373	330,995	23,795	59,708
Veneer and plywood	113,417	1,802	57,030	--	507	51,258	--	2,820
Pulp and board ¹	111,222	6,496	10,557	--	--	60,907	4,495	28,767
Shake and shingle	17,483	63	482	--	--	7,787	9,138	13
Export	480,046	28,052	--	--	4,425	--	366,976	80,593
Pole, post, and piling	8,354	879	--	--	634	2,334	3,101	1,406
Total	1,235,746	49,346	106,368	--	45,939	453,281	407,505	173,307
Central Washington								
Lumber	263,910	11,309	116,031	--	61,118	54,679	1,610	19,163
Veneer and plywood ²	161,269	8,306	58,997	--	28,447	46,719	1,136	17,664
Pulp and board	--	--	--	--	--	--	--	--
Shake and shingle ²	86	--	12	--	48	--	26	--
Export	--	--	--	--	--	--	--	--
Pole, post, and piling	--	--	--	--	--	--	--	--
Total	425,265	19,615	175,040	--	89,613	101,398	2,772	36,827
Inland Empire								
Lumber	247,189	14,651	85,633	427	33,631	23,391	10,929	78,527
Veneer and plywood ²	--	--	--	--	--	--	--	--
Pulp and board ¹	--	--	--	--	--	--	--	--
Shake and shingle ²	--	--	--	--	--	--	--	--
Export	--	--	--	--	--	--	--	--
Pole, post, and piling	10,119	2,293	1,639	--	552	194	581	4,860
Total	257,308	16,944	87,272	427	34,183	23,585	11,510	83,387
Total, State								
Lumber	2,434,139	186,285	713,519	779	139,930	870,800	234,642	288,184
Veneer and plywood	483,176	18,699	208,177	--	30,022	156,085	15,937	54,256
Pulp and board	436,233	36,817	90,706	--	10,798	173,894	70,671	53,347
Shake and shingle	135,633	10,536	25,531	--	16,297	10,978	68,053	4,238
Export	2,308,206	418,813	4,996	--	66,641	103,751	1,321,468	392,537
Pole, post, and piling	37,418	5,520	1,639	--	1,186	2,942	13,040	13,091
Total	5,834,805	676,670	1,044,568	779	264,874	1,318,450	1,723,811	805,653

¹Inland Empire combined with Lower Columbia to avoid disclosure

²Inland Empire combined with Central Washington to avoid disclosure

³National Forest includes Canadian federal and British Columbia provincial forests

**Table 8—Log consumption by species, area and industry
(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	Hardwoods
Puget Sound										
Lumber	736,156	308,842	280,122	23,089	574	2	5,010	70,265	14	48,240
Veneer and plywood	86,969	29,204	24,001	14,099	242	242	--	--	--	19,181
Pulp and board	174,710	870	101,580	66,849	--	--	--	--	--	5,411
Shake and shingle	30,819	--	--	--	--	--	--	30,819	--	--
Export	1,008,012	581,253	330,453	32,881	5,387	9,259	2,348	11,911	21,952	12,568
Pole, post and piling	12,961	9,584	--	--	--	--	--	3,377	--	--
Total	2,049,629	929,753	736,156	136,918	6,203	9,503	7,358	116,372	21,966	85,400
Olympic Peninsula										
Lumber	681,658	207,152	320,257	4,504	7,266	3	847	54,838	44	86,747
Veneer and plywood	121,521	75,386	19,957	1,600	1,119	--	--	7,284	16,175	--
Pulp and board	150,301	10,512	130,129	6,102	2,838	--	--	--	--	720
Shake and shingle	87,245	--	--	--	--	--	--	87,235	10	--
Export	820,148	179,686	554,273	4,940	48,995	353	89	28,753	75	3,994
Pole, post and piling	5,984	5,053	--	--	--	--	--	931	--	--
Total	1,866,857	477,789	1,024,616	16,246	60,218	356	936	179,921	16,304	91,371
Lower Columbia										
Lumber	505,224	261,209	156,993	3,154	193	54,641	--	19,989	--	9,045
Veneer and plywood	113,417	68,424	20,064	3,083	--	267	--	20,446	--	1,133
Pulp and board	111,222	34,837	37,356	--	--	--	--	--	--	39,029
Shake and shingle	17,483	--	--	--	--	--	--	17,483	--	--
Export	480,046	344,590	101,336	22,303	1,423	607	744	2,111	4,956	1,976
Pole, post and piling	8,354	8,157	--	--	--	--	--	197	--	--
Total	1,235,746	717,217	315,749	28,540	1,616	55,515	744	60,226	4,956	51,183
Central Washington										
Lumber	263,910	58,929	3,000	25,058	3,382	163,516	5,049	--	4,938	38
Veneer and plywood	161,269	118,190	2,498	20,165	10,715	4,627	3,712	--	906	454
Pulp and board	--	--	--	--	--	--	--	--	--	--
Shake and shingle	86	--	--	--	--	--	--	26	50	--
Export	--	--	--	--	--	--	--	--	--	--
Pole, post, and piling	--	--	--	--	--	--	--	--	--	--
Total	425,265	177,119	5,498	45,223	14,097	168,143	8,761	26	5,906	492
Inland Empire										
Lumber	247,189	103,386	8,110	12,982	9,442	78,355	17,565	8,128	3,319	10
Veneer and plywood	--	--	--	--	--	--	--	--	--	--
Pulp and board	--	--	--	--	--	--	--	--	--	--
Shake and shingle	--	--	--	--	--	--	--	--	--	--
Export	--	--	--	--	--	--	--	--	--	--
Pole, post and piling	10,119	--	--	--	--	81	6,825	2,621	592	--
Total	257,308	103,386	8,110	12,982	9,442	78,436	24,390	10,749	9,811	10
Total, State										
Lumber	2,434,139	939,518	766,482	68,787	29,857	296,517	28,471	153,212	14,215	144,089
Veneer and plywood	483,176	291,204	66,520	38,947	12,076	5,136	3,712	27,730	17,083	20,768
Pulp and board	436,233	46,219	269,065	72,951	2,838	--	--	--	--	45,160
Shake and shingle	135,633	--	--	--	--	--	--	135,663	10	--
Export	2,308,206	1,105,529	906,062	59,724	55,805	10,213	3,181	42,755	26,384	18,448
Pole, post and piling	37,418	22,794	--	--	--	81	6,825	7,126	592	--
Total	5,834,805	2,405,264	2,090,129	239,509	91,578	311,953	42,189	366,396	58,943	228,466

*Inland Empire has been combined with Lower Columbia to avoid disclosure

*Inland Empire has been combined with Central Washington 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				Unused	All bark	Used ¹				Unused	
			Total	Pulp and board	Fuel	Other			Total	Pulp and board	Fuel	Other		
Puget Sound														
Lumber	1,142,378	886,264	880,396	356,013	264,913	259,470	5,868	256,114	255,586	--	113,408	142,178	528	
Veneer and plywood	231,117	186,073	184,313	99,083	76,368	8,862	1,760	45,044	43,981	--	43,981	--	1,063	
Shake and shingle	38,232	27,677	15,422	1,024	8,033	6,365	12,255	10,555	3,943	--	3,039	904	6,612	
Other ²	62,304	--	--	--	--	--	--	62,304	58,956	--	1,769	57,187	3,348	
Total	1,474,031	1,100,014	1,080,131	456,120	349,314	274,697	19,883	374,017	362,466	--	162,197	200,269	11,551	
Olympic Peninsula														
Lumber	1,043,165	805,197	798,309	450,326	270,621	77,362	6,888	237,968	235,802	--	197,879	37,923	2,166	
Veneer and plywood	207,773	167,148	167,148	100,144	47,482	19,522	--	40,625	38,217	--	30,144	8,073	2,408	
Shake and shingle	114,682	83,160	32,217	5,214	16,027	10,976	50,943	31,522	9,009	--	7,200	1,809	22,513	
Other ²	12,776	--	--	--	--	--	--	12,776	12,648	--	12,479	169	128	
Total	1,378,396	1,055,505	997,674	555,684	334,130	107,860	57,831	322,891	295,676	--	247,702	47,974	27,215	
Lower Columbia														
Lumber	770,777	599,745	598,436	177,118	352,949	68,369	1,309	171,032	170,953	--	82,445	88,508	79	
Veneer and plywood	183,616	145,640	145,640	89,202	35,342	21,096	--	37,976	37,976	--	37,976	--	--	
Shake and shingle	21,982	15,146	13,886	2,640	10,503	743	1,260	6,836	6,355	--	6,248	107	481	
Other ²	69,340	--	--	--	--	--	--	69,340	69,340	--	69,340	--	--	
Total	1,045,715	760,531	757,962	268,960	398,794	90,208	2,569	285,184	284,624	--	196,009	88,615	560	
Central Washington														
Lumber	396,241	308,009	288,042	113,247	172,024	2,771	19,967	88,232	84,936	--	78,388	6,548	3,296	
Veneer and plywood ³	249,736	197,950	197,950	123,014	47,258	27,678	--	51,786	46,005	--	45,352	653	5,781	
Shake and shingle ³	220	201	138	--	12	126	63	19	17	--	13	4	2	
Other ²	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total	646,197	506,160	486,130	236,261	219,294	30,575	20,030	140,037	130,958	--	123,753	7,205	9,079	
Inland Empire														
Lumber	383,288	298,872	275,205	180,277	86,950	7,978	23,667	84,416	62,341	--	60,343	1,998	22,075	
Veneer and plywood ³	--	--	--	--	--	--	--	--	--	--	--	--	--	
Shake and shingle ³	--	--	--	--	--	--	--	--	--	--	--	--	--	
Other ²	3,136	--	--	--	--	--	--	3,136	1,586	--	1,586	--	1,550	
Total	386,424	298,872	275,205	180,277	86,950	7,978	23,667	87,552	63,927	--	60,343	3,584	23,625	
Total, State														
Lumber	3,735,849	2,898,087	2,840,388	1,276,981	1,147,457	415,950	57,699	837,762	809,618	--	532,463	277,155	28,144	
Veneer and plywood	872,242	696,811	695,051	411,443	206,450	77,158	1,760	175,431	166,179	--	157,453	8,726	9,252	
Shake and shingle	175,116	126,184	61,663	8,878	34,575	18,210	64,521	48,932	19,324	--	16,500	2,824	29,608	
Other ²	147,556	--	--	--	--	--	--	147,556	142,530	--	83,588	58,942	5,026	
Total	4,930,763	3,721,082	3,597,102	1,697,302	1,388,482	511,318	123,980	1,209,681	1,137,651	--	790,004	347,647	72,030	

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

²Includes log export, and pole and piling operations

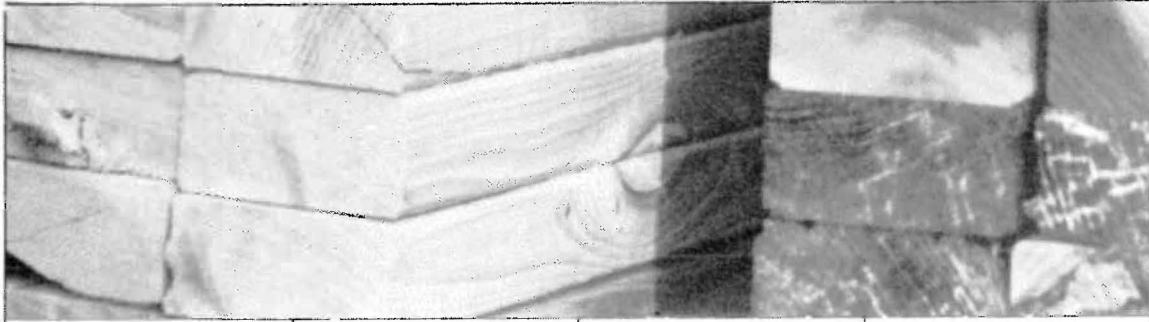
³Inland Empire combined with Central Washington to avoid disclosure

**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	736,158	328,860	407,298
Veneer and plywood	86,969	38,781	48,188
Pulp and board	174,710	151,878	22,832
Shake and shingle	30,819	30,471	348
Export	1,008,012	603,247	404,765
Pole, post and piling	12,961	--	12,961
Total	2,049,629	1,153,237	896,392
Olympic Peninsula			
Lumber	681,658	272,625	409,033
Veneer and plywood	121,521	75,744	45,777
Pulp and board	150,301	90,578	59,723
Shake and shingle	87,245	85,652	1,593
Export	820,148	392,840	427,308
Pole, post and piling	5,984	--	5,984
Total	1,866,857	917,439	949,418
Lower Columbia			
Lumber	505,224	380,322	124,902
Veneer and plywood	113,417	51,129	62,288
Pulp and board ¹	111,222	32,841	78,381
Shake and shingle	17,483	17,481	2
Export	480,046	341,708	138,338
Pole, post and piling	8,354	1,207	7,147
Total	1,235,746	824,688	411,058
Central Washington			
Lumber	263,910	163,020	100,890
Veneer and plywood ²	161,269	143,122	18,147
Pulp and board	--	--	--
Shake and shingle ²	86	56	30
Export	--	--	--
Pole, post and piling	--	--	--
Total	425,265	306,198	119,067
Inland Empire			
Lumber	247,189	130,378	116,811
Veneer and plywood ³	--	--	--
Pulp and board ¹	--	--	--
Shake and shingle ²	--	--	--
Export	--	--	--
Pole, post and piling	10,119	8,018	2,101
Total	257,308	138,396	118,912
Total, State			
Lumber	2,434,139	1,275,205	1,158,934
Veneer and plywood	483,176	308,776	174,400
Pulp and board	436,233	275,297	160,936
Shake and shingle	135,633	133,660	1,973
Export	2,308,206	1,337,795	970,411
Pole, post and piling	37,418	9,225	28,193
Total	5,834,805	3,339,958	2,494,847

¹Inland Empire combined with Lower Columbia to avoid disclosure

²Inland Empire combined with Central Washington to avoid disclosure



LUMBER

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	14	9	--	3	2
Kitsap	3	2	--	--	1
Pierce	13	6	--	1	6
San Juan	1	1	--	--	--
Skagit	8	7	--	--	1
Snohomish	23	13	2	5	3
Whatcom	3	2	1	--	--
Total	67	41	4	9	13
Olympic Peninsula					
Clallam	18	16	1	--	1
Grays Harbor	12	6	2	--	4
Jefferson	5	4	--	1	--
Lewis	14	5	1	2	6
Mason	9	4	2	1	2
Pacific	5	2	1	--	2
Thurston	8	5	2	1	--
Total	71	42	9	5	15
Lower Columbia					
Clark	5	4	1	--	--
Cowlitz	7	1	2	2	2
Klickitat	6	2	1	2	1
Skamania	2	--	--	--	2
Wahkiakum	2	2	--	--	--
Total	22	9	4	4	5
Central Washington					
Chelan	2	--	--	1	1
Lincoln	1	--	--	--	1
Okanogan	11	7	2	--	2
Yakima	4	--	1	2	1
Total	18	7	3	3	5
Inland Empire					
Asotin	2	1	1	--	--
Ferry	4	1	1	1	1
Pend Oreille	5	4	1	--	--
Spokane	3	2	--	1	--
Stevens	14	8	5	1	--
Walla Walla	2	1	1	--	--
Total	30	17	9	3	1
Total, State	208	116	29	24	39

¹Mill size-class identified as follows: Class A mills = 120,000 + board foot capacity per shift, B = 80,000 - 119,999, C = 40,000 - 79,999, D = less than 40,000

WASHINGTON SAWMILLS, 1980

**Table 12—Installed eight-hour 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	46	2	44	--	--
King	747	75	--	280	392
Kitsap	508	8	--	--	500
Pierce	1,185	20	--	95	1,070
San Juan	4	4	--	--	--
Skagit	194	69	--	--	125
Snohomish	1,423	189	110	445	679
Whatcom	73	3	70	--	--
Total	4,180	370	224	820	2,766
Olympic Peninsula					
Clallam	333	133	40	--	160
Grays Harbor	772	77	95	--	600
Jefferson	123	23	--	100	--
Lewis	1,214	62	45	185	922
Mason	735	86	105	94	450
Pacific	390	5	55	--	330
Thurston	225	35	110	80	--
Total	3,792	421	450	459	2,462
Lower Columbia					
Clark	122	62	60	--	--
Cowlitz	905	3	97	180	625
Klickitat	425	10	75	170	170
Skamania	275	--	--	--	275
Wahkiakum	12	12	--	--	--
Total	1,739	87	232	350	1,070
Central Washington					
Chelan	225	--	--	100	125
Lincoln	130	--	--	--	130
Okanogan	345	--	45	--	300
Yakima	395	--	60	210	125
Total	1,095	--	105	310	680
Inland Empire					
Asotin	64	4	60	--	--
Ferry	298	8	50	100	140
Pend Oreille	110	64	46	--	--
Spokane	87	7	--	80	--
Stevens	454	91	238	--	125
Walla Walla	63	1	62	--	--
Total	1,076	175	456	180	265
Total, State	11,882	1,053	1,467	2,119	7,243

¹Mill-size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

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	9	18	--	3
C	4	4	4	1	2
B	7	8	7	--	4
A	13	13	11	--	8
Total	28	34	40	1	17
Olympic Peninsula					
D	7	10	13	8	4
C	6	8	5	--	2
B	5	5	4	--	3
A	13	15	12	--	11
Total	31	38	34	8	20
Lower Columbia					
D	1	2	4	--	1
C	4	4	4	--	2
B	3	4	2	--	2
A	4	5	5	--	4
Total	12	15	15	--	9
Central Washington					
D	--	--	--	1	--
C	3	3	3	2	2
B	3	3	2	--	2
A	5	5	4	--	5
Total	11	11	9	3	9
Inland Empire					
D	3	3	8	2	--
C	9	9	7	4	5
B	3	3	3	1	2
A	1	1	1	1	1
Total	16	16	19	8	8
Total, State					
D	16	24	43	11	8
C	25	28	23	7	13
B	21	23	18	1	13
A	36	39	33	1	29
Total	98	114	117	20	63

¹Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per shift, B = 80,000 - 119,999, C = 40,000 - 79,999, D = less than 40,000

WASHINGTON SAWMILLS, 1980

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	4	4	8	--	3
Kitsap	1	1	3	--	--
Pierce	7	7	7	--	4
San Juan	--	--	1	--	--
Skagit	2	3	3	--	2
Snohomish	12	17	16	--	7
Whatcom	1	1	1	--	1
Total	28	34	40	1	17
Olympic Peninsula					
Clallam	2	5	5	5	2
Grays Harbor	7	7	4	2	4
Jefferson	1	1	1	1	1
Lewis	8	11	11	--	6
Mason	7	8	7	--	4
Pacific	3	3	4	--	3
Thurston	3	3	2	--	--
Total	31	38	34	8	20
Lower Columbia					
Clark	2	2	4	--	1
Cowlitz	4	6	5	--	3
Klickitat	4	4	4	--	3
Skamania	2	2	2	--	2
Wahkiamum	--	1	--	--	--
Total	12	15	15	--	9
Central Washington					
Chelan	2	2	2	--	2
Lincoln	1	1	1	--	1
Okanogan	4	4	3	3	3
Yakima	4	4	3	--	3
Total	11	11	9	3	9
Inland Empire					
Asotin	1	1	1	--	1
Ferry	3	3	3	3	2
Pend Oreille	3	3	2	--	1
Spokane	1	1	2	--	1
Stevens	7	7	9	4	2
Walla Walla	1	1	2	1	1
Total	16	16	19	8	8
Total, State	98	114	117	20	63

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

Economic area and mill size-class ¹	Circular saw				Band saw				Gang saw			Chipping saw			Scragg double cut saw		
	2 ft.	4 ft.	6 ft.	8+ 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.
Puget Sound																	
D	5	19	7	6	3	--	--	--	1	--	1	--	--	--	--	--	--
C	--	--	--	--	4	--	--	--	--	--	--	1	--	--	--	--	--
B	1	1	--	--	2	3	1	--	--	1	--	--	--	--	1	--	--
A	--	--	--	--	7	2	4	--	--	--	--	3	--	--	1	--	--
Total	6	20	7	6	16	5	5	--	1	1	1	4	--	--	2	--	--
Olympic Peninsula																	
D	3	17	4	11	5	--	--	--	--	--	--	1	--	--	2	--	--
C	--	2	2	--	2	2	--	--	--	--	--	1	--	--	1	--	--
B	--	--	--	--	--	3	--	--	--	--	--	3	--	--	--	--	--
A	--	1	--	--	4	7	2	--	--	1	--	4	--	--	1	--	--
Total	3	20	6	11	11	12	2	--	--	1	--	9	--	--	4	--	--
Lower Columbia																	
D	--	3	3	2	--	1	--	--	1	--	--	--	--	--	--	--	--
C	--	--	--	--	1	3	--	--	--	--	--	--	--	--	--	--	--
B	--	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--	--
A	--	--	--	--	2	2	1	--	1	--	--	2	--	--	1	--	--
Total	--	3	3	2	3	10	1	--	2	--	--	2	--	--	1	--	--
Central Washington																	
D	--	4	1	1	--	--	--	--	--	--	--	--	1	--	--	--	--
C	--	1	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
B	--	--	--	--	--	2	--	--	--	--	--	1	--	--	--	--	--
A	--	--	--	--	--	4	--	--	--	--	--	1	--	--	--	--	--
Total	--	5	1	1	--	8	--	--	--	--	--	2	1	--	--	--	--
Inland Empire																	
D	3	11	--	1	2	--	--	--	--	--	--	--	--	--	--	--	--
C	--	2	1	--	2	3	--	--	--	--	--	--	--	--	1	--	--
B	--	1	--	--	2	--	--	--	--	--	--	--	--	--	1	--	--
A	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
Total	4	14	1	1	7	3	--	--	--	--	--	--	--	--	2	--	--
Total, State																	
D	11	54	15	21	10	1	--	--	2	--	1	1	1	--	2	--	--
C	--	5	2	--	9	10	--	--	--	--	--	2	--	--	2	--	--
B	1	2	--	--	4	12	1	--	--	1	--	4	--	--	2	--	--
A	1	1	--	--	14	15	7	--	1	1	--	10	--	--	3	--	--
Total	13	62	17	21	37	38	8	--	3	2	1	17	1	--	9	--	--

¹Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per shift, B = 80,000 - 119,999, C = 40,000 - 79,999, D = less than 40,000

Note: Sizes of headrigs are upper limits. Thus, the 6-foot size class includes saws 49 through 72 inches

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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	21	20	1	--	--	--
	3 - 5	19	--	14	2	1	2
	6 - 10	21	1	2	18	--	--
	11 - 20	21	1	1	2	17	--
	21+	34	--	1	3	4	26
	Total	116	22	19	25	22	28
C	0 - 2	1	1	--	--	--	--
	3 - 5	2	--	2	--	--	--
	6 - 10	3	--	--	3	--	--
	11 - 20	5	--	--	2	2	1
	21+	18	1	1	4	4	8
	Total	29	2	3	9	6	9
B	0 - 2	1	1	--	--	--	--
	3 - 5	3	--	3	--	--	--
	6 - 10	2	--	--	2	--	--
	11 - 20	1	--	--	--	1	--
	21+	17	4	--	4	3	6
	Total	24	5	3	6	4	6
A	0 - 2	1	1	--	--	--	--
	3 - 5	3	--	3	--	--	--
	6 - 10	4	--	1	3	--	--
	11 - 20	6	--	--	1	5	--
	21+	25	1	2	7	2	13
	Total	39	2	6	11	7	13
Total, State	0 - 2	24	23	1	--	--	--
	3 - 5	27	--	22	2	1	2
	6 - 10	30	1	3	26	--	--
	11 - 20	33	1	1	5	25	1
	21+	94	6	4	18	13	53
	Total	208	31	31	51	39	56

¹Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per shift, B = 80,000 - 119,999, C = 40,000 - 79,999, 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	125	D	95
C	232	C	187
B	221	B	225
A	202	A	192
Average	159	Average	159
Olympic Peninsula		Inland Empire	
D	111	D	76
C	186	C	218
B	227	B ²	226
A	215	A ²	--
Average	150	Average	138
Lower Columbia		Total, State	
D	133	D	111
C	233	C	209
B	220	B ³	223
A	217	A	208
Average	186	Average	156

¹Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per 8-hour shift, B = 80,000 - 119,999, C = 40,000 - 79,999, D = less than 40,000

²Size-class A combined with size-class B to avoid disclosure

³Size-class B includes size-class A for Inland Empire

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

Economic area and mill size- class ¹	Roundwood			Other	
	All roundwood	Sound logs	Utility logs	Peeler cores	Cants
	----- Scribner log rule -----			--- Lumber tally ---	
Puget Sound					
D	38,796	37,315	1,481	--	--
C	25,800	24,404	1,396	--	--
B	137,988	131,687	6,301	--	--
A	533,574	390,352	143,222	500	--
Total	736,158	583,758	152,400	500	--
Olympic Peninsula					
D	34,537	28,986	5,551	--	87
C	76,929	54,299	22,630	--	--
B	87,352	46,818	40,534	2	--
A	482,840	452,030	30,810	247	--
Total	681,658	582,133	99,525	249	87
Lower Columbia					
D	6,250	5,345	905	--	--
C	56,861	51,236	5,625	--	--
B	97,553	96,256	1,297	--	--
A	344,560	342,478	2,082	--	--
Total	505,224	495,315	9,909	--	--
Central Washington					
D	687	541	146	--	--
C	27,323	26,775	548	--	--
B	87,512	84,301	3,211	--	--
A	148,388	142,851	5,537	--	--
Total	263,910	254,468	9,442	--	--
Inland Empire					
D	8,638	7,597	1,041	--	--
C	120,937	119,379	1,558	--	--
B and A ²	117,614	109,102	8,512	--	4,000
Total	247,189	236,078	11,111	--	4,000
Total, State					
D	88,908	79,784	9,124	--	87
C	307,850	276,093	31,757	--	--
B ³	528,019	468,164	59,855	2	4,000
A	1,509,362	1,327,711	181,651	747	--
Total	2,434,139	2,151,752	282,387	749	4,087

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

²Combined to avoid disclosure

³Total for Class B includes Class A for Inland Empire

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	38,796	12,314	26,482
C	25,800	5,050	20,750
B	137,988	55,488	82,500
A	533,574	256,008	277,566
Total	736,158	328,860	407,298
Olympic Peninsula			
D	34,537	9,408	25,129
C	76,929	2,954	73,975
B	87,352	21,458	65,894
A	482,840	238,805	244,035
Total	681,658	272,625	409,033
Lower Columbia			
D	6,250	2,318	3,932
C	56,861	38,958	17,903
B	97,553	76,066	21,487
A	344,560	262,980	81,580
Total	505,224	380,322	124,902
Central Washington			
D	687	201	486
C	27,323	18,942	8,381
B	87,512	48,228	39,284
A	148,388	95,649	52,739
Total	263,910	163,020	100,890
Inland Empire			
D	8,638	931	7,707
C	120,937	76,232	44,705
B and A ²	117,614	53,215	64,399
Total	247,189	130,378	116,811
Total, State			
D	88,908	25,172	63,736
C	307,850	142,136	165,714
B ³	528,019	254,455	273,564
A	1,509,362	853,442	655,920
Total	2,434,139	1,275,205	1,158,934

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per shift, B = 80,000 - 119,999, C = 40,000 - 79,999, D = less than 40,000

²Combined to avoid disclosure

³Total for Class B includes Class A for Inland Empire

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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 and San Juan ¹	8,320	6	8,314
King	133,635	81,427	52,208
Kitsap	58,180	5,802	52,378
Pierce	177,318	52,174	125,144
Skagit	34,452	12,951	21,501
Snohomish	315,774	174,433	141,341
Whatcom	8,479	2,067	6,412
Total	736,158	328,860	407,298
Olympic Peninsula			
Clallam	45,339	30,705	14,634
Grays Harbor	172,616	82,588	90,028
Jefferson	13,965	10,701	3,264
Lewis	142,716	32,739	109,977
Mason	186,323	58,748	127,575
Pacific	102,023	57,084	44,939
Thurston	18,676	60	18,616
Total	681,658	272,625	409,033
Lower Columbia			
Clark	11,600	1,540	10,060
Cowlitz	364,243	302,230	62,013
Klickitat	96,081	63,027	33,054
Skamania and Wahkiamum ¹	33,300	13,525	19,775
Total	505,224	380,322	124,902
Central Washington			
Chelan, Lincoln and Okanogan ¹	139,219	76,050	63,169
Yakima	124,691	86,970	37,721
Total	263,910	163,020	100,890
Inland Empire			
Asotin and Walla Walla ¹	43,650	23,771	19,879
Ferry	67,664	50,355	17,309
Pend Oreille and Spokane ¹	42,593	11,036	31,557
Stevens	93,282	45,216	48,066
Total	247,189	130,378	116,811
Total, State	2,434,139	1,275,205	1,158,934

¹Combined 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			1980 log consumption	Apparent 1980 log receipts
	January 1, 1980	December 31, 1980	Net Change		
Puget Sound	169,073	169,308	+235	736,158	736,393
Olympic Peninsula	102,178	125,849	+23,671	681,658	705,329
Lower Columbia	77,688	81,514	+3,826	505,224	509,050
Central Washington	58,297	67,920	+9,623	263,910	273,533
Inland Empire	53,830	60,368	+6,538	247,189	253,727
Total, State	461,066	504,959	+43,893	2,434,139	2,478,032

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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	38,796	3,018	10,583	2	976	1,020	9,035	14,162
C	25,800	4,040	4,460	--	910	5,850	2,320	8,220
B	137,988	10,027	60,933	--	90	3,256	36,941	26,741
A	533,574	38,706	152,501	--	394	267,754	56,810	17,409
Total	736,158	55,791	228,477	2	2,370	277,880	105,106	66,532
Olympic Peninsula								
D	34,537	2,658	6,188	350	8	1,207	16,569	7,557
C	76,929	18,558	806	--	--	581	45,684	11,300
B	87,352	12,964	24,718	--	554	6,465	22,617	20,034
A	482,840	58,300	213,367	--	1,876	175,602	8,332	25,363
Total	681,658	92,480	245,079	350	2,438	183,855	93,202	64,254
Lower Columbia								
D	6,250	--	--	--	--	--	4,795	1,455
C	56,861	1,350	--	--	5,998	33,663	13,300	2,550
B	97,553	2,504	4,870	--	32,555	53,798	3,000	826
A	344,560	8,200	33,429	--	1,820	243,534	2,700	54,877
Total	505,224	12,054	38,299	--	40,373	330,995	23,795	59,708
Central Washington								
D	687	99	259	--	80	--	10	239
C	27,323	400	24,831	--	--	--	1,600	492
B	87,512	2,566	25,715	--	30,967	24,694	--	3,570
A	148,388	8,244	65,226	--	30,071	29,985	--	14,862
Total	263,910	11,309	116,031	--	61,118	54,679	1,610	19,163
Inland Empire								
D	8,638	350	1,102	--	70	67	1,498	5,551
C	120,937	2,640	45,027	--	14,337	22,470	9,004	27,459
B and A ²	117,614	11,661	39,504	427	19,224	854	427	45,517
Total	247,189	14,651	85,633	427	33,631	23,391	10,929	78,527
Total, State								
D	88,908	6,125	18,132	352	1,134	2,294	31,907	28,964
C	307,850	26,988	75,124	--	21,245	62,564	71,908	50,021
B ³	528,019	39,722	155,740	427	83,390	89,067	62,985	96,688
A	1,509,362	113,450	464,523	--	34,161	716,875	67,842	112,511
Total	2,434,139	186,285	713,519	779	139,930	870,800	234,642	288,184

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

²Combined to avoid disclosure

³Total for Class B includes Class A for Inland Empire

**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
						Owned wood supply	Other wood supply	
Puget Sound								
Island and San Juan ¹	8,320	--	--	--	--	5,850	400	2,070
King	133,635	7,137	35,407	--	960	85,338	2,622	2,171
Kitsap	58,160	14,500	2,900	--	--	29,005	--	11,775
Pierce	177,318	6,543	57,101	--	394	52,816	58,747	1,717
Skagit	34,452	8,993	12,928	2	16	510	--	12,003
Snohomish	315,774	16,978	117,681	--	590	104,350	42,517	33,658
Whatcom	8,479	1,640	2,460	--	410	11	820	3,138
Total	736,158	55,791	228,477	2	2,370	277,880	105,106	66,532
Olympic Peninsula								
Clallam	45,339	5,183	33,692	--	8	889	3,609	1,967
Grays Harbor	172,616	28,788	32,091	350	1,076	91,843	8,673	8,995
Jefferson	13,965	10,194	1,194	--	118	5	1,591	863
Lewis	142,716	7,478	52,510	--	403	8,288	40,540	33,497
Mason	186,323	7,233	124,762	--	--	34,879	12,849	6,600
Pacific	102,023	27,840	830	--	--	47,456	15,840	10,057
Thurston	18,676	5,764	--	--	33	495	10,109	2,275
Total	681,658	92,480	245,079	350	2,438	183,855	93,202	64,254
Lower Columbia								
Clark	11,600	--	--	--	--	--	11,000	600
Cowlitz	364,243	1,350	--	--	--	296,340	9,300	57,263
Klickitat	96,081	7,054	12,149	--	40,373	34,655	--	1,850
Skamania and Wahkiakum ¹	33,300	3,650	26,150	--	--	--	3,495	5
Total	505,224	12,054	38,299	--	40,373	330,995	23,795	59,708
Central Washington								
Chelan, Lincoln and Skanogan ¹	139,219	4,097	64,501	--	24,018	28,944	10	17,649
Yakima	124,691	7,212	51,530	--	37,100	25,735	1,600	1,514
Total	263,910	11,309	116,031	--	61,118	54,679	1,610	19,163
Inland Empire								
Asotin and Walla Walla ¹	43,650	1,250	22,812	--	2,500	--	--	17,088
Ferry	67,664	3,161	38,039	427	19,224	854	427	5,532
Pend Oreille and Spokane ¹	42,593	3,350	10,213	--	--	--	1,498	27,532
Stevens	93,282	6,890	14,569	--	11,907	22,537	9,004	28,375
Total	247,189	14,651	85,633	427	33,631	23,391	10,929	78,527
Total, State	2,434,139	186,285	713,519	779	139,930	870,800	234,642	288,184

¹Combined to avoid disclosure

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 reocedar	Other softwoods	Hardwoods
Puget Sound										
D	38,796	9,440	6,732	10	6	2	10	13,344	14	9,238
C	25,800	14,242	5,892	492	--	--	--	1,894	--	3,280
B	137,988	15,096	31,481	17,739	--	--	--	37,950	--	35,722
A	533,574	270,064	236,017	4,848	568	--	5,000	17,077	--	--
Total	736,158	308,842	280,122	23,089	574	2	5,010	70,265	14	48,240
Olympic Peninsula										
D	34,537	2,864	2,743	15	3,332	3	17	17,189	44	8,330
C	76,929	6,620	1,676	120	40	--	--	33,378	--	35,095
B	87,352	22,947	20,303	1,200	118	--	--	--	--	42,784
A	482,840	174,721	295,535	3,169	3,776	--	830	4,271	--	538
Total	681,658	207,152	320,257	4,504	7,266	3	847	54,838	44	86,747
Lower Columbia										
D	5,250	5,699	28	35	193	140	--	110	--	45
C	56,861	16,597	--	3,119	--	11,277	--	16,868	--	9,000
B	97,553	6,499	44,819	--	--	43,224	--	3,011	--	--
A	344,560	232,414	172,146	--	--	--	--	--	--	--
Total	505,224	281,209	156,993	3,154	193	54,641	--	19,989	--	9,045
Central Washington										
D	687	283	--	--	15	50	41	--	260	38
C	27,323	13,493	--	2,000	640	9,720	796	--	684	--
B	87,512	21,978	3,000	10,699	--	50,124	--	--	1,711	--
A	148,388	23,175	--	12,359	2,727	103,522	4,222	--	2,283	--
Total	263,910	58,929	3,000	25,058	3,382	163,516	5,049	--	4,938	38
Inland Empire										
D	8,538	1,879	128	174	--	2,537	1,877	615	1,418	10
C	120,937	42,657	6,482	9,510	6,259	42,787	5,082	2,713	5,447	--
B and A ²	117,614	58,850	1,500	3,298	3,183	33,031	10,506	4,792	2,354	--
Total	247,189	103,386	8,110	12,982	9,442	78,355	17,565	8,120	9,219	10
Total, State										
D	88,908	20,165	9,631	234	3,546	2,732	1,945	31,258	1,736	17,661
C	307,660	93,609	14,050	15,241	6,939	63,764	5,868	54,853	6,131	47,375
B ³	528,919	125,370	101,103	32,936	3,301	126,379	10,606	45,753	4,065	78,506
A	1,509,352	790,374	643,698	20,376	7,071	103,622	10,052	21,348	2,283	538
Total	2,434,139	939,518	768,482	68,787	20,857	296,517	28,471	153,212	14,215	144,080

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

²Combined to avoid disclosure

³Total for Class B includes Class A for Inland Empire

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Table 26—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 and San Juan ¹	8,320	7,118	1,102	8	--	--	--	12	--	--
King	133,635	41,607	78,260	4,937	2	--	8	8,803	4	14
Kitsap	58,180	46,543	11,601	--	--	--	--	27	9	--
Pierce	177,318	68,224	79,555	4,848	568	--	--	20,766	--	3,357
Skagit	34,452	12,892	10,746	2	--	2	5,000	663	--	5,147
Snohomish	315,774	130,889	97,047	12,802	2	--	2	38,593	1	36,438
Whatcom	8,479	1,569	1,731	492	2	--	--	1,401	--	3,284
Total	736,158	308,842	280,122	23,089	574	2	5,010	70,265	14	48,240
Olympic Peninsula										
Clallam	45,339	9,344	25,020	11	3,910	3	2	7,042	3	4
Grays Harbor	172,616	31,024	127,526	2,658	1,545	--	--	2,809	19	7,035
Jefferson	13,965	66	11,730	4	118	--	--	2,040	--	7
Lewis	142,716	43,786	39,356	1,831	--	--	--	7,077	--	50,666
Mason	186,323	100,417	62,026	--	--	--	4	23,714	--	162
Pacific	102,023	17,297	54,588	--	1,693	--	830	1,207	--	26,408
Thurston	18,676	5,218	11	--	--	--	11	10,949	22	2,466
Total	681,658	207,152	320,257	4,504	7,266	3	847	54,838	44	86,747
Lower Columbia										
Clark	11,600	11,452	13	--	--	--	--	110	--	25
Cowlitz	364,243	202,344	133,991	10	--	--	--	18,878	--	9,020
Klickitat	96,081	26,511	10,784	3,144	--	54,641	--	1,001	--	--
Skamania and Wahkiakum ¹	33,300	20,902	12,205	--	193	--	--	--	--	--
Total	505,224	261,209	156,993	3,154	193	54,641	--	19,989	--	9,045
Central Washington										
Chelan, Lincoln and Okanogan ¹	139,219	34,817	3,000	13,000	2,510	78,050	4,577	--	3,227	38
Yakima	124,691	24,112	--	12,058	872	85,466	472	--	1,711	--
Total	263,910	58,929	3,000	25,058	3,382	163,516	5,049	--	4,938	38
Inland Empire										
Asotin and Walla Walla ¹	43,650	12,182	5,022	7,418	4,784	12,612	1,622	--	--	10
Ferry	67,664	44,990	--	298	2,583	9,041	6,706	1,692	2,354	--
Pend Oreille and Spokane ¹	42,593	10,505	1,513	3,148	--	15,888	4,402	3,450	3,687	--
Stevens	93,282	35,709	1,575	2,118	2,075	40,814	4,835	2,978	3,178	--
Total	247,189	103,386	8,110	12,982	9,442	78,355	17,565	8,120	9,219	10
Total, State	2,434,139	939,518	768,482	68,787	20,857	296,517	28,471	153,212	14,215	144,080

¹Combined to avoid disclosure

Table 27—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 residue			Wood residue			Bark residue		
	Total	Used ²	Unused	Total	Used ²	Unused	Total	Used ²	Unused
Puget Sound									
B	49,749	47,992	1,757	37,573	36,344	1,229	12,176	11,648	528
C	35,334	34,987	347	27,516	27,169	347	7,818	7,818	--
B	221,382	217,427	3,955	170,829	166,674	3,955	50,753	50,753	--
A	835,913	835,576	337	650,546	650,209	337	185,367	185,367	--
Total	1,142,378	1,135,982	6,396	886,264	880,396	5,868	256,114	255,586	528
Olympic Peninsula									
D	44,907	35,853	9,054	33,914	27,026	6,888	10,993	8,827	2,166
C	89,233	89,233	--	67,224	67,224	--	22,009	22,009	--
B	149,729	149,729	--	115,332	115,332	--	34,397	34,397	--
A	759,296	759,296	--	588,727	588,727	--	170,569	170,569	--
Total	1,043,165	1,034,111	9,054	805,197	798,309	6,888	237,968	235,802	2,166
Lower Columbia									
D	10,217	10,089	128	7,789	7,740	49	2,428	2,349	79
C	85,692	85,692	--	66,485	66,485	--	19,207	19,207	--
B	119,071	117,811	1,260	92,477	91,217	1,260	26,594	26,594	--
A	555,797	555,797	--	432,994	432,994	--	122,803	122,803	--
Total	770,777	769,389	1,388	599,745	598,436	1,309	171,032	170,953	79
Central Washington									
D	699	625	74	517	464	53	182	161	21
C	43,975	39,890	4,085	34,029	33,219	810	9,946	6,671	3,275
B	125,611	125,611	--	97,013	97,013	--	28,598	28,598	--
A	225,956	206,852	19,104	176,450	157,346	19,104	49,506	49,506	--
Total	396,241	372,978	23,263	308,009	288,042	19,967	88,232	84,936	3,296
Inland Empire									
D	10,811	4,901	5,910	8,205	3,118	5,087	2,606	1,783	823
C	187,450	175,725	11,725	146,285	139,969	6,316	41,165	35,756	5,409
B and A ³	185,027	156,920	28,107	144,382	132,118	12,264	40,645	24,802	15,843
Total	383,288	337,546	45,742	298,872	275,205	23,667	84,416	62,341	22,075
Total Washington									
D	116,383	99,460	16,923	87,998	74,692	13,306	28,385	24,768	3,617
C	441,684	425,527	16,157	341,539	334,066	7,473	100,145	91,461	8,684
B ⁴	800,820	767,498	33,322	619,833	602,354	17,479	180,987	165,144	15,843
A	2,376,962	2,357,521	19,441	1,848,717	1,829,276	19,441	528,245	528,245	--
Total	3,735,849	3,650,006	85,843	2,898,087	2,840,388	57,699	837,762	809,618	28,144

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

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

³Combined to avoid disclosure

⁴Total for Class B includes Class A for Inland Empire

WASHINGTON SAWMILLS, 1980

Table 28—Production and disposition of wood
(Tons, dry)

Economic area and mill size- class ¹	All types							Coarse ³						
	Total	Total used ²	Pulp	Board	Fuel	Other	Unused	Total	Total used ²	Pulp	Board	Fuel	Other	Unused
Puget Sound														
D	37,573	36,344	8,435	--	18,155	9,754	1,229	23,966	23,057	7,621	--	11,692	3,744	909
C	27,516	27,169	11,177	--	7,603	8,389	347	15,657	15,657	11,177	--	4,480	--	--
B	170,629	166,674	42,309	--	81,195	43,170	3,955	99,881	95,926	42,309	--	53,617	--	3,955
A	650,546	650,209	294,092	--	157,960	198,157	337	378,900	378,900	246,852	--	21,248	110,800	--
Total	886,264	880,396	356,013	--	264,913	259,470	5,868	518,404	513,540	307,959	--	91,037	114,544	4,864
Olympic Peninsula														
D	33,914	27,026	6,613	5	17,870	2,538	6,888	21,676	17,032	5,042	5	9,937	2,048	4,644
C	67,224	67,224	54,590	--	11,602	1,032	--	42,274	42,274	40,388	--	1,306	580	--
B	115,332	115,332	75,249	3,882	33,439	2,762	--	66,767	66,767	57,469	--	9,298	--	--
A	588,727	588,727	271,160	38,827	207,710	71,030	--	348,539	348,539	219,852	11,368	77,108	40,211	--
Total	805,197	798,309	407,612	42,714	270,621	77,362	6,888	479,256	474,612	322,751	11,373	97,649	42,839	4,644
Lower Columbia														
D	7,789	7,740	6,552	--	707	481	49	4,960	4,960	4,111	--	595	254	--
C	66,485	66,485	32,381	8,890	25,214	--	--	38,370	38,370	29,141	--	9,229	--	--
B	92,477	91,217	17,846	--	73,371	--	1,260	54,323	53,062	10,018	--	43,045	--	1,260
A	432,994	432,994	111,449	--	253,657	67,888	--	250,842	250,842	74,650	--	176,192	--	--
Total	599,745	598,436	168,228	8,890	352,949	68,369	1,309	348,495	347,235	117,920	--	229,061	254	1,260
Central Washington														
D	517	464	--	--	418	46	53	366	334	--	--	310	24	32
C	34,029	33,219	4,818	2,499	23,177	2,725	810	20,316	20,316	1,581	--	18,735	--	--
B	97,013	97,013	24,390	4,811	67,812	--	--	58,416	58,416	24,390	--	34,026	--	--
A	176,450	157,346	65,324	11,405	80,617	--	19,104	101,120	82,016	65,324	--	16,692	--	19,104
Total	308,009	288,042	94,532	18,715	172,024	2,771	19,967	180,218	161,082	91,295	--	69,763	24	19,136
Inland Empire														
D	8,205	3,118	32	--	2,168	918	5,087	5,321	1,980	32	--	1,709	239	3,341
C	146,285	139,969	73,692	--	59,217	7,060	6,316	84,083	84,078	50,234	--	33,844	--	5
B and A ⁶	144,382	132,118	91,820	14,733	25,565	--	12,264	83,022	74,063	74,063	--	--	--	8,959
Total	298,872	275,205	165,544	14,733	86,950	7,978	23,667	172,426	160,121	124,329	--	35,553	239	12,305
Total, State														
D	87,998	74,692	21,632	5	39,318	13,737	13,306	56,289	47,363	16,806	5	24,243	6,309	8,926
C	341,539	334,066	176,658	11,389	126,813	19,206	7,473	200,700	200,695	132,521	--	67,594	580	5
B ⁷	619,833	602,354	251,614	23,426	281,382	45,932	17,479	362,409	348,235	208,249	--	139,986	--	14,174
A	1,848,717	1,829,276	742,025	50,232	699,944	337,075	19,441	1,079,401	1,060,297	606,678	11,368	291,240	151,011	19,104
Total	2,898,087	2,840,388	1,191,929	85,052	1,147,457	415,950	57,699	1,698,799	1,656,590	964,254	11,373	523,063	157,900	42,209

¹Mill 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

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

³Slabs, edgings, trim, and spur ends

⁴Shavings

⁵Sawdust

⁶Combined to avoid disclosure

⁷Total for Class B includes Class A for Inland Empire

WASHINGTON SAWMILLS, 1980

residues, by area and mill size-class weight)

Medium ⁴							Fine ⁵						
Total	Total used ²	Pulp	Board	Fuel	Other	Unused	Total	Total used ²	Pulp	Board	Fuel	Other	Unused
3,938	3,938	340	--	1,644	1,954	--	9,669	9,349	474	--	4,819	4,056	320
5,493	5,266	--	--	1,285	3,981	227	6,366	6,246	--	--	1,838	4,408	120
30,449	30,449	--	--	12,692	17,757	--	40,299	40,299	--	--	14,886	25,413	--
116,346	116,346	11,794	--	68,499	36,053	--	155,300	154,963	35,446	--	68,213	51,304	337
156,226	155,999	12,134	--	84,120	59,745	227	211,634	210,857	35,920	--	89,756	85,181	777
3,464	3,012	194	--	2,706	112	452	8,774	6,982	1,377	--	5,227	378	1,792
8,075	8,075	4,566	--	3,295	214	--	16,875	16,875	9,636	--	7,001	238	--
21,788	21,788	8,194	3,882	9,712	--	--	26,777	26,777	9,586	--	14,429	2,762	--
97,336	97,336	14,230	12,620	56,148	14,338	--	142,852	142,852	37,078	14,839	74,454	16,481	--
130,663	130,211	27,184	16,502	71,861	14,664	452	193,278	193,486	57,677	14,839	101,111	19,859	1,792
796	796	756	--	--	40	--	2,033	1,984	1,685	--	112	187	49
12,535	12,535	1,080	7,836	3,619	--	--	15,580	15,580	2,160	1,054	12,366	--	--
15,889	15,889	--	--	15,889	--	--	22,265	22,265	7,828	--	14,437	--	--
79,341	79,341	5,508	--	44,738	29,095	--	102,811	102,811	31,291	--	32,727	38,793	--
108,561	108,561	7,344	7,836	64,246	29,135	--	142,689	142,640	42,964	1,054	59,642	38,980	49
--	--	--	--	--	--	--	151	130	--	--	108	22	21
5,386	5,192	--	2,499	--	2,693	194	8,327	7,711	3,237	--	4,442	32	616
14,654	14,654	--	4,811	9,843	--	--	23,943	23,943	--	--	23,943	--	--
33,884	33,884	--	11,405	22,479	--	--	41,446	41,446	--	--	41,446	--	--
53,924	53,730	--	18,715	32,322	2,693	194	73,867	73,230	3,237	--	69,939	54	637
703	493	--	--	4	489	210	2,181	645	--	--	455	190	1,536
26,874	24,021	10,649	--	6,312	7,060	2,853	35,328	31,870	12,809	--	19,061	--	3,458
27,332	27,332	--	14,733	12,599	--	--	34,028	30,723	17,757	--	12,966	--	3,305
54,909	51,846	10,649	14,733	18,915	7,549	3,063	71,537	63,238	30,566	--	32,482	190	8,299
8,901	8,239	1,290	--	4,354	2,595	662	22,908	19,090	3,536	--	10,721	4,833	3,718
58,363	55,089	16,295	10,335	14,511	13,948	3,274	82,476	78,282	27,842	1,054	44,708	4,678	4,194
110,112	110,112	8,194	23,426	60,735	17,757	--	147,312	144,007	35,171	--	80,661	28,175	3,305
326,907	326,907	31,532	24,025	191,864	79,486	--	442,409	442,072	103,815	14,839	216,840	106,578	337
504,283	500,347	57,311	57,786	271,464	113,786	3,936	695,005	683,451	170,364	15,893	352,930	144,264	11,554

WASHINGTON SAWMILLS, 1980

Table 29 —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	Other	
Puget Sound							
D	12,176	11,648	--	--	6,520	5,128	528
C	7,818	7,818	--	--	2,769	5,049	--
B	50,753	50,753	--	--	17,856	32,897	--
A	185,367	185,367	--	--	86,263	99,104	--
Total	256,114	255,586	--	--	113,408	142,178	528
Olympic Peninsula							
D	10,993	8,827	--	--	7,059	1,768	2,166
C	22,009	22,009	--	--	9,563	12,446	--
B	34,397	34,397	--	--	30,374	4,023	--
A	170,569	170,569	--	--	150,883	19,686	--
Total	237,968	235,802	--	--	197,879	37,923	2,166
Lower Columbia							
D	2,428	2,349	--	--	419	1,930	79
C	19,207	29,207	--	--	19,207	--	--
B	26,594	26,594	--	--	17,243	9,351	--
A	122,803	122,803	--	--	45,576	77,227	--
Total	171,032	170,953	--	--	82,445	88,508	79
Central Washington							
D	182	161	--	--	140	21	21
C	9,946	6,671	--	--	1,326	5,345	3,275
B	28,598	28,598	--	--	28,097	501	--
A	49,506	49,506	--	--	48,825	681	--
Total	88,232	84,936	--	--	78,388	6,548	3,296
Inland Empire							
D	2,606	1,783	--	--	688	1,095	823
C	41,165	35,756	--	--	34,853	903	5,409
B and A ³	40,645	24,802	--	--	24,802	--	15,843
Total	84,416	62,341	--	--	60,343	1,998	22,075
Total, State							
D	28,385	24,768	--	--	14,826	9,942	3,617
C	100,145	91,461	--	--	67,718	23,743	8,694
B ⁴	180,987	165,144	--	--	118,372	46,772	15,843
A	528,245	528,245	--	--	331,547	196,698	--
Total	837,762	809,618	--	--	532,463	277,155	28,144

¹Mill size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

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

³Combined to avoid disclosure

⁴Includes Class A for Inland Empire

WASHINGTON SAWMILLS, 1980

Table 30—Production and disposition of wood and bark residues, by area and county
(Tons, dry weight)

Economic area and county	All residues			Wood residues			Bark residue		
	Total	Used ¹	Unused	Total	Used ¹	Unused	Total	Used ¹	Unused
Puget Sound									
Island and San Juan ²	14,005	13,658	347	11,082	10,656	347	3,003	3,003	--
King	191,501	191,070	431	146,857	146,430	427	44,644	44,640	4
Kitsap	109,814	109,814	--	86,527	86,527	--	23,287	23,287	--
Pierce	308,263	304,305	3,958	239,469	235,533	3,956	68,774	68,772	2
Skagit	56,820	56,134	686	43,891	43,288	603	12,929	12,846	83
Snohomish	449,403	448,639	764	348,795	348,458	337	100,608	100,181	427
Whatcom	12,572	12,362	210	9,703	9,505	198	2,869	2,857	12
Total	1,142,378	1,135,982	6,396	886,264	880,396	5,868	256,114	255,586	528
Olympic Peninsula									
Cllallam	65,877	62,177	3,700	50,608	47,773	2,835	15,269	14,404	865
Grays Harbor	233,226	232,359	867	178,724	178,092	632	54,502	54,267	235
Jefferson	25,648	22,844	3,604	20,039	17,364	2,675	5,609	4,680	929
Lewis	229,522	228,660	862	175,161	174,434	727	54,361	54,226	135
Mason	343,317	343,317	--	268,219	268,219	--	75,098	75,098	--
Pacific	120,767	120,754	13	93,282	93,269	13	27,485	27,485	--
Thurston	24,908	24,800	8	19,164	19,158	6	5,644	5,642	2
Total	1,043,165	1,034,111	9,054	805,197	798,309	6,888	237,968	235,802	2,166
Lower Columbia									
Clark	19,543	19,522	21	14,988	14,989	--	4,554	4,533	21
Cowlitz	531,890	531,890	--	413,477	413,477	--	118,413	118,413	--
Klickitat	151,771	150,404	1,367	118,633	117,324	1,309	33,138	33,080	58
Skamania and Wahkiakum ²	67,573	67,573	--	52,646	52,646	--	14,927	14,927	--
Total	778,777	769,389	1,388	599,745	598,436	1,309	171,032	170,953	79
Central Washington									
Chelan, Lincoln and Okanogan ²	224,322	201,059	23,263	174,623	154,656	19,967	49,699	46,403	3,296
Yakima	171,919	171,919	--	133,386	133,386	--	38,533	38,533	--
Total	396,241	372,978	23,263	308,009	288,042	19,967	88,232	84,936	3,296
Inland Empire									
Asotin and Walla Walla ²	78,209	78,209	--	61,627	61,627	--	16,582	16,582	--
Ferry	95,871	69,790	26,081	75,077	57,888	17,189	20,794	11,902	8,892
Pend Oreille and Spokane ²	60,308	50,577	9,731	46,736	46,216	520	13,572	4,361	9,211
Stevens	148,900	138,970	9,930	115,432	109,474	5,958	33,468	29,496	3,972
Total	383,288	337,546	45,742	298,872	275,205	23,667	84,416	62,341	22,075
Total, State	3,735,849	3,650,006	85,843	2,898,087	2,840,388	57,699	837,762	809,618	28,144

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

²Combined to avoid disclosure

WASHINGTON SAWMILLS, 1980

Table 31 — Production and disposition
(Tons, dry)

Economic area and county	All types							Coarse ¹						
	Total	Total used ⁴	Pulp	Board	Fuel	Other	Unused ²	Total	Total used ⁴	Pulp	Board	Fuel	Other	Unused
Puget Sound														
Island and San Juan ⁵	11,032	10,655	5,834	--	300	4,521	347	6,134	6,134	5,834	--	300	--	--
King	146,857	146,430	7,697	--	70,099	68,634	427	91,191	91,026	7,697	--	39,517	43,812	165
Kitsap	86,527	86,527	66,870	--	19,440	217	--	47,566	47,566	47,430	--	--	135	--
Pierce	239,489	235,533	132,493	--	94,453	8,567	3,956	139,862	135,897	132,493	--	3,266	138	3,955
Skagit	43,891	43,288	23,848	--	6,518	12,922	603	26,160	25,612	23,848	--	1,751	13	548
Snohomish	348,795	348,458	113,932	--	74,103	160,423	337	201,955	201,955	85,318	--	46,203	70,434	--
Whatcom	9,703	9,505	5,339	--	--	4,166	198	5,547	5,351	5,339	--	--	12	196
Total	886,264	880,396	356,013	--	264,913	259,470	5,868	518,404	513,540	307,959	--	91,037	114,544	4,864
Olympic Peninsula														
Clallam	50,608	47,773	32	5	47,533	203	2,835	31,188	29,530	32	5	29,344	149	1,658
Grays Harbor	178,724	178,092	78,411	--	28,588	71,093	632	110,661	110,225	69,396	--	576	40,253	436
Jefferson	20,039	17,364	9,486	--	7,791	87	2,675	11,456	9,559	9,486	--	3	70	1,897
Lewis	175,161	174,434	124,221	11,368	35,998	2,847	727	106,623	105,986	65,359	11,368	29,259	--	637
Mason	268,219	266,219	154,521	31,341	80,808	1,549	--	153,397	153,397	150,555	--	1,293	1,549	--
Pacific	93,282	93,269	24,104	--	69,050	115	13	54,403	54,391	17,153	--	37,161	77	12
Thurston	19,164	19,158	16,837	--	853	1,468	6	11,528	11,524	10,770	--	13	741	4
Total	805,197	798,309	407,612	42,714	270,621	77,362	6,888	479,256	474,612	322,751	11,373	97,649	42,839	4,644
Lower Columbia														
Clark	14,989	14,989	14,467	--	257	265	--	9,301	9,301	8,959	--	194	148	--
Cowlitz	413,477	413,477	108,684	2,012	234,744	68,037	--	241,010	241,010	64,057	--	176,847	106	--
Klickitat	118,633	117,324	32,888	6,878	77,504	54	1,309	67,691	66,431	32,888	--	33,543	--	1,260
Skamania and Wahkiakum ⁵	52,646	52,646	12,189	--	40,444	13	--	30,493	30,493	12,016	--	18,477	--	--
Total	599,745	598,436	168,228	8,890	352,949	68,369	1,309	348,495	347,235	117,920	--	229,061	254	1,260
Central Washington														
Chehalis, Lincoln and Okanogan ⁵	174,623	154,656	56,510	--	97,874	272	19,967	101,509	82,373	54,383	--	27,966	24	19,136
Tacoma	133,386	133,386	38,022	18,715	74,150	2,499	--	78,709	78,709	36,912	--	41,797	--	--
Total	308,009	288,042	94,532	18,715	172,024	2,771	19,967	180,218	161,082	91,295	--	69,763	24	19,136
Inland Empire														
Asotin and Walla Walla ⁵	61,627	61,627	15,120	--	46,507	--	--	33,871	33,871	--	--	33,871	--	--
Ferry	75,077	57,888	43,681	10,197	3,997	13	17,189	42,475	33,516	33,484	--	32	--	8,959
Pend Oreille and Spokane ⁵	46,736	46,216	39,747	4,536	1,791	142	520	27,722	27,353	26,009	--	1,344	--	369
Stevens	115,432	109,474	66,996	--	34,655	7,823	5,958	68,358	65,381	64,836	--	306	239	2,977
Total	298,872	275,205	165,544	14,733	86,950	7,978	23,667	172,426	160,121	124,329	--	35,553	239	12,305
Total, State	2,898,087	2,840,388	1,191,929	85,052	1,147,457	415,950	57,699	1,698,799	1,656,590	964,254	11,373	523,063	157,900	42,209

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

²Medium residue is planer shavings

³Fine residue is sawdust

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

⁵Combined to avoid disclosure

WASHINGTON SAWMILLS, 1980

of wood residues, by area and county
(weight)

Medium ²							Fine ³						
Total	Total used ⁴	Pulp	Board	Fuel	Other	Unused	Total	Total used ⁴	Pulp	Board	Fuel	Other	Unused
2,353	2,126	--	--	--	2,126	227	2,515	2,395	--	--	--	2,395	120
18,289	18,289	--	--	10,415	7,874	--	37,377	37,115	--	--	20,167	16,948	262
19,467	19,467	--	--	19,440	27	--	19,495	19,495	19,440	--	--	55	--
42,421	42,421	--	--	42,378	43	--	57,216	57,215	--	--	48,809	8,406	1
7,094	7,094	--	--	63	7,031	--	10,637	10,582	--	--	4,704	5,878	55
64,667	64,667	12,134	--	11,824	40,709	--	82,173	81,836	16,480	--	16,076	49,280	337
1,935	1,935	--	--	--	1,935	--	2,221	2,219	--	--	--	2,219	2
156,226	155,999	12,134	--	84,120	59,745	227	211,634	210,857	35,920	--	89,756	85,181	777
6,634	6,182	--	--	6,172	10	452	12,786	12,061	--	--	12,017	44	725
22,820	22,820	2,816	--	5,666	14,338	--	45,243	45,047	6,199	--	22,346	16,502	196
3,888	3,888	--	--	3,888	--	--	4,695	3,917	--	--	3,900	17	778
25,599	25,599	19,041	--	6,458	100	--	42,939	42,849	39,821	--	281	2,747	90
51,938	51,938	--	16,502	35,436	--	--	62,884	62,884	3,966	14,839	44,079	--	--
16,874	16,874	2,631	--	14,241	2	--	22,005	22,004	4,320	--	17,648	36	1
2,910	2,910	2,696	--	--	214	--	4,726	4,724	3,371	--	840	513	2
130,563	130,211	27,184	16,502	71,861	14,664	452	195,278	193,486	57,677	14,839	101,111	19,859	1,792
1,876	1,876	1,836	--	--	40	--	3,812	3,812	3,672	--	63	77	--
73,833	73,833	5,508	958	38,272	29,095	--	98,634	98,634	39,119	1,054	19,625	38,836	--
23,197	23,197	--	6,878	16,319	--	--	27,745	27,696	--	--	27,642	54	49
9,655	9,655	--	--	9,655	--	--	12,498	12,498	173	--	12,312	13	--
108,561	108,561	7,344	7,836	64,246	29,135	--	142,689	142,640	42,964	1,054	59,642	38,980	49
31,507	31,373	--	--	31,119	194	194	41,607	40,970	2,127	--	38,789	54	637
22,417	22,417	--	18,715	1,203	2,499	--	32,260	32,260	1,110	--	31,150	--	--
53,924	53,730	--	18,715	32,322	2,693	194	73,867	73,230	3,237	--	69,939	54	637
13,873	13,873	7,560	--	6,313	--	--	13,883	13,883	7,560	--	6,323	--	--
14,329	11,996	--	10,197	1,799	--	2,333	18,273	12,376	10,197	--	2,166	13	5,897
7,652	7,652	3,089	4,536	3	24	--	11,362	11,211	10,649	--	444	118	151
19,055	18,325	--	--	10,800	7,525	730	28,019	25,768	2,160	--	23,549	59	2,251
54,909	51,846	10,649	14,733	18,915	7,549	3,063	71,537	63,238	30,566	--	32,482	190	8,299
504,283	500,347	57,311	57,786	271,464	113,786	3,936	695,005	683,451	170,364	15,893	352,930	144,264	11,554

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Table 32—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	Other	
Puget Sound							
Island and San Juan ²	3,003	3,003	--	--	147	2,856	--
King	44,644	44,640	--	--	9,540	35,100	4
Kitsap	23,287	23,287	--	--	23,220	67	--
Pierce	68,774	68,772	--	--	58,931	9,841	2
Skaagit	12,929	12,846	--	--	214	12,632	83
Snohomish	100,608	100,181	--	--	18,589	81,592	427
Whatcom	2,869	2,857	--	--	2,767	90	12
Total	256,114	255,586	--	--	113,408	142,178	528
Olympic Peninsula							
Clallam	15,269	14,404	--	--	14,353	51	865
Grays Harbor	54,502	54,267	--	--	34,560	19,707	235
Jefferson	5,609	4,680	--	--	4,645	35	929
Lewis	54,361	54,226	--	--	46,891	7,335	135
Mason	75,098	75,098	--	--	68,983	6,115	--
Pacific	27,485	27,485	--	--	27,441	44	--
Thurston	5,644	5,642	--	--	1,006	4,636	2
Total	237,968	235,802	--	--	197,879	37,923	2,166
Lower Columbia							
Clark	4,554	4,533	--	--	2,655	1,878	21
Cowlitz	118,413	118,413	--	--	31,783	86,630	--
Klickitat	33,138	33,080	--	--	33,080	--	58
Skamania and Wahkiakum ²	14,927	14,927	--	--	14,927	--	--
Total	171,032	170,953	--	--	82,445	88,508	79
Central Washington							
Chelan, Lincoln and Okanogan ²	49,699	46,403	--	--	46,343	60	3,296
Yakima	38,533	38,533	--	--	32,045	6,488	--
Total	88,232	84,936	--	--	78,388	6,548	3,296
Inland Empire							
Asotin and Walla Walla ²	16,582	16,582	--	--	15,679	903	--
Ferry	20,794	11,902	--	--	11,902	--	8,892
Pend Oreille and Spokane ²	13,572	4,361	--	--	4,361	--	9,211
Stevens	33,468	29,496	--	--	28,401	1,095	3,972
Total	84,416	62,341	--	--	60,343	1,998	22,075
Total, State	837,762	809,618	--	--	532,463	277,155	28,144

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

²Combined to avoid disclosure

**Table 33—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	34,396	9,061	693	44,150	26,086	18,064
C	22,369	5,090	1,791	29,250	3,874	25,376
B	109,342	74,631	--	183,973	43,471	140,502
A	435,797	283,179	--	718,976	180,337	538,639
Total	601,904	371,961	2,484	976,349	253,768	722,581
Olympic Peninsula						
D	31,931	8,140	8	40,079	24,193	15,886
C	55,452	20,828	--	76,280	39,282	36,998
B	35,062	84,825	1,680	121,567	21,142	100,425
A	314,727	346,633	--	661,360	210,727	450,633
Total	437,172	460,426	1,688	899,286	295,344	603,942
Lower Columbia						
D	9,330	75	--	9,405	5,718	3,687
C	43,265	28,274	--	71,539	13,670	57,869
B	23,262	76,459	3,357	103,078	29,518	73,560
A	345,086	122,232	8,663	475,981	108,663	367,318
Total	420,943	227,040	12,020	660,003	157,569	502,434
Central Washington						
D	600	--	91	691	691	--
C	25,547	12,853	150	38,550	13,615	24,935
B	16,000	94,845	--	110,845	43,005	67,840
A	21,510	169,366	1,002	191,878	35,008	156,870
Total	63,657	277,064	1,243	341,964	92,319	249,645
Inland Empire						
D	8,924	--	1,172	10,096	6,836	3,260
C	50,873	104,478	8,200	163,551	39,136	124,415
B and A ²	37,400	104,037	16,100	157,537	31,000	126,537
Total	97,197	208,515	25,472	331,184	76,972	254,212
Total, State						
D	85,181	17,276	1,964	104,421	63,524	40,897
C	197,506	171,523	10,141	379,170	109,577	289,593
B ³	221,066	434,197	21,137	677,000	168,136	508,864
A	1,117,120	921,410	9,665	2,048,195	534,735	1,513,460
Total	1,620,873	1,545,006	42,907	3,208,786	875,972	2,332,814

¹Mill size-classes identified as follows: Class A mills = 120,000+board-foot capacity per 8-hour shift,

B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

²Combined to avoid disclosure

³Total for Class B includes Class A for Inland Empire

WASHINGTON SAWMILLS, 1980

Table 34—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	44,150	29,995	13,475	680	--	--
C	29,250	--	28,143	--	1,107	--
B	183,973	10,163	133,864	36,000	--	3,946
A	718,976	--	606,516	--	86,652	25,808
Total	976,349	40,158	781,998	36,680	87,759	29,754
Olympic Peninsula						
D	40,079	24,132	13,447	--	25	2,475
C	76,280	30,082	27,388	--	18,360	450
B	121,567	--	58,850	--	62,717	--
A	661,360	13,075	464,481	7,000	142,931	33,873
Total	899,286	67,289	564,166	7,000	224,033	36,798
Lower Columbia						
D	9,405	1,960	7,000	445	--	--
C	71,539	--	71,539	--	--	--
B	103,078	--	103,078	--	--	--
A	475,981	--	412,619	6,600	41,170	15,592
Total	660,003	1,960	594,236	7,045	41,170	15,592
Central Washington						
D	691	688	--	--	3	--
C	38,550	3,000	35,550	--	--	--
B	110,845	--	72,000	--	38,845	--
A	191,878	--	155,628	--	36,250	--
Total	341,964	3,688	263,178	--	75,098	--
Inland Empire						
D	10,096	7,551	2,545	--	--	--
C	163,551	16,010	137,541	--	--	10,000
B and A ²	157,537	43,522	107,215	--	--	6,800
Total	331,184	67,083	247,301	--	--	16,800
Total, State						
D	104,421	64,326	36,467	1,125	28	2,475
C	379,170	49,092	300,161	--	19,467	10,450
B ³	677,000	53,685	475,007	36,000	101,562	10,746
A	2,048,195	13,075	1,639,244	13,600	307,003	75,273
Total	3,208,786	180,178	2,450,879	50,725	428,060	98,944

¹Mill size-classes identified as follows: Class A mills = 120,000 + board foot capacity per 8-hour shift, B = 80,000-119,999, C = 40,000-79,999, D = less than 40,000

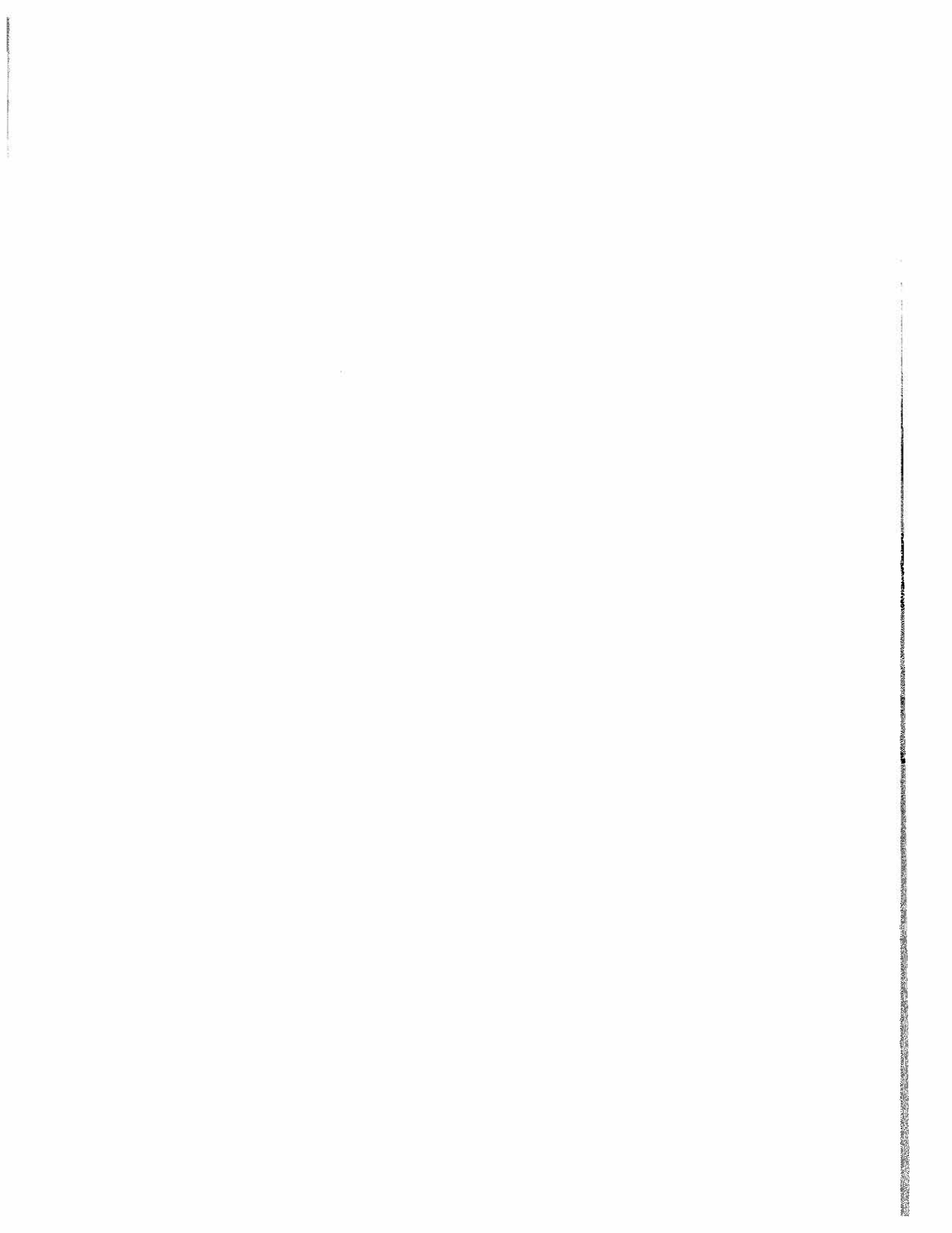
²Combined to avoid disclosure

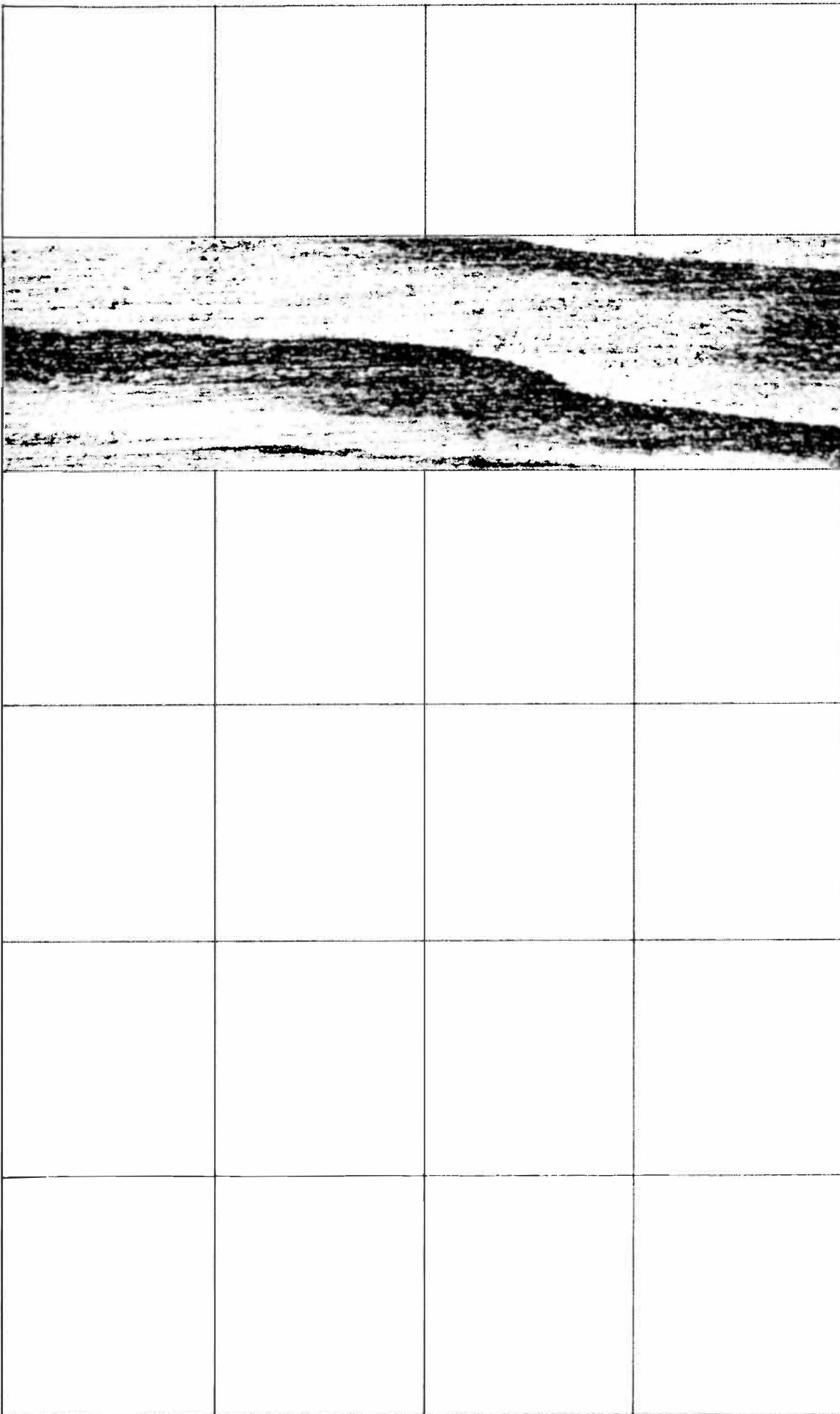
³Total for Class B includes Class A for Inland Empire

Table 35—Lumber production by headrig type, area and county
(Thousand board feet, lumber tally)

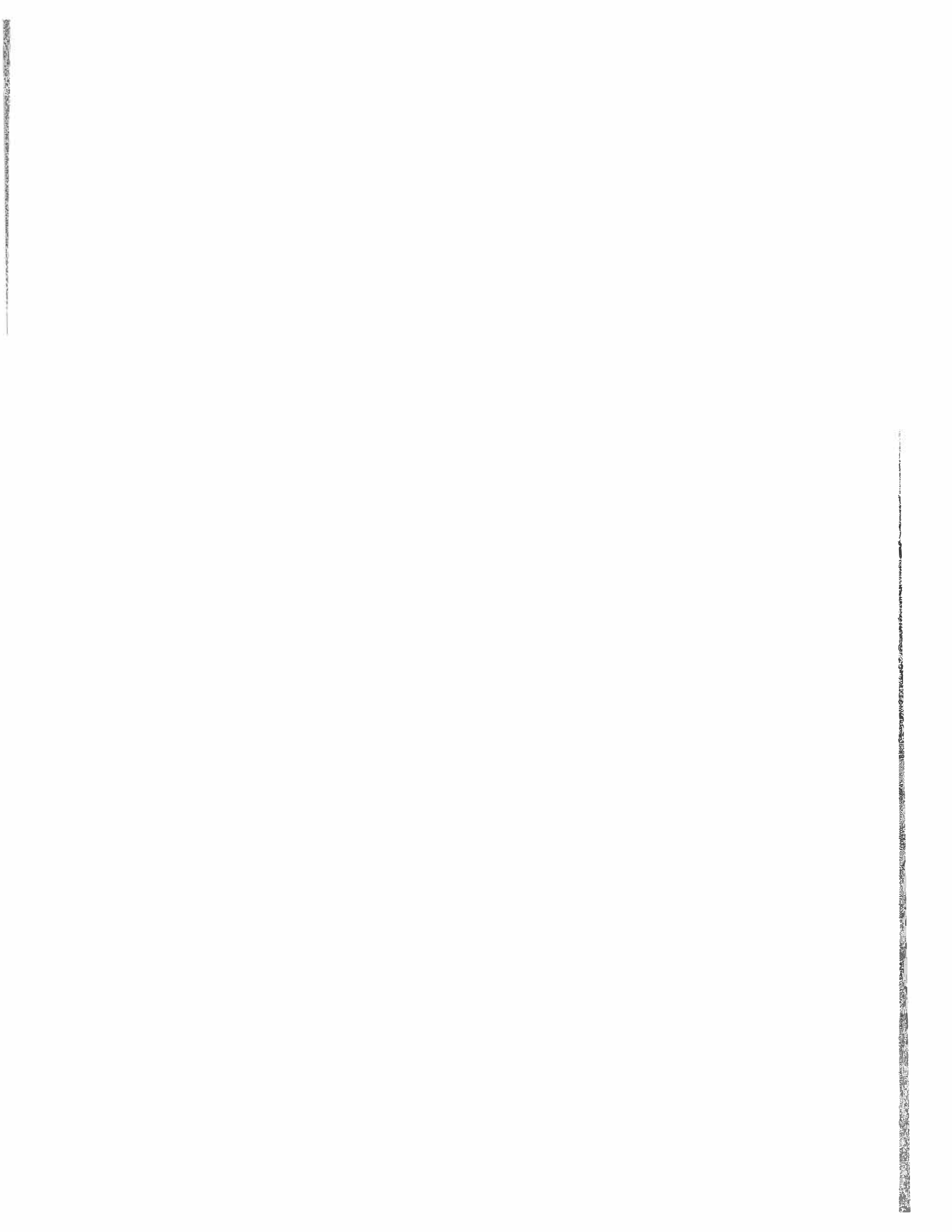
Economic area and county	All types	Circular saw	Band saw	Gang saw	Chipping saw	Scragg double cut saw
Puget Sound						
Island and San Juan ¹	11,640	570	9,963	--	1,107	--
King	173,041	5,745	131,296	36,000	--	--
Kitsap	90,256	256	90,000	--	--	--
Pierce	264,457	11,192	152,261	--	71,250	29,754
Skagit	48,889	4,389	29,098	--	15,402	--
Snohomish	377,999	17,611	359,708	680	--	--
Whatcom	10,067	395	9,672	--	--	--
Total	976,349	40,158	781,998	36,680	87,759	29,754
Olympic Peninsula						
Clallam	59,186	9,542	32,033	--	17,611	--
Grays Harbor	209,006	258	165,672	--	43,076	--
Jefferson	21,737	3,737	18,000	--	--	--
Lewis	195,668	21,983	105,308	--	34,504	33,873
Mason	291,136	11,843	152,433	--	124,010	2,850
Pacific	100,682	18,569	75,113	7,000	--	--
Thurston	21,871	1,357	15,607	--	4,832	75
Total	899,286	67,289	564,166	7,000	224,033	36,798
Lower Columbia						
Clark	17,645	645	17,000	--	--	--
Cowlitz	456,054	200	419,934	--	35,920	--
Klickitat	128,444	255	112,152	445	--	15,592
Skamania and Wahkiakum ¹	57,860	860	45,150	6,600	5,250	--
Total	660,003	1,960	594,236	7,045	41,170	15,592
Central Washington						
Chelan, Lincoln and Okanogan ¹	192,613	3,688	152,672	--	36,253	--
Yakima	149,351	--	110,506	--	38,845	--
Total	341,964	3,688	263,178	--	75,098	--
Inland Empire						
Asotin and Walla Walla ¹	64,270	50	64,220	--	--	--
Ferry	84,597	55,582	22,215	--	--	6,800
Pend Oreille and Spokane ¹	52,602	756	51,846	--	--	--
Stevens	129,715	10,695	109,020	--	--	10,000
Total	331,184	67,083	247,301	--	--	16,800
Total, State	3,208,786	180,178	2,450,879	50,725	428,060	98,944

¹Combined to avoid disclosure





**VENEER
&
PLYWOOD**



WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 36—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	7
Olympic Peninsula				
Clallam	2	1	--	1
Grays Harbor	5	1	1	3
Jefferson	1	1	--	--
Lewis	4	4	--	--
Mason	1	--	--	1
Thurston	3	1	2	--
Total	16	8	3	5
Lower Columbia				
Clark	1	--	--	1
Cowlitz	2	1	--	1
Klickitat	1	--	--	1
Skamania	2	1	--	1
Total	6	2	--	4
Central Washington				
Kittitas	1	1	--	--
Okanogan	1	--	--	1
Yakima	1	--	--	1
Total	3	1	--	2
Inland Empire				
Stevens				
Total	1	--	--	1
Total, State	34	11	4	19

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 37 Installed eight-hour single shift capacity by type of mill, area and county
(Thousand square feet, 3/8-inch basis)

Economic area and county	Type of Operation			
	Veneer only	Layup only	Veneer and Layup	
			Veneer	Layup
Puget Sound				
King	--	--	280	361
Pierce	--	110	135	535
Skagit	--	--	78	200
Snohomish	--	--	25	30
Whatcom	--	--	195	150
Total	--	110	713	1,276
Olympic Peninsula				
Clallam	200	--	180	180
Grays Harbor	240	207	205	480
Jefferson	80	--	--	--
Lewis	485	--	--	--
Mason	--	--	285	40
Thurston	60	370	--	--
Total	1,065	577	670	700
Lower Columbia				
Clark	--	--	200	200
Cowlitz	97	--	112	49
Klickitat	--	--	170	170
Skamania	110	--	134	163
Total	207	--	616	582
Central Washington				
Kittitas	200	--	--	--
Okanogan	--	--	170	170
Yakima	--	--	185	185
Total	200	--	355	355
Inland Empire				
Stevens	--	--	150	150
Total	--	--	150	150
Total, State	1,472	687	2,504	3,063

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 38—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	1	--	1	1	3
Olympic Peninsula	3	--	1	2	1	1	2	6
Lower Columbia	--	1	--	1	1	--	1	2
Central Washington	--	1	1	--	1	--	--	--
Inland Empire	--	--	1	--	--	--	--	--
Total, State	4	2	4	4	3	2	4	11

Table 39—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	11+	
Puget Sound	--	--	1	1	3	1	--	--	1	1
Olympic Peninsula	--	1	3	5	1	3	--	--	--	3
Lower Columbia	--	--	2	3	1	--	--	--	--	--
Central Washington	--	--	3	--	--	--	--	--	--	--
Inland Empire	--	--	1	--	--	--	--	--	--	--
Total, State	--	1	10	9	5	4	--	--	1	4

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 40—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	--	2	--
Pierce	1	1	--	1	1	--	2	1
Skagit	1	1	--	1	1	1	1	--
Snohomish	1	--	--	1	1	1	--	--
Whatcom	1	1	--	--	1	--	1	--
Total	4	5	1	5	6	2	6	1
Olympic Peninsula								
Clallam	1	4	--	1	--	--	1	--
Grays Harbor	2	2	--	4	2	--	4	--
Jefferson	--	1	--	1	1	--	--	--
Lewis	3	2	--	4	3	--	--	--
Mason	--	2	--	1	1	--	1	--
Thurston	1	--	--	--	--	1	2	--
Total	7	11		11	7	1	8	--
Lower Columbia								
Clark	1	1	--	1	1	--	1	--
Cowlitz	--	2	--	1	1	--	1	--
Klickitat	--	1	--	1	--	--	1	--
Skamania	2	1	--	2	2	--	1	--
Total	3	5	--	5	4	--	4	--
Central Washington								
Kittitas	--	1	--	1	1	--	--	--
Okanogan	1	1	--	1	--	--	--	1
Yakima	1	1	--	--	1	--	1	--
Total	2	3	--	2	2	--	1	1
Inland Empire								
Stevens								
Total	--	1	--	1	1	--	1	--
Total, State	16	25	1	24	20	3	20	2

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 41—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						
21+						
Total	8	--	--	--	1	7
Olympic Peninsula						
0-2	1	1	--	--	--	--
6-10	1	--	--	1	--	--
11-20	3	--	--	--	3	--
21+	11	1	2	1	2	5
Total	16	2	2	2	5	5
Lower Columbia						
3-5	1	--	1	--	--	--
11-20	1	--	--	--	1	--
21+	4	--	--	--	--	4
Total	6	--	1	--	1	4
Central Washington						
6-10	2	--	1	1	--	--
11-20	1	--	--	--	1	--
Total	3	--	1	1	1	--
Inland Empire						
11-20	1	--	--	--	1	--
Total	1	--	--	--	1	--
Total, State						
0-2	1	1	--	--	--	--
3-5	1	--	1	--	--	--
6-10	3	--	1	2	--	--
11-20	6	--	--	--	6	--
21+	23	1	2	1	3	16
Total	34	2	4	3	9	16

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 42—Average number of operating days, by type of mill and area

Economic area	Veneer only	Layup only	Veneer and layup
Puget Sound	--	189	214
Olympic Peninsula	178	214	200
Lower Columbia	210	--	235
Central Washington	193	--	220
Inland Empire	--	--	311
Total, State	185	208	221

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 43—Log consumption by type of material, area and county
(Thousand board feet, Scribner log rule)

Economic area	Total roundwood	Sound logs	Utility logs
Puget Sound			
King and Pierce ¹	47,645	36,523	11,122
Skagit, Snohomish, and Whatcom ¹	39,324	38,767	557
Total	86,969	75,290	11,679
Olympic Peninsula			
Clallam, Jefferson, Mason and Thurston ¹	73,644	67,904	5,740
Grays Harbor	11,903	11,297	606
Lewis	35,974	31,796	4,178
Total	121,521	110,997	10,524
Lower Columbia			
Clark and Cowlitz ¹	87,011	84,758	2,253
Klickitat and Skamania ¹	26,406	24,736	1,670
Total	113,417	109,494	3,923
Central Washington and Inland Empire			
Kittitas, Okanogan, Yakima, and Stevens ¹			
Total	161,269	159,679	1,590
Total, State	483,176	455,460	27,716

¹Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 44—Log consumption by timber age, area and county
(Thousand board feet, Scribner log rule)

Economic area	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound			
King and Pierce ¹	47,645	27,629	20,016
Skagit, Snohomish, and Whatcom ¹	39,324	11,152	28,172
Total	86,969	38,781	48,188
Olympic Peninsula			
Clallam, Jefferson, Mason, and Thurston ¹	73,644	46,332	27,312
Grays Harbor	11,903	10,403	1,500
Lewis	35,974	19,009	16,965
Total	121,521	75,744	45,777
Lower Columbia			
Clark and Cowlitz ¹	87,011	45,152	41,859
Klickitat and Skamania ¹	26,406	5,977	20,429
Total	113,417	51,129	62,288
Central Washington and Inland Empire ¹			
Kittitas, Okanogan, Yakima, and Stevens ¹	161,269	143,122	18,147
Total, State	483,176	308,776	174,400

¹Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 45—Log inventory changes, log consumption, and apparent log receipts,
by area
(Thousand board feet, Scribner log rule)

Economic area	Log inventory			1980 log consumption	Apparent 1980 log receipts
	January 1, 1980	December 31, 1980	Net change		
Puget Sound	34,199	36,187	+1,988	86,969	88,957
Olympic Peninsula	21,325	23,614	+2,289	121,521	123,810
Lower Columbia	31,918	26,834	-5,084	113,417	108,333
Central Washington and Inland Empire ¹	40,954	42,211	+1,257	161,269	162,526
Total, State	128,396	128,846	+450	483,176	483,626

¹Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 46—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	47,645	--	5,380	--	--	25,498	6,422	10,345
Skagit, Snohomish, and Whatcom ¹	39,324	--	23,821	--	--	5,233	4,112	6,158
Total	86,969	--	29,201	--	--	30,731	10,534	16,503
Olympic Peninsula								
Clallam, Jefferson, Mason and Thurston ¹	73,644	5,784	30,701	--	1,068	22,577	1,507	12,007
Grays Harbor	11,903	1,766	9,245	--	--	600	--	292
Lewis	35,974	1,041	23,003	--	--	4,200	2,760	4,970
Total	121,521	8,591	62,949	--	1,068	27,377	4,267	17,269
Lower Columbia								
Clark and Cowlitz ¹	87,011	--	34,200	--	--	49,991	--	2,820
Skamania and Klickitat ¹	26,406	1,802	22,830	--	507	1,267	--	--
Total	113,417	1,802	57,030	--	507	51,258	--	2,820
Central Washington and Inland Empire ¹								
Kittitas, Okanogan, Stevens and Yakima ¹	161,269	8,306	58,997	--	28,447	46,719	1,136	17,664
Total, State	483,176	18,699	208,177	--	30,022	156,085	15,937	54,256

¹Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 47—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 ¹	47,645	22,969	12,340	--	--	--	--	--	--	12,336
Skagit, Snohomish, and Whatcom ¹	39,324	6,235	11,661	14,099	242	242	--	--	--	6,845
Total	86,969	29,204	24,001	14,099	242	242	--	--	--	19,181
Olympic Peninsula										
Clallam, Jefferson, Mason and Thurston ¹	73,644	60,893	6,887	1,600	53	--	--	4,211	--	--
Grays Harbor	11,903	444	7,395	--	1,066	--	--	2,223	775	--
Lewis	35,974	14,049	5,675	--	--	--	--	850	15,400	--
Total	121,521	75,386	19,957	1,600	1,119	--	--	7,284	16,175	--
Lower Columbia										
Clark and Cowlitz ¹	87,011	50,382	14,767	283	--	--	--	20,446	--	1,133
Klickitat and Skamania ¹	26,406	18,042	5,297	2,800	--	267	--	--	--	--
Total	113,417	68,424	20,064	3,083	--	267	--	20,446	--	1,133
Central Washington and Inland Empire ¹										
Kittitas, Okanogan, Stevens and Yakima ¹	161,269	118,190	2,498	20,165	10,715	4,627	3,712	--	908	454
Total, State	483,176	291,204	66,520	38,947	12,076	5,136	3,712	27,730	17,883	20,768

¹Combined to avoid disclosure

**Table 48—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									
King and Pierce ²	149,286	147,526	1,760	120,608	118,848	1,760	28,678	28,678	
Skagit, Snohomish, and Whatcom ²	81,831	80,768	1,063	65,465	65,465	--	16,366	15,303	1,063
Total	231,117	228,294	2,823	186,073	184,313	1,760	45,044	43,981	1,063
Olympic Peninsula									
Clallam, Jefferson, Mason and Thurston ²	127,251	125,105	2,146	101,238	101,238	--	26,013	23,867	2,146
Grays Harbor	33,320	33,320	--	30,290	30,290	--	3,030	3,030	
Lewis	47,202	46,940	262	35,620	35,620	--	11,582	11,320	262
Total	207,773	205,365	2,408	167,148	167,148	--	40,625	38,217	2,408
Lower Columbia									
Clark and Cowlitz ²	133,293	133,293	--	105,610	105,610	--	27,683	27,683	--
Klickitat and Skamania ²	50,323	50,323	--	40,030	40,030	--	10,293	10,293	--
Total	183,616	183,616	--	145,640	145,640	--	37,976	37,976	--
Central Washington and Inland Empire									
Kittitas, Okanogan, Stevens and Yakima ²									
Total	249,736	243,955	5,781	197,950	197,950	--	51,786	46,005	5,781
Total, State	872,242	861,230	11,012	696,811	695,051	1,760	175,431	166,179	9,252

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

²Combined to avoid disclosure

**Table 49—Production and disposition of wood residues, by area and county
(Tons, dry weight)**

Economic area and county	All types ¹						Coarse ² and medium ³						Fine ⁴						
	Total	Total used ¹	Pulp and board	Fuel	Other	Unused	Total	Total used ¹	Pulp and board	Fuel	Other	Unused	Total	Total used ¹	Pulp and board	Fuel	Other	Unused	
Puget Sound King and Pierce ⁵ Skagit, Snohomish, and Whatcom ⁵	120,608	118,848	72,307	37,679	8,862	1,760	114,127	114,127	72,307	32,958	8,862	--	6,481	4,721	--	4,721	--	1,760	
	65,465	65,465	26,776	38,689	--	--	62,439	62,439	26,776	35,663	--	--	3,026	3,026	--	3,026	--	--	
	Total	186,073	184,313	99,083	76,368	8,862	1,760	176,566	176,566	99,083	68,621	8,862	--	9,507	7,747	--	7,747	--	1,760
Olympic Peninsula Clallam, Jefferson, Mason and Thurston ⁵ Grays Harbor Lewis	101,238	101,238	65,708	24,625	10,905	--	96,993	96,993	65,708	20,380	10,905	--	4,245	4,245	--	4,245	--	--	
	30,290	30,290	7,583	22,285	422	--	26,096	26,096	7,583	18,091	422	--	4,194	4,194	--	4,194	--	--	
	35,620	35,620	26,853	572	8,195	--	35,620	35,620	26,853	572	8,195	--	--	--	--	--	--	--	
	Total	167,148	167,148	100,144	47,482	19,522	--	158,709	158,709	100,144	39,043	19,522	--	8,439	8,439	--	8,439	--	--
Lower Columbia Clark and Cowlitz ⁵ Klickitat and Skamania ⁵	105,610	105,610	57,234	27,280	21,096	--	101,518	101,518	57,234	25,828	18,456	--	4,092	4,092	--	1,452	2,640	--	
	40,030	40,030	31,968	8,062	--	--	38,356	38,356	31,614	6,742	--	--	1,674	1,674	354	1,320	--	--	
	Total	145,640	145,640	89,202	35,342	21,096	--	139,874	139,874	88,848	32,570	18,456	--	5,766	5,766	354	2,772	2,640	--
Central Washington and Inland Empire ⁵ Kittitas, Okanogan, Stevens and Yakima ⁵	Total	197,950	197,950	123,014	47,258	27,678	--	190,216	190,216	123,014	39,524	27,678	--	7,734	7,734	--	7,734	--	--
Total, State	696,811	695,051	411,443	206,450	77,158	1,760	665,365	665,365	411,089	179,758	74,518	--	31,446	29,686	354	26,692	2,640	1,760	

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

²Coarse residue includes log trim, cores, veneer clippings, roundup and spur trim

³Medium residue includes reject veneer and panel trim

⁴Fine residue includes sawdust and sander dust

⁵Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

Table 50—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	28,678	28,678	--	28,678	--	--
Skagit, Snohomish, and Whatcom ²	16,366	15,303	--	15,303	--	1,063
Total	45,044	43,981	--	43,981	--	1,063
Olympic Peninsula						
Clallam, Jefferson, Mason and Thurston ²	26,013	23,867	--	20,303	3,564	2,146
Grays Harbor	3,030	3,030	--	3,030	--	--
Lewis	11,582	11,320	--	6,811	4,509	262
Total	40,625	38,217	--	30,144	8,073	2,408
Lower Columbia						
Clark and Cowlitz ²	27,683	27,683	--	27,683	--	--
Klickitat and Skamania ²	10,293	10,293	--	10,293	--	--
Total	37,976	37,976	--	37,976	--	--
Central Washington and Inland Empire ²						
Kittitas, Okanogan, Stevens and Yakima ²						
Total	51,786	46,005	--	45,352	653	5,781
Total, State	175,431	166,179	--	157,453	8,726	9,252

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

²Combined to avoid disclosure

WASHINGTON VENEER AND PLYWOOD MILLS, 1980

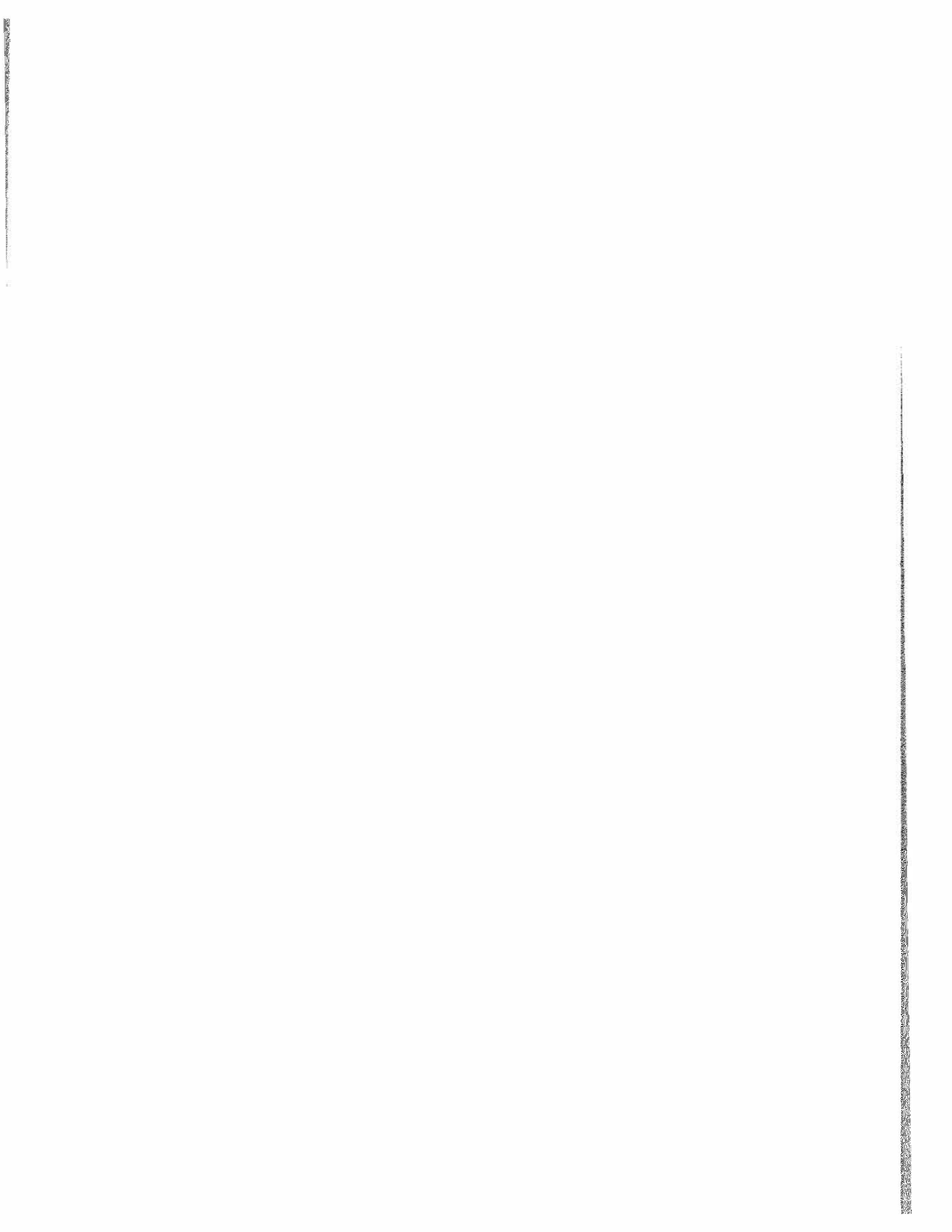
**Table 51—Veneer and plywood production, by area and county
(Thousand square feet, 3/8-inch basis)**

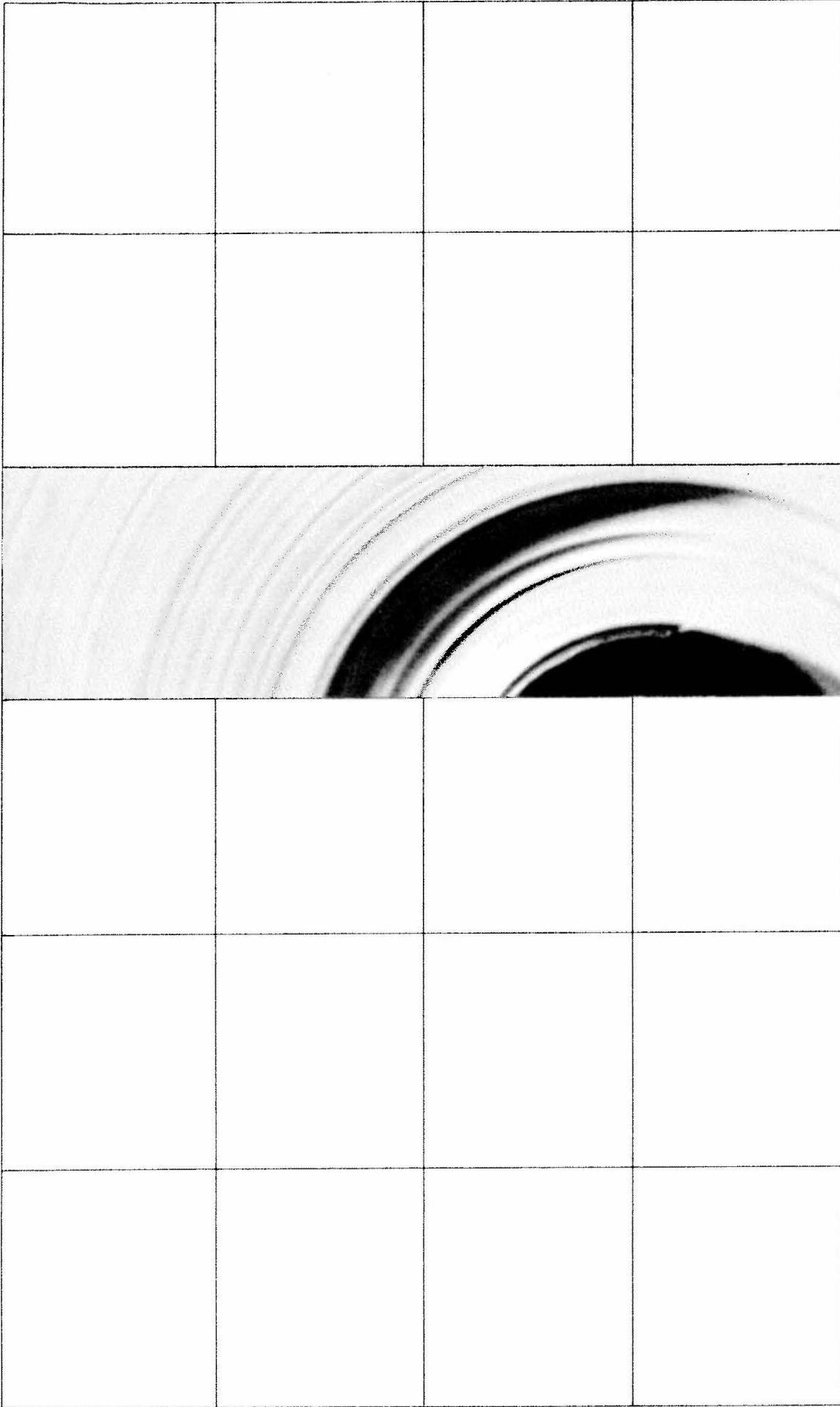
Economic area and county	Veneer	Plywood ¹
Puget Sound King, Pierce, Skagit, Snohomish, and Whatcom ²	112,968	432,098
Olympic Peninsula Clallam, Grays Harbor, Jefferson, Lewis, Mason, and Thurston ²	265,582	383,648
Lower Columbia Clark, Cowlitz, Klickitat, Kittitas, and Skamania ^{2,3}	59,054	262,096
Central Washington and Inland Empire ² Okanogan, Stevens, and Yakima ²	46,728	351,531
Total, State	484,332	1,429,373

¹Includes hardwood and softwood faced plywood

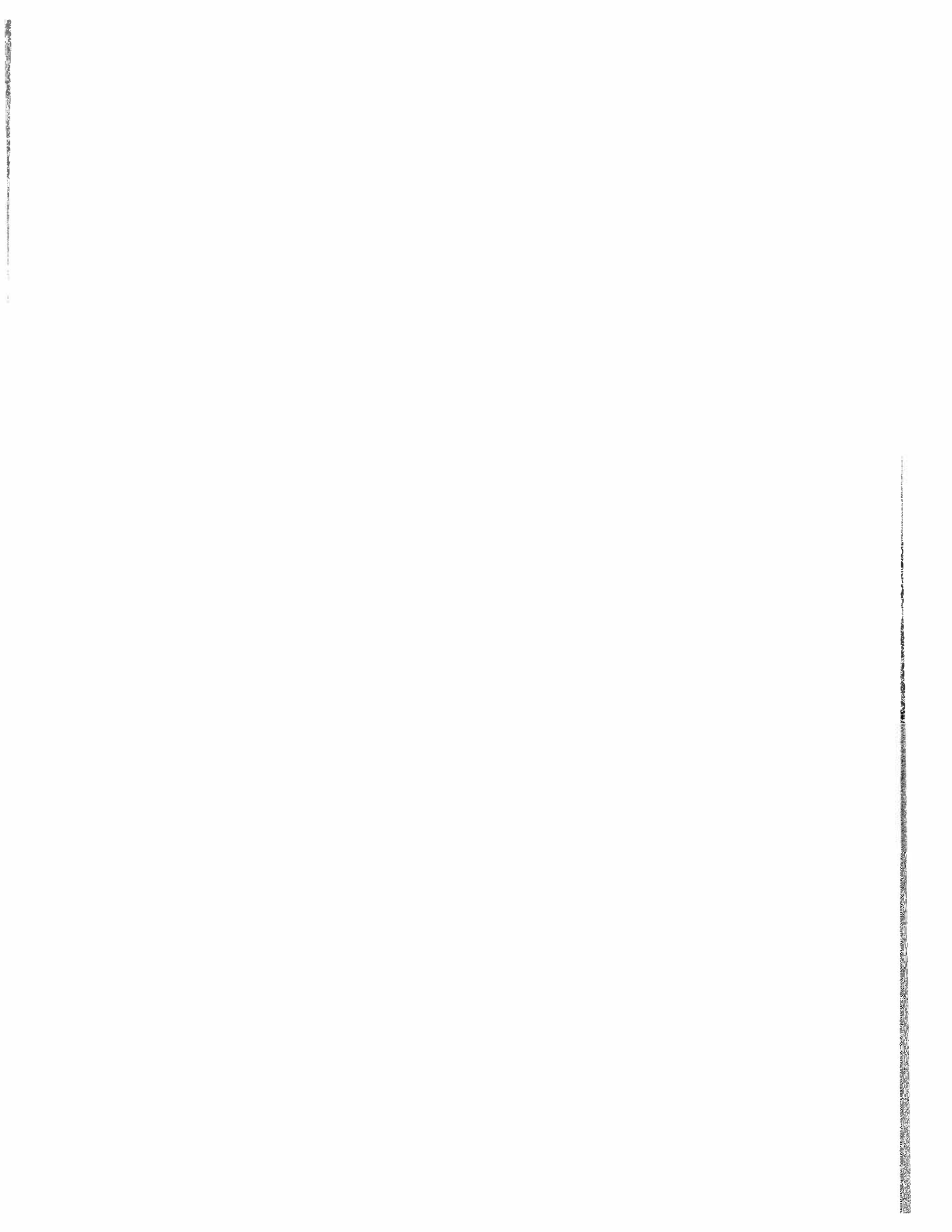
²Combined to avoid disclosure

³Kittitas County included in Lower Columbia to avoid disclosure





**PULP &
BOARD**



WASHINGTON PULP AND BOARD MILLS, 1980

Table 52—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	1	--	--	--	--	1	--	--
Snohomish	3	--	1	2	--	--	--	--
Whatcom	2	1	--	--	1	--	--	--
Total	8	1	2	3	1	1	--	--
Olympic Peninsula								
Clallam	2	1	--	1	--	--	--	--
Grays Harbor	2	2	--	--	--	--	--	--
Jefferson	1	--	1	--	--	--	--	--
Total	5	3	1	1	--	--	--	--
Lower Columbia								
Clark	3	1	2	--	--	--	--	--
Cowlitz	4	--	2	--	2	--	--	--
Total	7	1	4	--	2	--	--	--
Inland Empire								
Spokane	1	--	--	1	--	--	--	--
Walla Walla	2	--	1	--	1	--	--	--
Total	3	--	1	1	1	--	--	--
Total, State	23	5	8	5	4	1	--	--

WASHINGTON PULP AND BOARD MILLS, 1980

Table 53—Installed capacity by type of mill, area and county

Economic area and county	Type of Pulp Mill				Type of Board Mill	
	All mills	Sulfite	Sulfate	Groundwood	Semichemical	Hardboard 1/8" basis
		----- Bone dry tons † -----				-Million square- feet/year
Puget Sound						
Pierce	1,395	--	945	450	--	--
Skagit	--	--	--	--	--	52
Snohomish	1,050	--	385	665	--	--
Whatcom	612	522	--	--	90	--
Total	3,057	522	1,330	1,115	90	52
Olympic Peninsula						
Clallam	976	476	--	500	--	--
Grays Harbor	950	950	--	--	--	--
Jefferson	396	--	396	--	--	--
Total	2,322	1,426	396	500	--	--
Lower Columbia						
Clark	1,289	336	953	--	--	--
Cowlitz	3,691	--	3,286	--	405	--
Total	4,980	336	4,239	--	405	--
Inland Empire						
Spokane	145	--	--	145	--	--
Walla Walla	705	--	457	--	248	--
Total	850	--	457	145	248	--
Total, State	11,209	2,284	6,422	1,760	743	52

†Twenty-four hour capacity

WASHINGTON PULP AND BOARD MILLS, 1980

Table 54—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 21+	--	--	--	3	3
Sulfate 21+	--	--	--	1	7
Groundwood 21+	--	--	--	1	3
Semichemical 11-20	--	--	--	1	--
21+	--	--	--	1	2
Hardboard 21+	--	--	--	1	--
Total	--	--	--	8	15

Table 55—Average number of operating days by area

Economic area	Pulp	Board
Puget Sound	342	131
Olympic Peninsula	355	--
Lower Columbia	347	--
Inland Empire	358	--
Total, State	349	131

WASHINGTON PULP AND BOARD MILLS, 1980

Table 56—Mill production¹ by type of product, area and type of operation
(Bone dry tons)

Economic area	Type of Product					
	All Products	Newsprint	Bleached Paper	Unbleached	Other paper	Market Pulp
Puget Sound	998,641	165,732	137,646	208,295	80,645	406,323
Olympic Peninsula	725,146	36,582	180,732	105,041	--	402,791
Lower Columbia and Inland Empire ²	1,597,731	42,754	652,315	737,732	146,444	18,486
Total, State	3,321,518	245,068	970,693	1,051,068	227,089	827,600
Type of Operation						
Total, State						
Sulfite	911,855	--	306,805	2,963	70,046	532,041
Sulfate	1,785,075	--	566,209	840,265	146,444	232,157
Groundwood	624,588	245,068	97,679	207,840	10,599	63,402
Total	3,321,518	245,068	970,693	1,051,068	227,089	827,600

¹Board not included to avoid disclosure

²Combined to avoid disclosure

Table 57—Type of wood consumed by area

Economic area	Roundwood			Other					
	Total	Sound logs	Utility logs	Total	Chips		Sawdust	Shavings	Waste-paper
					From mill residue	From roundwood chipping mill			
	Thousand board feet, -- -- Scribner log rule -- --			----- Bone Dry Tons -----					
Puget Sound	174,710	7,152	167,558	1,705,874	1,363,435	342,439	--	--	--
Olympic Peninsula	150,301	121,790	28,511	1,054,081	599,769	416,090	36,742	1,342	138
Lower Columbia and Inland Empire ¹	111,222	--	111,222	2,967,620	2,379,795	293,323	229,117	--	65,385
Total, State	436,233	128,942	307,291	5,727,575	4,342,999	1,051,852	265,859	1,342	65,523

¹Combined to avoid disclosure

WASHINGTON PULP AND BOARD MILLS, 1980

**Table 58—Roundwood and chip consumption by species and area
(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 firs	Spruce	Lodgepole Pine	Other softwoods	Hardwoods
Puget Sound								
Total logs	174,710	870	101,580	66,849	--	--	--	5,411
Chips								
Roundwood	342,439	112,964	123,276	15,004	8,825	--	76,486	5,884
Residue ¹	1,363,435							
Total chips	1,705,874							
Olympic Peninsula								
Total logs	150,301	10,512	130,129	6,102	2,838	--	--	720
Chips								
Roundwood	416,090	32,861	248,603	--	83,073	--	1,153	50,400
Residue ¹	599,769							
Total chips	1,015,859							
Lower Columbia								
Inland Empire ²								
Total logs	111,222	34,837	37,356	--	--	--	--	39,029
Chips								
Roundwood	293,323	176,399	86,017	1,966	562	26,390	--	1,989
Residue ¹	2,379,795							
Total chips	2,673,118							
Total, State								
Total logs	436,233	46,219	269,065	72,951	2,838	--	--	45,160
Chips								
Roundwood	1,051,852	322,224	457,896	16,970	92,460	26,390	77,639	58,273
Residue ¹	4,342,999							
Total chips	5,394,851							

¹Species breakdown for residue chips is not available

²Combined to avoid disclosure

WASHINGTON PULP AND BOARD MILLS, 1980

Table 59--Residue and off-site roundwood chip consumption by state or province of origin and area (Tons, dry weight)

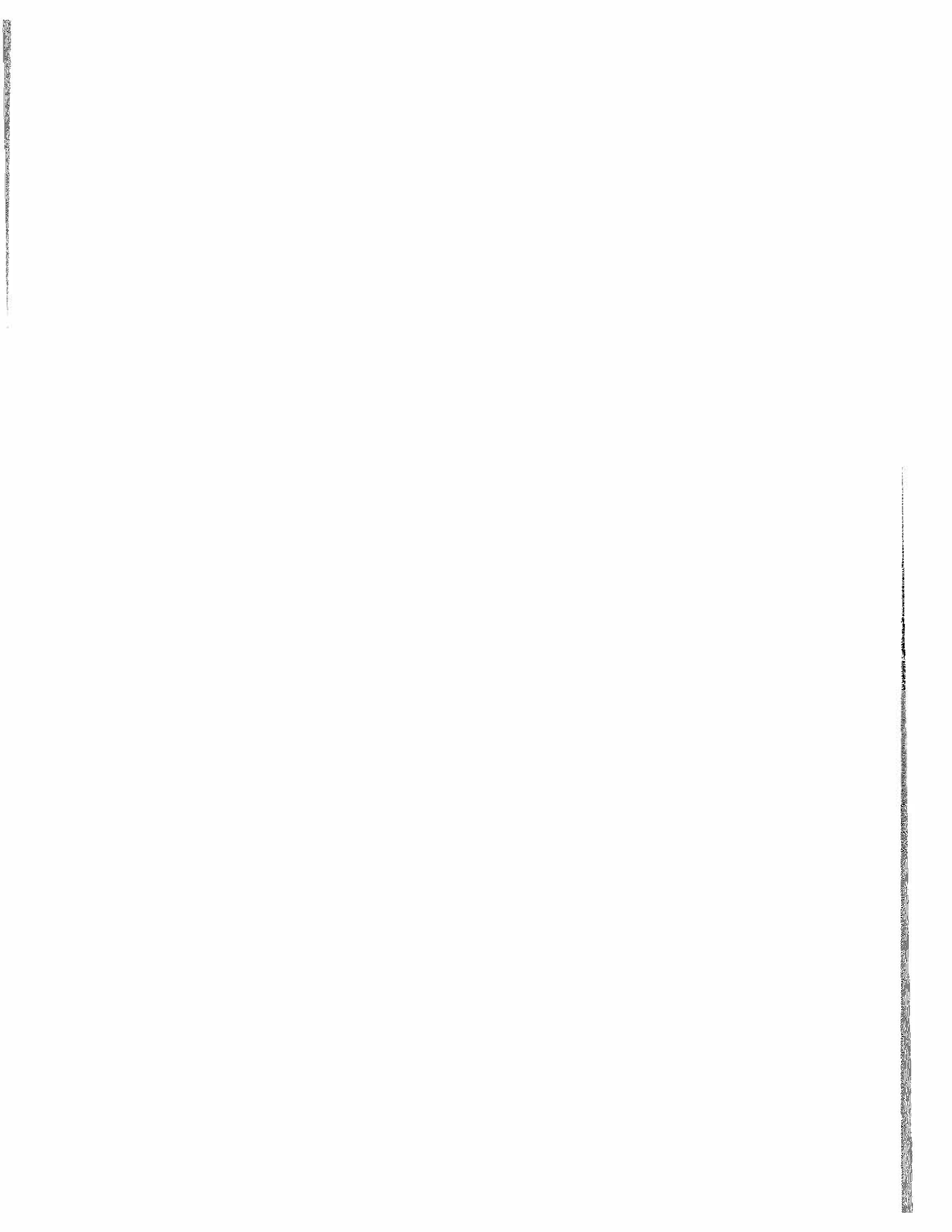
Economic area and type of material	Total volume	Washington	Oregon	Idaho	British Columbia	Other
Puget Sound						
Chip residue ¹	1,363,435	--	--	--	--	--
Chip roundwood	342,439	293,845	2,403	16,430	--	29,761
Sawdust and shavings	--	--	--	--	--	--
Total	1,705,874	293,845	2,403	16,430	--	29,761
Olympic Peninsula						
Chip residue ¹	599,769	--	--	--	--	--
Chip roundwood	416,090	333,017	--	--	83,073	--
Sawdust and shavings	38,084	18,243	--	--	19,841	--
Total	1,053,943	351,260	--	--	102,914	--
Lower Columbia and Inland Empire²						
Chip residue ¹	2,379,795	--	--	--	--	--
Chip roundwood	293,323	265,699	20,536	2,190	562	4,336
Sawdust and shavings	229,117	172,770	56,347	--	--	--
Total	2,902,235	438,469	76,883	2,190	562	4,336
Total, State						
Chip residue ¹	4,342,999	--	--	--	--	--
Chip roundwood	1,051,852	892,561	22,939	18,620	83,635	34,097
Sawdust and shavings	267,201	191,013	56,347	--	19,841	--
Total	5,662,052	--	--	--	--	--

¹State or province of origin for residue chips is not available

²Combined to avoid disclosure



**SHAKE &
SHINGLE**



WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 60—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					
Island and Snohomish ²	21	1,032	741	11	139
King and Pierce ²	7	280	100	52	92
Skagit	26	2,251	361	72	164
Whatcom	6	179	17	15	158
Total	60	3,742	1,219	150	146
Olympic Peninsula					
Clallam	62	4,519	1,298	391	143
Grays Harbor	87	7,011	1,448	824	134
Jefferson, Mason and Thurston ²	6	226	6	40	160
Lewis	19	620	151	61	146
Pacific	9	754	116	43	124
Total	183	13,130	3,019	1,359	139
Lower Columbia					
Clark and Wahkiakum ²	6	328	103	23	174
Cowlitz	10	885	190	123	137
Total	16	1,213	293	146	151
Central Washington and Inland Empire ²					
Douglas, Okanogan, Pend Oreille and Stevens ²	8	172	50	30	84
Total	8	172	50	30	84
Total, State	267	18,257	4,581	1,685	140

¹Eight-hour shift capacity

²Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 61—Number of shake and shingle mills with selected equipment by area and county

Economic area and county	Chipper	Barker	Burner
Puget Sound			
Island and Snohomish ¹	4	--	6
King and Pierce ¹	1	--	2
Skagit	3	--	10
Whatcom	--	--	1
Total	8	--	19
Olympic Peninsula			
Clallam	2	--	26
Grays Harbor	7	--	38
Jefferson, Mason and Thurston ¹	1	--	1
Lewis	1	1	2
Pacific	2	--	--
Total	13	1	67
Lower Columbia			
Clark and Wahkiakum ¹	1	--	--
Cowlitz	4	--	--
Total	5	--	--
Central Washington and Inland Empire ¹			
Douglas, Okanogan, Pend Oreille and Stevens ¹			
Total	--	--	1
Total, State	26	1	87

¹Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 62—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	18	16	1	1	--	--
3-5	83	5	77	1	--	--
6-10	68	5	7	56	--	--
11-20	63	4	8	6	45	--
21+	35	4	5	5	3	18
Total	267	34	98	69	48	18

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 63—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				
Island and Snohomish ¹	12,354	10,352	705	1,297
King and Pierce ¹	2,597	1,816	--	781
Skagit	21,020	17,061	290	3,669
Whatcom	2,504	595	--	1,909
Total	38,475	29,824	995	7,656
Olympic Peninsula				
Clallam	34,565	26,043	527	7,995
Grays Harbor	67,313	44,689	2,170	20,454
Jefferson, Mason and Thurston ¹	1,545	871	81	593
Lewis	6,071	3,804	731	1,536
Pacific	8,753	8,256	73	424
Total	118,247	83,663	3,582	31,002
Lower Columbia				
Clark and Wahkiakum ¹	2,171	1,392	118	661
Cowlitz	16,923	15,032	941	950
Total	19,094	16,424	1,059	1,611
Central Washington and Inland Empire ¹				
Douglas, Pend Oreille, Okanogan and Stevens ¹				
Total	502	84	2	416
Total, State	176,318	129,995	5,638	40,685

¹Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 64—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 and Snohomish ¹	11,057	996	6,849	--	--	155	1,056	2,001
King and Pierce ¹	1,816	--	366	--	--	--	1,450	--
Skagit	17,351	2,071	10,685	--	--	--	3,423	1,172
Whatcom	595	170	170	--	--	--	255	--
Total	30,819	3,237	18,070	--	--	155	6,184	3,173
Olympic Peninsula								
Clallam	26,570	4,522	1,672	--	712	--	19,578	86
Grays Harbor	46,859	2,637	4,295	--	15,537	--	24,069	321
Jefferson, Mason and Thurston ¹	952	18	--	--	--	--	934	--
Lewis	4,535	59	1,000	--	--	--	3,476	--
Pacific	8,329	--	--	--	--	3,036	4,648	645
Total	87,245	7,236	6,967	--	16,249	3,036	52,705	1,052
Lower Columbia								
Clark and Wahkiakum ¹	1,510	63	--	--	--	--	1,434	13
Cowlitz	15,973	--	482	--	--	7,787	7,704	--
Total	17,483	63	482	--	--	7,787	9,138	13
Central Washington and Inland Empire¹								
Douglas, Okanogan, Pend Oreille and Stevens ¹								
Total	86	--	12	--	48	--	26	--
Total, State	135,633	10,536	25,531	--	16,297	10,978	68,053	4,238

¹Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 65—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 and Snohomish ²	13,333	8,705	4,628	9,599	6,617	2,982	3,734	2,088	1,646
King and Pierce ²	1,336	191	7,145	976	169	807	360	22	338
Skaist	22,096	9,073	13,023	15,813	7,401	8,412	6,283	1,672	4,611
Whatcom	1,467	1,396	71	1,289	1,235	54	178	161	17
Total	38,232	19,365	18,867	27,677	15,422	12,255	10,555	3,943	6,612
Olympic Peninsula									
Clallam	37,663	12,942	24,721	27,383	10,017	17,366	10,280	2,925	7,355
Grays Harbor	61,786	22,086	39,700	45,334	17,040	28,294	16,452	5,046	11,406
Jefferson, Mason and Thurston ²	1,287	898	389	912	582	330	375	316	59
Lewis	6,037	2,165	3,872	4,354	1,862	2,492	1,683	303	1,380
Pacific	7,909	3,135	4,774	5,177	2,716	2,461	2,732	419	2,313
Total	114,682	41,226	73,456	83,160	32,217	50,943	31,522	9,009	22,513
Lower Columbia									
Clark and Wahkiakum ²	2,947	1,206	1,741	2,189	929	1,260	758	277	481
Cowlitz	19,035	19,035	--	12,957	12,957	--	6,078	6,078	--
Total	21,982	20,241	1,741	15,146	13,886	1,260	6,836	6,355	481
Central Washington and Inland Empire²									
Douglas, Okanogan, Pend Oreille and Stevens ²									
Total	220	155	65	201	138	63	19	17	2
Total, State	175,116	80,987	94,129	126,184	61,663	64,521	48,932	19,324	29,608

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

²Combined to avoid disclosure

Table 66—Production and disposition of wood residues, by area and county
(Tons, dry weight)

Economic area and county	All Types										Coarse ¹					Fine ²				
	Total	Total used ³	Pulp and board			Other	Unused	Total	Total used ³	Pulp and board			Total	Total used ³	Pulp and board			Other	Unused	
				Fuel																
Puget Sound	9,599	6,617	1,024	4,374	1,219	2,982	3,326	2,949	1,022	1,452	475	377	6,273	3,668	2	2,922	744	2,605		
Island and Snohomish ⁴	976	169	--	23	446	807	429	64	--	23	41	365	105	--	--	105	442			
King and Pierce ⁴	15,813	7,401	--	3,420	3,981	8,412	6,248	2,811	--	2,056	755	3,434	4,590	--	--	1,364	3,226	4,978		
Skagit	1,289	1,235	--	216	1,019	54	539	513	--	106	407	26	722	--	--	110	612	28		
Whatcom																				
Total	27,677	15,422	1,024	8,033	6,365	12,255	10,539	6,337	1,022	3,537	1,678	4,202	17,138	9,085	2	4,396	4,687	8,053		
Olympic Peninsula	27,383	10,017	2,512	6,980	525	17,366	10,172	4,720	2,512	1,951	257	5,452	17,211	5,297	--	5,029	266	11,914		
Clallam	45,334	17,040	412	8,621	8,007	28,294	17,794	6,744	412	2,040	4,292	11,050	27,540	10,296	--	6,581	3,715	17,244		
Grays Harbor																				
Jefferson, Mason and Thurston ⁴	912	582	--	72	510	330	432	272	--	--	272	160	480	310	--	72	238	170		
Lewis	4,354	1,862	--	337	1,525	2,492	1,738	1,074	--	319	755	664	2,616	788	--	18	770	1,828		
Pacific	5,177	2,716	2,290	17	409	2,461	2,252	2,244	2,040	17	187	8	2,925	472	250	--	222	2,453		
Total	83,160	32,217	5,214	16,027	10,976	50,943	32,388	15,054	4,964	4,327	5,763	17,334	50,172	17,163	250	11,700	5,213	33,609		
Lower Columbia	2,189	929	--	373	556	1,260	793	394	--	203	191	399	1,396	535	--	170	365	861		
Clark and Wahkiakum ⁴	12,957	12,957	2,640	10,130	187	--	4,973	4,973	1,537	3,356	80	--	7,984	7,984	1,103	6,774	107	--		
Total	15,146	13,886	2,640	10,503	743	1,260	5,766	5,367	1,537	3,559	271	399	9,380	8,519	1,103	6,944	472	861		
Central Washington and Inland Empire ⁴																				
Douglas, Okanogan, Pend Oreille and Stevens ⁴																				
Total	201	138	--	12	126	63	93	57	--	12	45	36	108	81	--	--	81	27		
Total, State	126,104	61,663	8,878	34,575	18,210	64,521	48,786	26,815	7,523	11,535	7,757	21,971	77,398	34,848	1,355	23,040	10,453	42,550		

¹End block trim, spalts

²Splints and sawdust

³Used residues were not necessarily consumed in the economic area in which they were produced

⁴Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

Table 67—Production and disposition of bark residues, by area and county
(Tons, dry weight)

Economic area and county	Bark					
	Total	Total used ¹	Pulp and board	Fuel	Other	Unused
Puget Sound						
Island and Snohomish ²	3,734	2,088	--	1,748	340	1,646
King and Pierce ²	360	22	--	--	22	338
Skagit	6,283	1,672	--	1,164	508	4,611
Whatcom	178	161	--	127	34	17
Total	10,555	3,943	--	3,039	904	6,612
Olympic Peninsula						
Clallam	10,280	2,925	--	2,860	65	7,355
Grays Harbor	16,452	5,046	--	3,961	1,085	11,406
Jefferson, Mason and Thurston ²	375	316	--	--	316	59
Lewis	1,683	303	--	117	186	1,380
Pacific	2,732	419	--	262	157	2,313
Total	31,522	9,009	--	7,200	1,809	22,513
Lower Columbia						
Clark and Wahkiakum ²	758	277	--	207	70	481
Cowlitz	6,078	6,078	--	6,041	37	--
Total	6,836	6,355	--	6,248	107	481
Central Washington and Inland Empire						
Douglas, Okanogan, Pend Oreille and Stevens ²	19	17	--	13	4	2
Total	19	17	--	13	4	2
Total, State	48,932	19,324	--	16,500	2,824	29,608

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

²Combined to avoid disclosure

WASHINGTON SHAKE AND SHINGLE MILLS, 1980

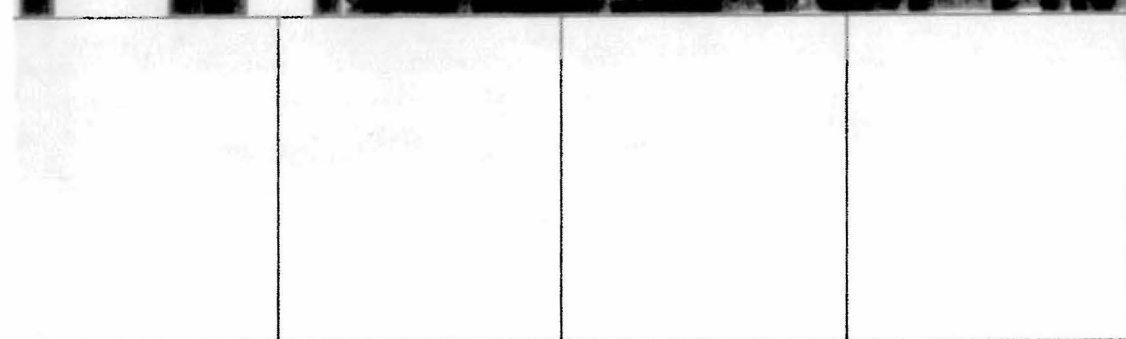
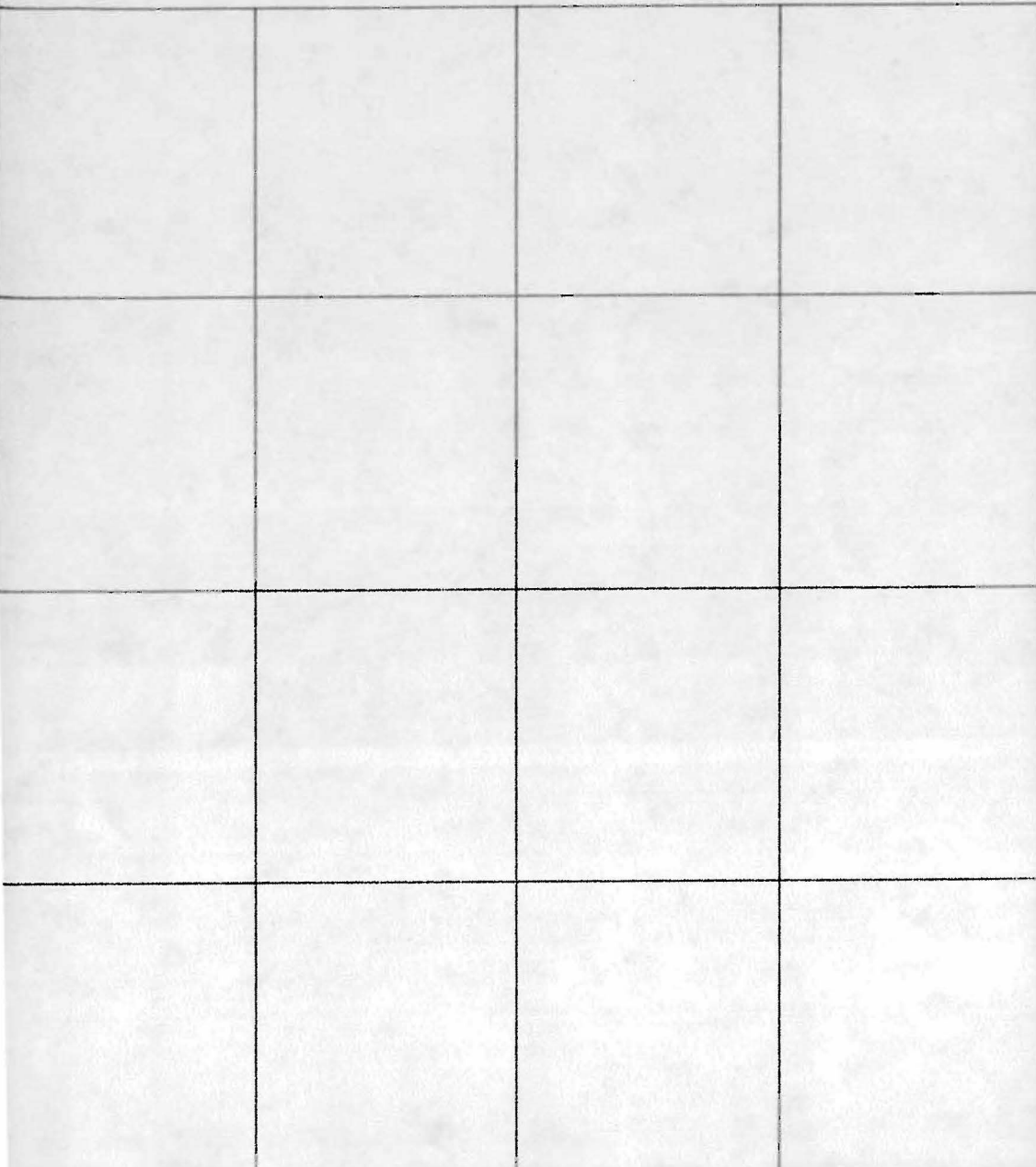
Table 68—Mill production by product type, area and county

Economic area and county	Shakes	Shingles	Other ¹
	----- Squares -----		
Puget Sound			
Island and Snohomish ²	96,538	53,783	680
King and Pierce ²	14,953	1,871	2,698
Skagit	222,230	58,432	3,224
Whatcom	19,440	3,570	1,485
Total	353,161	117,656	8,087
Olympic Peninsula			
Clallam	315,285	126,543	20,317
Grays Harbor	580,163	171,864	56,662
Jefferson, Mason and Thurston ²	16,052	566	3,000
Lewis	62,490	15,350	1,120
Pacific	87,132	10,994	4,170
Total	1,061,122	325,317	85,269
Lower Columbia			
Clark and Wahkiakum ²	22,500	10,900	2,624
Cowlitz	168,207	53,500	4,375
Total	190,707	64,400	6,999
Central Washington and Inland Empire ²			
Douglas, Okanogan, Pend Oreille and Stevens ²			
Total	1,695	240	2,281
Total, State	1,606,685	507,613	102,636

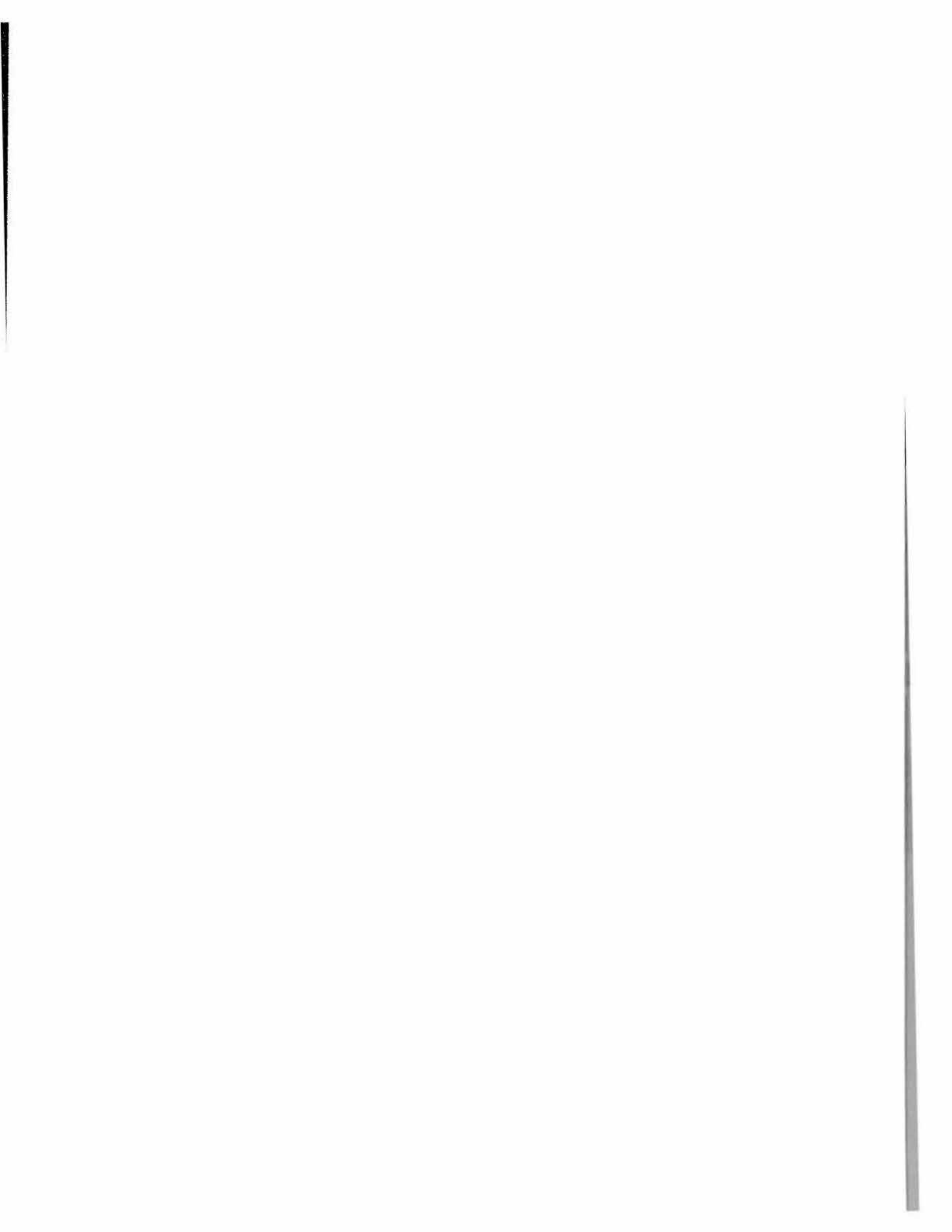
¹Other includes such products as hip and ridge shakes, wedges etc

²Combined to avoid disclosure





**POLE,
POST &
PILING**



WASHINGTON POLE, POST AND PILING MILLS, 1980

Table 69 —Number of pole, post and piling mills and their operating characteristics by area

Economic area	Number of mills	Yearly installed capacity, thousand board feet, Scribner log rule		Average number of operating days in 1980	
		Peeling	Treatment	Peeling	Treatment
Puget Sound	7	11,377	8,447	189 (7) ¹	162 (5) ¹
Olympic Peninsula	4	6,528	--	198 (4)	--
Lower Columbia	5	16,998	17,264	151 (5)	350 (2)
Inland Empire	5	12,296	10,572	168 (5)	170 (4)
Total, State	21	47,199	36,283	177 (21)	199 (11)

¹Number of mills.

Table 70—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	21+
Pole, post, and piling						
3-5	--	--	--	--	--	--
6-10	1	--	--	1	--	--
11-20	10	--	1	2	7	--
21+	10	--	1	1	2	6
Total	21	--	2	4	9	6

WASHINGTON POLE, POST AND PILING MILLS, 1980

Table 71—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				
Kitsap	2	--	2	--
Pierce	1	--	1	--
Skagit	1	--	1	--
Snohomish	2	--	2	--
Whatcom	1	--	1	1
Total	7	--	7	1
Olympic Peninsula				
Clallam	1	--	1	--
Mason	1	--	1	--
Thurston	2	--	2	--
Total	4	--	4	--
Lower Columbia				
Clark	1	--	1	1
Cowlitz	3	--	3	--
Skamania	1	--	1	--
Total	5	--	5	1
Inland Empire				
Spokane	1	--	1	--
Stevens	4	--	4	1
Total	5	--	5	1
Total, State	21	--	21	3

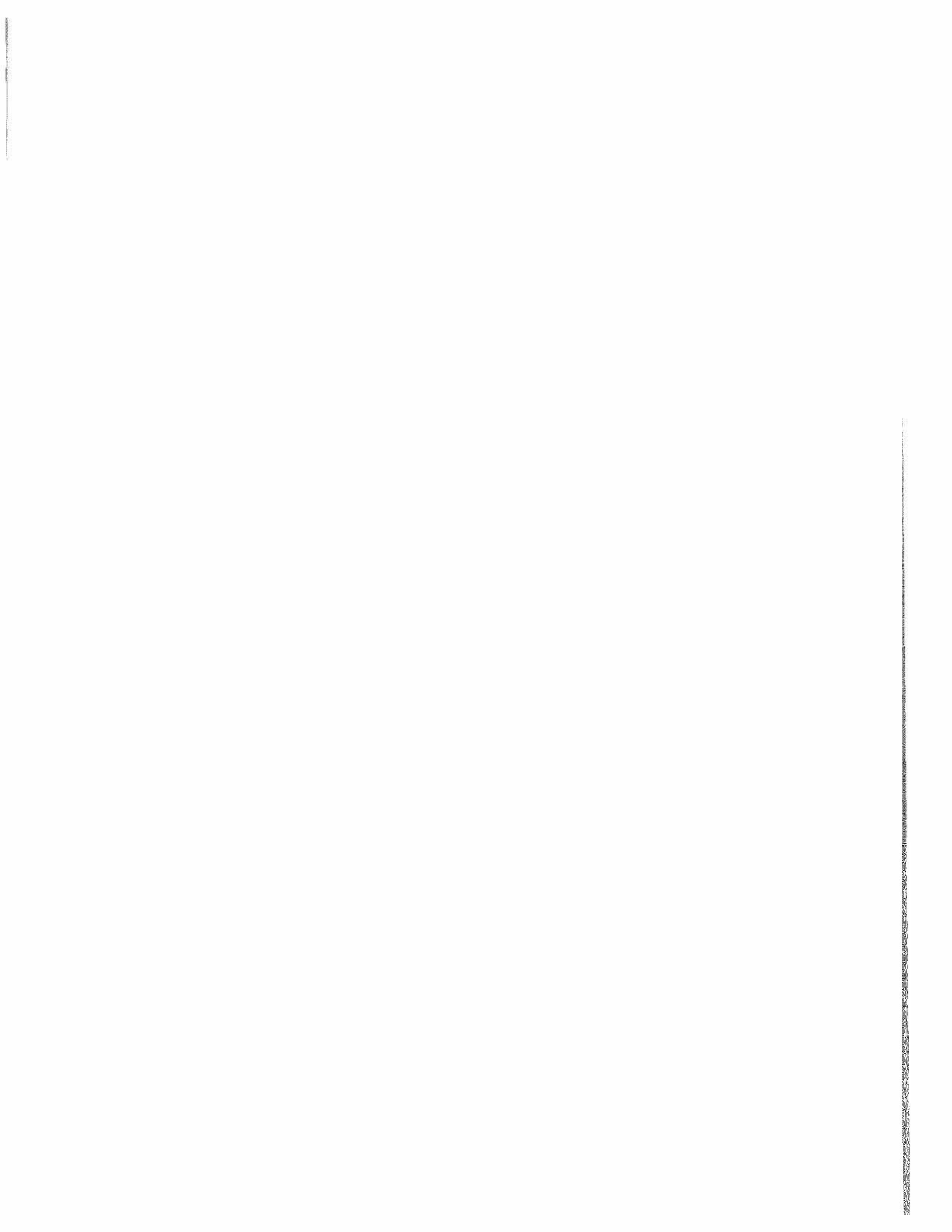
WASHINGTON POLE, POST AND PILING MILLS, 1980

Table 72 - Mill production, by product type and area†
(Thousand board feet, Scribner log rule)

Economic Area	Shipments		
	Treated	Untreated	Total
Puget Sound	9,046	2,918	11,964
Olympic Peninsula	--	5,201	5,201
Lower Columbia	18,246	3,751	21,997
Inland Empire	8,461	1,260	9,721
Total, State	35,753	13,130	48,883

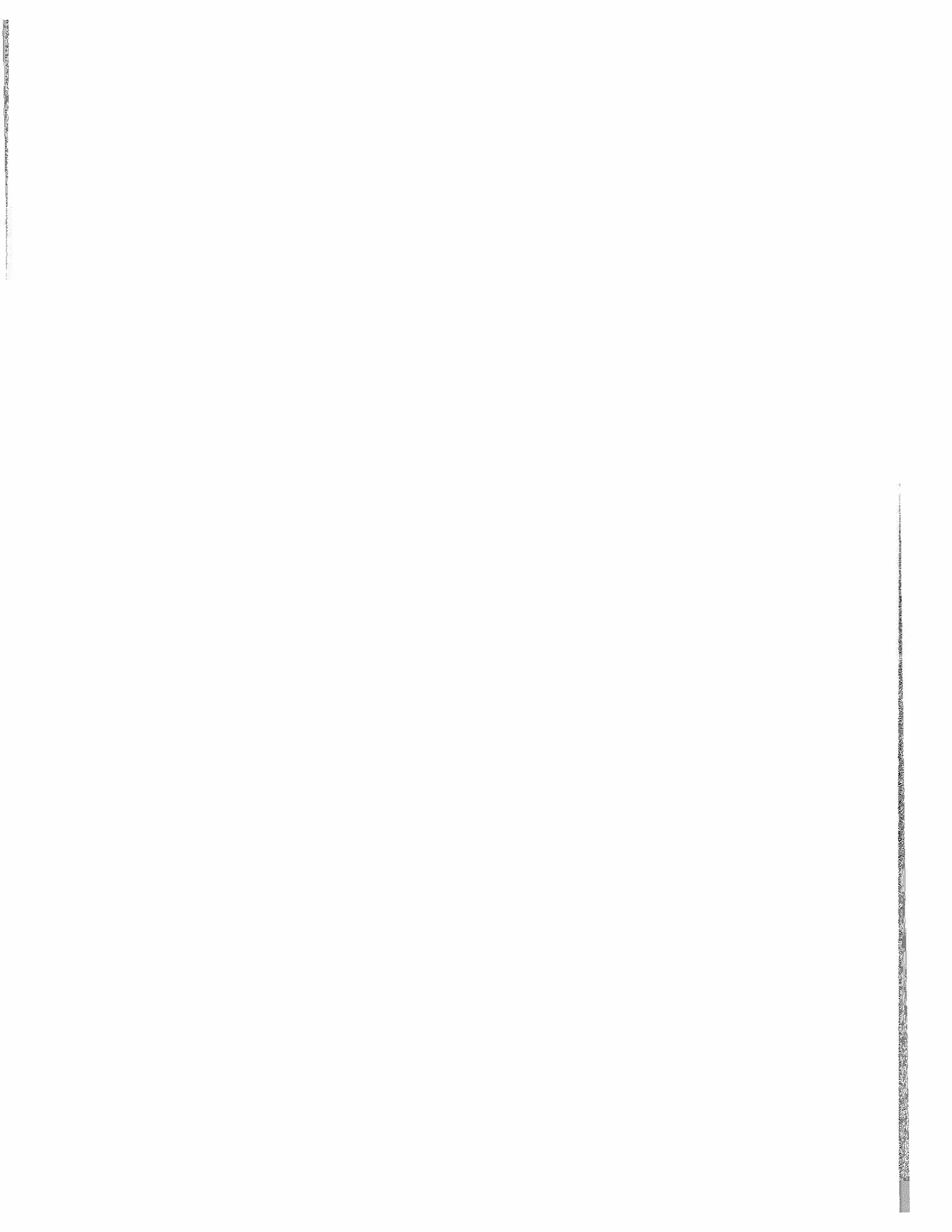
†This table reports shipments from pole, post and piling operations. Actual timber consumption by Economic Area was as follows:

<u>Economic Area</u>	<u>Thousand board feet Scribner log rule</u>
Puget Sound	12,961
Olympic Peninsula	5,984
Lower Columbia	8,354
Inland Empire	10,119
State	37,418





**LOG
EXPORT**



WASHINGTON LOG EXPORT OPERATIONS, 1980

Table 73—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	Total
— (Thousand board feet, Scribner log scale) —					
Puget Sound					
Anacortes and Bellingham ¹	Skagit	4	28,204	--	28,204
Everett and Seattle ¹	Whatcom				
	Snohomish	33	378,324	1,326	379,650
Tacoma	King	24	594,880	5,278	600,158
	Pierce				
Total		61	1,001,408	6,604	1,008,012
Olympic Peninsula					
Grays Harbor	Grays Harbor	26	477,542	1,781	479,323
Olympia	Thurston	4	90,840	--	90,840
Port Angeles	Clallam	16	249,824	161	249,985
Total		46	818,206	1,942	820,148
Lower Columbia					
Longview	Cowlitz				
Total		27	479,086	960	480,046
Total, State		134	2,298,700	9,506	2,308,206

¹Combined to avoid disclosure

Table 74—Number of export operations by tenure of present ownership occupancy and years of site

Years of Site Occupancy (Years)	All Operations	Tenure of Present Ownership				
		0-2	3-5	6-10	11-20	21+
0-2	23					
3-5	40					
6-10	21	Distribution of tenure not available for export operations				
11-20	42					
21+	8					
Total	134					

WASHINGTON LOG EXPORT OPERATIONS, 1980

Table 75—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							Total
	Anacortes & Bellingham ^{1,2}	Everett & Seattle ^{1,3}	Grays Harbor ⁴	Longview ⁵	Olympia ⁶	Port Angeles ⁷	Tacoma ⁸	
Puget Sound								
Island	--	--	--	--	--	--	10,244	10,244
King	795	3,361	110	380	855	--	142,371	147,772
Kitsap	--	1,257	--	--	172	--	5,250	6,679
Pierce	--	4,690	836	1,603	64,483	--	169,085	240,697
Skagit	14,954	85,214	22	--	--	--	740	100,930
Snohomish	1,520	199,400	880	344	3,421	3,597	27,201	236,363
Whatcom	9,842	9,967	--	--	--	--	--	19,809
Total	26,511	303,889	1,848	2,327	68,931	3,597	354,891	761,994
Olympic Peninsula								
Clallam	--	12,847	2,506	171	--	174,162	--	189,686
Grays Harbor	--	--	307,310	7,506	--	--	2,493	317,309
Jefferson	--	7,718	98,634	1,194	9,690	72,226	--	189,462
Lewis	--	2,538	3,574	20,381	4,525	--	144,870	175,888
Mason	--	6,427	2,015	171	4,925	--	6,657	20,195
Pacific	--	--	41,476	7,848	--	--	--	49,324
Thurston	--	3,146	1,391	--	1,483	--	25,127	31,147
Total	--	32,676	456,906	37,271	20,623	246,388	179,147	973,011
Lower Columbia								
Clark	--	--	--	15,391	--	--	--	15,391
Cowlitz	--	440	2,023	330,160	431	--	--	333,054
Klickitat	--	237	1,012	232	--	--	--	1,481
Skamania	--	--	742	30,417	--	--	--	31,159
Wahkiakum	--	--	724	10,110	--	--	--	10,834
Total	--	677	4,501	386,310	431	--	--	391,919
Central Washington								
Chehalis	97	11,002	66	280	--	--	35,681	47,126
Kittitas	--	5,234	--	180	--	--	24,561	29,976
Lincoln	729	800	--	--	--	--	--	1,529
Okanogan	--	7,165	--	--	--	--	--	7,165
Total	826	24,201	66	460	--	--	60,242	85,795
Inland Empire								
Ferry	97	565	66	--	--	--	--	728
Pend Oreille	--	1,600	--	--	--	--	--	1,600
Spokane	--	8,516	411	--	--	--	977	9,904
Stevens	--	2,400	--	--	--	--	--	2,400
Total	97	13,081	477	--	--	--	977	14,632
Total, State	27,434	374,524	463,798	426,368	89,985	249,985	595,257	2,227,351
Outside Washington	770	5,126	15,525	53,678	855	--	4,901	80,855
Total	28,204	379,650	479,323	480,046	90,840	249,985	600,158	2,308,206

¹Combined to avoid disclosure

⁵Cowlitz County

²Skagit and Whatcom Counties

⁶Thurston County

³Snohomish and King Counties

⁷Clallam County

⁴Grays Harbor County

⁸Pierce County

WASHINGTON LOG EXPORT OPERATIONS, 1980

Table 76—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 Snohomish ¹	379,650	194,327	147,439	6,395	2,072	6,863	407	6,384	8,424	7,339
Pierce	600,158	373,525	172,610	26,266	2,947	1,922	1,922	4,259	12,981	3,726
Skagit and Whatcom ¹	28,204	13,401	10,404	220	368	474	19	1,268	547	1,503
Total	1,008,012	581,253	330,453	32,881	5,387	9,259	2,348	11,911	21,952	12,568
Olympic Peninsula										
Clallam	249,985	28,250	195,332	1,300	16,951	--	--	7,741	--	411
Grays Harbor	479,323	112,379	310,040	2,740	32,044	353	89	19,247	75	2,356
Thurston	90,840	39,057	48,901	--	--	--	--	1,745	--	1,137
Total	820,148	179,686	554,273	4,040	48,995	353	89	28,733	75	3,904
Lower Columbia										
Cowlitz										
Total	480,046	344,590	101,336	22,303	1,423	607	744	2,111	4,956	1,976
Total, State	2,308,206	1,105,529	986,062	59,224	55,805	10,219	3,181	42,755	26,983	18,444

¹Combined to avoid disclosure

Table 77—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 Snohomish ¹	379,650	133,424	2,440	--	2,055	12,347	154,872	74,512
Pierce	600,158	19,860	1,500	--	12,716	89,337	401,680	75,065
Skagit and Whatcom ¹	28,204	14,790	--	--	--	--	--	13,414
Total	1,008,012	168,074	3,940	--	14,771	101,684	556,552	162,991
Olympic Peninsula								
Clallam	249,985	96,346	--	--	--	--	108,857	44,782
Grays Harbor	479,323	113,396	1,056	--	47,188	1,381	214,866	101,436
Thurston	90,840	12,945	--	--	257	686	74,217	2,735
Total	820,148	222,687	1,056	--	47,445	2,067	397,940	148,953
Lower Columbia								
Cowlitz								
Total	480,046	28,052	--	--	4,425	--	366,976	80,593
Total, State	2,308,206	418,813	4,996	--	66,641	103,751	1,321,468	392,537

¹Combined to avoid disclosure





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