

WASHINGTON MILL SURVEY

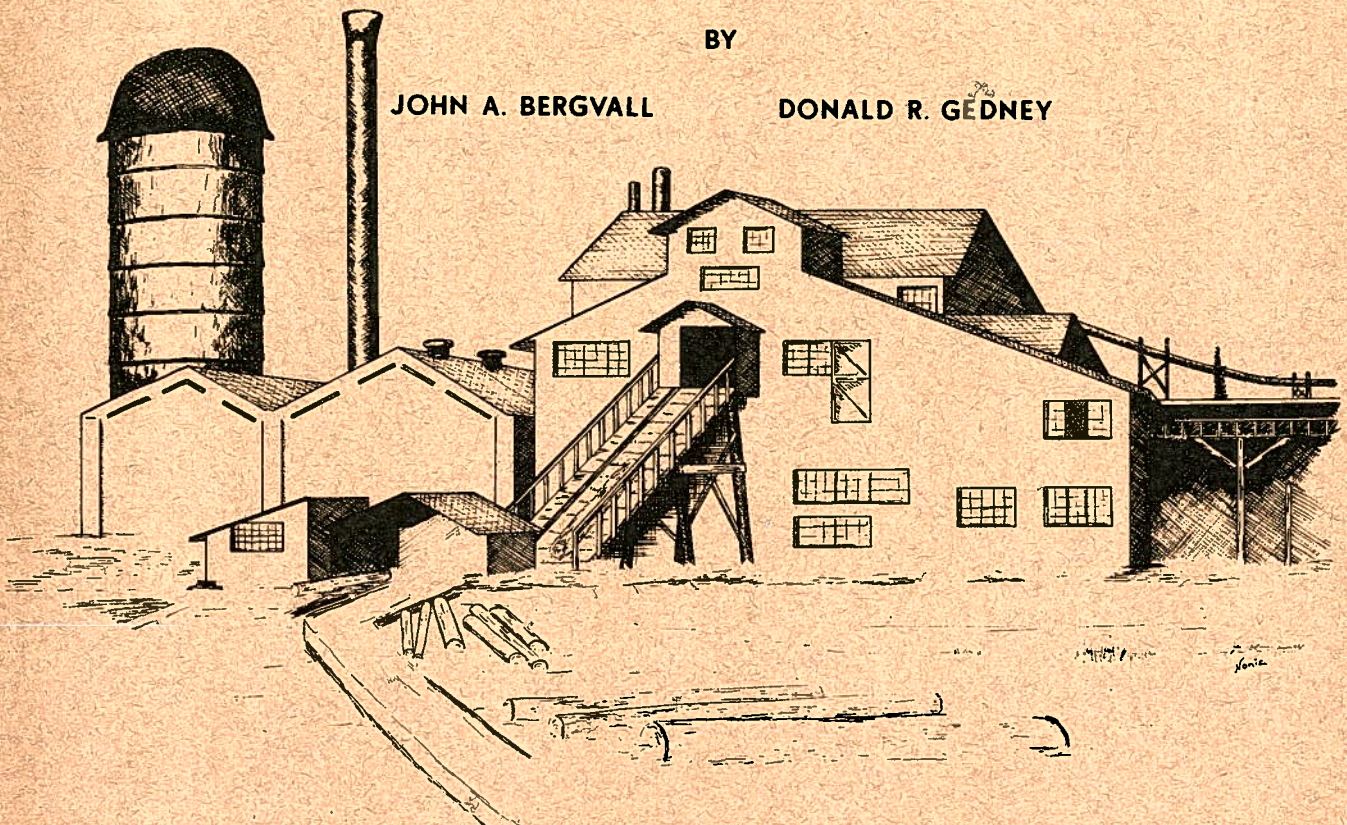
WOOD CONSUMPTION AND MILL CHARACTERISTICS

1968

BY

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DONALD R. GEDNEY



A JOINT STUDY BY

STATE OF WASHINGTON

Department of

Natural Resources

BERT L. COLE — COMMISSIONER OF PUBLIC LANDS

AND

PACIFIC NORTHWEST

FOREST AND RANGE EXPERIMENT STATION
FOREST SERVICE PORTLAND, OREGON

U.S. DEPARTMENT OF AGRICULTURE

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Three individuals contributed substantially to this report. Grover A. Choate, Resource Analyst with Forest Survey, Pacific Northwest Forest and Range Experiment Station was responsible for the preliminary analysis of the data; Brian R. Wall, Associate Economist with the Forest Survey Project, organized and supervised initial collection of field data and supplied economic data for the report; Ronald J. Holtcamp, Statistical Forester, Washington State Department of Natural Resources, supervised final data collection and compilation procedures.

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FOREWORD

This report contains statistics on wood consumption and characteristics of all primary wood processing mills in the State of Washington for the year 1968. Although considerable information is available from various published sources, little is known about the raw material requirements of the forest industries. This survey serves to document the wood raw material inputs to the wood-using industries of Washington for 1968.

Wood flows to the industry from different ownerships, from different species, from timber harvest areas, and in the form of mill residues. Changes in the flow of any of these factors may indicate a change in the wood processing plants, thereby affecting other industries, employment, and community development.

The need for this information stems from the increasing complexity of planning. Better statistics are needed by many people—industry people, legislators, public resource managers, and the various other groups and individuals concerned with planning at state, national, and local levels.

The 1968 statistics shown in this report result from a survey conducted in 1969 by the State of Washington Department of Natural Resources in cooperation with the Forest Survey staff of the Pacific Northwest Forest and Range Experiment Station, U.S. Forest Service.

Members of these agencies visited practically all primary wood processing mills in the state to collect information for this survey. Personal contacts were made at most mills. In a few cases, contacts by phone were necessary. Information for individual mills or companies is confidential, and all information that could reveal an individual operation has been merged with other data to avoid disclosure.

The production data obtained in this survey for lumber, veneer and plywood, shake and shingle, export logs, and poles and piling were not considered a major objective of the study but were obtained to provide information on wood requirements necessary for given levels of production.

The reliability of the data presented in this report is generally considered high. As the survey was a 100 percent canvass, no sampling error is involved. The information collected from each mill is assumed to be the best available. When possible, the information came from records; in some instances, it came from estimates or judgments.

The text in this report points out some of the more significant features of the statistics presented in the tables. It also provides a summary background of the timber economy in 1968, as well as some recent trend information.

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HIGHLIGHTS

Mills

- 493 mills operated in 1968—212 sawmills, 43 veneer and plywood, 35 pulp and board, 158 shake and shingle, 26 export, and 19 pole, post, and piling.
- Grays Harbor was the leading county in number of mills—79.
- Installed capacity per 8-hour shift amounted to 10.6 million board feet of lumber, 5.3 million square feet of $\frac{3}{8}$ -inch plywood, 12,776 squares of shakes and shingles, and 11,216 tons of pulp and board per 24-hour shift.
- The 24 largest sawmills had 45 per cent of the state's lumber capacity and consumed 54 per cent of the roundwood logs in 1968.

Wood Consumption

- Mills consumed 6.7 billion board feet of logs, as well as 4.9 million tons of chips, sawdust, peeler cores, and 0.9 million tons of bark.
- The leading counties in log consumption were Grays Harbor (1,033 million board feet Scribner) and Snohomish (949 million board feet Scribner).
- Sawmills consumed 47 per cent of the roundwood logs; veneer and plywood mills, 12 per cent; pulp and board mills, 17 per cent; and other mills, 24 per cent.
- Two-thirds of the wood used by pulp and board mills was in the form of chips and sawdust which were residues of other mills, principally sawmills.

- 93 per cent of log consumption was from sound live timber and 78 per cent from old-growth.
- 36 per cent of the logs were Douglas fir and 33 per cent, hemlock.
- The leading sources of log supply were the companies' own timberlands (37 per cent) and National Forests (24 per cent).
- 96 per cent of the log consumption came from harvests within the state; most of the balance came from Oregon.

Residues and By-products

- Wood and bark residues amounted to 6.1 million tons—74 per cent from sawmills, 20 per cent from veneer and plywood mills, and 6 per cent from shake and shingle mills.
- 78 per cent of all residues were wood; 22 per cent, bark.
- Conversion of residues to by-products amounted to 86 per cent for wood and 68 per cent for bark—1.1 million tons of residue are still unused.
- 49 per cent of wood residues went into pulp and board, 32 per cent into fuel, and 5 per cent into agricultural and other products.
- Industries produced an average of 0.96 tons of by-products per 1,000 board feet of logs consumed.

AN OVERVIEW OF THE INDUSTRY

The Industry Is Important to the Nation and the State

Washington's timber industry has been long and widely recognized as of outstanding importance to the nation as well as to the state. In 1968, wood products accounted for 12 per cent of the total United States consumption of roundwood. In so doing, Washington industries used 9 per cent of the national consumption of saw logs, 13 per cent of the veneer and plywood logs, 12 per cent of the pulpwood, 51 per cent of the export log vol-

ume, and 11 per cent of other industrial roundwood.

Washington's timber industry is also of substantial national significance in terms of employment and value added¹ by manufacture. Preliminary Census of Manufacturers Industry Series reports for 1967 show Washington percentages of national totals as follows:

¹Value added includes the interest, wages and salaries, rent, and profit associated with the manufacture of a product. It does not include the cost of raw materials purchased from other firms.

	Employment	Value Added
Logging camps and contractors (SIC2411)	14.9%	18.2%
Sawmills and planing mills (SIC2421)	8.4%	9.5%
Veneer and plywood (SIC2432)	11.7%	12.8%
Pulpmills and papermills (SIC2611 and 2621)	7.3%	9.0%

In comparing states on the basis of such economic yardsticks, Washington is generally included in the top three or four states.

The timber industry's significance to the state's economy is illustrated by figures on employment² and payrolls. In 1968, the timber industry's average monthly employment of 65,900 workers with a payroll of \$513 million represented 8 and 9 per cent respectively of total employment and payrolls in the state. Within the manufacturing segment of the economy, it provided 23 per cent of the employment and 21 per cent of the payrolls, exceeded only by the aircraft industry. Aside from employment and payrolls,

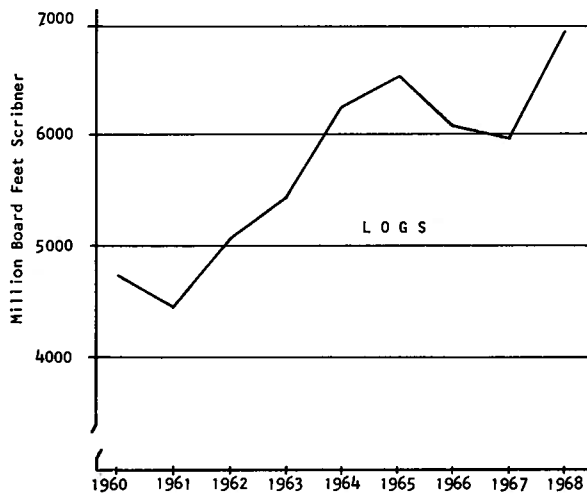
the timber industry contributes to the state's economy in other ways: taxes, return on local investments, and as a market for equipment suppliers, other related industries and services.

Timber Industry Production Was High In 1968

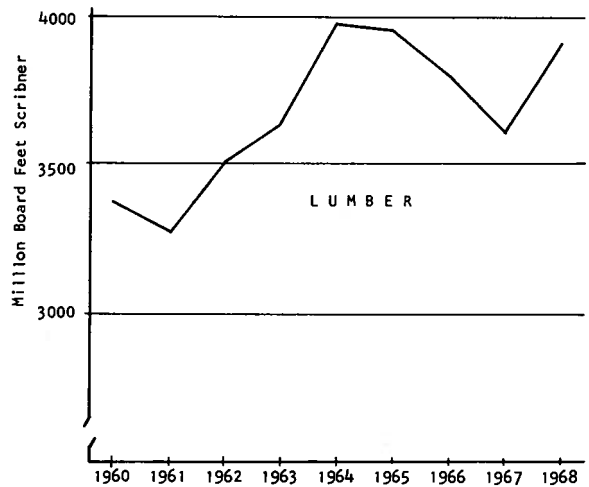
In general, the 1968 economic climate was very favorable for Washington's timber industries. Nationally, new housing and other construction was up substantially from the 1966-67 level. Increasing prices of most softwood products resulted in general increases in production and employment, although the extent of increase varied considerably among products. Log production from Washington timberlands made a strong recovery from the 1966-67 dip in the general upward trend since 1960 (Fig. 1). In fact, the 1968 harvest of 6.97 billion board feet Scribner was the largest since the record

²Employment and wage data reported to the Employment Security Department on quarterly tax reports by employers subject to the Washington Employment Security Act. Timber industry employment (SIC24 and 26) does not include some employment, such as longshoremen or truckers, not entirely attributable to the timber industry.

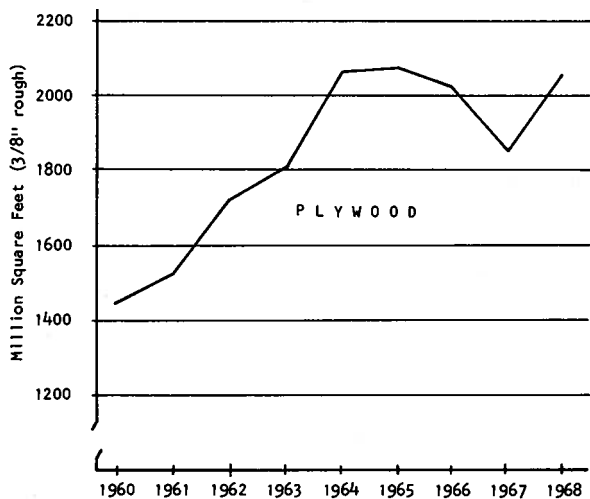
Figure 1.—Output of Major Timber Products for Washington, 1960-1968.



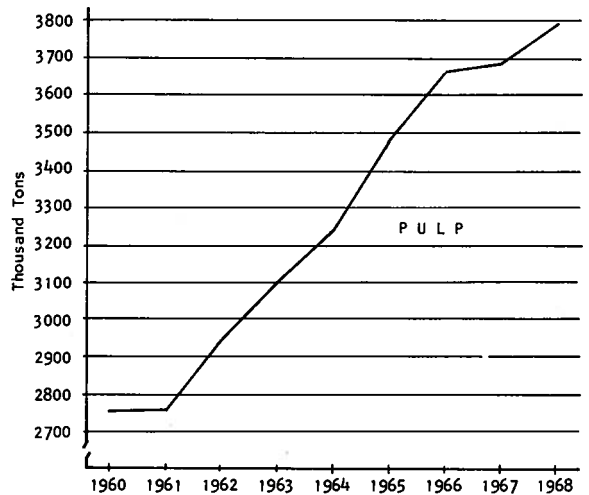
Source: State of Washington Department of Natural Resources



Source: Western Wood Products Association



Source: American Plywood Association



Source: Northwest Pulp & Paper Association

7.38 billion board feet produced in 1929.³

Lumber prices rose sharply during the year; Douglas fir dimension material, for example, showed a wholesale price increase of 32 per cent from the fourth quarter of 1967 to the fourth quarter of 1968.⁴ Lumber production for the year was up 6.9 per cent from 1967, almost at the 1964-65 level. Softwood plywood prices also showed a big increase with the wholesale price of exterior 3/8-inch plywood, for example, increasing 55 per cent from the fourth quarter of 1967 to the fourth quarter, 1968.⁵ Production showed a general increase throughout the year and for 1968 recorded an 11.3 per cent gain over 1967, approaching the previous high in 1964-65. Pulp, as well as paper and board output, continued to increase but at less than the 4 per cent compound rate experienced over the 1960-68 period. Markets for log exports continued to improve and the 1968 export volume was roughly 27 per cent greater than that of 1967. Exports in 1968 were largely unaffected by the 1968 legislation restricting exports from public lands.

Substantial rises in stumpage prices for public timber accompanied the higher prices and improved markets for products during 1968. These increases, from the fourth quarter of 1967 to the fourth quarter of 1968, averaged 49 per cent in Western Washington and 69 per cent in Eastern.⁶

Total employment in the timber industry showed an overall increase by year's end and, for the year as a whole, recorded a 3 per cent gain over 1967. This gain occurred entirely outside of the paper and board industry which recorded no increase.

³Wall, Brian R., 1969. *1968 Washington Timber Harvest. Pacific Northwest Forest & Range Experiment Station, USDA Forest Service, 2 pp., illus.*

⁴Austin, John W., 1969. *Production, prices, employment, and trade in Northwest Forest Industries, fourth quarter 1968. Pacific Northwest Forest & Range Experiment Station, USDA Forest Service, 46 pp., illus.*

⁵*Ibid.*

⁶*Ibid.*

Changes Are Occurring in the Industry

While the output of various products has shown a general upward trend since 1960, many important changes have taken place with the timber industry. Fundamental changes beyond the scope of this report will not be discussed in detail. They include land-use changes that decrease the area available for timber production; the increasing intensity of timber management; and the general tendency of timber companies to increase in size through mergers, acquisitions, and internal diversification.

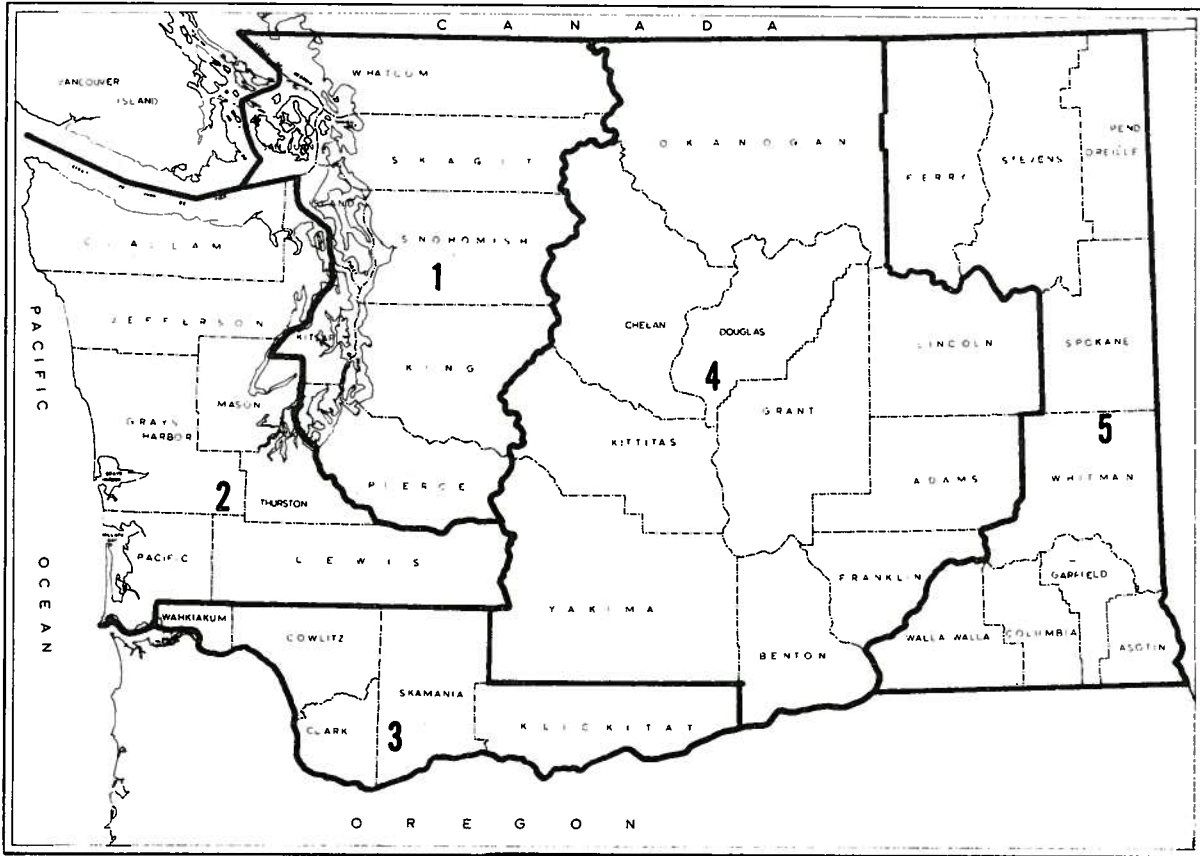
Many changes, however, are relevant to this report. Since most of these will be discussed later, they need only brief mention at this point. Development of mill equipment suitable for processing small material has been concurrent with the diminishing supply of large old-growth timber and the greater use of smaller logs. The pulp and board industry's increased use of residues from sawmills and veneer and plywood plants is another very significant development. Chip production is changing in other respects. Portable chip mills permit the salvage of cull material and logging residues which can be processed on the site. Portable chippers are also used in the woods. In addition, chips may be produced at facilities other than those physically located at pulp mill sites.

The Industry Is Larger and More Diversified in Western than in Eastern Washington

The great bulk of the timber industry is in Western Washington, from the Cascade Range to the Coast, with plants of one type or another in every county. In this heavily forested area, Douglas fir and hemlock⁷ make up about three-fourths of

⁷Western hemlock and mountain hemlock have been combined under the generic designation of hemlock in this report.

FIGURE 2
WASHINGTON MILL SURVEY ECONOMIC AREAS
Encompassing the Thirteen Economic Regions^a



^aSee Appendix, page 34, for boundaries of the thirteen Economic Regions

1 PUGET SOUND

- (3) North Puget Sound
- (4) Central Puget Sound

2 OLYMPIC PENINSULA

- (1) North Coast
- (2) South Coast
- (5) South Puget Sound

4 CENTRAL WASHINGTON

- (7) Upper Columbia
- (8) Yakima Valley
- (9) Columbia Basin
- (10) Two Rivers

3 LOWER COLUMBIA

- (6) Lower Columbia

5 INLAND EMPIRE

- (11) Northeast
- (12) Spokane
- (13) Southeast

the wood used; western red cedar and true firs supply most of the remaining volume.

The smaller size of the industry in Eastern Washington is largely a reflection of the smaller timber base; a number of counties have no significant timberland or industry. Douglas fir and ponderosa pine are the leading species and account for about three-quarters of the wood used by industry in Eastern Washington.

In general, the industry in Western Washington is more diversified than in the eastern part of the state. This is shown to some extent by the distribution of mills⁸ by type of industry within each of the five economic areas used in the report. These areas are delineated in Figure 2, and number of mills by industry is shown in Table 1.⁹ All of the economic areas comprising Western Washington (Puget Sound, Olympic Peninsula, and Lower Columbia)¹⁰ have a good representation of mills from each of the four industry groups: lumber mills, veneer and plywood mills, pulpmills, and "other" industry composed of export mills, shake and shingle mills, and pole and piling mills. The Olympic Peninsula has more mills than any other area; however, more than one-half of the 194 mills in this area are relatively small plants characteristic of the shake and shingle industry. In the economic areas east of the Cascades, the industry is based largely on lumber production. Seventy-nine per cent of the 73 mills in the Central Washington-Inland Empire combination are sawmills.

⁸For 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.

⁹The veneer and plywood industry discussed in this report consists essentially of mills producing softwood veneer and plywood. However, a few of these mills do use relatively small volumes of local hardwoods—largely black cottonwood. Mills producing veneer and plywood from exotic woods—tropical or hardwoods from eastern United States—were not included in the survey.

¹⁰Although Klickitat County lies east of the Cascade Range, it has been included in the Lower Columbia Area and is considered as part of Western Washington for purposes of this report.

Roundwood Consumption Was Mainly by Sawmills; Puget Sound Was the Leading Area

The lumber industry used by far the greatest proportion of the 6.7 billion board feet¹¹ of roundwood consumed by all timber industries in Washington in 1968 (Table 2 and Fig. 3). This was also the case within each of the individual economic areas, except on the Olympic Peninsula where the "other" industries group was the major consumer.

Among the five economic areas, the leaders in roundwood consumption were Puget Sound (34 per cent) and Olympic Peninsula (32 per cent).

The composition of roundwood use by type of material was as follows:

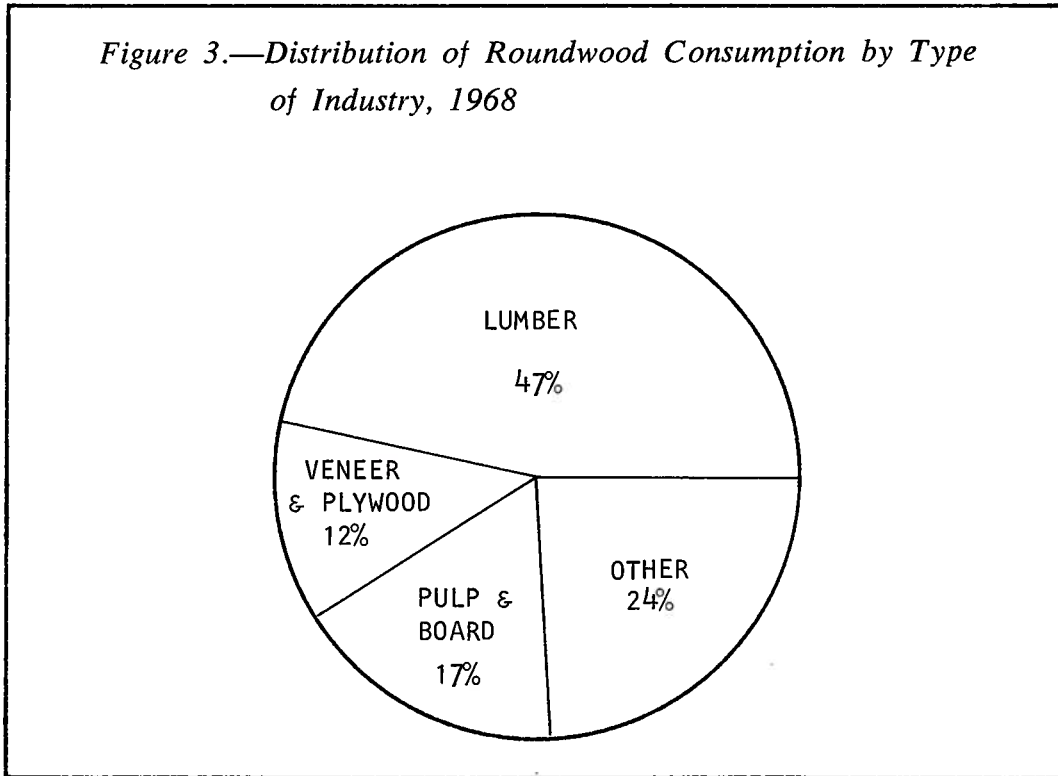
	Per cent
Sound live	93
Dead	3
Cull	4

In addition to roundwood, the industry consumed more than 4.9 million tons of plant residues (Table 2). This was largely in the form of chips, sawdust, and other material produced as plant by-products from residues of the sawmill, veneer and plywood, and "other" industries, and subsequently used by pulp and board mills. Included, however, was a small volume of peeler cores which were sawed into lumber.

Compared to total wood consumption including residue, the area percentage of roundwood consumed varied from a low of 46 per cent in the Lower Columbia to almost 100 per cent in Central Washington and Inland Empire Areas. Among industries, the range was from 31 per cent in pulp and board to 100 per cent in the veneer and plywood and "other" industries (Table 2).

¹¹In this report, 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.

Figure 3.—Distribution of Roundwood Consumption by Type of Industry, 1968



Most of the roundwood came from old-growth timber (at least 100 years old). The average old-growth consumption for all industries was 78 per cent.

Washington Timberlands Supplied Most of the Logs

In 1968, 96 per cent of the 6.7 billion board feet of logs used by Washington's timber industry was harvested within the state (Table 3). Oregon was the principal source of imports, although some logs came from British Columbia, Idaho, and Montana. The 158 million board feet imported to the Lower Columbia Area from Oregon accounted for two-thirds of all the Washington imports; it also represented 12 per cent of the log consumption by this area.

The pulp and board industry was the biggest importer—52 per cent. The bulk of this volume imported by pulp and board mills went to the Lower Columbia Area.

Analysis of Table 4 shows that only about one-half the logs consumed by mills in Washington were harvested in the same county as consumed; 80 per cent of the consumption was in the same economic area as the harvest. Following is a breakdown of consumption by origin in terms of counties and economic areas:

By Counties	Per cent
County of use	49
Adjoining counties	36
Non-adjoining counties or out-of-state	15
	<hr/> 100
By Economic Areas	
Area of use	80
Adjoining areas	16
Non-adjoining areas or out-of-state	4
	<hr/> 100

Mills Differ Substantially in Ownership Origin of Logs

Mills showed a wide variation in their dependence on timber from various land ownership classes such as National Forest, State, Private, etc. (Table 5). For example, of the 212 lumber mills active in the state in 1968, 121 received no National Forest timber. On the other hand, only 12

of the 43 veneer and plywood mills and 5 of the 32 pulp and board mills reported no National Forest timber receipts. Similar differences were noted in comparisons of one part of the state with another.

For all industries, the National Forests and lands owned by the industries provided 70 per cent of the total timber requirements.

Ownership		Per cent
Public	National Forest	24
	State	12
	BLM	^a
	Other public	4
Private	Forest Industry	
	Own wood supply	37
	Other wood supply	9
	Farmer and miscellaneous private	14
Total		100

^aLess than 0.5.

Douglas Fir and Hemlock Are the Leading Species

Washington, in contrast with many states, has few species of major industrial significance. Douglas fir and hemlock com-

bine to make up almost 70 per cent of Washington's industrial consumption of logs (Table 6). However, as shown below, the relative importance of species varies considerably from one part of the state to another.

Economic Area	Douglas	Hemlock	True	Ponderosa	Other*	All
	Fir		Firs	Pine	Species	Species
	Per cent					
Puget Sound	35	40	9	0	16	100
Olympic Peninsula	23	47	7	0	23	100
Lower Columbia	55	23	8	5	9	100
Central Washington	34	2	4	52	8	100
Inland Empire	48	2	14	19	17	100
Average	36	33	8	7	16	100

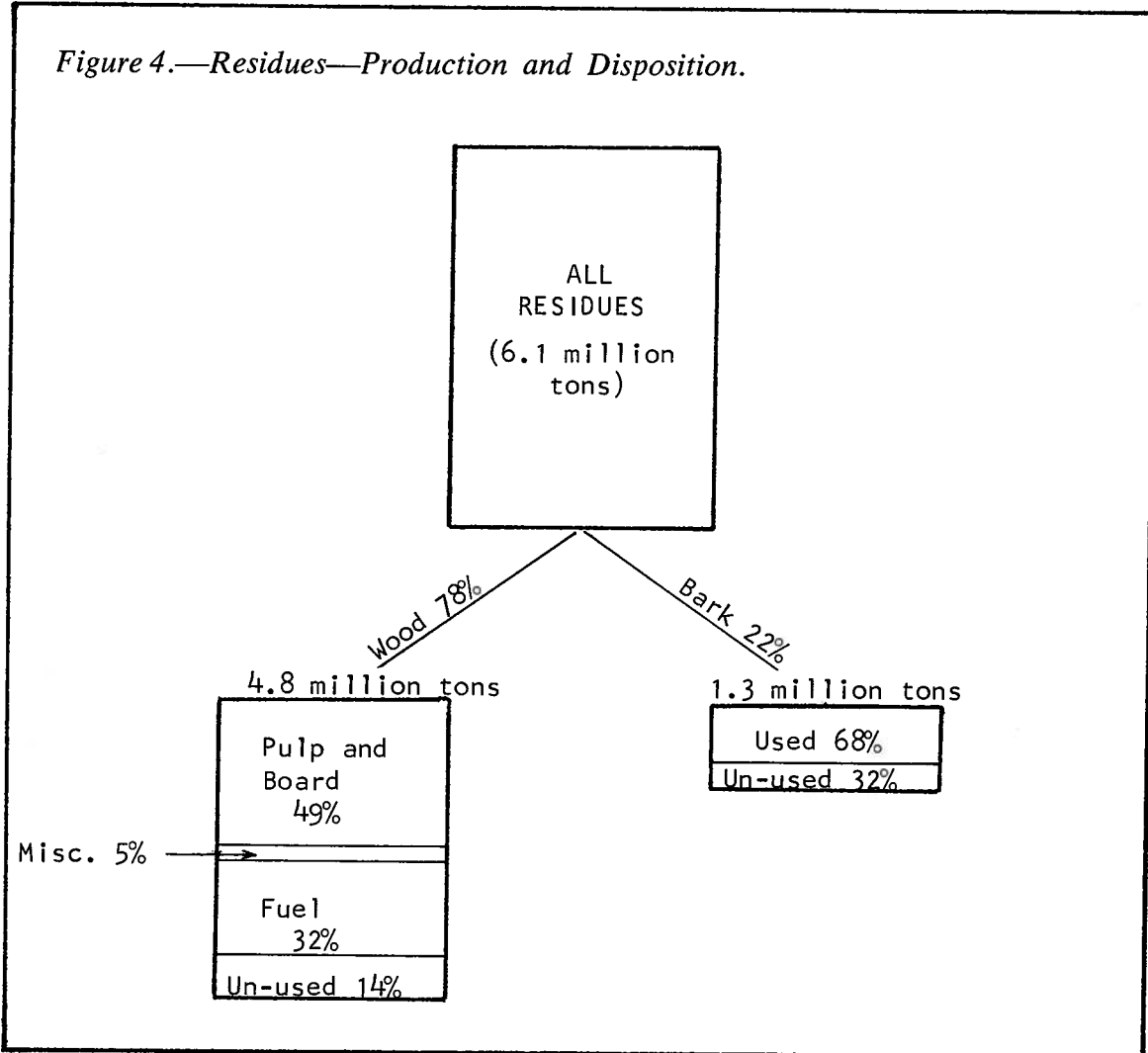
*Principally western redcedar, western larch, western white pine, spruce, lodgepole pine, and hardwoods.

Species use also varies substantially among industries:

Industry	Douglas	Hemlock	True	Ponderosa	Other	All
	Fir		Firs	Pine	Species	Species
	Per cent					
Lumber	48	20	6	13	13	100
Veneer and Plywood	65	17	5	4	9	100
Pulp and Board	4	67	14	0	15	100
Other	19	43	10	⁽¹⁾	28	100
Average	36	33	8	7	16	100

¹Less than 0.5.

Figure 4.—Residues—Production and Disposition.



More than 80 Per Cent of Mill Residues Used

Residues of wood and bark, resulting from the conversion of logs into lumber, veneer and plywood, and shakes and shingles, amounted to 6.1 million tons in 1968. Eighty-two per cent of this volume was subsequently used by the timber industry within the state, marketed for non-industrial uses (mostly agricultural), or exported.

Of the total residue volume,¹² 4.8 million tons (78 per cent) was wood, and 1.3 million tons (22 per cent) was bark (Table 7). This breakdown as well as disposition of residues is shown in Figure 4.

Of the total residue volume, 74 per cent was produced by the lumber industry, 20 per cent by veneer and plywood plants, and 6 per cent by shake and shingle mills. A breakdown of disposition of wood residues is shown as follows:

Producing Industry	Used				Unused	Total
	Pulp	Board	Fuel	Misc.		
	Per cent					
Lumber	50	1	33	5	11	100
Veneer and Plywood	53	(a)	30	7	10	100
Shake and Shingle	2	..	21	(a)	77	100
Average	48	1	32	5	14	100

^aLess than 0.5.

Each economic area's contribution to production and utilization of wood residues was as follows:

Area	Production of wood residues	Residue Utilization	
		wood	bark
	Per cent		
Puget Sound	34	88	82
Olympic Peninsula	24	82	56
Lower Columbia	22	94	81
Central Washington-Inland Empire ^a	20	76	40
Total	100	86	68

^aCombined to avoid disclosure.

Residue utilization varied somewhat among areas. The Lower Columbia Area industry rated high in the percentages of residues of both wood and bark that were converted to by-products.

The volume of wood residue by-products per thousand board feet of roundwood

consumed amounted to about one ton for both the lumber and the veneer and plywood industries and 0.2 tons for shake and shingle mills. The average for all three industries was 0.96 tons.

¹²The method of obtaining estimates of residue volume and use are described in the appendix.

LUMBER INDUSTRY

Large Mills Had 45 Per Cent of the State's Sawmill Capacity

The 212 sawmills active in Washington during 1968 represent a decrease of about 10 per cent from the number estimated for 1963 and more than 40 per cent from 1960.¹³ The reduction in number of mills during recent decades has been characterized by dropouts of smaller mills.¹⁴ Between 1960 and 1968, the number of small mills (less than 40,000 board foot capacity per 8-hour shift) decreased by almost one-half while large mills (at least 120,000 board foot capacity) dropped a little less than 12 per cent.

In this report, sawmills have been grouped into four classes, according to the lumber production capacity for a single 8-hour shift, as follows:

Mill-Size-Class	Board foot capacity 8-hour shift
A	120,000+
B	80,000-119,000
C	40,000-79,000
D	Less than 40,000

Total 8-hour shift capacity of the 212 mills was 10.6 billion board feet in 1968 (Table 9). The percentage distribution of mills and their installed capacity by mill-size-class is shown as follows:

Mill-Size-Class	Sawmills Per cent	Installed Capacity	
		Per cent	Billion Board Feet
A	11	45	4.8
B	9	17	1.8
C	20	22	2.3
D	60	16	1.7
Total	100	100	10.6

Puget Sound, with roughly one-third of the sawmills and installed capacity in the state, was the leading area in both respects, and Snohomish the leading county.

Large Sawmills More Fully Equipped

Table 10 shows the number of mills in each size class having selected types of equipment—barkers, chippers, planers, burners, and kilns. The following tabulation for the state as a whole shows the

percentage of mills in each size class that had each type of equipment.

Equipment	Mill-Size-Class				
	D	C	B	A	All
	-----Per cent-----				
Barker	22	86	89	100	50
Chipper	18	93	95	100	49
Planer	58	90	89	96	72
Burner	23	55	53	29	33
Kiln	19	67	74	71	39

The relatively small percentage of Class A mills with burners is the principal exception to the general relationship of equipment to mill size; the implications are obvious with respect to residue disposal and use.

Tables 10 and 11, used in conjunction with Table 8, provide a basis for a

¹³Anonymous. *1964-65 Statistical Yearbook. Western Wood Products Association, Portland, Oregon. 31pp.*

¹⁴Wall, Brian R., et. al. 1966. *Forest Industries of Eastern Washington. Pacific Northwest Forest and Range Experiment Station, U.S. Forest Service, Resource Bulletin PNW-17, 32pp., illus.*

number of comparisons among areas and counties. For example, of the 66 mills in the Puget Sound Area, 32 (48 per cent) had chippers and 9 (14 per cent) had burners.

Information on size and type of head-rigs is an important consideration in relation to size of logs that can be processed. Table 12 shows that 16 mills could handle material larger than 6 feet in diameter. The table does not, however, show the combinations of headrigs with which many mills are equipped to saw logs of various types and sizes.

Many Sawmills At Same Site and Under Same Ownership for More Than 20 Years

About three-fourths of the sawmills in the state had occupied their sites for more than 10 years and one-half of these for more than 20 years (Table 13). Three of every five mills in the state had been under the same ownership for more than 10 years. Fifty-two mills (one-fourth of all mills) had been at their same location and under the same ownership for more than 20 years. The percentage distribution of the 212 mills by site occupancy and ownership tenure is as follows:

Site Occupancy (Years)	Present Ownership Tenure (Years)					Total
	0-2	3-5	6-10	11-20	21+	
	----- Per cent -----					
0-2	7	..	..	..	..	7
3-5	1	7	..	..	..	8
6-10	1	1	9	..	..	11
11-20	1	1	4	31	..	37
21+	2	3	2	5	25	37
Total	12	12	15	36	25	100

The greatest number of mills falls into the 11-20 class, for both site occupancy and ownership.

In general, the industry is stable in location and in ownership. Larger mills show more years on present sites and in present ownerships than do smaller mills.

Large Sawmills Operated More Days per Year

Washington's sawmills averaged 199 days of operation during 1968 (Table 14). In general, large mills operated substantially more days than small mills as indicated by the range of 175 days for Class D mills to 244 for Class A. The situation differed little among the economic areas.

Wood Consumed by Sawmills—Largely Sound Live Logs from Old-Growth Timber

Roundwood composed 99 per cent of the 3.2 billion board feet of wood consumed by Washington's sawmills in 1968 (Table 15). Peeler cores and cants made up the other 1 per cent. The breakdown by type of logs was as follows:

	Per Cent
Sound live	96.7
Sound dead	2.1
Cull	1.2
	100.0

No important differences from the above percentages are apparent for individual

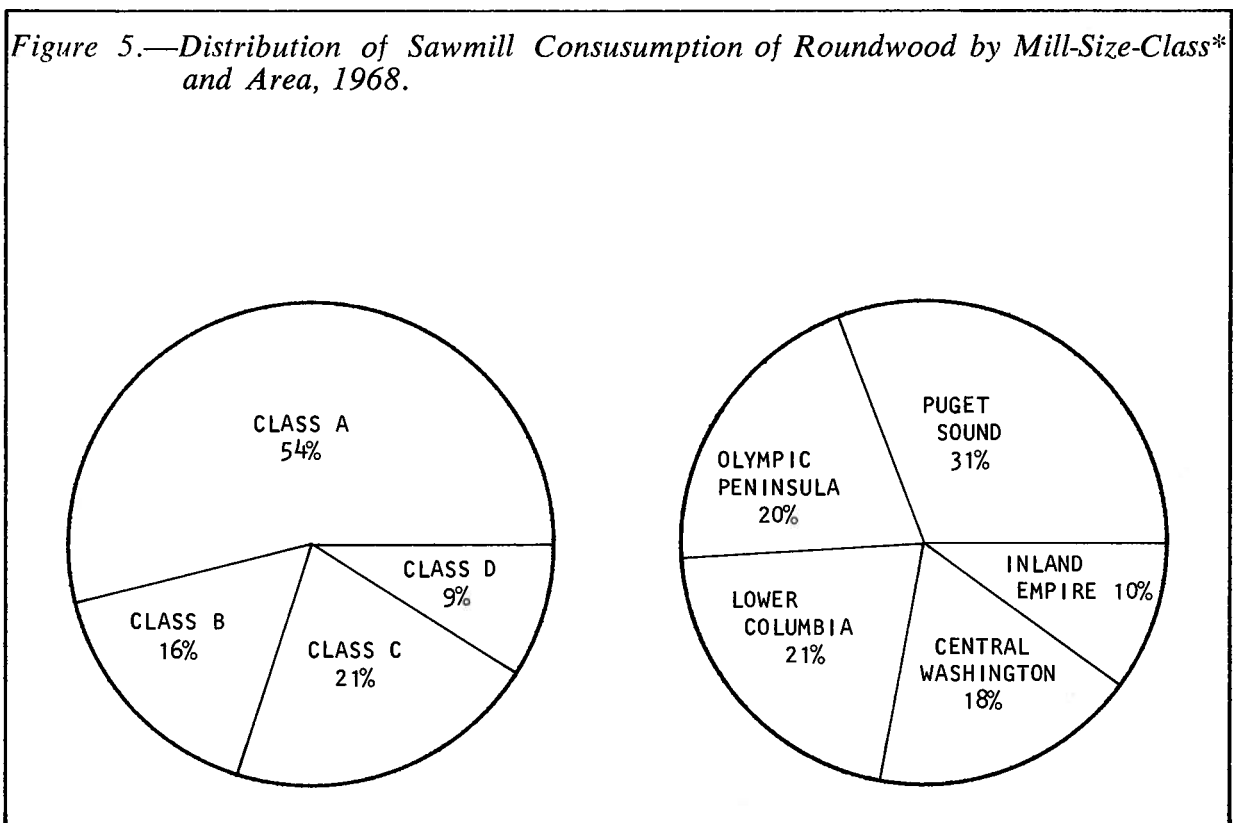
economic areas or mill-size-classes.

Distribution of the total roundwood consumption by mill-size-class and area is shown in Figure 5.

About three-fourths of the logs consumed by sawmills were from old-growth timber. However, as shown below and in Table 16, there is considerable variation by mill-size-class and area.

The principal exception to the relatively low consumption of old-growth timber by Class D mills occurred in Central Washington where the nine mills in this class consumed 97 per cent old timber, and 99 per cent of the consumption of all mills in Chelan County was old growth (Table 17).

Mill-Size-Class	Old-Growth (Per Cent)	Area	Old-Growth (Per Cent)
D	25	Puget Sound	65
C	76	Olympic Peninsula	65
B	69	Lower Columbia	79
A	83	Central Washington	95
	—	Inland Empire	73
Average	74	Average	74



*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.

Log Inventories Stable During 1968

Although mills were not surveyed for 1968 log receipts, this can be estimated on the basis of information furnished from the year's beginning and ending inventories and consumption during the year. On this basis, the apparent receipts (Table 18) were 3.0 billion board feet—about 4 per cent less than consumption. Central Washington was the only area showing a net inventory gain for the year. Lower Columbia made the biggest reduction in inventory—50 per cent.

Sixty Per Cent of the Log Consumption Was from Private Lands

Private timberlands were the major source of supply of logs used by sawmills in 1968 (Table 19). On the average, saw-

Mill-Size-Class	Private Land (Per cent)	Area	Private Land (Per cent)
D	73	Puget Sound	77
C	40	Olympic Peninsula	51
B	33	Lower Columbia	74
A	74	Central Washington	33
	—	Inland Empire	44
Average	60	Average	60

Almost One-Half the Logs Consumed by Sawmills Were Douglas Fir

Sixty-eight per cent of the 1968 log consumption in Washington consisted of Douglas fir and hemlock; almost one-half the volume of all species was Douglas fir (Table 22). Considerable variation occurred among areas (Fig. 6).

Douglas fir was an important species

mills got a bigger proportion (37 per cent) of their logs from their own timberlands than from any of the other ownership classes identified in the survey. This was particularly the case with the largest mills (Class A) which met 61 per cent of their needs from their own wood supply.

National Forests, by supplying 27 per cent of the consumption, were the principal public source. State of Washington lands provided 8 per cent and other public lands, about 5 per cent.

The relative importance of the several types of land ownership is shown in Table 21.

The proportion of logs coming from private and public lands varies substantially by mill-size-class and area as shown below.

in all areas. Hemlock was a major component in the western areas but was supplanted by ponderosa pine in Eastern Washington.

Among mill-size-classes, Douglas fir and hemlock made up a significantly larger percentage of the logs used by large mills. As shown below, smaller mills were quite dependent on species other than Douglas fir, hemlock, and ponderosa pine.

Mill-Size-Class	Douglas Fir	Hemlock	Ponderosa Pine	Other Species	Total
	<i>Per cent</i>				
D	37	9	8	46	100
C	43	9	22	26	100
B	47	11	19	23	100
A	52	29	9	10	100

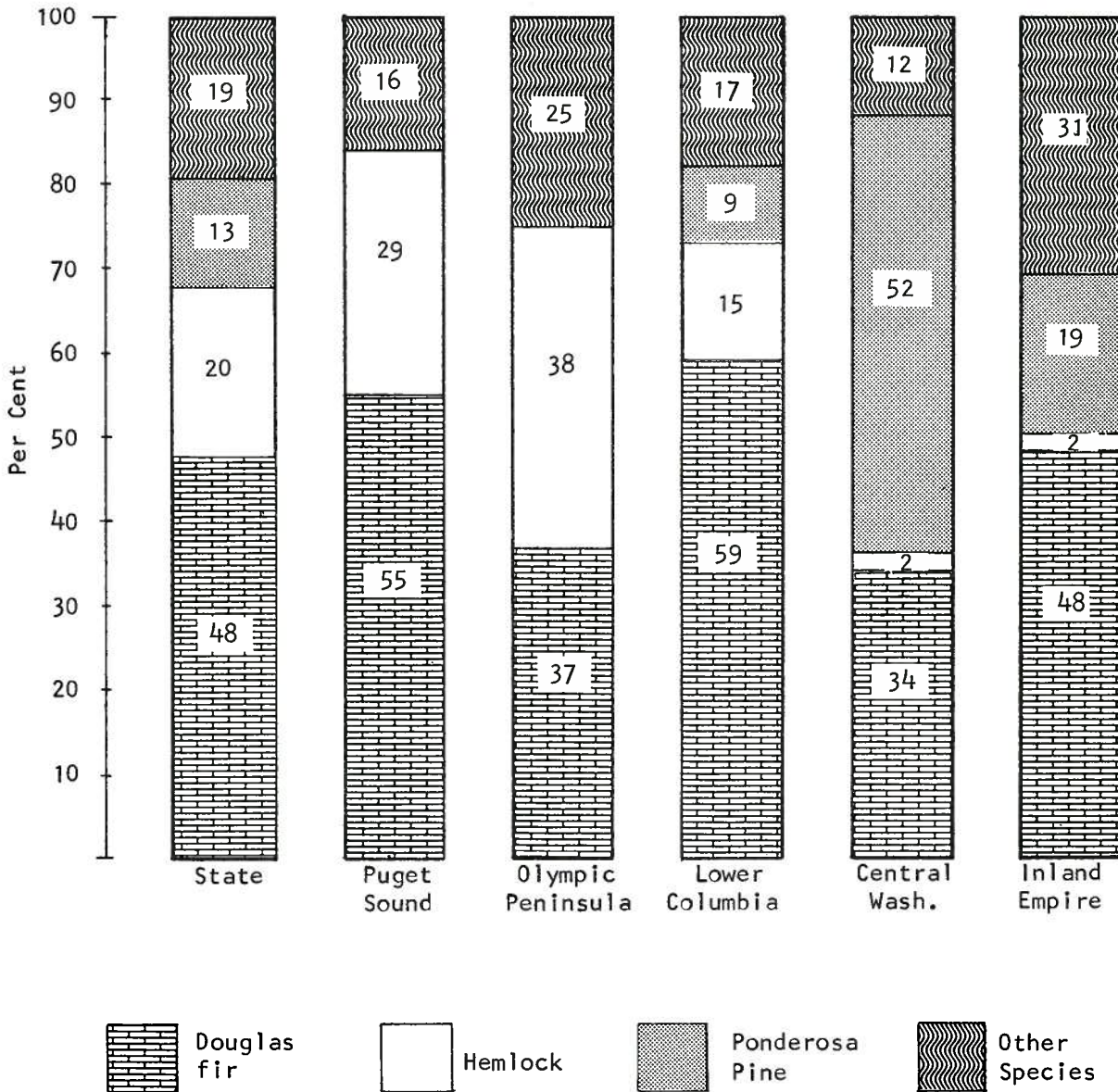


Figure 6.—Distribution of Saw Log Consumption by Species and Area, 1968.

Imports Constituted Only 2 Per Cent of Saw Log Consumption

Ninety-eight per cent of the 3.1 billion board feet of logs used by Washington's sawmills in 1968 came from timberlands within the state (Table 3). Oregon was the principal source of imports, although some logs came from British Columbia and Idaho. The 42 million board

feet imported to the Lower Columbia Area from Oregon accounted for more than three-fifths of all Washington imports.

Puget Sound Major Lumber Producer

Lumber production totaled 3.6 billion board feet in 1968. The 1.1 billion produced in the Puget Sound Area was approximately 42 per cent greater than the

Lower Columbia which was second in total production. Lumber production by area is as follows:

Area	Production (Million Board Feet)
Puget Sound	1,136
Olympic Peninsula	709
Lower Columbia	800
Central Washington	604
Inland Empire	347
Total	3,596

Eighty-six Per Cent of Sawmill Residues Used

Sawmill residues constitute a very significant source of supply for by-products such as pulp material, fuel wood, particle board, and mulch. Use of slabs, edgings, shavings, sawdust, etc., has increased from year to year. In 1968, about 86 per cent

of Washington's 4.5 million tons of sawmill residues went into by-products for domestic use and export (Table 25). Of the total residue volume, 3.6 million tons (79 per cent) were wood, and 0.9 million tons (21 per cent) were bark. Almost nine-tenths of the wood residues were used, but only three-fourths of the bark.

Wood Residue Mostly Coarse, Used Mainly for Pulp

The various sawmill residues are classed as: coarse (slabs, edgings, trim, spur ends), medium (shavings), and fine (sawdust). Volumes in these classes are shown in Table 26.

Figure 7 illustrates relative volumes of coarse, medium, and fine residues, as well as different uses of each type.

Differences in the disposition of used residues are noted among mill-size-classes.

Mill-Size-Class	Pulp	Board	Fuel	Misc.	Total
	----- Per cent -----				
D	52	..	30	18	100
C	58	..	28	14	100
B	67	..	25	8	100
A	54	2	43	1	100

Wood Residues Used Averaged 1 Ton per MBF Of Wood Consumed

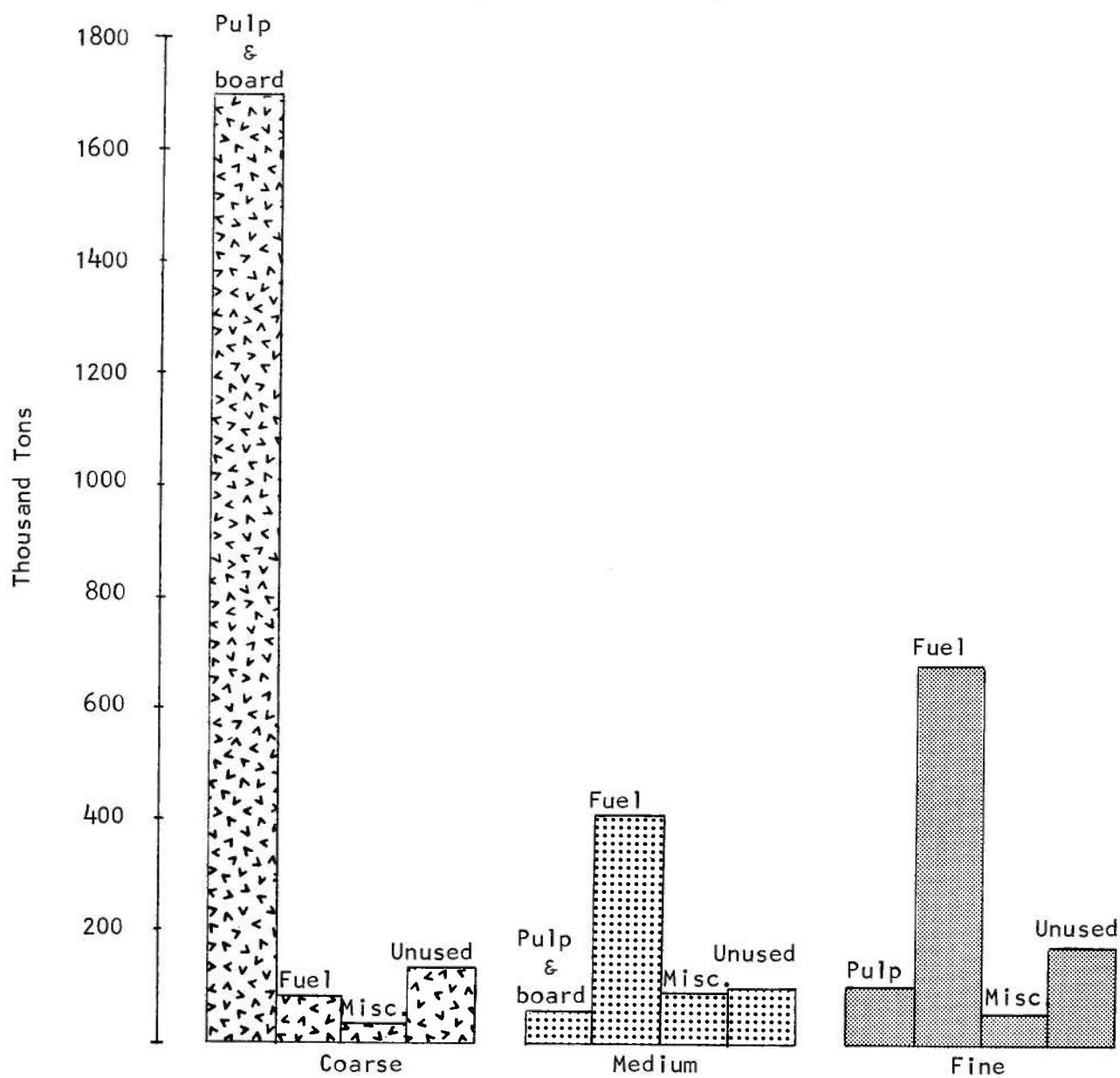
Some striking differences were apparent among areas and mill sizes in use of wood by-products (used residue) per thou-

sand board feet of logs that enter the plant (Tables 15 and 26). Class D mills in the Lower Columbia Area had the highest recovery ratios (1.47 tons per MBF) and Class D mills in the Inland Empire, the lowest (0.29 tons per MBF).

Area	Mill-Size-Class				
	D	C	B	A	All
	----- Tons per MBF -----				
Puget Sound	0.79	1.09	1.15	1.28	1.19
Olympic Peninsula	0.69	0.71	(—1.20 ^a —)		1.09
Lower Columbia	1.47	0.87	1.39	1.06	1.08
Central Washington	0.35	0.78	0.77	0.83	0.78
Inland Empire	0.29	(—0.70 ^a —)			0.62
State	0.69	0.83	1.00	1.15	1.02

^aCombined to avoid disclosure.

Figure 7.—Type and Disposition of Sawmill Residues, 1968.



Disposition:	Coarse	Medium	Fine	Total	Per cent
	Thousand Tons				
Pulp and Board	1696	51	100 ^a	1847	51
Fuel	85	409	678	1172	33
Miscellaneous	31	86	53	170	5
Unused	135	91	171	397	11
Total	1947	637	1002	3586	
Per cent	54%	18%	28%		100%

^aPulp only.

**Three-Fourths of Bark Used,
Mostly for Fuel**

Bark constituted little more than 20 per cent of all residues. Much of it was used for fuel and miscellaneous purposes, especially agriculture. Three-fourths of the 0.9 million tons of bark were used; of this volume, 88 per cent went into fuelwood

and 12 per cent into other products (Table 27).

Information on production and disposition of residues by county is shown in Tables 28-30.

As shown below, there were substantial differences among mill-size-classes and areas.

Mill-Size-Class	Total Bark Residue	Fuel	Misc.	Unused
	<i>Tons</i>	<i>Per cent</i>		
D	68,454	29	21	50
C	171,723	34	4	62
B	146,260	48	18	34
A	542,660	85	7	8
All Classes	929,097	66	9	25
Area				
Puget Sound	321,211	73	19	8
Olympic Peninsula	180,624	63	5	32
Lower Columbia	216,903	82	2	16
Central Washington	136,421	60	7	33
Inland Empire	73,938	4	3	93
State	929,097	66	9	25

VENEER AND PLYWOOD INDUSTRY

Olympic Peninsula Shows Greatest Capacity

The veneer and plywood industry, with 43 mills in 1968 (Table 31), continued as a major component of Washington's timber industry. Manufacture of veneer and plywood, which has had a record of growth during recent decades, is of widespread importance within the state. In 1968, 18 or nearly one-half the counties in Washington had at least one plant; Grays Harbor and Lewis had the greatest number—six each. Twenty-three mills produced veneer and went on to manufacture plywood, 15 cut only veneer, and five were limited to manufacturing plywood from veneer produced elsewhere.

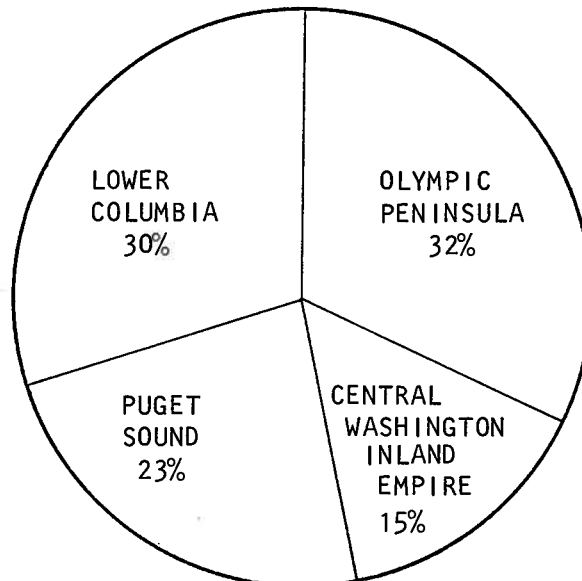
The Olympic Peninsula Area had not only the greatest number of mills (19) but also the greatest 8-hour mill capacity of all types of mills with 74 per cent of veneer capacity, 85 per cent of layup capacity and 52 per cent in plants that produce both veneer and plywood (Table 32, Fig. 8).

Lewis County was the leading county in this respect. Mill capacity in the state by type of mill was as follows:

	Thousand Square Feet 3/8-inch basis
Veneer Production Only	2,246
Layup Only	394
Veneer and Layup	4,993

Tables 33-35 provide information on mill characteristics with respect to selected types of equipment. Some of this information is especially important when considering log dimensions for future utilization by plywood mills. For example, 15 of the 43 mills had lathes capable of handling material of at least 80-inch diameter. And again, 6 mills peeled down to a 3-inch core, thereby greatly increasing efficiency in processing small-diameter logs. Size of cores is also of interest to some sawmills. As shown earlier in Table 15, the 1968 wood consumption by sawmills included 1.7 million board feet of cores.

Figure 8.—Veneer and Plywood Log Consumption by Area, 1968.



More Than One-Half of the Mills at Least 11 Years Old

In 1968, 24 of the 43 mills in the state had been located in the same place for more than 10 years, 14 of these for more than 20 years (Table 36). Nineteen of the mills had been under the same ownership for more than 10 years. Only six mills had been at the same place and in the same ownership for more than 20 years.

The veneer and plywood industry is a relatively new industry east of the Cascade Range. Of the five mills in this area, only one had been established for more than 5 years.

Days of operation during 1968 varied substantially by type of mill (Table 37). Veneer and layup mills operated the most days, 263, and mills producing only veneer, the fewest, 221.

Consumption Mainly Sound Live Old-Growth Logs

Ninety-five per cent of the 844 million board feet of wood consumed by veneer and plywood mills in 1968 was in the form of sound live logs. This varied slightly from area to area, from a low of 93 per cent for the Olympic Peninsula to practically 100 per cent for the Central Washington-Inland Empire combination. The remainder was sound dead (3 per cent) and cull (2 per cent) (Table 38). Total consumption of logs by area is shown in Figure 8.

Old-growth timber accounted for 90 per cent of the wood consumption with relatively little variation between economic areas (Table 39).

Although mills were not surveyed for log receipts, this volume can be estimated on the basis of information provided by mills' beginning and ending inventories for the year and consumption during the year. On this basis, the apparent receipts (Table 40) were 795 million board feet—about 6 per cent less than consumption. Lower Columbia was the only area showing a net inventory gain for the year.

Log Inventory Change

Area	(Per cent)
Puget Sound	-35
Olympic Peninsula	- 5
Lower Columbia	+ 5
Central Washington-Inland Empire ^a	-38
Average	-20

^aCombined to avoid disclosure.

Most Logs from Public Lands

Sixty-two per cent of the logs consumed by Washington's veneer and plywood mills came from public lands (Table 41). However, the proportion varied substantially by area.

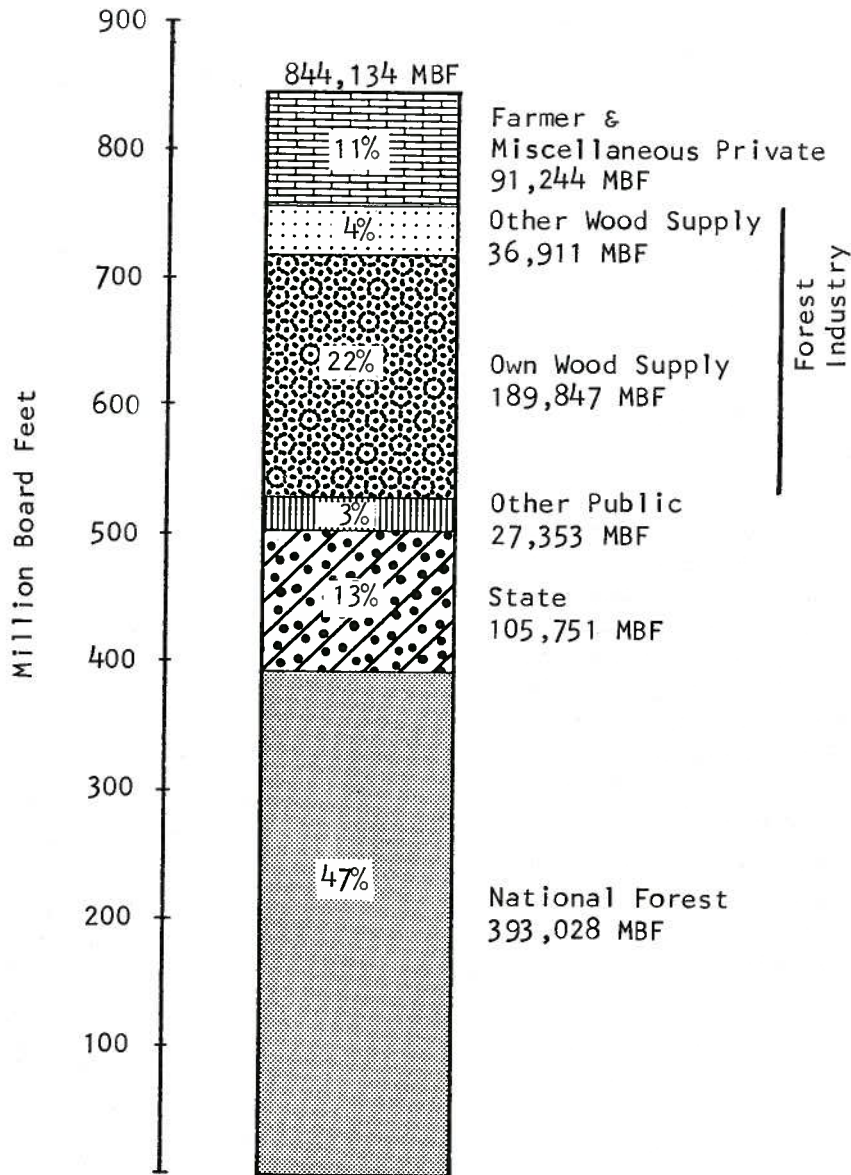
Area	Log Consumption (Per cent)
Puget Sound	67
Olympic Peninsula	77
Lower Columbia	53
Central Washington-Inland Empire ^a	42
Average	62

^aCombined to avoid disclosure.

National Forest ownership was the biggest supplier—47 per cent (Fig. 9). This was particularly true in Lewis and Skamania Counties—80 per cent in each case.

Logs harvested from the Forest Industry's own lands were the principal source of material consumed from private land, amounting to 22 per cent of total consumption in the state. King County led the way with 71 per cent of consumption from company-owned lands. Table 42 classifies mills with respect to the per cent of 1968 consumption which came from each ownership. For example, 14 of the 43 mills in the state depended on public timber for at least two-thirds of their logs; only five mills were equally dependent on private land.

Figure 9.—Veneer and Plywood Log Consumption by Ownership Origin of Logs, 1968.



Two-Thirds of Consumption was Douglas Fir

Douglas fir was by far the leading species for veneer and plywood (Table 43 and Fig. 10).

	Per cent
Douglas Fir	65
Hemlock	17
True Firs	5
Spruce	1
Ponderosa Pine	4
Other Softwoods	7
Hardwoods	1
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Total	100

Among areas, the most significant departures were: greater use of hemlock at the expense of Douglas fir in the Puget Sound Area; a higher percentage of Douglas fir and less hemlock in the Lower Columbia; and more ponderosa pine and miscellaneous species in relation to Douglas fir and hemlock in the Central Washington-Inland Empire combination.

The percentage by species (Table 44) of total consumption that came from cull logs was as follows:

	Per cent
Douglas Fir	2
Hemlock	5
True Firs	6
Ponderosa Pine	1
Miscellaneous Species	^a
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Average	2

^aLess than 0.5.

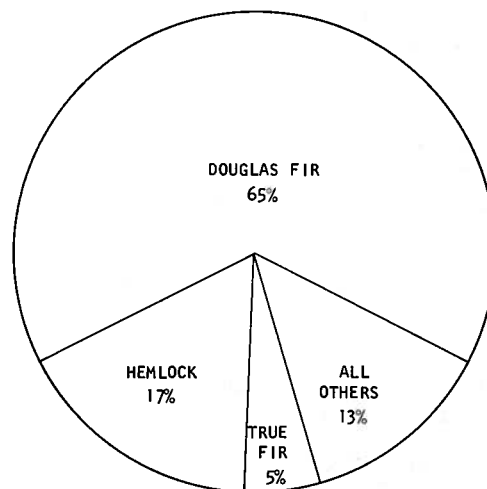


Figure 10.—Veneer and plywood log consumption by species distribution, 1968.

Washington Plywood Production 14 Per Cent of U.S.

In 1968, plywood production in Washington totaled 2.2 billion square feet, $\frac{3}{8}$ -inch basis, obtained from 23 integrated plywood plants and 5 plants that produce plywood only from purchased veneer. The 10 plants that produce veneer only produced 550 million square feet which was slightly less than the plywood industry's veneer purchase requirements (557 million square feet), making necessary some veneer import. The relations are shown by area in the following tabulation:

Area	Total Veneer Purchases by All Veneer and Plywood Plants	Veneer Produced (Veneer-Only Plants)
	----- Thousand square feet, $\frac{3}{8}$ inch -----	
Puget Sound	143,830	8,222
Olympic Peninsula	370,000	343,060
Lower Columbia, Central Washington- Inland Empire ^a	43,417	198,498
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Total	557,247	549,780

^aCombined to avoid disclosure.

Residue Use High

Wood and bark residues resulting from the production of veneer and plywood amounted to the sizeable volume of 1.24 million tons (Table 45). Eighty-four per cent of the log trim, cores, clippings, bark, and other residues went into plant by-products such as pulp material, fuel, and mulch.

Of the total residue volume, 0.96 million tons (77 per cent) were wood and 0.28 million tons (23 per cent) bark. About 90 per cent of the wood residue and 63 per cent of the bark were used.

Residue production by economic area is shown in Fig. 11.

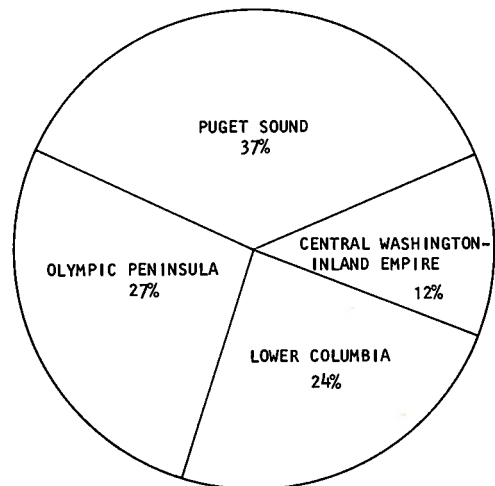


Figure 11.—Veneer and plywood residue production by economic area, 1968.

Ninety Per Cent of Wood Residues Used, Mostly for Pulp and Fuel

In this report, wood residues from the production of veneer and plywood have been classified as coarse (log trim, spur trim, cores, roundup, veneer clippings, panel trim, and reject veneer) and fine (sawdust and sander dust). Ninety-five per cent of all wood residues were coarse; there were practically no area differences (Table 46).

Pulp material and fuel were the prin-

cipal uses of both coarse and fine residues:

	Coarse	Fine	All
	----- Per cent -----		
Pulp	56	..	53
Fuel	28	78	30
Miscellaneous	6	12	7
Unused	10	10	10
Total	100	100	100

Differences occurred among areas in the extent and manner of residue use:

Area	Pulp	Fuel	Misc.	Unused	Total
	----- Per cent -----				
Puget Sound	27	54	3	16	100
Olympic Peninsula	72	18	7	3	100
Lower Columbia	69	22	3	6	100
Central Washington-Inland Empire ^a	62	1	26	11	100
State	53	30	7	10	100

^aCombined to avoid disclosure.

Used Wood Residues More than 1 Ton per MBF of Log Consumption

The 0.86 million tons of used residues resulting from the consumption of 844 million board feet of veneer and plywood logs represented an output of 1.02 tons per thousand board feet. However, yields varied from one part of the state to another.

Area	Tons Per MBF
Puget Sound	1.53
Olympic Peninsula	.89
Lower Columbia	.89
Central Washington-Inland Empire ^a	.80
State	1.02

^aCombined to avoid disclosure.

**Sixty-three Per Cent of Bark Used,
Mostly for Fuel**

Bark is becoming an important residue of logs processed for veneer and plywood

—of the 0.3 million tons of bark residue, 63 per cent was used. Fuel accounted for practically all of the volume used; the remainder went largely to mulch (Table 47). Residue used varied by area:

Area	Total Bark Residue Tons	Fuel - - - - -	Other Per cent	Unused - - - - -
Puget Sound	101,887	73	..	27
Olympic Peninsula	79,417	63	2	35
Lower Columbia	63,224	78	..	22
Central Washington- Inland Empire ^a	38,860	..	10	90
Total	283,388	61	2	37

^aCombined to avoid disclosure.

PULP AND BOARD INDUSTRY

Sulfate and Sulfite Mills Predominated in Number and Capacity

Thirty-five mills were engaged in the production of various types of pulp and board in Washington in 1968. Although in a number of instances two or more of these mills were operated as a plant or establishment at a single location and under a single ownership, they are identified separately here on the basis of the type of pulp or board produced or by the process used. The number of mills in each of five pulp mill and three board mill categories is shown in Table 48. The table also shows Lower Columbia as the leading area with more than one-third of the mills; Cowlitz County alone had more than one-fourth of all pulp and board mills in the state.

Almost three-fourths of the 11,020 tons-per-day capacity of the pulp industry was in sulfate and sulfite mills (Table 49). However, as shown by Figure 12, daily capacity by type of mill varied substantially from one area to another. The figure also indicates Lower Columbia as the leading area in terms of capacity.

Table 50 provides information on the tenure of ownership of pulp and board plants and shows how long the plants have been established. The 26 plants shown here (rather than the 35 shown in the preceding tables) result from certain combinations on the basis of location in a mill complex under a single ownership. None of the plants was less than 6 years old and 17 had been established more than 20 years. Ownership had been quite stable, with 15 mills under the same ownership for at least 21 years.

The pulp mills in the state averaged 352 operating days during 1968, with little area variation (Table 51). Board mills had fewer days of operation.

Roundwood Thirty-one Per Cent of Wood Consumed

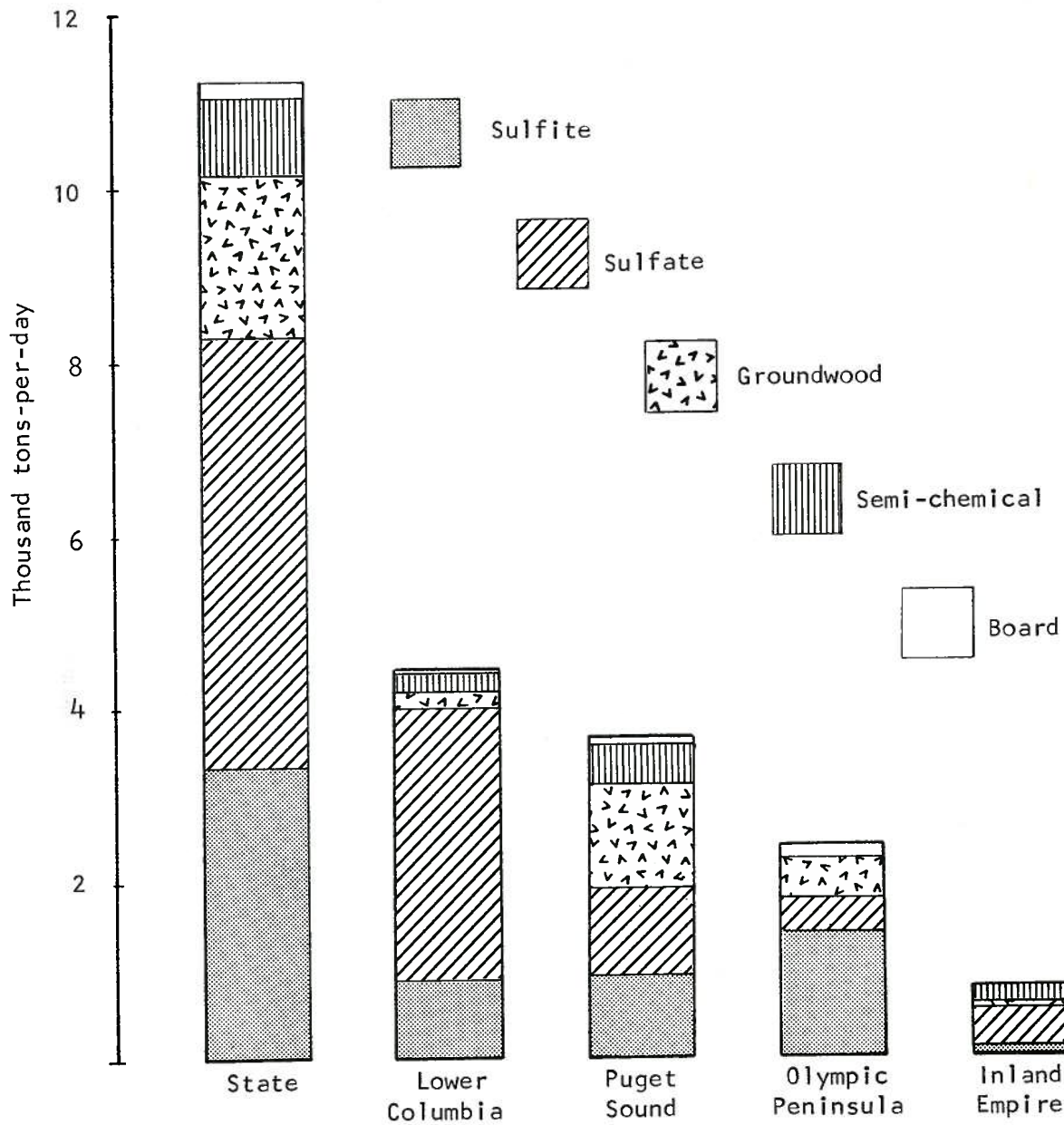
Wood consumed by the pulp and board industry consisted of 1.1 billion board feet of roundwood and 5.0 million tons of other material (Table 52). The latter was in the form of chips and sawdust from residues of other industries (99 per cent), chips produced in the woods, or (1 per cent) produced at roundwood chipping mills not part of any pulp or board mill or complex. The entire wood consumption of the three board mills came from chip residues and amounted to 46,613 tons.

The 1.1 billion board feet of logs, equivalent to about 2.2 million tons of chips, is far less than the 5.0 million tons of chips and sawdust from other sources and amounts to only a little less than one-third of the total wood consumption by the industry. Similar conversions made for each area show considerable variation in the use of roundwood.

Area	Roundwood as a per cent of total wood consumption
Puget Sound	42
Olympic Peninsula	64
Lower Columbia-Inland Empire ^a	9
Total	31

^aCombined to avoid disclosure.

Figure 12.—Daily Pulp and Board Capacity by Type of Mill and Area, 1968.



Area	Total	Sulfite	Sulfate	Ground-wood	Semi-chemical	Board
Puget Sound	3,637	940	980	1,207	460	50
Olympic Peninsula	2,405	1,430	400	445	...	130
Lower Columbia	4,434	903	3,100	190	225	16
Inland Empire	740	80	450	40	170	...
State	11,216	3,353	4,930	1,882	855	196

Total wood consumption varied by economic areas as shown in Figure 13.

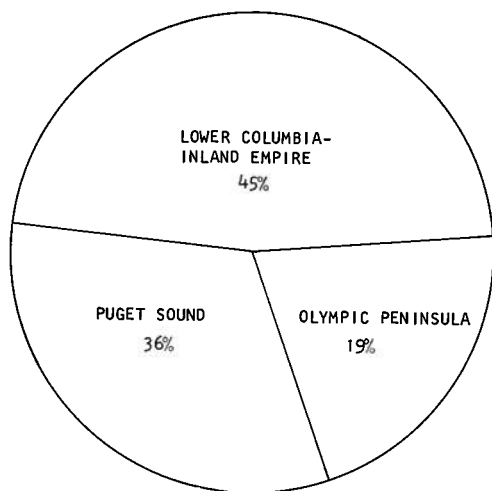


Figure 13.—Pulp and board industry wood consumption by economic area, 1968.

Although most of the roundwood volume consisted of sound live material a substantial volume was from cull (utility grade) logs. Figure 14. In the lower Columbia-Inland Empire Area, cull logs accounted for slightly over one-half of roundwood consumed.

Old-growth timber accounted for 75 per cent of the roundwood consumption (Table 53). However, the percentage

varied substantially within areas, ranging from 29 per cent in the Lower Columbia-Inland Empire Area to 89 per cent in the Olympic Peninsula Area.

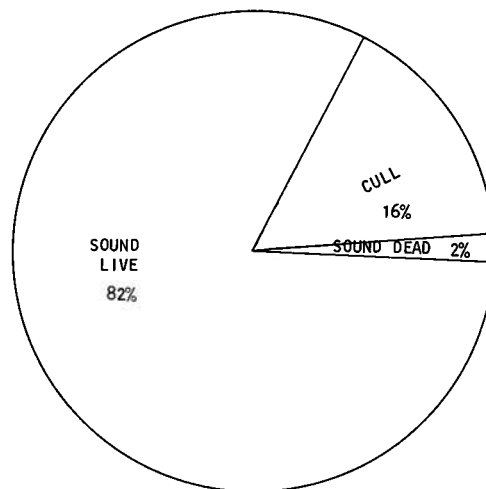


Figure 14.—Pulp and board industry roundwood consumption by type of material, 1968.

Roundwood Comes Mainly from Private Lands

Private timberlands provided 804 million board feet or 72 per cent of the roundwood (Table 54). Harvesting from industry's own lands was the most important single source and averaged 62 per cent for the state as shown below.

Ownership		Per cent
Public	National Forest	12
	State	12
	Other public	4
Private	Forest Industry	62
	Own wood supply	3
	Other wood supply	7
	Farmer and miscellaneous private	
Total		100

The importance of private as opposed to public timberlands is shown in a different way in Table 55. Only two of the 26 plants in the state depended on public ownership for as much as two-thirds of

their logs. Fourteen plants were entirely independent of National Forest timber, and a greater number independent of other public lands.

Hemlock Principal Source of Roundwood

Hemlock, with two-thirds of the roundwood volume, was the leading species consumed by Washington's pulp and board mills (Table 56). Other species were true firs (14 per cent), hardwoods (12 per cent), Douglas fir (4 per cent), spruce (2 per cent), and cedar (1 per cent). Hemlock was also the leading species consumed in all economic areas and ranged from 83 per cent in the Olympic Peninsula to a low of 53 per cent in the Puget Sound Area. In the latter area, hardwoods amounted to 19 per cent.

Sixteen per cent of the hemlock volume came from cull logs; for Douglas fir and true firs, the comparable proportions were 39 and 26 per cent respectively.

Most of Wood Used Originated Within the State

Logs came mainly (89 per cent) from timberlands within the state (Table 3). Other sources were Oregon (8 per cent), Idaho (2 per cent), and British Columbia (1 per cent). Practically all the logs used in the Olympic Peninsula Area came from within the state, as did 95 per cent of the logs in the Puget Sound Area. The Lower Columbia-Inland Empire combination obtained 63 per cent of its needs from out-of-state, principally Oregon.

Imported residues were a much more important source of supply than were logs. Information from this survey indicates that 35 per cent of all residues consumed by mills in the state were imported. The breakdown by type of residues and area of origin is as follows:

	Washington	Oregon	British Columbia	Idaho	All Sources
	<i>Per cent</i>				
Chips	66	22	7	5	100
Sawdust and Shavings	40	46	14	—	100
All Types	65	23	8	4	100

"OTHER" TIMBER INDUSTRIES

The "other" industry group includes the remaining primary wood processing establishments of industrial importance in Washington. The group consists of 158 shake and shingle mills, 26 export operations, and 19 pole, post, and piling plants (Table 57). The "other" timber industries are largely located in Western Washington. Two shake and shingle mills and four pole and piling plants are found in the Inland Empire Area of Eastern Washington.

Only a small number of "other" industries had a substantial investment in plant equipment; only eight chippers and 18 barkers were reported (Table 59). Most

of the barkers were at pole and piling plants and the chippers, at shake and shingle mills. The small percentage of mills having such equipment is hardly surprising in view of the small size of most shake and shingle mills, and the nature of log processing by export as well as pole, post, and piling plants. On the other hand, 124 (three-fifths) of the mills had burners.

Hemlock was the leading single species used by "other" industries. The export industry was the principal user of hemlock (Tables 67 and 68). The following tabulation shows variations that occurred among areas.

Area	Douglas Fir	Hemlock	True Firs <i>Per cent</i>	Other Species ^a	Total
Puget Sound	26	46	12	16	100
Olympic Peninsula Lower Columbia-	11	43	8	38	100
Inland Empire ^b	33	32	7	28	100
Average	19	43	10	28	100

^a*Cedar, spruce, white pine, ponderosa pine, and lodgepole pine.*

^b*Combined to avoid disclosure.*

Ninety-nine per cent of the logs used in 1968 originated within Washington (Table 3) with about one-half of the 19 million board feet of imports coming from Oregon, primarily for the export market.

The Shake and Shingle Industry

The installed 8-hour capacity of this industry was 12,776 squares of shakes and shingles (Table 58). About two-thirds of this installed capacity was in the Olympic Peninsula Area. The number of days worked per year ranged from 183 to 215 with the Olympic Peninsula Area having the highest (Table 61).

Only 15 of the 158 shake and shingle mills had been at their present location for more than 20 years; of these, only five had been under the same ownership

throughout this period (Table 60). However, the ownership of those mills less than 20 years old was relatively stable; most mills have been under the same ownership during their entire existence.

The shake and shingle industry consumed 305 million board feet of western redcedar logs in 1968 (Table 62). Seventy-six per cent of the material was sound live logs; 22 per cent, sound dead; and 2 per cent, cull. Ninety-nine per cent of the volume consumed was from old-growth timber (Table 63).

Log consumption by shake and shingle mills was distributed by areas as shown in Figure 15.

Private lands supplied 55 per cent of the logs to shake and shingle mills although their importance varied by area

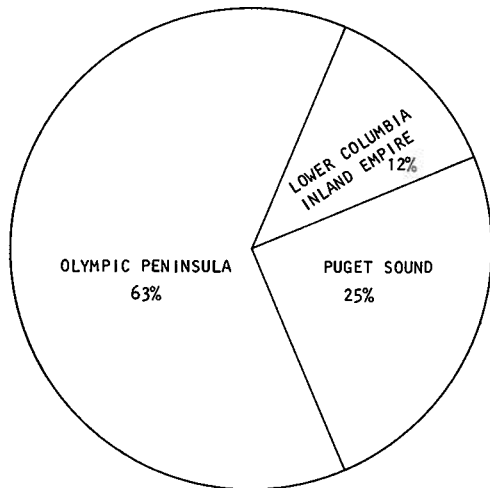


Figure 15.—Shake and shingle mill log consumption by economic area, 1968.

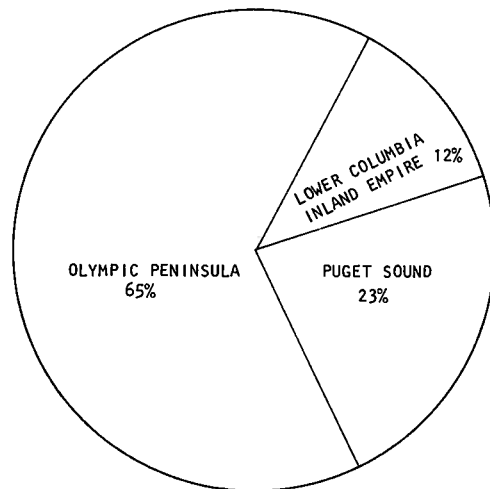


Figure 16.—Shake and shingle mill production by economic area, 1968.

(Tables 64 and 65). Private timber supplied about one-half the needs of the shake and shingle industry in the Puget Sound Area and Olympic Peninsula, but 95 per cent in the Lower Columbia-Inland Empire.

Area	Private ----- Per cent -----	Public	Total
Puget Sound	53	47	100
Olympic Peninsula	48	52	100
Lower Columbia-Inland Empire ^a	95	5	100

^aCombined to avoid disclosure.

The single most important source of private supply was from lands owned by other industries (37 per cent) while lands owned by the shake and shingle industry itself met only 7 per cent of needs (Fig. 17). State lands were of major importance, especially in the Olympic Peninsula Area.

Additional information on the relative importance of land ownership classes is shown in Table 66. Here, for example, it is seen that 95 shake and shingle mills received none of their 1968 supply from National Forest lands. And, as another example, 52 mills met more than two-thirds of their needs from lands owned by other companies.

Figure 16 shows the distribution of the reported production of 3,285,100 squares of shakes and shingles.

Residues from the manufacture of shakes and shingles were the principal source of by-products in the "other" industry group. Since residues from log export and pole, post, and piling operations are not significant, no information on their production or use was obtained.

Residues, such as cutoff, trim of various types, sawdust, and bark from shake and shingle mills, amounted to 0.36 million tons in 1968 (Table 69). Twenty-one per cent of those residues was used for pulp material, fuel, and other purposes. Wood made up 69 per cent of the total residue volume and bark, 31 per cent. Twenty-three per cent of the wood and 17 per cent of the bark was used.

The 0.25 million tons of wood residue were made up of 36 per cent coarse residues and 64 per cent fine (Table 70).

A little more than 90 per cent of used wood residues went to fuel, 7 per cent was chipped for pulp, and the remainder used for mulch and other purposes. None of the fine residues went into pulp.

Utilization was especially high in the Lower Columbia-Inland Empire Area. This is shown by a comparison based on volume of used wood residues per 1,000 board feet of log consumption (Tables 62 and 70).

Area	Residues Used Tons Per MBF
Puget Sound	0.12
Olympic Peninsula	.16
Lower Columbia- Inland Empire ^a	.44
State	0.19

^aCombined to avoid disclosure.

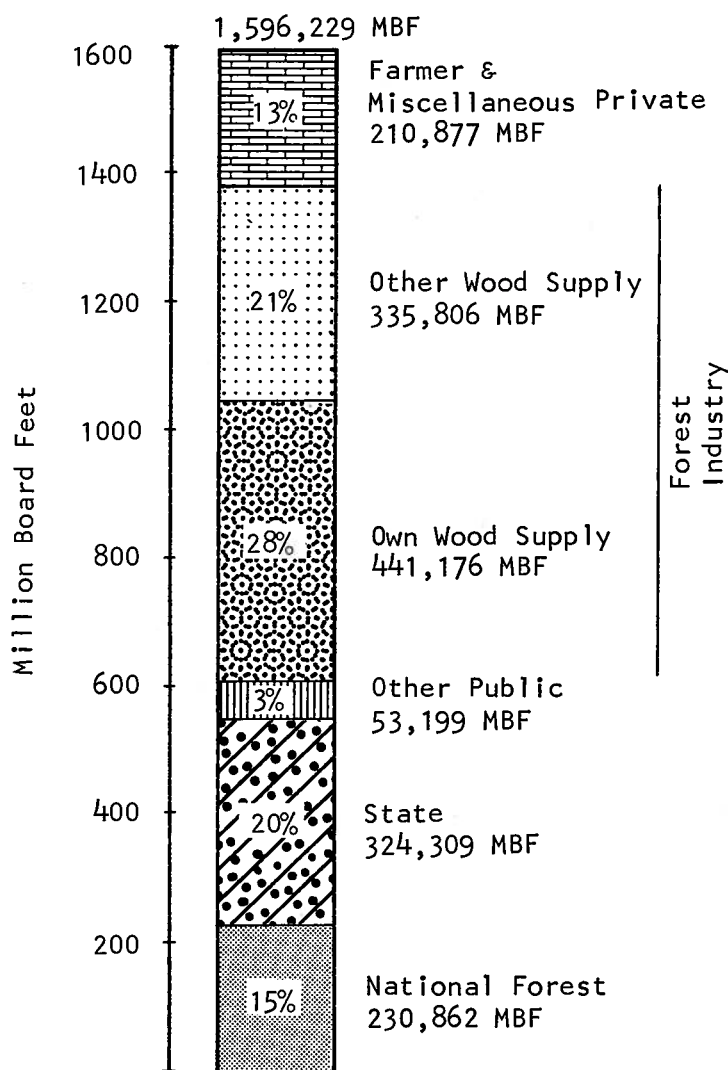
Bark residues (0.11 million tons) came mainly (57 per cent) from the Olympic Peninsula Area (Table 71). Only 75 per cent of the bark residues was used, and of this, 97 per cent went into fuel.

The Export Industry

All of the 26 export facilities were located in Western Washington. Eleven were in the Puget Sound Area, eleven in the Olympic Peninsula, and four in the Lower Columbia (Table 57). They exported 1.2 billion board feet of logs in 1968 with the greatest volume coming from firms located on the Olympic Peninsula (Figure 18).

Although the export industry might be considered new because of recent publicity, two of the 26 operations had been in business and in the same ownership 11

Figure 17.—Log Consumption by "Other" Industry Mills by Ownership Origin of Logs, 1968.



to 20 years, five from 6 to 10 years, and eight for 3 to 5 years (Table 60).

More than three-fifths of all logs exported in 1968 came from private lands (Table 64). Slightly more than one-half of this volume came from exporters' own lands, then in decreasing amounts from

other industries' lands and from other private. Almost 60 per cent of the public timber was from state land; the bulk of the remainder from National Forests. The ownership source of export logs is shown in the following tabulation:

Ownership		Per cent	Per cent
Public	National Forest	41	37
	State	57	
	Other public	2	
		100	
Private	Forest Industry	53	63
	Own wood supply	27	
	Farmer and miscellaneous private	20	
		100	100

The importance of land ownership classes to the export industry is shown in Table 66. Here, for example, it can be seen that three export firms were 67 to 100 per cent dependent on state lands while no firms were this dependent on National Forest lands. Ten firms received no timber from National Forests; seven firms, no timber from state lands; and 20 export firms exported no timber from their own lands in 1968.

Of all the logs exported, almost all were sound; 78 per cent were from old-growth timber and 22 per cent from young growth (Table 63).

The Post, Pole, and Piling Industry

The post, pole, and piling industry is located mainly on the west side of the state. Six plants are in the Puget Sound Area, six in the Olympic Peninsula, three in the Lower Columbia, and four in the Inland Empire (Table 57).

The pole and piling industry has been a stable part of the forest industry for many years (Table 60). Twelve of the 19 plants

have been in the same location and in the same ownership for at least six years, and 6 of these have been at the same location for more than 20 years.

The industry consumed 57 million board feet in 1968 which, although not a large volume, represents a high value crop with most of the wood processed in the Puget Sound Area (Table 64 and Fig. 19).

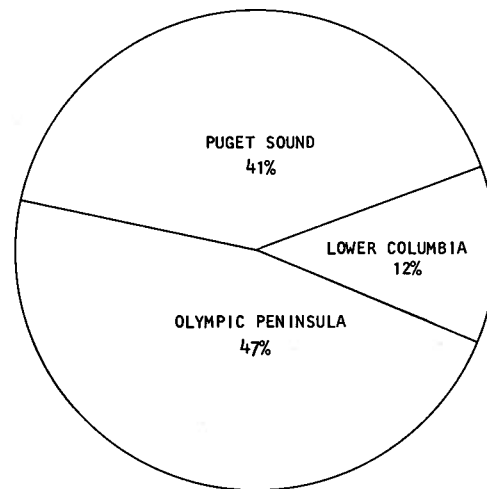


Figure 18.—Log export volume distribution by economic area, 1968.

Most of the wood used by the industry came from private ownership (Table 64). Only 35 per cent came from public ownership, with this volume almost evenly divided between state and National Forest lands. Most of the private timber was from other private lands and other industry lands.

In terms of relative dependency, only a few mills were heavily dependent on any

one source of timber (Table 66). Only three mills were more than two-thirds dependent on public timber, and six mills similarly dependent on private timber.

The post, pole, and piling industry reported a total production of 14,786,000 lineal feet in 1968. This production occurred by areas as follows:

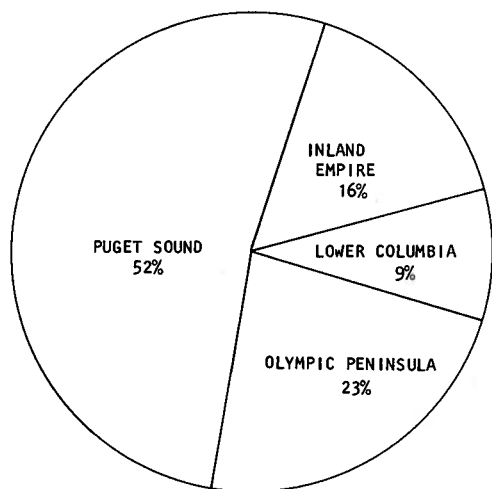


Figure 19.—Post, pole, and piling industry wood consumption by economic area, 1968.

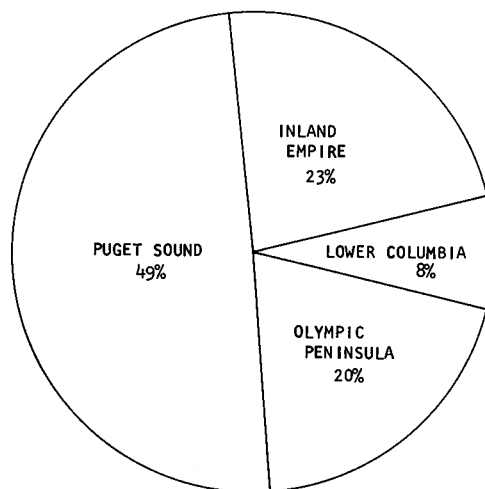
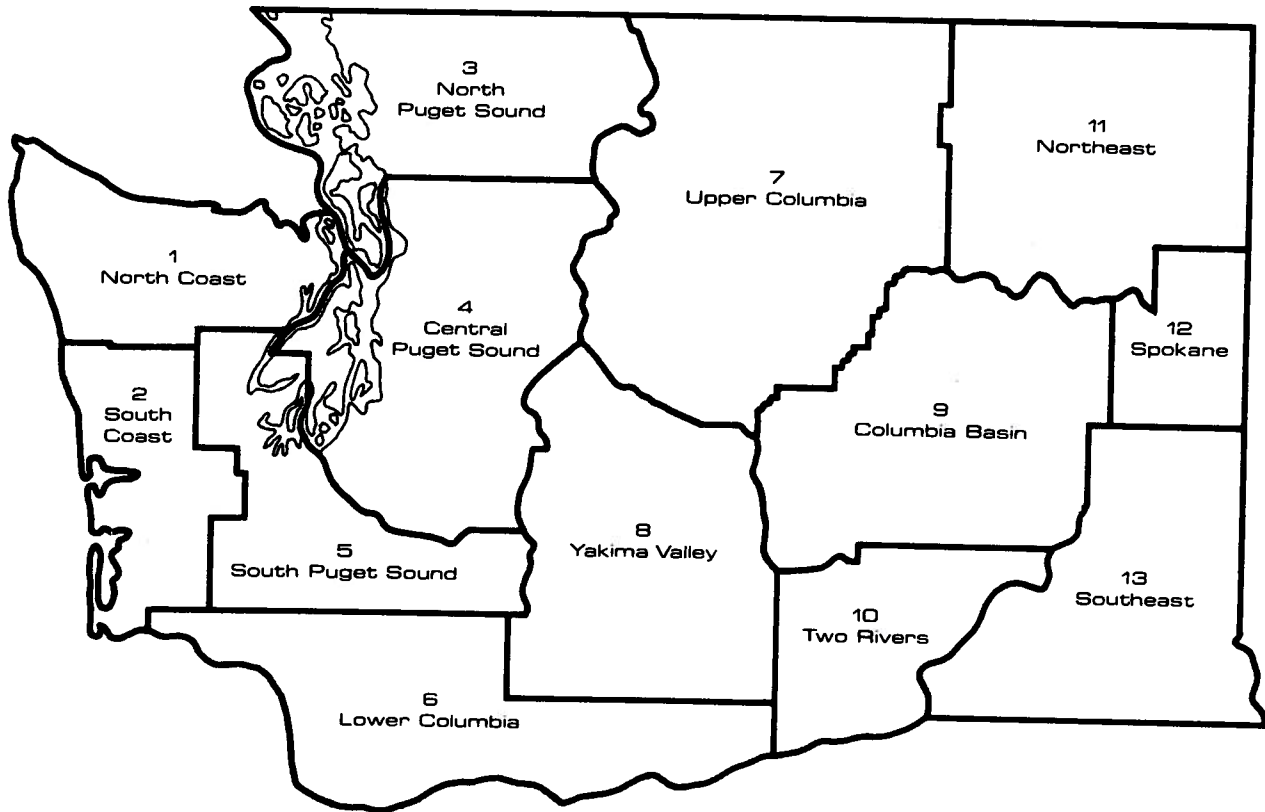


Figure 20.—Post, pole, and piling industry production by economic area, 1968.

APPENDIX

FIGURE 21
THIRTEEN ECONOMIC REGIONS



This map shows the thirteen economic regions defined by the Planning and Commerce departments of State government. The regions represent a management approach to the difficult task of integrated planning and industrial/economic development. As such, they are both a stimulator and a measuring device and, whether considered separately or in total, provide a graphic demonstration of Washington's diversity and aggregate strength. To preserve anonymity, we have combined statistics from these regions into five areas as illustrated in Figure 2, page 4.

Log Scales

Industries in the survey were requested to provide information on the type of scale they used for measuring logs. Results are summarized in Table 72. Some mills used more than one scale, depending on the type of material, which accounts for 563 responses from the 493 mills.

Scribner was the only board-foot scale reported. Variations in scaling standards (Forest Service, Log Scaling and Grading Bureaus, etc.) are not shown as separate entries in the table. It is apparent from the table that the Scribner long-log scale is favored in Western Washington and the short-log scale in Eastern.

The lumber and veneer and plywood mills relied almost entirely on one or the other of the two Scribner scales. Pulp board mills used tons, cords, and cubic measure as well as board-foot scales. Although the "other" industry 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.

All roundwood volumes not given in board feet were subsequently converted to Scribner scale which is used as a common denominator for this report.

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

1 cord=	500 board feet
10.5 squares=	1,000 board feet
1 lineal foot=	3.8 board feet
1 ton=	500 board feet
1 cubic foot=	6 board feet

Mill Residues

Very few mills are able to quantify all the uses of residues. Generally, residue which is sold is measured; the higher the price, the more accurate the measurement. Chips used for pulp or board are commonly measured in terms of bone dry units (2,400 lbs.), 200 cubic foot units, or bone dry tons (2,000 lbs.). However, lower value products such as fuel or agricultural mulches are frequently sold by the truck-load or cubic yard.

In this study, mills were asked to quantify use of residues when possible. Estimates of relative residue distribution were obtained from operators when quantities were unknown. In such instances, residue production ratios per unit of production from studies of sample mills were used. The residue estimates developed through use of these ratios were allocated on the basis of the estimated relative disposition made by the operator.

The residue factors used are as follows:

HARDWOOD SAWMILL RESIDUE¹

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

	200 cu. ft. units	Dry tons
Chips	.97	.82
Bark	.40	.34
Sawdust	.27	.23

¹Based on information furnished by Northwest Hardwoods, Inc.

SOFTWOOD SAWMILL RESIDUE¹

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

Item	Solid Volume*		Western Wash.	Eastern Wash.
	Cubic Feet	Per Cent**	Dry Weight Tons	
Wood Residue				
Slabs, Edgings, Sawmill Trim	40	24.2	.512	.480
Planer trim	3	1.8	.038	.036
Sawdust	22	13.4	.282	.264
Planer shavings	16	9.7	.205	.192
Total Wood Residue	81	49.1	1.037	.972
Bark	19	11.5	.285	.228
Lumber	65	39.4	.832	.780
Whole Log	165	100.0	2.154	1.980

¹Based on data from Oregon mills compiled by Oregon State University, School of Forestry, in 1967. Dry weights adjusted for different species mix utilized in Washington.

*Equivalent undried solid volume.

**Per cent by volume.

SOFTWOOD PLYWOOD RESIDUE¹

Average quantity of residue developed in producing the equivalent of
a thousand square feet of 3/8-inch plywood (rough basis) in 1962.

Plywood Residue	Solid Volume Cubic Feet*	Dry Weight Tons	Proportion of
			Dry Weight Per Cent
Wood Residues:			
Log Trim	3.4	.046	4.4
Cores	3.7	.050	4.7
Veneer Clippings, Roundup and Spur Trim	18.5	.250	23.8
Dry Trim and Layup Loss	6.5	.088	8.4
Sander Dust	1.6	.021	2.0
Total Wood Residue	33.7	.455	43.3
Bark	8.8	.132	12.6
All Residue	42.5	.587	55.9
Plywood	34.3	.463	44.1
Whole Log	76.8	1.050	100.0

¹Based 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.

*Volumes are based on equivalent green volume.

SHINGLE MILL RESIDUE¹

Average quantity of residue developed in utilizing 1,000 board feet of logs, Scribner scale, or in producing the equivalent volume of 10.5 squares.

Shake and Shingle Residue	Solid Volume		Dry Weight per MBM
	<i>Cubic Feet</i>	<i>Per Cent</i>	<i>Tons</i>
Shingles:			
Coarse	23	13.7	.22
Fine	78	46.8	.75
Bark	19	11.5	.28
Shakes:			
Coarse	23	13.7	.22
Fine	24	14.5	.23
Bark	19	11.5	.28
Shingle and Shake:			
Coarse	23	13.7	.22
Fine	51	30.6	.49
Bark	19	11.5	.28

¹*From information provided by the Red Cedar Shingle Bureau.*

Computer Program Used for This Report

SMART is the name of an assembler language program written by Maurice F. Whitney, Office of the State of Washington Superintendent of Public Instruction. This program was used for the storage, retrieval, and processing of information used in this report.

SMART uses control cards which specify title, heading, data arrangement, and computational requirements necessary to produce the desired report. Information from the control cards is stored by SMART which then accesses the file (card, tape, or disk) for data and produces the report.

PACIFIC COAST FOREST INDUSTRY SURVEY 1968
 SAWMILL QUESTIONNAIRE
 (Information on individual plants will be held confidential)

1. MILL IDENTITY
 Plant name _____ Location _____ County _____ State _____
 Corporate owner _____ Person contacted _____ Title _____
 Phone _____ Interviewer _____ Date _____

2. MILL CHARACTERISTICS
 8-hour shift capacity _____ MBM, lumber tally _____
 Approximate operating days a year _____ days
 Length of time mill has been in this location _____ years; in this ownership _____ years

Diameter limit of head rig _____ inches
 Maximum log used _____ inches
 Minimum log used _____ inches
 Equipment burner chipper kiln barker steam generating plants
 Type of head rig circular band high tension band gang chipping saw

3. WOOD CONSUMPTION IN 1968
 Consumption _____
 Type of scale used for items A, B, & C
 a. Sound logs (live trees) _____ MBM (Net Scale)
 b. Sound logs (dead trees) _____ MBM (Net Scale)
 c. Cull logs _____ MBM (Gross Scale)
 d. Peeler cores _____ (Units)
 e. Other (specify) _____ (Units)

4. LOG INVENTORY 12/31/68 1/1/68
 Sound Logs _____ MBM (Net Scale)
 Cull Logs _____ MBM (Net Scale)

5. SPECIES BREAKDOWN OF LOG CONSUMPTION IN 1968

Species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa & Jeffrey Pine	W. White Pine	Redwood	Other Softwoods	Western Hardwoods	Other (Specify)
Percent of sound logs										
Percent of cull logs										

6. ORIGIN OF LOGS CONSUMED IN 1968

State or Country of Origin	Sound Logs	Cull Logs
Washington		
Oregon		
California		
Other (specify)		
	100%	100%

c. Age Group

Old growth (100 yrs. +)	Young growth
Sound Logs _____ %	Sound Logs _____ %
Cull Logs _____ %	Cull Logs _____ %
100%	100%

d. Owner of Origin

State Lands	National Forests	B.L.M.	Open Lands	Other Industry	Other Private
Sound Logs _____ %	Sound Logs _____ %	Sound Logs _____ %	Sound Logs _____ %	Sound Logs _____ %	Sound Logs _____ %
Cull Logs _____ %	Cull Logs _____ %	Cull Logs _____ %	Cull Logs _____ %	Cull Logs _____ %	Cull Logs _____ %
100%	100%	100%	100%	100%	100%

7. 1968 LUMBER PRODUCTION

Production _____ MBM Lumber tally

Green	Kiln-dried	Air-dried	Rough	Surfaced	Remanufactured
_____ %	_____ %	_____ %	_____ %	_____ %	_____ %
100%	100%	100%	100%	100%	100%

8. USE OF PLANT RESIDUES

Where information on residue use is available by units indicate type of units such as 2,400 lbs. 80U, or 200 cu. ft., etc. If information is not available by units estimate remaining distribution. If only part of data is available in units estimate remaining distribution on a percentage distribution basis. (For example, 75,000 units of coarse residue sold for pulp and of remaining coarse residue 70 percent used for fuel and 30 percent burned as waste.)

ITEM	USE OF RESIDUES		
	For Fuel Plant Sold	For Pulp Ind. Board	For Other Purposes Unused Burned Not Burn
Coarse residue:			
Type of units _____			
Percentage distribution remain. vol. _____			
Sawdust:			
Number of units _____			
Type of unit _____			
Percentage distribution remain. vol. _____			
Shavings:			
Number of units _____			
Type of unit _____			
Percentage distribution remain. vol. _____			
Bark:			
Number of units _____			
Type of unit _____			
Percentage distribution remain. vol. _____			

9. QUANTITY OF PLANT RESIDUES SOLD TO PULP AND BOARD INDUSTRY

Plant	Location	No. of units sold	Transported by Truck	Ball	Barge

1. MILL IDENTITY
 Plant name _____ Location _____ County _____ State _____
 Corporate owner _____ Person contacted _____ Title _____
 Phone _____ Interviewer _____ Date _____

2. MILL CHARACTERISTICS
 Type of mill or operation _____
 veneer only layup only veneer and layup
 8-hour shift capacity _____ M sq. ft. 3/8-inch basis, or 1-inch basis
 Approximate operating days a year _____ days
 Length of time mill has been in this location _____ years; in this ownership _____ years
 Lathe diameter limit _____ inches
 Maximum log used _____ inches
 Minimum log used _____ inches
 Equipment: 4-foot lathe 8-foot lathe burner hot press
 cold press slicer veneer chipper core chipper
 Average core size _____ inches

3. WOOD CONSUMPTION IN 1968
 Consumption
 a. Sound logs (live trees) _____ MBM (Net Scale) Type of scale used _____
 b. Sound logs (dead trees) _____ MBM (Net Scale) For items a, b, & c
 Scriber log Short log
 c. Cull logs _____ MBM (Gross Scale) Hunkolt Spaulding
 d. Veneer from other plants _____ M sq. ft., 3/8-inch basis Other (specify) _____

4. LOG INVENTORY 12/31/68 1/1/68
 Sound Logs _____ MBM (Net Scale)
 Cull Logs _____ MBM (Net Scale)

5. SPECIES BREAKDOWN OF LOG CONSUMPTION IN 1968

Species	Douglas	Hemlock	True	Spruce	Ponderosa	W. White	Redwood	Softwoods	Hardwoods	Other (specify)
Percent of sound logs										
Percent of cull logs										

6. ORIGIN OF LOGS CONSUMED IN 1968

a. State or Country of Origin	Washington	Oregon	California	British Columbia	Other (specify)
Sound Logs					
Cull Logs					
Loss					
100%					

7. 1968 VENEER AND PLYWOOD PRODUCTION
 Veneer for sale or transfer _____ M sq. ft., 3/8-inch basis 1-inch basis
 Plywood _____ M sq. ft., 3/8-inch basis 1-inch basis

8. USE OF PLANT RESIDUES
 Where information on residue use is available by units indicate type of units such as 2,400 lbs. 800, or 200 cu. ft., etc. If information is not available by units, estimate percentage distribution. If only partial information is available, estimate remaining distribution on percentage distribution basis. (For example, 25,000 units of fuel and 20 percent burned as waste.)

ITEM	USE OF RESIDUES			
	For Fuel Plant Sold	For Pulp Ind.	For Board Purposes	Unused Burned Not Burned
Log trim, spur trim, round-up veneer clip)				
Cores				
Panel trim reject veneer				
Sander dust				
Bark				

9. QUANTITY OF PLANT RESIDUES SOLD TO PULP AND BOARD INDUSTRY

Plant	Location	No. of units sold	Transported by Truck	Ball	Barge

c. Age Group
 Old growth (100 yrs. +) _____ %
 Young growth _____ %
 100%

d. Owner of Origin
 State Lands _____ %
 National Forests _____ %
 Federal Public _____ %
 Other Public _____ %
 Own Lands _____ %
 Other Industry _____ %
 Other Private _____ %
 100%

Sound Cull Loss
 _____ %
 100%

County of Origin
 _____ %
 100%

PACIFIC COAST FOREST INDUSTRY SURVEY 1968
 PULP AND BOARD INDUSTRY QUESTIONNAIRE

(Information on individual plants will be held confidential)

1. MILL IDENTITY

Plant name _____ Location _____ County _____ State _____
 Corporate owner _____ Person contacted _____ Title _____
 Phone _____ Interviewer _____ Date _____

2. MILL CHARACTERISTICS

24-hour shift capacity _____ tons per day
 Approximate operating days a year _____ days
 Length of time mill has been in this location _____ years; in this ownership _____ years
 Sulfite Groundwood Semichemical Other (specify) _____
 Sulfate Disk refiner _____
 Sulfate Drum refiner _____

3. WOOD CONSUMPTION IN 1968

a. Sound logs (live trees) _____ MBM (Net Scale) _____
 b. Sound logs (dead trees) _____ MBM (Net Scale) _____
 c. Cull logs _____ MBM (Gross Scale) _____
 d. Sound cordwood (live trees) _____ Cords _____
 e. Sound cordwood (dead trees) _____ Cords _____
 f. Chip receipts from plant residues _____ units, 2400 lb. 80U, or specify _____
 g. Chip receipts from roundwood chipping plants _____ units, 2400 lb. 80U, or spec. _____
 h. Sawdust receipts _____ units, 2400 lb. 80U, or specify _____

4. SPECIES BREAKDOWN OF ROUNDWOOD CONSUMPTION

Species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa & Jeffrey Pine	W. White Pine & Sugar Pine	Redwood	Other Softwoods	Western Hardwoods	Other (specify)
Percent of sound logs										
Percent of cull logs										

5. ORIGIN OF WOOD CONSUMED IN 1968

<p>a. <u>State or Country of Origin</u></p> <p>Washington _____ % Oregon _____ % California _____ % British Columbia _____ % Other (specify) _____ % _____ % _____ % 100% 100% 100%</p>	<p>b. <u>Owner of Origin</u></p> <p>State lands _____ % Nat'l Forest _____ % BLM _____ % Other Public _____ % Own Lands _____ % Other Industry _____ % Other Private _____ % _____ % 100% 100%</p>	<p>Sawdust & Planer Shavings _____ % _____ % _____ % _____ % _____ % _____ % _____ % _____ % 100%</p>	<p>c. <u>Country of Origin</u></p> <p>_____ % _____ % _____ % _____ % _____ % _____ % _____ % _____ % 100% 100% 100%</p>	<p>d. <u>Age Group</u></p> <p>Old-growth (100 years +) _____ % Young growth _____ % _____ % _____ % _____ % _____ % _____ % 100% 100%</p>
--	--	---	--	--

Table 1.—Number of mills in the timber industry in Washington by industry and area, 1968

Economic area	All industries	Industry			
		Lumber	Veneer and plywood	Pulp and board ^{1/}	Other ^{2/}
Puget Sound	150	66	11	10	63
Olympic Peninsula	194	57	19	8	110
Lower Columbia	76	31	8	13	24
Central Washington	25	24	1	--	--
Inland Empire	48	34	4	4	6
Total State	493	212	43	35	203

^{1/} Each pulping process at a multiplant location is considered an individual mill.

^{2/} Includes shake and shingle mills, log export plants, and pole and piling mills.

Table 2.—Roundwood and residue consumption by mills in Washington by type of material, area, and industry, 1968

Economic area and industry	Roundwood ^{1/}				Residue ^{2/}
	All roundwood	Sound live	Dead	Cull	
	Thousand board feet, Scribner log rule				- Tons -
Puget Sound					
Lumber	962,080	936,860	10,809	14,411	--
Veneer and plywood	192,152	187,742	2,460	1,950	--
Pulp and board	540,094	447,194	26,900	66,000	1,501,899
Other	609,158	601,772	6,386	1,000	--
Total	<u>2,303,484</u>	<u>2,173,568</u>	<u>46,555</u>	<u>83,361</u>	<u>1,501,899</u>
Olympic Peninsula					
Lumber	623,597	594,432	17,557	11,608	50
Veneer and plywood	272,762	252,527	12,707	7,528	--
Pulp and board	431,836	399,576	--	32,260	462,384
Other	789,606	721,204	61,001	7,401	--
Total	<u>2,117,801</u>	<u>1,967,739</u>	<u>91,265</u>	<u>58,797</u>	<u>462,434</u>
Lower Columbia					
Lumber	676,596	638,809	27,754	10,033	170
Veneer and plywood	251,538	235,728	5,160	10,650	--
Pulp and board ^{3/}	148,033	68,780	2,000	77,253	2,970,675
Other	187,208	181,933	2,275	3,000	--
Total	<u>1,263,375</u>	<u>1,125,250</u>	<u>37,189</u>	<u>100,936</u>	<u>2,970,845</u>
Central Washington					
Lumber	566,852	559,624	5,936	1,292	--
Veneer and plywood ^{4/}	--	--	--	--	--
Pulp and board	--	--	--	--	--
Other	--	--	--	--	--
Total	<u>566,852</u>	<u>559,624</u>	<u>5,936</u>	<u>1,292</u>	<u>--</u>

Table 2.—Roundwood and residue consumption by mills in Washington by type of material, area, and industry, 1968 (continued)

Economic area and industry	Roundwood ^{1/}				Residue ^{2/}
	All roundwood	Sound live	Dead	Cull	
	Thousand board feet, Scribner log rule				- Tons -
Inland Empire					
Lumber	312,361	308,871	3,240	250	1,500
Veneer and plywood ^{4/}	127,682	127,482	100	100	--
Pulp and board ^{3/}	--	--	--	--	--
Other	10,257	9,877	190	190	--
Total	<u>450,300</u>	<u>446,230</u>	<u>3,530</u>	<u>540</u>	<u>1,500</u>
Total, State					
Lumber	3,141,486	3,038,596	65,296	37,594	1,720
Veneer and plywood	844,134	803,479	20,427	20,228	--
Pulp and board	1,119,963	915,550	28,900	175,513	4,934,958
Other	1,596,229	1,514,786	69,852	11,591	--
Total	<u>6,701,812</u>	<u>6,272,411</u>	<u>184,475</u>	<u>244,926</u>	<u>4,936,678</u>

^{1/} Does not include roundwood used in production of 72,731 tons of chips in the woods and at chipping mills not on the site of pulp plants.

^{2/} Includes peeler cores used by sawmills; slabs, edgings, sawdust, veneer clippings, and similar residues from the sawmill and veneer and plywood industries used by pulp and board mills.

^{3/} Inland Empire has been combined with Lower Columbia to avoid disclosure.

^{4/} Consumption of the one mill in Central Washington was combined with Inland Empire to avoid disclosure.

Table 3.—Log flows to mills in Washington by state or country of log origin, area, and industry, 1968
(Thousand board feet, Scribner log rule)

Economic area and industry	Origin				
	All	Washington	Oregon	British Columbia	Other ^{1/}
Puget Sound					
Lumber	962,080	959,454	--	2,626	--
Veneer and plywood	192,152	192,152	--	--	--
Pulp and board	540,094	512,180	--	12,196	15,718
Other	609,158	601,785	1,031	6,326	16
Total	2,303,484	2,265,571	1,031	21,148	15,734
Olympic Peninsula					
Lumber	623,597	623,597	--	--	--
Veneer and plywood	272,762	272,762	--	--	--
Pulp and board	431,836	431,662	--	174	--
Other	789,606	784,009	4,900	697	--
Total	2,117,801	2,112,030	4,900	871	--
Lower Columbia					
Lumber	676,596	634,816	41,780	--	--
Veneer and plywood	251,538	223,239	28,299	--	--
Pulp and board ^{2/}	148,033	55,470	83,763	--	8,800
Other	187,208	183,445	3,763	--	--
Total	1,263,375	1,096,970	157,605	--	8,800
Central Washington					
Lumber	566,852	566,852	--	--	--
Veneer and plywood ^{3/}	--	--	--	--	--
Pulp and board	--	--	--	--	--
Other	--	--	--	--	--
Total	566,852	566,852	--	--	--
Inland Empire					
Lumber	312,361	289,590	8,150	--	14,621
Veneer and plywood ^{3/}	127,682	127,682	--	--	--
Pulp and board ^{2/}	--	--	--	--	--
Other	10,257	8,016	--	--	2,241
Total	450,300	425,288	8,150	--	16,862
Total, State					
Lumber	3,141,486	3,074,309	49,930	2,626	14,621
Veneer and plywood	844,134	815,835	28,299	--	--
Pulp and board	1,119,963	999,312	83,763	12,370	24,518
Other	1,596,229	1,577,255	9,694	7,023	2,257
Total	6,701,812	6,466,711	171,686	22,019	41,396

^{1/} Idaho and Montana.

^{2/} Inland Empire has been combined with Lower Columbia to avoid disclosure.

^{3/} The one plywood plant in Central Washington was added to Inland Empire.

Table 4.—Log flows to mills in Washington area and county of use, 1968
(Thousand board feet)

Economic area and county of use	Total	Economic area and county of origin							
		Puget Sound							
		Island	King	Kitsap	Pierce	San Juan	Skagit	Snohomish	Whatcom
Puget Sound									
Island and San Juan 1/	10,104	9,946	--	--	--	158	--	--	--
King	259,220	--	152,309	--	9,974	--	--	9,086	--
Kitsap	83,219	--	2,816	11,730	221	--	--	482	--
Pierce	638,375	--	284,654	12,375	154,754	--	--	6,994	--
Skagit	187,240	3,496	--	--	--	--	93,356	51,496	26,530
Snohomish	949,355	200	100,483	807	56,982	2,264	154,873	279,031	37,780
Whatcom	175,971	--	--	5,149	--	--	65,188	9,522	80,300
Total	2,303,484	13,642	540,262	30,061	221,931	2,422	313,417	356,611	144,620
Olympic Peninsula									
Clallam	380,911	--	--	--	--	--	7,277	--	--
Grays Harbor	1,032,987	1,001	--	--	--	--	--	--	--
Jefferson	50,739	--	--	--	--	--	--	--	--
Lewis	219,355	--	--	--	6,284	--	--	--	--
Mason	209,063	--	--	200	--	--	--	--	--
Pacific	135,428	--	--	--	--	--	--	--	--
Thurston	89,318	--	--	--	8,278	--	--	--	--
Total	2,117,801	1,001	--	200	14,562	--	7,277	--	--
Lower Columbia									
Clark	266,066	--	--	--	--	--	--	--	--
Cowlitz	718,952	--	--	--	2,936	--	--	--	--
Klickitat	144,825	--	--	--	--	--	--	--	--
Skamania	120,221	--	--	--	--	--	--	--	--
Wahkiakum	4,831	--	--	--	--	--	--	--	--
Total	1,254,895	--	--	--	2,936	--	--	--	--
Central Washington									
Chelan	95,901	--	--	--	--	--	--	--	--
Grant, Kittitas, and Lincoln 1/	145,093	--	--	--	--	--	--	--	--
Okanogan	157,080	--	--	--	--	--	--	--	--
Yakima	221,746	--	--	--	--	--	--	--	--
Total	619,820	--	--	--	--	--	--	--	--
Inland Empire									
Asotin and Walla Walla 1/	48,850	--	--	--	--	--	--	--	--
Ferry	32,177	--	--	--	--	--	--	--	--
Pend Oreille	30,291	--	--	--	--	--	--	--	--
Spokane	76,178	--	--	--	--	--	--	--	--
Stevens	218,316	--	--	--	--	--	--	--	--
Total	405,812	--	--	--	--	--	--	--	--
Total	6,701,812	14,643	540,262	30,261	239,429	2,422	320,694	356,611	144,620

1/ Combined to avoid disclosure.

county and out-of-state origins, and by
 ibner log rule)

Economic area and county of origin											
Olympic Peninsula							Lower Columbia				
Sallam	Grays Harbor	Jefferson	Lewis	Mason	Pacific	Thurston	Clark	Cowlitz	Klickitat	Skamania	Wahkiakum
--	--	--	--	--	--	--	--	--	--	--	--
1,663	2,852	14,611	16,700	--	--	--	--	--	--	5,594	--
0,952	--	11,693	939	19,216	--	--	--	--	8,388	15,578	--
5,658	14,948	--	117,010	4,970	13,527	19,791	--	2,405	--	--	--
7,542	--	4,454	--	--	--	--	--	--	--	--	--
8,550	2,981	3,800	142,112	5,650	--	140,000	--	--	--	--	--
3,090	2,417	--	--	--	--	--	--	--	--	--	--
7,455	23,198	34,558	276,761	29,836	13,527	159,791	--	2,405	8,388	21,172	--
1,807	--	167,325	2,683	1,341	--	--	--	--	--	--	--
2,060	668,874	169,938	404	259	130,277	10,174	--	--	--	--	--
6,200	5,073	39,466	--	--	--	--	--	--	--	--	--
--	2,307	--	177,765	2,533	9,287	5,484	362	7,576	--	7,757	--
450	60,681	450	280	146,722	--	280	--	--	--	--	--
--	7,688	--	5,352	--	122,388	--	--	--	--	--	--
--	3,946	--	6,781	16,190	--	29,926	--	2,787	--	2,014	--
0,517	748,569	377,179	193,265	167,045	261,952	45,864	362	10,363	--	9,771	--
--	--	--	11	--	--	--	30,233	17,282	--	92,268	46,704
1,253	626	391	156,831	--	60,857	--	31,425	344,250	--	32,941	29,167
--	--	--	--	--	--	--	--	--	44,482	32,788	--
--	--	--	--	--	--	--	--	1,207	2,137	100,235	--
--	--	--	--	--	3,459	--	--	--	--	--	1,328
1,253	626	391	156,842	--	64,316	--	61,658	362,739	46,619	258,232	77,199
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	34,543	--	--
--	--	--	--	--	--	--	--	--	34,543	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
09,225	772,393	412,128	626,868	196,881	339,795	205,655	62,020	375,507	89,550	289,175	77,199

Table 4.—Low flows to mills in Washington by county and out-of-state origins, and by area and county of use, 1968 (continued)
(Thousand board feet, Scribner log rule)

Economic area and county of use	Economic area and county of origin												Out-of-State origin
	Central Washington				Inland Empire								
	Chelan	Kittitas	Okanogan	Yakima	Asotin	Columbia	Ferry	Garfield	Pend Oreille	Spokane	Stevens	Walla Walla	
Puget Sound													
Island and San Juan 1/	--	--	--	--	--	--	--	--	--	--	--	--	--
King	--	36,431	--	--	--	--	--	--	--	--	--	--	--
Kitsap	--	--	--	--	--	--	--	--	--	--	--	--	--
Pierce	--	1,289	--	--	--	--	--	--	--	--	--	--	1,204
Skagit	--	--	--	--	--	--	--	--	--	--	--	--	366
Snohomish	--	1,009	--	--	--	--	--	--	--	--	--	--	12,829
Whatcom	--	--	--	--	--	--	--	--	--	--	--	--	10,299
Total	--	38,729	--	--	--	--	--	--	--	--	--	--	24,698
Olympic Peninsula													
Clallam	--	--	--	--	--	--	--	--	--	--	--	--	478
Grays Harbor	--	--	--	--	--	--	--	--	--	--	--	--	--
Jefferson	--	--	--	--	--	--	--	--	--	--	--	--	--
Lewis	--	--	--	--	--	--	--	--	--	--	--	--	--
Mason	--	--	--	--	--	--	--	--	--	--	--	--	--
Pacific	--	--	--	--	--	--	--	--	--	--	--	--	--
Thurston	45	14,885	--	4,466	--	--	--	--	--	--	--	--	--
Total	45	14,885	--	4,466	--	--	--	--	--	--	--	--	478
Lower Columbia													
Clark	--	--	--	--	--	--	--	--	--	--	--	--	79,568
Cowlitz	--	--	--	--	--	--	--	--	--	--	--	--	58,275
Klickitat	--	--	--	67,555	--	--	--	--	--	--	--	--	--
Skamania	--	--	--	4,118	--	--	--	--	--	--	--	--	12,524
Wahkiakum	--	--	--	--	--	--	--	--	--	--	--	--	44
Total	--	--	--	71,673	--	--	--	--	--	--	--	--	150,411
Central Washington													
Chelan	87,838	--	8,063	--	--	--	--	--	--	--	--	--	--
Grant, Kittitas, and Lincoln 1/	--	32,261	35,422	--	--	--	70,798	--	--	--	6,612	--	--
Okanogan	--	--	156,675	--	--	--	405	--	--	--	--	--	--
Yakima	--	46,774	--	140,429	--	--	--	--	--	--	--	--	--
Total	87,838	79,035	200,160	140,429	--	--	71,203	--	--	--	6,612	--	--
Inland Empire													
Asotin and Walla Walla 1/	--	--	--	--	2,593	17,203	--	3,007	--	--	--	14,403	11,644
Ferry	--	--	4,445	--	--	--	25,642	--	--	--	2,090	--	--
Pend Oreille	--	--	--	--	--	--	--	26,718	1,235	--	1,435	--	903
Spokane	--	--	--	--	--	--	14,997	--	11,095	9,131	20,161	--	20,794
Stevens	--	--	--	--	--	--	65,406	--	24,305	411	128,080	--	114
Total	--	--	4,445	--	2,593	17,203	106,045	3,007	62,118	10,777	151,766	14,403	33,455
Total	87,883	132,649	204,605	216,568	2,593	17,203	177,248	3,007	62,118	10,777	158,378	14,403	209,042

1/ Combined to avoid disclosure.

Table 5.—Relative dependency of Washington mills for logs by ownership origin of logs, area, and industry, 1968
(Number of mills)

Economic area and industry	National Forest			State			Bureau of Land Management			Other public			Forest industry			Farmer & miscellaneous private												
	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												
	Dependency, per cent			Dependency, per cent			Dependency, per cent			Dependency, per cent			Dependency, per cent			Dependency, per cent												
Puget Sound	46	7	6	7	41	20	5	---	65	1	---	56	9	1	---	49	8	2	7	42	15	5	4	14	14	8	30	
Lumber	3	2	2	4	4	7	---	11	---	---	10	1	---	7	3	---	5	5	1	---	5	5	1	---	5	3	2	1
Veneer and plywood	3	4	---	---	2	5	---	7	---	---	5	2	---	3	3	1	4	3	---	4	3	---	---	2	3	1	1	
Pulp and board	16	20	11	16	32	25	4	2	62	1	---	59	3	---	1	57	3	1	2	17	19	12	15	39	16	5	3	
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	68	33	19	27	79	57	9	2	145	2	---	130	15	1	1	113	17	6	11	68	42	18	19	60	36	16	35	
Olympic Peninsula	41	6	6	4	27	21	8	1	57	---	---	53	2	1	1	46	6	1	4	43	5	7	2	16	10	6	25	
Lumber	6	3	6	4	6	9	2	2	19	---	---	17	2	---	---	15	4	---	---	15	2	1	1	10	8	1	---	
Veneer and plywood	1	5	---	---	1	3	2	---	6	---	---	5	1	---	---	1	1	3	1	2	4	---	---	2	4	---	---	
Pulp and board	83	16	6	5	61	18	14	17	108	2	---	77	11	8	14	107	1	---	2	60	9	7	34	76	17	6	11	
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	131	30	18	13	95	51	26	20	190	2	---	152	16	9	15	169	12	4	7	120	20	15	37	104	39	13	36	
Lower Columbia	17	6	3	5	20	8	3	---	31	---	---	30	1	---	---	20	5	4	2	17	8	3	3	8	8	5	10	
Lumber	1	2	2	3	4	2	2	---	7	1	---	8	---	---	---	5	1	1	1	6	2	---	---	4	4	---	---	
Veneer and plywood	1	---	1	2	3	1	---	---	4	---	---	4	---	---	---	3	---	1	---	3	---	---	---	1	4	---	---	
Pulp and board	13	2	4	5	14	7	2	1	24	---	---	23	1	---	---	20	2	---	2	9	4	2	9	15	7	2	---	
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	32	10	10	15	41	18	7	1	66	1	---	65	2	---	---	48	8	6	5	35	14	5	13	31	19	7	10	
Central Washington	5	5	3	11	15	6	1	2	22	1	1	20	1	1	2	14	9	1	---	23	---	---	1	10	10	2	2	
Lumber	---	1	---	---	---	1	---	---	1	---	---	1	---	---	---	---	1	---	---	1	---	---	---	---	---	---	1	---
Veneer and plywood	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pulp and board	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	5	6	3	11	15	7	1	2	23	1	1	21	1	1	2	14	10	1	---	24	---	---	1	10	10	3	2	
Inland Empire	12	8	4	10	20	13	1	---	30	4	---	27	6	1	---	24	8	2	---	32	---	---	2	3	14	3	14	
Lumber	2	1	1	1	2	2	---	---	3	1	---	3	---	---	---	2	2	---	---	4	---	---	---	1	2	---	1	
Veneer and plywood	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pulp and board	2	1	2	1	1	3	2	---	6	---	---	3	3	---	---	5	1	---	---	6	---	---	---	3	1	---	2	
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	16	10	7	11	23	18	3	---	39	5	---	33	9	1	1	31	11	2	---	42	---	---	2	7	17	3	17	
Total, State	121	32	22	37	123	68	18	3	205	6	1	186	19	4	3	153	36	10	13	157	28	15	12	51	56	24	81	
Lumber	12	9	11	11	16	21	4	2	41	2	---	39	3	---	1	29	11	1	2	31	9	2	1	20	17	4	2	
Veneer and plywood	5	9	1	2	6	9	2	---	17	---	---	14	3	---	---	4	4	7	2	9	7	---	1	8	7	1	1	
Pulp and board	114	39	23	27	108	53	22	20	200	3	---	162	18	8	15	189	7	1	6	92	32	21	58	133	41	13	16	
Other	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total	252	89	57	77	253	151	46	25	463	11	1	401	43	12	19	375	58	19	23	289	76	38	72	212	121	42	100	

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

Table 6.—Log consumption by mills in Washington by species, area, and industry, 1968
(Thousand board feet, Scribner log rule)

Economic area and industry	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}	Hardwoods
Puget Sound									
Lumber	962,080	529,141	278,918	16,109	300	--	2,834	95,897	38,881
Veneer and plywood	192,152	96,713	69,859	12,630	240	--	810	8,253	3,647
Pulp and board	540,094	23,650	285,359	109,828	7,847	--	--	11,760	101,650
Other	609,158	154,797	280,599	73,901	1,470	--	710	97,681	--
Total	2,303,484	804,301	914,735	212,468	9,857	--	4,354	213,591	144,178
Olympic Peninsula									
Lumber	623,597	232,080	238,830	38,032	6,887	--	7	80,127	27,634
Veneer and plywood	272,762	160,716	58,454	17,406	1,090	--	2,750	31,502	844
Pulp and board	431,836	16,703	358,323	27,898	7,879	--	--	348	20,685
Other	789,606	86,687	338,851	65,314	41,486	--	2,018	255,250	--
Total	2,117,801	496,186	994,458	148,650	57,342	--	4,775	367,227	49,163
Lower Columbia									
Lumber	676,596	402,322	98,349	67,937	3,763	59,320	4,549	29,337	11,019
Veneer and plywood	251,538	224,514	17,140	1,000	300	5,250	--	3,334	--
Pulp and board ^{2/}	148,033	8,000	107,305	14,834	6,057	--	--	--	11,837
Other	187,208	64,250	64,082	13,003	735	831	507	43,800	--
Total	1,263,375	699,086	286,876	96,774	10,855	65,401	5,056	76,471	22,856
Central Washington									
Lumber	566,852	193,193	10,010	25,084	3,361	293,734	2,203	39,267	--
Veneer and plywood ^{3/}	--	--	--	--	--	--	--	--	--
Pulp and board	--	--	--	--	--	--	--	--	--
Other	--	--	--	--	--	--	--	--	--
Total	566,852	193,193	10,010	25,084	3,361	293,734	2,203	39,267	--
Inland Empire									
Lumber	312,361	148,821	7,241	52,426	11,021	60,663	7,034	17,435	7,720
Veneer and plywood ^{3/}	127,682	65,547	2,040	8,913	6,702	26,347	--	18,133	--
Pulp and board ^{2/}	--	--	--	--	--	--	--	--	--
Other	10,257	--	--	--	--	--	--	10,257	--
Total	450,300	214,368	9,281	61,339	17,723	87,010	7,034	45,825	7,720
Total, State									
Lumber	3,141,486	1,505,557	633,348	199,588	25,332	413,717	16,627	262,063	85,254
Veneer and plywood	844,134	547,490	147,493	39,949	8,332	31,597	3,560	61,222	4,491
Pulp and board	1,119,963	48,353	750,987	152,560	21,783	--	--	12,108	134,172
Other	1,596,229	305,734	683,532	152,218	43,691	831	3,235	406,988	--
Total	6,701,812	2,407,134	2,215,360	544,315	99,138	446,145	23,422	742,381	223,917

^{1/} Mostly western redcedar, western larch, and lodgepole pine.

^{2/} Inland Empire has been combined with Lower Columbia to avoid disclosure.

^{3/} The one plywood plant in Central Washington was included in Inland Empire.

Table 7.—Production and disposition of wood and bark residues by mills in Washington by use, area, and residue-producing industry, 1968 (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	Board	Fuel	Misc.					
Puget Sound												
Lumber	1,532,131	1,210,920	1,144,237	582,937	--	495,007	66,293	66,683	321,211	296,221	24,990	
Veneer and plywood	453,168	351,281	294,151	95,761	--	188,490	9,900	57,130	101,887	74,845	27,042	
Other ^{2/}	107,624	74,827	9,350	828	--	8,390	132	65,477	32,797	3,212	29,585	
Total	2,092,923	1,637,028	1,447,738	679,526	--	691,887	76,325	189,290	455,895	374,278	81,617	
Olympic Peninsula												
Lumber	942,202	761,578	676,804	402,878	19,343	227,236	27,347	84,774	180,624	123,041	57,583	
Veneer and plywood	329,916	250,499	242,671	179,917	95	44,454	18,205	7,828	79,417	51,544	27,873	
Other ^{2/}	210,853	146,402	31,422	3,182	--	27,744	496	114,980	64,451	7,125	57,326	
Total	1,482,971	1,158,479	950,897	585,977	19,438	299,434	46,048	207,582	324,492	181,710	142,782	
Lower Columbia												
Lumber	982,257	765,354	733,372	470,221	--	250,080	13,071	31,982	216,903	181,761	35,142	
Veneer and plywood	302,718	239,494	224,714	164,418	--	52,781	7,515	14,780	63,224	49,514	13,710	
Other ^{2/}	45,678	29,452	16,314	--	--	15,780	534	13,138	16,226	9,060	7,166	
Total	1,330,653	1,034,300	974,400	634,639	--	318,641	21,120	59,900	296,353	240,335	56,018	
Central Washington												
Lumber	648,097	511,676	441,052	256,494	21,889	140,433	22,236	70,624	136,421	91,687	44,734	
Veneer and plywood	--	--	--	--	--	--	--	--	--	--	--	
Other	--	--	--	--	--	--	--	--	--	--	--	
Total	648,097	511,676	441,052	256,494	21,889	140,433	22,236	70,624	136,421	91,687	44,734	
Inland Empire												
Lumber	410,866	336,928	194,199	93,190	--	59,751	41,258	142,729	73,938	4,727	69,211	
Veneer and plywood	154,920	116,060	102,550	71,800	--	750	30,000	13,510	38,860	4,000	34,860	
Other	--	--	--	--	--	--	--	--	--	--	--	
Total	565,786	452,988	296,749	164,990	--	60,501	71,258	156,239	112,798	8,727	104,071	
Total, State												
Lumber	4,515,553	3,586,456	3,189,664	1,805,720	41,232	1,172,507	170,205	396,792	929,097	697,437	231,660	
Veneer and plywood	1,240,722	957,334	864,086	511,896	95	286,475	65,620	93,248	283,388	179,903	103,485	
Other ^{2/}	364,155	250,681	57,086	4,010	--	51,914	1,162	193,595	113,474	19,397	94,077	
Total	6,120,430	4,794,471	4,110,836	2,321,626	41,327	1,510,896	236,987	683,635	1,325,959	896,737	429,222	

^{1/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{2/} Includes shake and shingle mills only.

Table 8.—Number of sawmills in Washington by mill-size-class, area, and county, 1968

Economic area and county	All classes	Mill-size-class ^{1/}			
		D	C	B	A
Puget Sound					
Island	3	3	--	--	--
King	13	8	1	3	1
Kitsap	7	6	--	--	1
Pierce	18	11	2	2	3
San Juan	1	1	--	--	--
Skagit	2	1	1	--	--
Snohomish	20	11	5	2	2
Whatcom	2	1	1	--	--
Total	66	42	10	7	7
Olympic Peninsula					
Clallam	8	7	--	--	1
Grays Harbor	6	2	1	1	2
Jefferson	6	6	--	--	--
Mason	5	3	--	--	2
Thurston	9	8	--	--	1
Lewis	21	12	6	1	2
Pacific	2	--	--	--	2
Total	57	38	7	2	10
Lower Columbia					
Clark	11	8	2	--	1
Cowlitz	10	6	1	1	2
Skamania	3	1	--	1	1
Wahkiakum	1	1	--	--	--
Klickitat	6	2	3	1	--
Total	31	18	6	3	4
Central Washington					
Chelan	4	--	3	1	--
Grant	1	--	--	1	--
Kittitas	3	2	1	--	--
Okanogan	12	7	2	2	1
Yakima	3	--	1	1	1
Lincoln	1	--	--	--	1
Total	24	9	7	5	3

Table 8.—Number of sawmills in Washington by mill-size-class, area, and county, 1968
(continued)

Economic area and county	All classes	Mill-size-class ^{1/}			
		D	C	B	A
Inland Empire					
Asotin	1	--	1	--	--
Ferry	6	4	2	--	--
Pend Orielle	4	2	2	--	--
Spokane	5	3	2	--	--
Stevens	15	10	4	1	--
Walla Walla	3	1	1	1	--
Total	34	20	12	2	--
Total, State	212	127	42	19	24

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

Table 9.—Installed 8-hour capacity of sawmills in Washington by mill-size-class, area, and county, 1968
(Million board feet, Scribner log rule)

Economic area and county	Total capacity	Mill-size-class ^{1/}			
		D	C	B	A
Puget Sound					
Island	47	47	--	--	--
King	642	112	40	290	200
Kitsap	274	54	--	--	220
Pierce	893	93	95	200	505
San Juan	2	2	--	--	--
Skagit	103	28	75	--	--
Snohomish	1,331	138	293	190	710
Whatcom	81	16	65	--	--
Total	3,373	490	568	680	1,635
Olympic Peninsula					
Clallam	211	61	--	--	150
Grays Harbor	435	30	60	80	265
Jefferson	66	66	--	--	--
Mason	384	53	--	--	331
Thurston	272	122	--	--	150
Lewis	779	104	310	100	265
Pacific	370	--	--	--	370
Total	2,517	436	370	180	1,531
Lower Columbia					
Clark	314	64	90	--	160
Cowlitz	1,144	119	65	100	860
Skamania	240	10	--	90	140
Wahkiakum	4	4	--	--	--
Klickitat	303	20	183	100	--
Total	2,005	217	338	290	1,160

Table 9.—Installed 8-hour capacity of sawmills in Washington by mill-size-class, area, and county, 1968 (continued)
(Million board feet, Scribner log rule)

Economic area and county	Total capacity	Mill-size-class ^{1/}			
		D	C	B	A
Central Washington					
Chelan	270	--	190	80	--
Grant	85	--	--	85	--
Kittitas	93	18	75	--	--
Okanogan	551	139	102	185	125
Yakima	365	--	60	80	225
Lincoln	150	--	--	--	150
Total	1,514	157	427	430	500
Inland Empire					
Asotin	63	--	63	--	--
Ferry	126	36	90	--	--
Pend Orielle	145	50	95	--	--
Spokane	201	56	145	--	--
Stevens	527	236	201	90	--
Walla Walla	140	20	40	80	--
Total	1,202	398	634	170	--
Total, State	10,611	1,698	2,337	1,750	4,826

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

Table 10.—Number of sawmills in Washington by mill-size-class, area, and selected equipment, 1968

Economic area and selected equipment	All classes	Mill-size-class ^{1/}			
		D	C	B	A
Puget Sound					
Barker	33	12	8	6	7
Chipper	32	9	9	7	7
Planer	51	28	10	6	7
Burner	9	6	2	1	--
Kiln	29	10	7	6	6
Olympic Peninsula					
Barker	23	6	5	2	10
Chipper	25	6	7	2	10
Planer	36	18	7	2	9
Burner	15	4	4	2	5
Kiln	17	8	5	--	4
Lower Columbia					
Barker	15	3	5	3	4
Chipper	16	3	6	3	4
Planer	24	11	6	3	4
Burner	7	1	2	3	1
Kiln	12	2	4	2	4
Central Washington					
Barker	14	1	6	4	3
Chipper	13	--	6	4	3
Planer	19	6	6	4	3
Burner	12	4	5	2	1
Kiln	14	2	5	4	3
Inland Empire					
Barker	20	6	12	2	--
Chipper	18	5	11	2	--
Planer	22	11	9	2	--
Burner	26	14	10	2	--
Kiln	11	2	7	2	--
Total, State					
Barker	105	28	36	17	24
Chipper	104	23	39	18	24
Planer	152	74	38	17	23
Burner	69	29	23	10	7
Kiln	83	24	28	14	17

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

Table 11.—Number of sawmills in Washington by selected equipment, area, and county, 1968

Economic area and county	Barker	Chipper	Planer	Burner	Kiln
Puget Sound					
Island	1	1	2	1	2
King	7	8	11	4	7
Kitsap	2	1	3	2	2
Pierce	8	8	13	--	5
San Juan	1	--	1	--	--
Skagit	2	1	2	--	2
Snohomish	10	11	17	1	9
Whatcom	2	2	2	1	2
Total	33	32	51	9	29
Olympic Peninsula					
Clallam	1	1	7	2	2
Grays Harbor	5	6	4	3	2
Jefferson	1	1	4	1	1
Mason	3	3	3	1	3
Thurston	1	1	3	1	1
Lewis	10	11	13	6	7
Pacific	2	2	2	1	1
Total	23	25	36	15	17
Lower Columbia					
Clark	3	4	7	--	2
Cowlitz	6	6	8	1	4
Skamania	2	2	2	2	2
Wahkiakum	--	--	1	--	--
Klickitat	4	4	6	4	4
Total	15	16	24	7	12

Table 11.—Number of sawmills in Washington by selected equipment, area, and county, 1968 (continued)

Economic area and county	Barker	Chipper	Planer	Burner	Kiln
Central Washington					
Chelan	3	3	4	2	4
Grant	1	1	--	--	--
Kittitas	1	1	2	2	--
Okanogan	5	4	9	5	6
Yakima	3	3	3	2	3
Lincoln	1	1	1	1	1
Total	14	13	19	12	14
Inland Empire					
Asotin	1	1	1	1	1
Ferry	2	1	3	4	2
Pend Oreille	2	2	1	4	1
Spokane	4	4	4	2	2
Stevens	9	8	10	13	4
Walla Walla	2	2	3	2	1
Total	20	18	22	26	11
Total, State	105	104	152	69	83

Table 12.—Number of sawmills in Washington by type and size of headrig,¹ area, and mill-size-class, 1968

Economic area and mill-size-class ^{2/}	Circular saw			Band saw				Gang saw			Chipping saw			Scrag double cut saw			
	2 ft.	4 ft.	6 ft.	8 ft.	10+ ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.	2 ft.	3 ft.	4 ft.
Puget Sound																	
D	4	20	8	3		4	3										
C	--	2	--	--		2	5										
B	--	--	--	--		2	3										
A	--	--	--	--		2	1	1									
Total	4	22	8	3	6	12	4	2									
Olympic Peninsula																	
D	3	15	9	1		4	1										
C	--	2	1	--		2	2										
B	--	1	--	--		--	1										
A	--	1	--	--		5	1										
Total	3	19	10	1	7	8	1	1									
Lower Columbia																	
D	4	9	3	1		1	--										
C	--	1	2	--		3	--										
B	--	--	--	--		3	--										
A	--	--	--	--		2	1										
Total	4	10	5	1	1	8	1										
Central Washington																	
D	--	4	3	--		--	1										
C	--	--	1	--		1	5										
B	--	1	--	--		4	--										
A	--	--	--	--		3	--										
Total	--	5	4	--	1	13	--										
Inland Empire																	
D	--	12	4	--		3	1										
C	--	3	1	--		3	3	2									
B	--	1	--	--		1	--										
A	--	--	--	--		--	--										
Total	--	16	5	--	7	4	2										
Total, State	11	60	27	5	12	6	--	--									
D	--	8	5	--	8	18	2	1									
C	--	3	--	--	1	9	3	1									
B	--	1	--	--	1	12	3	1									
A	--	--	--	--	1	--	--	--									
Total	11	72	32	5	22	45	8	3									

^{1/} Sizes of headrigs are upper limits. Thus the 6-foot size class includes saws 49 through 72 inches.

^{2/} Mill-size-classes identified as follows: Class A mills = 120,000+ board foot capacity per 8-hour shift, B = 80,000-119,000, C = 40,000-79,000, D = less than 40,000.

Table 13.—Number of sawmills in Washington by years of tenure of present ownership, years of site occupancy, and mill-size-class, 1968

Present mill-size-class ^{1/}	Site occupancy (years)	All mills	Tenure of present ownership (years)				
			0-2	3-5	6-10	11-20	21+
D	0- 2	12	12	--	--	--	--
	3- 5	13	2	11	--	--	--
	6-10	15	2	1	12	--	--
	11-20	55	1	2	6	46	--
	21+	32	3	1	1	5	22
	Total		127	20	15	19	51	22
C	0- 2	1	1	--	--	--	--
	3- 5	1	--	1	--	--	--
	6-10	3	--	1	2	--	--
	11-20	16	1	--	3	12	--
	21+	21	1	3	1	5	11
	Total		42	3	5	6	17	11
B	0- 2	--	--	--	--	--	--
	3- 5	2	--	2	--	--	--
	6-10	2	--	1	1	--	--
	11-20	4	1	--	--	3	--
	21+	11	--	1	1	--	9
	Total		19	1	4	2	3	9
A	0- 2	1	1	--	--	--	--
	3- 5	1	--	1	--	--	--
	6-10	3	--	--	3	--	--
	11-20	4	--	--	--	4	--
	21+	15	--	1	2	2	10
	Total		24	1	2	5	6	10
Total, State	0- 2	14	14	--	--	--	--
	3- 5	17	2	15	--	--	--
	6-10	23	2	3	18	--	--
	11-20	79	3	2	9	65	--
	21+	79	4	6	5	12	52
	Total		212	25	26	32	77	52

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

Table 14.—Average number of operating days of sawmills in Washington by area and mill-size-class, 1968

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	186	D	159
C	228	C	245
B	239	B	232
A	248	A	247
Average	205	Average	210
Olympic Peninsula		Inland Empire	
D	193	D	180
C	197	C	238
B	243	B	238
A	243	A	--
Average	204	Average	204
Lower Columbia		Total, State	
D	114	D	175
C	232	C	229
B	226	B	235
A	236	A	244
Average	163	Average	199

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

Table 15.—Wood consumption by sawmills in Washington by type of material consumed, area, and mill-size-class, 1968
(Thousand board feet, Scribner log rule)

Economic area and mill-size-class ^{1/}	All wood	Roundwood				Other	
		All roundwood	Sound logs		Cull logs	Peeler cores	Cants
			Live	Dead			
Puget Sound							
D	81,872	81,172	78,014	2,485	673	--	700
C	163,041	142,414	131,224	1,374	9,816	--	20,627
B	155,636	155,636	149,636	4,950	1,050	--	--
A	582,858	582,858	577,986	2,000	2,872	--	--
Total	983,407	962,080	936,860	10,809	14,411	--	21,327
Olympic Peninsula							
D	82,428	78,378	76,523	1,355	500	50	4,000
C	68,759	68,759	67,399	160	1,200	--	--
B and A ^{2/}	476,460	476,460	450,510	16,042	9,908	--	--
Total	627,647	623,597	594,432	17,557	11,608	50	4,000
Lower Columbia							
D	31,384	30,024	29,622	164	238	--	1,360
C	128,150	128,000	125,070	1,630	1,300	--	150
B	88,165	88,000	80,420	6,120	1,460	165	--
A	430,577	430,572	403,697	19,840	7,035	5	--
Total	678,276	676,596	638,809	27,754	10,033	170	1,510
Central Washington							
D	24,150	24,150	23,780	330	40	--	--
C	134,035	134,035	130,909	2,986	140	--	--
B	169,370	169,370	167,307	1,509	554	--	--
A	239,297	239,297	237,628	1,111	558	--	--
Total	566,852	566,852	559,624	5,936	1,292	--	--
Inland Empire							
D	58,193	58,193	57,953	240	--	--	--
C and B ^{2/}	262,718	254,168	250,918	3,000	250	1,500	7,050
Total	320,911	312,361	308,871	3,240	250	1,500	7,050
Total, State							
D	278,027	271,917	265,892	4,574	1,451	50	6,060
C	703,003	679,176	657,520	9,050	12,606	--	23,827
B	503,871	498,206	470,363	24,679	3,164	1,665	4,000
A	1,692,192	1,692,187	1,644,821	26,993	20,373	5	--
Total	3,177,093	3,141,486	3,038,596	65,296	37,594	1,720	33,887

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

^{2/} Combined to avoid disclosure.

Table 16.—Log consumption by sawmills in Washington by timber age group, area, and mill-size-class, 1968
(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	81,172	14,348	66,824
C	142,414	59,389	83,025
B	155,636	74,880	80,756
A	582,858	478,466	104,392
Total	962,080	627,083	334,997
Olympic Peninsula			
D	78,378	8,761	69,617
C	68,759	56,182	12,577
B and A ^{2/}	476,460	341,829	134,631
Total	623,597	406,772	216,825
Lower Columbia			
D	30,024	582	29,442
C	128,000	100,760	27,240
B	88,000	52,233	35,767
A	430,572	380,300	50,272
Total	676,596	533,875	142,721
Central Washington			
D	24,150	23,452	698
C	134,035	131,207	2,828
B	169,370	163,849	5,521
A	239,297	222,393	16,904
Total	566,852	540,901	25,951
Inland Empire			
D	58,193	21,197	36,996
C and B ^{2/}	254,168	206,594	47,574
Total	312,361	227,791	84,570
Total, State			
D	271,917	68,340	203,577
C	679,176	516,032	163,144
B	498,206	344,062	154,144
A	1,692,187	1,407,988	284,199
Total	3,141,486	2,336,422	805,064

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

^{2/} Combined to avoid disclosure.

Table 17.—Log consumption by sawmills in Washington by timber age group, area, and county, 1968
(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/}	10,104	453	9,651
King	178,234	117,569	60,665
Kitsap	53,191	33,122	20,069
Pierce	244,953	130,726	114,227
Skagit and Whatcom ^{1/}	57,529	4,800	52,729
Snohomish	418,069	340,413	77,656
Total	962,080	627,083	334,997
Olympic Peninsula			
Clallam	41,574	33,638	7,936
Grays Harbor and Pacific ^{1/}	252,477	156,730	95,747
Jefferson	9,976	1,525	8,451
Mason	150,717	141,623	9,094
Thurston	34,474	10,080	24,394
Lewis	134,379	63,179	71,200
Total	623,597	406,775	216,822
Lower Columbia			
Clark	57,869	40,424	17,445
Cowlitz and Wahkiakum ^{1/}	417,737	326,870	90,867
Skamania and Klickitat ^{1/}	200,990	166,581	34,409
Total	676,596	533,875	142,721

Table 17.—Log consumption by sawmills in Washington by timber age group, area, and county, 1968 (continued)
(Thousand board feet, Scribner log rule)

Economic area and county	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Central Washington			
Chelan	95,901	94,601	1,300
Grant, Lincoln, Kittitas, and Yakima ^{1/}	313,871	297,028	16,843
Okanogan	157,080	149,272	7,808
Total	566,852	540,901	25,951
Inland Empire			
Asotin and Walla Walla ^{1/}	48,850	43,287	5,563
Ferry	32,177	26,560	5,617
Pend Oreille	28,491	23,601	4,890
Spokane	66,446	52,687	13,759
Stevens	136,397	81,656	54,741
Total	312,361	227,791	84,570
Total, State	3,141,486	2,336,425	805,061

^{1/} Combined to avoid disclosure

Table 18.—Log inventory changes, log consumption, and apparent log receipts by sawmills in Washington, by area, 1968
(Thousand board feet, Scribner log rule)

Economic area	Log inventory			1968 log consumption	Apparent 1968 log receipts
	January 1, 1968	December 31, 1968	Net change		
Puget Sound	161,098	142,382	-18,716	962,080	943,364
Olympic Peninsula	80,278	63,667	-16,611	623,597	606,986
Lower Columbia	188,660	94,870	-93,790	676,596	582,806
Central Washington	98,993	99,886	893	566,852	567,745
Inland Empire	32,530	29,504	-3,026	312,361	309,335
Total, State	561,559	430,309	-131,250	3,141,486	3,010,236

Table 19.—Origin of logs consumed by sawmills in Washington by ownership class, area, and mill-size-class, 1968
(Thousand board feet, Scribner log rule)

Economic area and mill-size-class ^{1/}	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
D	81,172	7,947	5,550	--	1,155	4,273	15,269	46,978
C	142,414	61,400	24,650	640	4,731	955	30,679	19,359
B	155,636	39,206	26,607	--	3,600	4,800	29,623	51,800
A	582,858	25,089	21,581	--	--	499,342	10,340	26,506
Total	962,080	133,642	78,388	640	9,486	509,370	85,911	144,643
Olympic Peninsula								
D	78,378	1,990	11,983	--	1,000	251	14,055	49,099
C	68,759	39,604	4,063	--	5,100	5,025	390	14,577
B and A ^{2/}	476,460	170,570	50,090	--	20,000	158,436	25,042	52,322
Total	623,597	212,164	66,136	--	26,100	163,712	39,487	115,998
Lower Columbia								
D	30,026	1,800	6,057	--	--	346	9,202	12,621
C and B ^{2/}	216,000	73,090	23,530	--	440	28,860	28,430	61,650
A	430,570	47,141	23,719	--	--	335,270	14,231	10,209
Total	676,596	122,031	53,306	--	440	364,476	51,863	84,480
Central Washington								
D	24,149	14,775	1,361	905	--	726	1,500	4,882
C	134,035	93,393	11,089	--	5,400	20,532	--	3,621
B and A ^{2/}	408,668	138,386	26,911	--	89,520	50,368	--	103,483
Total	566,852	246,554	39,361	905	94,920	71,626	1,500	111,986
Inland Empire								
D	58,191	15,198	3,290	280	700	2,407	4,230	32,086
C and B ^{2/}	254,170	122,630	14,940	2,434	15,645	39,997	--	58,524
Total	312,361	137,828	18,230	2,714	16,345	42,404	4,230	90,610
Total, State								
D	271,916	41,710	28,241	1,185	2,855	8,003	44,256	145,666
C	679,178	317,617	59,232	2,064	30,036	90,259	47,239	132,731
B	498,206	192,408	48,551	1,010	92,073	25,408	41,883	96,873
A	1,692,186	300,484	119,397	--	22,327	1,027,918	49,613	172,447
Total	3,141,486	852,219	255,421	4,259	147,291	1,151,588	182,991	547,717

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

^{2/} Combined to avoid disclosure.

Table 20.—Origin of logs consumed by sawmills in Washington by ownership class, area, and county, 1968
(Thousand board feet, Scribner log rule)

Economic area and county	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Island and San Juan 1/	10,104	--	--	--	--	2,998	246	6,860
King	178,234	30,633	18,800	--	751	85,834	1,051	41,165
Kitsap	53,191	4,700	5,616	--	22	18,800	10,340	13,713
Pierce	244,953	19,210	16,790	--	2,807	144,222	21,021	40,903
Skagit and Whatcom 1/	57,529	15,202	16,211	640	960	600	13,171	10,745
Snohomish	418,069	63,897	20,971	--	4,946	256,916	40,082	31,257
Total	962,080	133,642	78,388	640	9,486	509,370	85,911	144,643
Olympic Peninsula								
Clallam	41,574	7,560	23,200	--	--	18	1,746	9,050
Grays Harbor and Pacific 1/	252,477	41,085	17,089	--	25,100	122,882	7,500	38,821
Jefferson	9,976	1,790	2,361	--	100	--	5,450	275
Mason	150,717	85,530	3,122	--	900	35,554	17,067	8,544
Thurston	34,474	6,720	9,170	--	--	--	--	18,584
Lewis	134,379	69,479	11,194	--	--	5,258	7,724	40,724
Total	623,597	212,164	66,136	--	26,100	163,712	39,487	115,998
Lower Columbia								
Clark	57,869	13,884	842	--	--	22,138	14,809	6,196
Cowlitz and Wahkiakum 1/	417,737	19,294	41,103	--	440	313,528	26,384	16,988
Skamania and Klickitat 1/	200,990	88,853	11,361	--	--	28,810	10,670	61,296
Total	676,596	122,031	53,306	--	440	364,476	51,863	84,480
Central Washington								
Chelan	95,901	82,525	--	--	--	11,561	--	1,815
Grant, Lincoln, Kittitas, and Yakima 1/	313,871	63,073	17,733	--	72,593	58,223	1,500	100,749
Okanogan	157,080	100,956	21,628	905	22,327	1,842	--	9,422
Total	566,852	246,554	39,361	905	94,920	71,626	1,500	111,986
Inland Empire								
Asotin	48,850	19,375	--	--	840	2,000	--	26,635
Ferry	32,177	28,876	1,120	--	--	669	90	1,422
Pend Oreille	28,491	19,782	500	--	500	--	--	7,709
Spokane	66,446	4,888	807	--	7,152	35,220	--	18,379
Stevens	136,397	64,907	15,803	2,714	7,853	4,515	4,140	36,465
Total	312,361	137,828	18,230	2,714	16,345	42,404	4,230	90,610
Total	3,141,486	852,219	255,421	4,259	147,291	1,151,588	182,991	547,717

1/ Combined to avoid disclosure.

Table 21.—Relative dependency of Washington sawmills for logs by ownership origin, area, and mill-size-class, 1968
(Number of mills)

Economic area and mill-size-class ^{1/}	National Forest			State			Bureau of Land Management			Other public			Forest industry			Farmer and miscellaneous private		
	1-32			33-66			67-100			1-32			33-66			67-100		
	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2
Puget Sound	36	2	1	3	33	6	3	---	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	3	2	2	---	2	6	2	---	---	---	---	---	---	---	---	---	---	---
B	2	---	---	---	2	5	---	---	---	---	---	---	---	---	---	---	---	---
A	5	1	---	1	4	3	---	---	---	---	---	---	---	---	---	---	---	---
Total	46	7	6	7	41	20	5	---	---	---	---	---	---	---	---	---	---	---
Olympic Peninsula	34	4	---	---	18	14	5	1	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	2	---	3	2	4	3	---	---	---	---	---	---	---	---	---	---	---	---
B	2	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---
A	3	2	3	2	3	4	3	---	---	---	---	---	---	---	---	---	---	---
Total	41	6	6	4	27	21	8	1	---	---	---	---	---	---	---	---	---	---
Lower Columbia	13	3	---	2	13	4	1	---	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	3	1	1	1	3	3	---	---	---	---	---	---	---	---	---	---	---	---
B	---	---	---	---	1	1	1	---	---	---	---	---	---	---	---	---	---	---
A	1	1	1	1	3	---	1	---	---	---	---	---	---	---	---	---	---	---
Total	17	6	3	5	20	8	3	---	---	---	---	---	---	---	---	---	---	---
Central Washington	3	1	2	3	6	1	---	2	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	---	2	---	5	5	1	1	---	---	---	---	---	---	---	---	---	---	---
B	2	---	---	3	4	1	---	---	---	---	---	---	---	---	---	---	---	---
A	---	2	1	---	---	3	---	---	---	---	---	---	---	---	---	---	---	---
Total	5	5	3	11	15	6	1	2	---	---	---	---	---	---	---	---	---	---
Inland Empire	12	3	2	3	16	4	---	---	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	---	4	1	7	3	8	1	---	---	---	---	---	---	---	---	---	---	---
B	---	1	1	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---
Total	12	8	4	10	20	13	1	---	---	---	---	---	---	---	---	---	---	---
Total, State	98	13	5	11	86	29	9	3	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
C	7	9	8	18	17	21	4	---	---	---	---	---	---	---	---	---	---	---
B	7	4	4	4	10	8	1	---	---	---	---	---	---	---	---	---	---	---
A	9	6	5	4	10	10	4	---	---	---	---	---	---	---	---	---	---	---
Total	121	32	22	37	123	68	18	3	---	---	---	---	---	---	---	---	---	---

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

Table 22.—Log consumption by sawmills in Washington by species, area, and mill-size-class, 1968
(Thousand board feet, Scribner log rule)

Economic area and mill-size-class ^{1/}	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{2/}	Hardwoods
Puget Sound									
D	81,172	28,410	4,112	116	300	--	189	12,364	35,681
C	142,414	67,279	37,343	8,059	--	--	1,971	24,562	3,200
B	155,636	92,000	31,088	1,694	--	--	--	30,854	--
A	582,858	341,452	206,375	6,240	--	--	674	28,117	--
Total	962,080	529,141	278,918	16,109	300	--	2,834	95,897	38,881
Olympic Peninsula									
D	78,378	27,113	14,023	480	167	--	7	10,619	25,969
C	68,759	26,971	6,181	14,042	--	--	--	19,900	1,665
B and A ^{3/}	476,460	177,996	218,626	23,510	6,720	--	--	49,608	--
Total	623,597	232,080	238,830	38,032	6,887	--	7	80,127	27,634
Lower Columbia									
D	30,024	10,556	4,325	480	8	1,770	--	1,866	11,019
C	128,000	36,100	7,920	25,080	--	57,550	--	1,350	--
B	88,000	57,280	10,760	14,900	908	--	4,152	--	--
A	430,572	298,386	75,344	27,477	2,847	--	397	26,121	--
Total	676,596	402,322	98,349	67,937	3,763	59,320	4,549	29,337	11,019
Central Washington									
D	24,150	8,791	600	340	80	3,352	--	10,987	--
C	134,035	51,825	4,272	15,856	2,335	49,383	1,347	9,017	--
B	169,370	58,898	5,138	1,187	946	91,371	856	10,974	--
A	239,297	73,679	--	7,701	--	149,628	--	8,289	--
Total	566,852	193,193	10,010	25,084	3,361	293,734	2,203	39,267	--
Inland Empire									
D	58,193	24,490	309	5,605	778	17,544	427	9,040	--
C and B ^{3/}	254,168	124,331	6,932	46,821	10,243	43,119	6,607	8,395	7,720
Total	312,361	148,821	7,241	52,426	11,021	60,663	7,034	17,435	7,720
Total, State									
D	271,917	99,360	23,369	7,021	1,333	22,666	623	44,876	72,669
C	679,176	289,246	58,608	93,058	10,558	148,032	9,925	61,204	8,545
B	498,206	232,238	54,426	34,581	3,874	93,391	5,008	70,648	4,040
A	1,692,187	884,713	496,945	64,928	9,567	149,628	1,071	85,335	--
Total	3,141,486	1,505,557	633,348	199,588	25,332	413,717	16,627	262,063	85,254

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

^{2/} Mostly western redcedar, western larch, and lodgepole pine.

^{3/} Combined to avoid disclosure.

Table 23.—Log consumption by sawmills in Washington by species, area, and type of material, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}	Hardwood
Puget Sound									
Sound ^{2/}	947,668	524,235	272,262	15,219	300	--	2,511	94,285	38,856
Cull	14,412	4,906	6,656	890	--	--	323	1,612	25
Total	962,080	529,141	278,918	16,109	300	--	2,834	95,897	38,881
Olympic Peninsula									
Sound ^{2/}	611,989	229,318	234,402	33,854	6,722	--	7	80,052	27,634
Cull	11,608	2,762	4,428	4,178	165	--	--	75	--
Total	623,597	232,080	238,830	38,032	6,887	--	7	80,127	27,634
Lower Columbia									
Sound ^{2/}	666,563	398,677	95,948	65,827	3,473	59,320	4,500	27,799	11,019
Cull	10,033	3,645	2,401	2,110	290	--	49	1,538	--
Total	676,596	402,322	98,349	67,937	3,763	59,320	4,549	29,337	11,019
Central Washington									
Sound ^{2/}	565,561	192,378	10,010	25,084	3,361	293,397	2,203	39,128	--
Cull	1,291	815	--	--	--	337	--	139	--
Total	566,852	193,193	10,010	25,084	3,361	293,734	2,203	39,267	--
Inland Empire									
Sound ^{2/}	312,111	148,741	7,221	52,326	11,011	60,653	7,034	17,425	7,700
Cull	250	80	20	100	10	10	--	10	20
Total	312,361	148,821	7,241	52,426	11,021	60,663	7,034	17,435	7,720
Total, State									
Sound ^{2/}	3,103,892	1,493,349	619,843	192,310	24,867	413,370	16,255	258,689	85,209
Cull	37,594	12,208	13,505	7,278	465	347	372	3,374	45
Total	3,141,486	1,505,557	633,348	199,588	25,332	413,717	16,627	262,063	85,254

^{1/} Mostly western redcedar, western larch, and lodgepole pine.

^{2/} Includes both live and dead logs.

Table 24.—Log consumption by sawmills in Washington by species, area, and county, 1968

(Thousand board feet, Scribner log rule)

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}	Hardwood
Puget Sound									
Island and San Juan 2/	10,104	7,337	1,277	16	--	--	--	274	1,200
King	178,234	68,870	62,735	1,400	--	--	--	42,130	3,099
Kitsap	53,191	41,567	7,990	--	--	--	--	211	3,423
Pierce	244,953	114,364	108,344	6,340	--	--	2,325	3,572	10,008
Skagit and Whatcom 2/	57,529	31,888	8,100	633	300	--	320	5,123	11,165
Snohomish	418,069	265,115	90,472	7,720	--	--	189	44,587	9,986
Total	962,080	529,141	278,918	16,109	300	--	2,834	95,897	38,881
Olympic Peninsula									
Clallam	41,574	6,335	25,373	--	885	--	--	7,204	1,777
Grays Harbor and Pacific 2/	252,477	52,783	115,492	23,510	6,000	--	--	50,747	3,945
Jefferson	9,976	6,586	3	--	2	--	7	2,378	1,000
Mason	150,717	72,910	71,207	--	--	--	--	4,600	2,000
Thurston	34,474	31,147	125	50	--	--	--	122	3,030
Lewis	134,379	62,319	26,630	14,472	--	--	--	15,076	15,882
Total	623,597	232,080	238,830	38,032	6,887	--	7	80,127	27,634
Lower Columbia									
Clark	57,869	34,450	6,075	14,922	--	--	397	1,856	169
Cowlitz and Wahkiakum 2/	417,737	283,005	75,556	18,914	2,855	1,090	--	25,467	10,850
Skamania and Klickitat 2/	200,990	84,867	16,718	34,101	908	58,230	4,152	2,014	--
Total	676,596	402,322	98,349	67,937	3,763	59,320	4,549	29,337	11,019
Central Washington									
Chelan	95,901	35,324	6,710	3,440	1,325	47,189	1,393	520	--
Grant, Kittitas, Yakima, and Lincoln 2/	313,871	88,107	3,300	20,978	540	191,798	810	8,338	--
Okanogan	157,080	69,762	--	666	1,496	54,747	--	30,409	--
Total	566,852	193,193	10,010	25,084	3,361	293,734	2,203	39,267	--
Inland Empire									
Asotin and Walla Walla 2/	48,850	16,500	--	24,275	1,075	6,000	--	1,000	--
Ferry	32,177	24,721	--	1,392	2,659	2,253	--	1,152	--
Pend Oreille	28,491	13,675	431	7,643	693	5,180	801	68	--
Spokane	66,446	25,386	309	6,799	673	24,394	5,102	3,783	--
Stevens	136,397	68,539	6,501	12,317	5,921	22,836	1,131	11,432	7,720
Total	312,361	148,821	7,241	52,426	11,021	60,663	7,034	17,435	7,720
Total, State	3,141,486	1,505,557	633,348	199,588	25,332	413,717	16,627	262,063	85,254

^{1/} Mostly western redcedar, western larch, and lodgepole pine.

^{2/} Combine to avoid disclosure.

Table 25.—Production and disposition of wood and bark residues by sawmills in Washington by area, and mill-size-class, 1968
(Tons, dry weight)

Economic area and mill-size-class ^{1/}	All residues			Wood residue			Bark residue		
	Total	Used ^{2/}	Unused	Total	Used ^{2/}	Unused	Total	Used ^{2/}	Unused
Puget Sound									
D	114,890	76,267	38,623	95,091	63,978	31,113	19,799	12,289	7,510
C	202,121	187,021	15,100	165,336	155,336	10,000	36,785	31,685	5,100
B	237,749	220,449	17,300	191,345	179,145	12,200	46,404	41,304	5,100
A	977,371	956,721	20,650	759,148	745,778	13,370	218,223	210,943	7,280
Total	1,532,131	1,440,458	91,673	1,210,920	1,144,237	66,683	321,211	296,221	24,990
Olympic Peninsula									
D	99,702	65,017	34,685	79,457	54,023	25,434	20,245	10,994	9,251
C	98,609	53,429	45,180	78,368	48,929	29,439	20,241	4,500	15,741
B and A ^{3/}	743,891	681,399	62,492	603,753	573,852	29,901	140,138	107,547	32,591
Total	942,202	799,845	142,357	761,578	676,804	84,774	180,624	123,041	57,583
Lower Columbia									
D	52,063	51,398	665	44,743	44,267	476	7,320	7,131	189
C	152,949	131,210	21,739	118,396	111,660	6,736	34,553	19,550	15,003
B	171,450	149,400	22,050	133,000	122,400	10,600	38,450	27,000	11,450
A	605,795	583,125	22,670	469,215	455,045	14,170	136,580	128,080	8,500
Total	982,257	915,133	67,124	765,354	733,372	31,982	216,903	181,761	35,142
Central Washington									
D	27,931	9,898	18,033	22,049	8,341	13,708	5,882	1,557	4,325
C	174,269	112,315	61,954	139,309	104,693	34,616	34,960	7,622	27,338
B	179,232	158,991	20,241	141,689	130,189	11,500	37,543	28,802	8,741
A	266,665	251,535	15,130	208,629	197,829	10,800	58,036	53,706	4,330
Total	648,097	532,739	115,358	511,676	441,052	70,624	136,421	91,687	44,734
Inland Empire									
D	72,536	18,964	53,572	57,328	16,672	40,656	15,208	2,292	12,916
C and B ^{3/}	338,330	179,962	158,368	279,600	177,527	102,073	58,730	2,435	56,295
Total	410,866	198,926	211,940	336,928	194,199	142,729	73,938	4,727	69,211
Total Washington									
D	367,122	221,544	145,578	298,668	187,281	111,387	68,454	34,263	34,191
C	894,428	626,281	268,147	722,705	560,489	162,216	171,723	65,792	105,931
B	712,552	597,461	115,091	566,292	500,355	65,937	146,260	97,106	49,154
A	2,541,451	2,441,815	99,636	1,998,791	1,941,539	57,252	542,660	500,276	42,384
Total	4,515,553	3,887,101	628,452	3,586,456	3,189,664	396,792	929,097	697,437	231,660

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

^{2/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{3/} Combined to avoid disclosure.

Table 26.—Production and disposition
type of residue, use, area, a
(To

Economic area and mill-size- class ^{1/}	All types							Coarse ^{3/}				
	Total	Total used ^{2/}	Pulp	Board	Fuel	Misc.	Unused	Total	Total used ^{2/}	Pulp	Board	Fuel
Puget Sound												
D	95,091	63,978	28,115	--	14,974	20,889	31,113	62,629	40,747	28,115	--	12,04
C	165,336	155,336	81,907	--	36,585	36,844	10,000	88,258	78,258	72,527	--	3,39
B	191,345	179,145	114,570	--	56,015	8,560	12,200	108,870	108,870	98,870	--	10,00
A	759,148	745,778	358,345	--	387,433	--	13,370	366,127	366,127	358,345	--	7,78
Total	1,210,920	1,144,237	582,937	--	495,007	66,293	66,683	625,884	594,002	557,857	--	33,21
Olympic Peninsula												
D	79,457	54,023	21,948	--	27,788	4,287	25,434	47,248	31,147	15,864	--	14,87
C	78,368	48,929	45,181	--	1,798	1,950	29,439	46,340	35,840	35,770	--	7
B and A ^{6/}	603,753	573,852	335,749	19,343	197,650	21,110	29,901	338,341	338,341	319,591	13,500	5,25
Total	761,578	676,804	402,878	19,343	227,236	27,347	84,774	431,929	405,328	371,225	13,500	20,19
Lower Columbia												
D	44,743	44,267	36,926	--	6,060	1,281	476	31,174	30,856	27,496	--	3,24
C	118,396	111,660	62,750	--	37,120	11,790	6,736	58,310	58,300	55,200	--	90
B	133,000	122,400	106,800	--	15,600	--	10,600	84,700	84,700	84,700	--	1
A	469,215	455,045	263,745	--	191,300	--	14,170	247,835	247,835	247,835	--	1
Total	765,354	733,372	470,221	--	250,080	13,071	31,982	422,019	421,691	415,231	--	4,14
Central Washington												
D	22,049	8,341	3,300	--	4,446	595	13,708	12,361	5,988	3,300	--	2,68
C	139,309	104,693	67,410	--	30,837	6,446	34,616	75,501	68,210	62,410	--	5,80
B	141,689	130,189	72,444	--	42,550	15,195	11,500	81,440	79,440	72,444	--	78
A	208,629	197,829	113,340	21,889	62,600	--	10,800	124,600	122,100	106,600	--	15,50
Total	511,676	441,052	256,494	21,889	140,433	22,236	70,624	293,902	275,738	244,754	--	24,76
Inland Empire												
D	57,328	16,672	7,252	--	3,590	5,830	40,656	32,636	8,738	7,252	--	76
C and B ^{6/}	279,600	177,527	85,938	--	56,161	35,428	102,073	140,336	106,294	85,938	--	2,00
A	--	--	--	--	--	--	--	--	--	--	--	--
Total	336,928	194,199	93,190	--	59,751	41,258	142,729	172,972	115,032	93,190	--	2,76
Total, State												
D	298,668	187,281	97,541	--	56,858	32,882	111,387	186,048	117,476	82,027	--	33,61
C	722,705	560,489	326,674	--	156,357	77,458	162,216	377,233	315,390	295,333	--	12,16
B	566,292	500,355	337,934	--	123,666	38,755	65,937	328,772	326,772	294,776	--	10,78
A	1,998,791	1,941,539	1,043,571	41,232	835,626	21,110	57,252	1,054,653	1,052,153	1,010,121	13,500	28,53
Total	3,586,456	3,189,664	1,805,720	41,232	1,172,507	170,205	396,792	1,946,706	1,811,791	1,682,257	13,500	85,08

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

^{2/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{3/} Slabs, edgings, trim, spur ends.

^{4/} Shavings.

^{5/} Sawdust.

^{6/} Combined to avoid disclosure.

Wood residues by sawmills in Washington by mill-size-class, 1968 (by weight)

Disc.	Unused	Medium ^{4/}							Fine ^{5/}						
		Total	Total used 2/	Pulp	Board	Fuel	Misc.	Unused	Total	Total used 2/	Pulp	Board	Fuel	Misc.	Unused
589	21,882	10,450	8,074	--	--	650	7,424	2,376	22,012	15,157	--	--	2,281	12,876	6,855
2,341	10,000	30,960	30,960	--	--	7,380	23,580	--	46,118	46,118	9,380	--	25,815	10,923	--
--	--	34,435	30,135	--	--	25,095	5,040	4,300	48,040	40,140	15,700	--	20,920	3,520	7,900
--	--	140,345	135,425	--	--	135,425	--	4,920	252,676	244,226	--	--	244,226	--	8,450
1,930	31,882	216,190	204,594	--	--	168,550	36,044	11,596	368,846	345,641	25,080	--	293,242	27,319	23,205
404	16,101	9,590	9,450	2,394	--	4,963	2,093	140	22,619	13,426	3,690	--	7,946	1,790	9,193
--	10,500	12,346	5,031	4,253	--	728	50	7,315	19,682	8,058	5,158	--	1,000	1,900	11,624
--	--	99,877	90,085	--	5,843	70,912	13,330	9,792	165,535	145,426	16,158	--	121,488	7,780	20,109
404	26,601	121,813	104,566	6,647	5,843	76,603	15,473	17,247	207,836	166,910	25,006	--	130,434	11,470	40,926
116	318	4,109	4,109	2,200	--	935	974	--	9,460	9,302	7,230	--	1,881	191	158
2,200	10	25,492	18,770	--	--	13,700	5,070	6,722	34,594	34,590	7,550	--	22,520	4,520	4
--	--	19,200	12,000	5,000	--	7,000	--	7,200	29,100	25,700	17,100	--	8,600	--	3,400
--	--	80,050	73,730	9,430	--	64,300	--	6,320	141,330	133,480	6,480	--	127,000	--	7,850
1,316	328	128,851	108,609	16,630	--	85,935	6,044	20,242	214,484	203,072	38,360	--	160,001	4,711	11,412
--	6,373	3,750	841	--	--	812	29	2,909	5,938	1,512	--	--	946	566	4,426
--	7,291	24,533	17,297	--	--	10,851	6,446	7,236	39,275	19,186	5,000	--	14,186	--	20,089
2,216	2,000	20,480	18,240	--	--	10,120	8,120	2,240	39,769	32,509	--	--	31,650	859	7,260
--	2,500	47,089	43,789	--	21,889	21,900	--	3,300	36,940	31,940	6,740	--	25,200	--	5,000
2,216	18,164	95,852	80,167	--	21,889	43,683	14,595	15,685	121,922	85,147	11,740	--	71,982	1,425	36,775
726	23,898	7,377	2,814	--	--	1,420	1,394	4,563	17,315	5,120	--	--	1,410	3,710	12,195
3,356	34,042	67,697	45,877	--	--	33,073	12,804	21,820	71,567	25,356	--	--	21,088	4,268	46,211
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,082	57,940	75,074	48,691	--	--	34,493	14,198	26,383	88,882	30,476	--	--	22,498	7,978	58,406
1,835	68,572	35,276	25,288	4,594	--	8,780	11,914	9,988	77,344	44,517	10,920	--	14,464	19,133	32,827
1,897	61,843	148,634	111,791	4,253	--	59,588	47,950	36,843	196,838	133,308	27,088	--	84,609	21,611	63,530
2,216	2,000	94,228	69,594	5,000	--	51,434	13,160	24,634	143,292	103,989	38,158	--	61,452	4,379	39,303
--	2,500	359,642	339,954	9,430	27,732	289,462	13,330	19,688	584,496	549,432	24,020	--	517,632	7,780	35,064
1,948	134,915	637,780	546,627	23,277	27,732	409,264	86,354	91,153	1,001,970	831,246	100,186	--	678,157	52,903	170,724

Table 27.—Production and disposition of bark residue by sawmills in Washington by use, area, and mill-size-class, 1968
(Tons, dry weight)

Economic area and mill-size- class ^{1/}	All bark	Used ^{2/}					Unused
		Total	Pulp	Board	Fuel	Miscellaneous	
Puget Sound							
D	19,799	12,289	--	--	6,354	5,935	7,510
C	36,785	31,685	--	--	29,305	2,380	5,100
B	46,404	41,304	--	--	18,304	23,000	5,100
A	218,223	210,943	--	--	179,596	31,347	7,280
Total	321,211	296,221	--	--	233,559	62,662	24,990
Olympic Peninsula							
D	20,245	10,994	--	--	7,166	3,828	9,251
C	20,241	4,500	--	--	2,000	2,500	15,741
B and A ^{3/}	140,138	107,547	--	--	105,417	2,130	32,591
Total	180,624	123,041	--	--	114,583	8,458	57,583
Lower Columbia							
D	7,320	7,131	--	--	4,412	2,719	189
C	34,553	19,550	--	--	18,650	900	15,003
B	38,450	27,000	--	--	27,000	--	11,450
A	136,580	128,080	--	--	128,080	--	8,500
Total	216,903	181,761	--	--	178,142	3,619	35,142
Central Washington							
D	5,882	1,557	--	--	1,557	--	4,325
C	34,960	7,622	--	--	6,872	750	27,338
B	37,543	28,802	--	--	25,118	3,684	8,741
A	58,036	53,706	--	--	48,356	5,350	4,330
Total	136,421	91,687	--	--	81,903	9,784	44,734
Inland Empire							
D	15,208	2,292	--	--	292	2,000	12,916
C and B ^{3/}	58,730	2,435	--	--	2,435	--	56,295
Total	73,938	4,727	--	--	2,727	2,000	69,211
Total, State							
D	68,454	34,263	--	--	19,781	14,482	34,191
C	171,723	65,792	--	--	59,262	6,530	105,931
B	146,260	97,106	--	--	70,422	26,684	49,154
A	542,660	500,276	--	--	461,449	38,827	42,384
Total	929,097	697,437	--	--	610,914	86,523	231,660

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

^{2/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{3/} Combined to avoid disclosure.

Table 28.—Production and disposition of wood and bark residues by sawmills in Washington by area, and county, 1968
(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 San Juan ^{2/}	11,427	5,849	5,578	9,461	5,849	3,612	1,966	--	1,966
King	345,012	310,010	35,002	271,510	243,082	28,428	73,502	66,928	6,574
Kitsap	73,075	69,518	3,557	58,527	55,579	2,948	14,548	13,939	609
Pierce	367,740	364,631	3,109	290,673	287,583	3,090	77,067	77,048	19
Skagit and Whatcom ^{2/}	84,544	69,444	15,100	68,364	58,364	10,000	16,180	11,080	5,100
Snohomish	650,333	621,006	29,327	512,385	493,780	18,605	137,948	127,226	10,722
Total	1,532,131	1,440,458	91,673	1,210,920	1,144,237	66,683	321,211	296,221	24,990
Olympic Peninsula									
Clallam	63,821	59,526	4,295	51,612	48,516	3,096	12,209	11,010	1,199
Grays Harbor and Pacific ^{2/}	423,912	385,927	37,985	343,421	324,996	18,425	80,491	60,931	19,560
Jefferson	11,059	7,784	3,275	8,554	6,086	2,468	2,505	1,698	807
Mason	213,549	205,455	8,094	172,253	166,055	6,198	41,296	39,400	1,896
Thurston	49,302	35,416	13,886	42,158	31,466	10,692	7,144	3,950	3,194
Lewis	180,559	105,737	74,822	143,580	99,685	43,895	36,979	6,052	30,927
Total	942,202	799,845	142,357	761,578	676,804	84,774	180,624	123,041	57,583
Lower Columbia									
Clark	81,504	81,413	91	65,582	65,546	36	15,922	15,867	55
Cowlitz and Wahkiakum ^{2/}	610,989	610,955	34	474,841	474,813	28	136,148	136,142	6
Skamania and Klickitat ^{2/}	289,764	222,765	66,999	224,931	193,013	31,918	64,833	29,752	35,081
Total	982,257	915,133	67,124	765,354	733,372	31,982	216,903	181,761	35,142
Central Washington									
Chelan	121,423	90,179	31,244	97,453	76,287	21,166	23,970	13,892	10,078
Grant, Lincoln, Kittitas, and Yakima ^{2/}	339,650	305,020	34,630	265,967	250,572	15,395	73,683	54,448	19,235
Okanogan	187,024	137,540	49,484	148,256	114,193	34,063	38,768	23,347	15,421
Total	648,097	532,739	115,358	511,676	441,052	70,624	136,421	91,687	44,734
Inland Empire									
Asotin and Walla Walla ^{2/}	66,600	31,620	34,980	53,490	31,620	21,870	13,110	--	13,110
Ferry	38,338	18,899	19,439	35,499	18,899	16,600	2,839	--	2,839
Pend Oreille	33,931	20,324	13,607	26,871	20,324	6,547	7,060	--	7,060
Spokane	95,236	73,623	21,613	78,996	68,896	10,100	16,240	4,727	11,513
Stevens	176,761	54,460	122,301	142,072	54,460	87,612	34,689	--	34,689
Total	410,866	198,926	211,940	336,928	194,199	142,729	73,938	4,727	69,211
Total, State	4,515,553	3,887,101	628,452	3,586,456	3,189,664	396,792	929,097	697,437	231,660

^{1/} Used residues were not necessarily consumed in the area or county in which produced.

^{2/} Combined to avoid disclosure.

Table 29.—Production and disposition
type of residues, use, area
(Tons)

Economic area and county	All types							Coarse ^{1/}				
	Total	Total used ^{4/}	Pulp	Board	Fuel	Other	Unused	Total	Total used ^{4/}	Pulp	Board	Fuel
Puget Sound												
Island & San Juan ^{5/}	9,461	5,849	4,800	--	82	967	3,612	5,882	4,882	4,800	--	82
King	271,510	243,082	136,615	--	92,419	14,048	28,428	139,396	122,154	120,915	--	1,239
Kitsap	58,527	55,579	19,120	--	35,873	586	2,948	30,293	29,673	19,120	--	10,553
Pierce	290,673	287,583	138,972	--	140,546	8,065	3,090	152,562	151,481	138,972	--	12,320
Skagit & Whatcom ^{5/}	68,364	58,364	33,584	--	--	24,780	10,000	34,204	24,204	24,204	--	--
Snohomish	512,385	493,780	249,846	--	226,087	17,847	18,605	263,547	261,608	249,846	--	9,021
Total	1,210,920	1,144,237	582,937	--	495,007	66,293	66,683	625,884	594,002	557,857	--	33,215
Olympic Peninsula												
Clallam	51,612	48,516	26,534	--	21,599	383	3,096	28,023	26,443	26,170	--	63
Grays Harbor & Pacific ^{5/}	343,421	324,996	200,151	--	115,710	9,135	18,425	202,193	191,693	183,993	--	7,700
Jefferson	8,554	6,086	1,500	--	4,269	317	2,468	5,008	3,184	1,500	--	1,684
Mason	172,253	166,055	71,762	19,343	74,950	--	6,198	94,286	90,292	71,542	13,500	5,250
Thurston	42,158	31,466	10,500	--	7,436	13,530	10,692	21,379	14,536	10,500	--	4,036
Lewis	143,580	99,685	92,431	--	3,272	3,982	43,895	81,040	79,180	77,520	--	1,466
Total	761,578	676,804	402,878	19,343	227,236	27,347	84,774	431,929	405,328	371,225	13,500	20,199
Lower Columbia												
Clark	65,582	65,546	43,600	--	16,167	5,779	36	36,133	36,103	32,640	--	1,261
Cowlitz & Wahkiakum ^{5/}	474,841	474,813	287,071	--	187,583	159	28	261,832	261,828	258,941	--	2,773
Skamania & Klickitat ^{5/}	224,931	193,013	139,550	--	46,330	7,133	31,918	124,054	123,760	123,650	--	110
Total	765,354	733,372	470,221	--	250,080	13,071	31,982	422,019	421,691	415,231	--	4,144
Central Washington												
Chelan	97,453	76,287	40,000	--	34,587	1,700	21,166	49,091	42,800	40,000	--	2,800
Grant, Lincoln, Kittitas & Yakima ^{5/}	265,967	250,572	151,066	21,889	66,338	11,279	15,395	163,027	159,114	139,326	--	19,788
Okanogan	148,256	114,193	65,428	--	39,508	9,257	34,063	81,784	73,824	65,428	--	2,180
Total	511,676	441,052	256,494	21,889	140,433	22,236	70,624	293,902	275,738	244,754	--	24,768
Inland Empire												
Asotin & Walla Walla ^{5/}	53,490	31,620	16,512	--	8,344	6,764	21,870	29,670	16,512	16,512	--	--
Ferry	35,499	18,899	7,964	--	10,655	280	16,600	14,916	8,214	7,964	--	50
Pend Oreille	26,871	20,324	13,196	--	6,612	516	6,547	15,858	13,712	13,196	--	--
Spokane	78,996	68,896	22,508	--	29,385	17,003	10,100	32,724	28,524	22,508	--	2,660
Stevens	142,072	54,460	33,010	--	4,755	16,695	87,612	79,804	48,070	33,010	--	50
Total	336,928	194,199	93,190	--	59,751	41,258	142,729	172,972	115,032	93,190	--	2,760
Total	3,586,456	3,189,664	1,805,720	41,232	1,172,507	170,205	396,792	1,946,706	1,811,791	1,682,257	13,500	85,086

^{1/} Coarse residue includes slabs, edgings, sawmill trim and planer trim.

^{2/} Medium residue is planer shavings.

^{3/} Fine residue is sawdust.

^{4/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{5/} Combined to avoid disclosure.

of wood residues by sawmills in Washington, by
 and county, 1968
 (dry weight)

		Medium ^{2/}							Fine ^{3/}						
Other	Unused	Total	Total used ^{4/}	Pulp	Board	Fuel	Other	Unused	Total	Total used ^{4/}	Pulp	Board	Fuel	Other	Unused
--	1,000	1,525	775	--	--	--	775	750	2,054	192	--	--	--	192	1,862
--	17,242	49,214	44,914	--	--	38,380	6,534	4,300	82,900	76,014	15,700	--	52,800	7,514	6,886
--	620	11,616	10,720	--	--	10,720	--	896	16,618	15,186	--	--	14,600	586	1,432
189	1,081	52,642	52,642	--	--	47,521	5,121	--	85,469	83,460	--	--	80,705	2,755	2,009
--	10,000	17,000	17,000	--	--	--	17,000	--	17,160	17,160	9,380	--	--	7,780	--
2,741	1,939	84,193	78,543	--	--	71,929	6,614	5,650	164,645	153,629	--	--	145,137	8,492	11,016
2,930	31,882	216,190	204,594	--	--	168,550	36,044	11,596	368,846	345,641	25,080	--	293,242	27,319	23,205
210	1,580	9,377	9,252	364	--	8,815	73	125	14,212	12,821	--	--	12,721	100	1,391
--	10,500	52,087	48,562	--	--	40,982	7,580	3,525	89,141	84,741	16,158	--	67,028	1,555	4,400
--	1,824	669	654	--	--	640	14	15	2,877	2,248	--	--	1,945	303	629
--	3,994	29,953	29,953	110	5,843	24,000	--	--	48,014	45,810	110	--	45,700	--	2,204
--	6,842	7,180	7,180	--	--	1,430	5,750	--	13,599	9,750	--	--	1,970	7,780	3,849
194	1,860	22,547	8,965	6,173	--	736	2,056	13,582	39,993	11,540	8,738	--	1,070	1,732	28,453
404	26,601	121,813	104,566	6,647	5,843	76,603	15,473	17,247	207,836	166,910	25,006	--	130,434	11,470	40,926
2,202	30	11,049	11,047	--	--	8,535	2,512	2	18,400	18,396	10,960	--	6,371	1,065	4
114	4	75,531	75,531	16,630	--	58,900	1	--	137,478	137,454	11,500	--	125,910	44	24
--	294	42,271	22,031	--	--	18,500	3,531	20,240	58,606	47,222	15,900	--	27,720	3,602	11,384
2,316	328	128,851	108,609	16,630	--	85,935	6,044	20,242	214,484	203,072	38,360	--	160,001	4,711	11,412
--	6,291	21,597	18,391	--	--	16,691	1,700	3,206	26,765	15,096	--	--	15,096	--	11,669
--	3,913	45,818	42,209	--	21,889	9,900	10,420	3,609	57,122	49,249	11,740	--	36,650	859	7,873
6,216	7,960	28,437	19,567	--	--	17,092	2,475	8,870	38,035	20,802	--	--	20,236	566	17,233
6,216	18,164	95,852	80,167	--	21,889	43,683	14,595	15,685	121,922	85,147	11,740	--	71,982	1,425	36,775
--	13,158	8,640	8,640	--	--	6,144	2,496	--	15,180	6,468	--	--	2,200	4,268	8,712
200	6,702	11,414	4,250	--	--	4,220	30	7,164	9,169	6,435	--	--	6,385	50	2,734
516	2,146	2,784	2,784	--	--	2,784	--	--	8,229	3,828	--	--	3,828	--	4,401
3,356	4,200	28,850	28,250	--	--	17,625	10,625	600	17,422	12,122	--	--	9,100	3,022	5,300
15,010	31,734	23,386	4,767	--	--	3,720	1,047	18,619	38,882	1,623	--	--	985	638	37,259
19,082	57,940	75,074	48,691	--	--	34,493	14,198	26,383	88,882	30,476	--	--	22,498	7,978	58,406
30,948	134,915	637,780	446,627	23,277	27,732	409,264	86,354	91,153	1,001,970	831,246	100,186	--	678,157	52,903	170,724

Table 30.—Production and disposition of bark residue by sawmills in Washington by use, area, and county, 1968
(Tons, dry weight)

Economic area and county	All bark	Used ^{1/}					Unused
		Total	Pulp	Board	Fuel	Miscellaneous	
Puget Sound							
Island and San Juan ^{2/}	1,966	--	--	--	--	--	1,966
King	73,502	66,928	--	--	47,642	19,286	6,574
Kitsap	14,548	13,939	--	--	13,939	--	609
Pierce	77,067	77,048	--	--	38,582	38,466	19
Skagit and Whatcom ^{2/}	16,180	11,080	--	--	11,080	--	5,100
Snohomish	137,948	127,226	--	--	122,316	4,910	10,722
Total	321,211	296,221	--	--	233,559	62,662	24,990
Olympic Peninsula							
Clallam	12,209	11,010	--	--	10,918	92	1,199
Grays Harbor and Pacific ^{2/}	80,491	60,931	--	--	58,617	2,314	19,560
Jefferson	2,505	1,698	--	--	1,698	--	807
Mason	41,296	39,400	--	--	39,300	100	1,896
Thurston	7,144	3,950	--	--	1,820	2,130	3,194
Lewis	36,979	6,052	--	--	2,230	3,822	30,927
Total	180,624	123,041	--	--	114,583	8,458	57,583
Lower Columbia							
Clark	15,922	15,867	--	--	14,966	901	55
Cowlitz and Wahkiakum ^{2/}	136,148	136,142	--	--	133,424	2,718	6
Skamania and Klickitat ^{2/}	64,833	29,752	--	--	29,752	--	35,081
Total	216,903	181,761	--	--	178,142	3,619	35,142

Table 30.—Production and disposition of bark residue by sawmills in Washington by use, area, and county, 1968 (continued)
(Tons, dry weight)

Economic area and county	All bark	Used ^{1/}					Unused
		Total	Pulp	Board	Fuel	Miscellaneous	
Central Washington							
Chelan	23,970	13,892	--	--	11,192	2,700	10,078
Grant, Lincoln, Kittitas, and Yakima ^{2/}	73,683	54,448	--	--	47,364	7,084	19,235
Okanogan	38,768	23,347	--	--	23,347	--	15,421
Total	136,421	91,687	--	--	81,903	9,784	44,734
Inland Empire							
Asotin and Walla Walla ^{2/}	13,110	--	--	--	--	--	13,110
Ferry	2,839	--	--	--	--	--	2,839
Pend Oreille	7,060	--	--	--	--	--	7,060
Spokane	16,240	4,727	--	--	2,727	2,000	11,513
Stevens	34,689	--	--	--	--	--	34,689
Total	73,938	4,727	--	--	2,727	2,000	69,211
Total, State	929,097	697,437	--	--	610,914	86,523	231,660

^{1/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{2/} Combined to avoid disclosure.

Table 31.—Number of veneer and plywood mills in Washington by type of mill, area, and county, 1968

Economic area and county	All types	Veneer only	Layup only	Veneer and layup
Puget Sound				
King	3	1	--	2
Kitsap	1	--	--	1
Pierce	2	--	--	2
Skagit	1	--	--	1
Snohomish	3	--	--	3
Whatcom	1	--	--	1
Total	11	1	--	10
Olympic Peninsula				
Clallam	1	--	--	1
Grays Harbor	6	1	1	4
Jefferson	1	1	--	--
Mason	2	1	1	--
Thurston	3	1	2	--
Lewis	6	5	--	1
Total	19	9	4	6
Lower Columbia				
Clark	2	--	--	2
Cowlitz	3	1	--	2
Skamania	3	2	--	1
Total	8	3	--	5
Central Washington				
Yakima	1	--	--	1
Inland Empire				
Spokane	1	--	1	--
Stevens	3	2	--	1
Total	4	2	1	1
Total, State	43	15	5	23

Table 32.—Installed 8-hour capacity of veneer and plywood mills in Washington by type of mill, area, and county, 1968
(Thousand square feet, 3/8-inch basis)

Economic area and county	Veneer only	Layup only	Veneer and layup
Puget Sound			
King	50	--	310
Kitsap	--	--	150
Pierce	--	--	218
Skagit	--	--	175
Snohomish	--	--	365
Whatcom	--	--	115
Total	50	--	1,333
Olympic Peninsula			
Clallam	--	--	150
Grays Harbor	213	175	425
Jefferson	100	--	--
Mason	200	27	--
Thurston	60	132	--
Lewis	1,110	--	2,000
Total	1,683	334	2,575
Lower Columbia			
Clark	--	--	348
Cowlitz	150	--	390
Skamania	133	--	85
Total	283	--	823
Central Washington			
Yakima	--	--	167
Inland Empire			
Spokane	--	60	--
Stevens	230	--	95
Total	230	60	95
Total, State	2,246	394	4,993

Table 33.—Number of veneer and plywood mills in Washington having selected equipment by area and county, 1968.

Economic area and county	4-foot lathe	8-foot lathe	Slicer	Veneer chipper	Core chipper	Cold press	Hot press	Burner
Puget Sound								
King	1	2	1	3	3	--	2	1
Kitsap	--	1	--	1	--	--	1	1
Pierce	1	2	--	2	--	1	2	--
Skagit	1	1	--	1	1	1	1	--
Snohomish	3	1	--	3	3	2	1	1
Whatcom	1	1	--	1	1	--	1	--
Total	7	8	1	11	8	4	8	3
Olympic Peninsula								
Clallam	1	1	1	1	--	--	1	--
Grays Harbor	3	4	1	4	2	2	4	1
Jefferson	--	1	--	1	1	--	--	1
Mason	--	1	--	1	--	--	--	--
Thurston	1	--	--	1	1	2	2	1
Lewis	6	2	--	6	4	--	1	5
Total	11	9	2	14	8	4	8	8
Lower Columbia								
Clark	2	1	--	2	2	--	2	--
Cowlitz	--	3	--	2	1	--	1	1
Skamania	2	2	--	3	3	--	1	2
Total	4	6	--	7	6	--	4	3
Central Washington								
Yakima	1	1	--	1	1	--	1	--
Inland Empire								
Spokane	--	--	--	--	--	--	1	--
Stevens	--	3	--	3	2	--	1	3
Total	--	3	--	3	2	--	2	3
Total, State	23	27	3	36	25	8	23	17

Table 34.—Number of veneer and plywood mills in Washington by lathe log diameter limit and area, 1968

Economic area	Lathe log diameter limit							
	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
Puget Sound	--	--	--	2	--	4	1	4
Olympic Peninsula	4	1	1	4	--	1	2	6
Lower Columbia	--	--	--	--	1	1	1	5
Central Washington	--	--	--	--	--	1	--	--
Inland Empire	1	--	--	1	2	--	--	--
Total, State	5	1	1	7	3	7	4	15

Table 35.—Number of veneer and plywood mills in Washington by size of core produced and area, 1968

Economic area and county	Diameter of cores (inches)						
	3	4	5	6	7	8	9
Puget Sound	--	--	1	4	4	2	--
Olympic Peninsula	5	--	3	3	3	4	1
Lower Columbia	--	--	3	3	1	--	1
Central Washington	--	--	--	1	--	--	--
Inland Empire	1	1	--	1	1	--	--
Total, State	6	1	7	12	9	6	2

Table 36.—Number of veneer and plywood mills in Washington by years of tenure of present mill ownership, area, and years of site occupancy, 1968

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						
6 - 10	3	--	1	2	--	--
11 - 20	3	--	--	--	3	--
21+	5	1	--	--	2	2
Total	11	1	1	2	5	2
Olympic Peninsula						
0 - 2	1	1	--	--	--	--
3 - 5	4	--	4	--	--	--
6 - 10	2	--	--	2	--	--
11 - 20	5	--	--	--	5	--
21+	7	1	1	1	1	3
Total	19	2	5	3	6	3
Lower Columbia						
0 - 2	--	--	--	--	--	--
3 - 5	1	--	1	--	--	--
6 - 10	3	1	--	2	--	--
11 - 20	2	--	--	1	1	--
21+	2	--	--	--	1	1
Total	8	1	1	3	2	1
Central Washington						
6 - 10	1	--	--	1	--	--
Inland Empire						
0 - 2	3	3	--	--	--	--
3 - 5	1	1	--	--	--	--
Total	4	4	--	--	--	--
Total, State						
0 - 2	4	4	--	--	--	--
3 - 5	6	1	5	--	--	--
6 - 10	9	1	1	7	--	--
11 - 20	10	--	--	1	9	--
21+	14	2	1	1	4	6
Total	43	8	7	9	13	6

Table 37.—Average number of operating days of veneer and plywood mills in Washington by type of mill and area, 1968

Economic area	Veneer only	Layup only	Veneer and layup
Puget Sound	230	--	260
Olympic Peninsula	221	240	251
Lower Columbia	213	--	266
Central Washington	--	--	250
Inland Empire	225	220	357
Total, State	221	236	263

Table 38.—Log consumption by veneer and plywood mills in Washington by type of material and area, 1968
(Thousand board feet, Scribner log rule)

Economic area	All types	Sound		Cull
		Live	Dead	
Puget Sound	192,152	187,742	2,460	1,950
Olympic Peninsula	272,762	252,527	12,707	7,528
Lower Columbia	251,538	235,728	5,160	10,650
Central Washington and Inland Empire ^{1/}	127,682	127,482	100	100
Total, State	844,134	803,479	20,427	20,228

^{1/} Combined to avoid disclosure.

Table 39.—Log consumption by veneer and plywood mills in Washington by timber age group and area, 1968
(Thousand board feet, Scribner log rule)

Economic area	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound	192,152	160,881	31,271
Olympic Peninsula	272,762	237,054	35,708
Lower Columbia	251,538	238,986	12,552
Central Washington and Inland Empire ^{1/}	127,682	121,531	6,151
Total, State	844,134	758,452	85,682

^{1/} Combined to avoid disclosure.

Table 40.—Log inventory changes, log consumption, and apparent log receipts by veneer and plywood mills in Washington by area, 1968
(Thousand board feet, Scribner log rule)

Economic area	Log inventory			1968 log consumption	Apparent 1968 log receipts
	January 1, 1968	December 31, 1968	Net change		
Puget Sound	109,318	70,892	-38,426	192,152	153,726
Olympic Peninsula	44,452	42,307	-2,145	272,762	270,617
Lower Columbia	62,081	65,016	2,935	251,538	254,473
Central Washington and Inland Empire ^{1/}	31,886	19,894	-11,992	127,682	115,690
Total, State	247,737	198,109	-49,628	844,134	794,506

^{1/} Combined to avoid disclosure.

Table 41.—Origin of logs consumed by veneer and plywood mills in Washington by ownership class, area, and county, 1968
(Thousand board feet, Scribner log rule)

Economic area and county	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
King	52,994	9,300	--	--	--	37,714	5,580	400
Kitsap and Pierce ^{1/}	44,000	25,150	6,350	--	3,900	2,980	5,620	--
Skagit, Snohomish, and Whatcom ^{1/}	95,158	73,170	10,125	--	--	--	1,653	10,210
Total	192,152	107,620	16,475	--	3,900	40,694	12,853	10,610
Olympic Peninsula								
Clallam, Jefferson, and Mason ^{1/}	127,639	55,994	28,505	--	--	27,011	6,664	9,465
Grays Harbor	52,988	39,303	1,045	--	--	--	11,140	1,500
Thurston	15,000	--	12,000	--	1,500	--	--	1,500
Lewis	77,135	61,889	10,019	--	800	935	46	3,446
Total	272,762	157,186	51,569	--	2,300	27,946	17,850	15,911
Lower Columbia								
Clark and Cowlitz ^{1/}	187,538	52,716	20,543	959	--	102,913	6,208	4,199
Skamania	64,000	51,450	8,350	--	--	--	--	4,200
Total	251,538	104,166	28,893	959	--	102,913	6,208	8,399
Central Washington and Inland Empire								
Yakima and Stevens ^{1/}	127,682	24,056	8,814	510	19,684	18,294	--	56,324
Total, State	844,134	393,028	105,751	1,469	25,884	189,847	36,911	91,244

^{1/} Combined to avoid disclosure.

Table 42.—Relative dependency of Washington veneer and plywood mills for logs by ownership origin and area, 1968
(Number of mills)

Economic area and county	National Forest			State			Bureau of Land Management			Other public						Forest industry			Farmer and miscellaneous private						
	Dependancy per cent			Dependancy per cent			Dependancy per cent			Dependancy per cent			Dependancy per cent			Dependancy per cent			Dependancy per cent						
	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	3	2	2	4	7	--	--	11	--	--	10	1	--	7	3	--	1	5	5	1	--	5	3	2	1
Olympic Peninsula	6	3	6	4	6	9	2	19	--	--	17	2	--	15	4	--	--	15	2	1	1	10	8	1	--
Lower Columbia	1	2	2	3	4	2	2	7	1	--	8	--	--	5	1	1	1	6	2	--	--	4	4	--	--
Central Washington and Inland Empire ^{1/}	2	1	--	2	3	--	--	4	1	--	4	--	--	2	3	--	--	5	--	--	--	1	2	1	1
Total, State	12	9	11	11	16	21	4	41	2	--	39	3	--	29	11	1	2	31	9	2	1	20	17	4	2

^{1/} Combined to avoid disclosure.

Table 43.—Log consumption by veneer and plywood mills in Washington by species, area, and county, 1968
(Thousand board feet, Scribner log rule)

Economic area and county	All species	Douglas-fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}	Hardwoods
Puget Sound									
King	52,993	15,875	35,133	925	--	--	--	1,020	40
Kitsap and Pierce ^{2/}	44,001	30,370	3,088	6,735	240	--	480	3,088	--
Skagit, Snohomish, and Whatcom ^{2/}	95,158	50,468	31,638	4,970	--	--	330	4,145	3,607
Total	192,152	96,713	69,859	12,630	240	--	810	8,253	3,647
Olympic Peninsula									
Clallam, Jefferson, and Mason ^{2/}	127,639	79,400	25,363	4,974	--	--	--	17,902	--
Grays Harbor	52,988	9,600	19,238	8,800	850	--	900	13,600	--
Thurston	15,000	15,000	--	--	--	--	--	--	--
Lewis	77,135	56,716	13,853	3,632	240	--	1,850	--	844
Total	272,762	160,716	58,454	17,406	1,090	--	2,750	31,502	844
Lower Columbia									
Clark and Cowlitz ^{2/}	187,538	180,664	4,290	--	--	--	--	2,584	--
Skamania	64,000	43,850	12,850	1,000	300	5,250	--	750	--
Total	251,538	224,514	17,140	1,000	300	5,250	--	3,334	--
Central Washington and Inland Empire ^{2/}									
Yakima, Spokane, and Stevens ^{2/}	127,682	65,547	2,040	8,913	6,702	26,347	--	18,133	--
Total, State	844,134	547,490	147,493	39,949	8,332	31,597	3,560	61,222	4,491

^{1/} Cedar and western larch.

^{2/} Combined to avoid disclosure.

Table 44.—Log consumption by veneer and plywood mills in Washington by species, area, and type of material, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}	Hardwoods
Puget Sound									
Sound ^{2/}	190,202	95,039	69,859	12,390	228	--	786	8,253	3,647
Cull	1,950	1,674	--	240	12	--	24	--	--
Total	192,152	96,713	69,859	12,630	240	--	810	8,253	3,647
Olympic Peninsula									
Sound ^{2/}	265,234	158,591	55,192	15,390	1,090	--	2,625	31,502	844
Cull	7,528	2,125	3,262	2,016	--	--	125	--	--
Total	272,762	160,716	58,454	17,406	1,090	--	2,750	31,502	844
Lower Columbia									
Sound ^{2/}	240,888	218,704	12,750	1,000	300	4,800	--	3,334	--
Cull	10,650	5,810	4,390	--	--	450	--	--	--
Total	251,538	224,514	17,140	1,000	300	5,250	--	3,334	--
Central Washington and Inland Empire ^{3/}									
Sound ^{2/}	127,582	65,497	2,020	8,913	6,702	26,347	--	18,103	--
Cull	100	50	20	--	--	--	--	30	--
Total	127,682	65,547	2,040	8,913	6,702	26,347	--	18,133	--
Total, State									
Sound ^{2/}	823,906	537,831	139,821	37,693	8,320	31,147	3,411	61,192	4,491
Cull	20,228	9,659	7,672	2,256	12	450	149	30	--
Total	844,134	547,490	147,493	39,949	8,332	31,597	3,560	61,222	4,491

^{1/} Cedar and western larch.

^{2/} Includes both live and dead logs.

^{3/} Combined to avoid disclosure.

Table 45.—Production and disposition of wood and bark residues by veneer and plywood mills in Washington by area, and county, 1968
(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	84,859	84,727	132	65,308	65,308	--	19,551	19,419	132
Kitsap and Pierce ^{2/}	97,420	78,980	18,440	78,290	67,760	10,530	19,130	11,220	7,910
Skagit, Snohomish, and Whatcom ^{2/}	270,889	205,289	65,600	207,683	161,083	46,600	63,206	44,206	19,000
Total	453,168	368,996	84,172	351,281	294,151	57,130	101,887	74,845	27,042
Olympic Peninsula									
Clallam, Jefferson, and Mason ^{2/}	172,613	169,863	2,750	127,335	127,285	50	45,278	42,578	2,700
Grays Harbor	58,863	52,563	6,300	46,123	46,123	--	12,740	6,440	6,300
Thurston	16,305	16,305	--	14,405	14,405	--	1,900	1,900	--
Lewis	82,135	55,484	26,651	62,636	54,858	7,778	19,499	626	18,873
Total	329,916	294,215	35,701	250,499	242,671	7,828	79,417	51,544	27,873
Lower Columbia									
Clark and Cowlitz ^{2/}	220,708	208,258	12,450	175,744	168,044	7,700	44,964	40,214	4,750
Skamania	82,010	65,970	16,040	63,750	56,670	7,080	18,260	9,300	8,960
Total	302,718	274,228	28,490	239,494	224,714	14,780	63,224	49,514	13,710
Central Washington and Inland Empire^{2/}									
Yakima, Spokane, and Stevens ^{2/}	154,920	106,550	48,370	116,060	102,550	13,510	38,860	4,000	34,860
Total, State	1,240,722	1,043,989	196,733	957,334	864,086	93,248	283,388	179,903	103,485

^{1/} Used residues were not necessarily consumed in the area or county in which produced.

^{2/} Combined to avoid disclosure.

Table 46.—Production and disposition of wood residue by veneer and plywood mills in Washington by type of residue, use, area, and county, 1968
(Tons, dry weight)

Economic area and county	All types											Coarse ^{1/}					Fine ^{2/}					
	Total	Total used ^{3/}	Pulp	Board	Fuel	Misc.	Unused	Total	Total used ^{3/}	Pulp	Board	Fuel	Misc.	Unused	Total	Total used ^{3/}	Pulp	Board	Fuel	Misc.	Unused	
Puget Sound																						
King	55,308	65,308	33,964	--	31,344	--	--	61,486	61,486	33,964	--	27,522	--	--	3,822	3,822	--	--	--	3,822	--	--
Kitsap and Pierce	78,290	67,760	21,795	--	36,245	9,720	10,530	73,408	64,138	21,795	--	35,093	7,250	9,270	4,882	3,622	--	--	--	1,152	2,470	1,260
Skagit, Snohomish, and Whatcom ^{4/}	207,683	161,083	40,002	--	120,901	180	46,600	199,642	153,042	40,002	--	112,860	180	46,600	8,041	8,041	--	--	--	8,041	--	--
Total	351,281	294,151	95,761	--	188,490	9,900	57,130	334,536	278,666	95,761	--	175,475	7,430	55,870	16,745	15,485	--	--	13,015	2,470	1,260	
Olympic Peninsula																						
Clallam, Jefferson, and Mason ^{4/}	127,335	127,285	108,130	--	4,605	14,550	50	124,540	124,490	108,130	--	1,810	14,550	50	2,795	2,795	--	--	--	2,795	--	--
Grays Harbor	46,123	46,123	16,800	--	25,668	3,655	--	40,708	40,708	16,800	--	20,253	3,655	--	5,415	5,415	--	--	--	5,415	--	--
Thurston	14,405	14,405	1,684	--	12,721	--	--	11,954	11,954	1,684	--	10,270	--	--	2,451	2,451	--	--	--	2,451	--	--
Lewis	62,636	54,858	53,303	95	1,460	--	7,778	62,148	54,618	53,303	95	1,220	--	7,530	488	240	--	--	--	240	--	248
Total	250,499	242,671	179,917	95	44,454	18,205	7,828	239,350	231,770	179,917	95	33,553	18,205	7,580	11,149	10,901	--	--	10,901	--	--	248
Lower Columbia																						
Clark and Cowlitz ^{4/}	175,744	168,044	118,918	--	45,111	4,015	7,700	167,242	159,542	118,918	--	36,609	4,015	7,700	8,502	8,502	--	--	--	8,502	--	--
Skamania	63,750	56,670	45,500	--	7,670	3,500	7,080	62,280	55,200	45,500	--	6,200	3,500	7,080	1,470	1,470	--	--	--	1,470	--	--
Total	239,494	224,714	164,418	--	52,781	7,515	14,780	229,522	214,742	164,418	--	42,809	7,515	14,780	9,972	9,972	--	--	9,972	--	--	--
Central Washington and Inland Empire																						
Yakima, Spokane, and Stevens ^{4/}	116,060	102,550	71,800	--	750	30,000	13,510	110,700	99,950	71,800	--	750	27,400	10,750	5,360	2,600	--	--	--	2,600	--	2,600
Total, State	957,334	864,086	511,896	95	286,475	65,620	93,248	914,108	825,128	511,896	95	252,587	60,550	88,980	43,226	38,958	--	--	33,888	5,070	5,070	4,268

^{1/} Coarse residue includes log trim, cores, veneer clippings, rejected veneer, roundup, spur trim.

^{2/} Fine residue includes sawdust and sander dust.

^{3/} Used residues were not necessarily consumed in the area or county in which produced.

^{4/} Combined to avoid disclosure.

Table 47.—Production and disposition of bark residue by veneer and plywood mills in Washington by use, area, and county, 1968 (Tons, dry weight)

Economic area and county	All bark	Total used	Used 1/			Unused
			Pulp	Board	Fuel		Other
Puget Sound						
King	19,551	19,419	--	--	19,419	132
Kitsap, Pierce	19,130	11,220	--	--	11,220	7,910
Skagit, Snohomish and Whatcom 2/	63,206	44,206	--	--	44,206	19,000
Total	101,887	74,845	--	--	74,845	27,042
Olympic Peninsula						
Clallam, Jefferson and Mason 2/	45,278	42,578	--	--	42,578	2,700
Grays Harbor	12,740	6,440	--	--	6,440	6,300
Thurston	1,900	1,900	--	--	--	--
Lewis	19,499	626	--	--	626	1,900
Total	79,417	51,544	--	--	626	18,873
Lower Columbia						
Clark, Cowlitz 2/ Skamania	44,964	40,214	--	--	49,644	1,900
	18,260	9,300	--	--	9,300	27,873
Total	63,224	49,514	--	--	49,514	4,750
						8,960
						13,710

Table 47.—Production and disposition of bark residue by veneer and plywood mills in Washington by use, area, and county, 1968 (continued)
(Tons, dry weight)

Economic area and county	All bark	Total used	Used ^{1/}			Unused	
			Pulp	Board	Fuel	Other	
Central Washington and Inland Empire ^{2/}							
Yakima, Spokane and Stevens ^{2/}	38,860	4,000	--	--	--	4,000	34,860
Total	38,860	4,000	--	--	--	4,000	34,860
Total, State	283,388	179,903	--	--	174,003	5,900	103,485

^{1/} Used residues were not necessarily consumed in the area or county in which produced.

^{2/} Combined to avoid disclosure.

Table 48.—Number of pulp and board mills in Washington by type of mill, area, and county, 1968

Economic area and county	All mills	Type of pulpmill					Type of board mill					
		Sulfite	Sulfate	Groundwood		Semichemical	Hardboard	Particleboard	Insulation board			
				Disk	Drum							
Puget Sound												
Pierce	3	--	1	--	1		--	--		--	--	--
Skagit	2	1	--	--	--		1	--		--	--	--
Snohomish	4	1	2	1	--		--	--		--	--	--
Whatcom	1	1	--	--	--		--	--		--	--	--
Total	10	3	3	1	1	1	1	--		1	--	--
Olympic Peninsula												
Clallam	4	2	--	2	--		--	--		--	--	--
Grays Harbor	2	2	--	--	--		--	--		--	--	--
Jefferson	1	--	1	--	--		--	--		--	--	--
Mason	1	--	--	--	--		--	--		--	--	1
Total	8	4	1	2	--	--	--	--		--	--	1
Lower Columbia												
Clark	4	2	1	1	--		--	--		--	--	--
Cowlitz	9	1	4	2	--	1	--	1		--	1	--
Total	13	3	5	3	--	1	--	1		--	1	--
Inland Empire												
Spokane	2	1	--	1	--	--	--	--		--	--	--
Walla Walla	2	--	1	--	--	1	--	1		--	--	--
Total	4	1	1	1	--	1	--	1		--	--	--
Total, State	35	11	10	7	1	3	1	3		1	1	1

Table 49.—Installed 24-hour capacity of pulp and board mills in Washington by type of mill, area, and county, 1968
(Tons)

Economic area and county	All mills	Type of pulpmill						Type of board mill		
		Sulfite	Sulfate	Groundwood		Semichemical	Hardboard	Particleboard	Insulation board	
				Disk	Drum					
Puget Sound										
Pierce	1,270	--	460	--	350	460	--	--	--	
Skagit	180	130	--	--	--	--	50	--	--	
Snohomish	1,687	310	520	857	--	--	--	--	--	
Whatcom	500	500	--	--	--	--	--	--	--	
Total	3,637	940	980	857	350	460	50	--	--	
Olympic Peninsula										
Clallam	1,015	570	--	445	--	--	--	--	--	
Grays Harbor	860	860	--	--	--	--	--	--	--	
Jefferson	400	--	400	--	--	--	--	--	--	
Mason	130	--	--	--	--	--	--	--	130	
Total	2,405	1,430	400	445	--	--	--	--	130	
Lower Columbia										
Clark	1,380	623	710	47	--	--	--	--	--	
Cowlitz	3,054	280	2,390	143	--	225	--	16	--	
Total	4,434	903	3,100	190	--	225	--	16	--	
Inland Empire										
Spokane	120	80	--	40	--	--	--	--	--	
Walla Walla	620	--	450	--	--	170	--	--	--	
Total	740	80	450	40	--	170	--	--	--	
Total, State	11,216	3,353	4,930	1,532	350	855	50	16	130	

Table 50.—Number of pulp and board plants¹ in Washington by years of tenure of present ownership and years of site occupancy, 1968

Site occupancy (years)	Tenure of present ownership (years)				
	0-2	3-5	6-10	11-20	21+
0 - 2	--	--	--	--	--
3 - 5	--	--	--	--	--
6 - 10	--	--	1	--	--
11 - 20	1	--	2	5	--
21+	--	--	--	2	15
Total	1	--	3	7	15

^{1/} For this table, where several mills having different processes occur at one location and in one ownership, they are considered a single entry.

Table 51.—Average number of operating days of pulp and board mills in Washington by area, 1968

Economic area	Pulp	Board
Puget Sound	353	300
Olympic Peninsula	352	245
Lower Columbia	350	^{1/} 22
Inland Empire	355	--
Total, State	352	189

^{1/} The one board mill in this area was closed most of the year.

Table 52.—Wood consumption by pulp and board mills in Washington by type of material consumed and area, 1968

Economic area	Roundwood				Other			
	Total	Sound live ^{1/}	Sound dead	Cull	Total	Chips		Sawdust
						From mill residue	From roundwood chipping mill	
	--	Thousand board feet,	--		--	Tons	--	
		<u>Scribner log rule</u>						
Puget Sound	540,094	447,194	26,900	66,000	1,516,299	1,501,899	14,400	--
Olympic Peninsula	431,836	399,576	--	32,260	487,306	413,304	24,922	49,080
Lower Columbia and Inland Empire ^{2/}	148,033	68,780	2,000	77,253	3,004,084	2,748,375	33,409	222,300
Total, State	1,119,963	915,550	28,900	175,513	5,007,689	4,663,578	72,731	271,380

^{1/} Includes cordwood: 23,700 MBF from Puget Sound and 14,195 MBF from Olympic Peninsula.

^{2/} Combined to avoid disclosure.

Table 53.—Log consumption by pulp and board mills in Washington by timber age group and area, 1968
(Thousand board feet, Scribner log rule)

Economic area	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound	540,094	417,402	122,692
Olympic Peninsula	431,836	385,681	46,155
Lower Columbia and Inland Empire ^{1/}	148,033	42,353	105,680
Total, State	1,119,963	845,436	274,527

^{1/} Combined to avoid disclosure.

Table 54.—Ownership origin of logs consumed by pulp and board mills in Washington by area, 1968
(Thousand board feet, Scribner log rule)

Economic area	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous, private
						Own wood supply	Other wood supply	
Puget Sound	540,094	97,374	61,291	---	14,334	288,682	22,521	55,892
Olympic Peninsula	431,836	9,425	74,227	---	32,500	286,972	5,880	22,832
Lower Columbia-Inland Empire ^{1/}	148,033	24,021	2,522	---	---	113,490	8,000	---
Total, State	1,119,963	130,820	138,040	---	46,834	689,144	36,401	78,724

^{1/} Combined to avoid disclosure.

Table 55.—Relative dependency of Washington pulp and board plants¹ for logs by ownership origin and area, 1968
(Number of plants)

Economic area	National Forest		State		Bureau of Land Management		Other public		Forest industry		Farmer and miscellaneous, private						
	Dependency per cent		Dependency per cent		Dependency per cent		Dependency per cent		Dependency per cent		Dependency per cent						
	0	1-32	33-66	67-100	0	1-32	33-66	67-100	0	1-32	33-66	67-100					
Puget Sound	5	4	--	--	9	--	--	7	2	--	6	3	1	4	3	1	1
Olympic Peninsula	2	5	--	--	7	--	--	6	1	--	2	1	3	4	3	4	--
Lower Columbia and Inland Empire ^{2/}	7	1	--	2	10	--	--	10	--	--	9	--	1	8	--	2	10
Total, State	14	10	--	2	26	--	--	23	3	--	13	4	6	3	17	7	17

^{1/} For this table where several mills having different processes occur at one location and in one ownership, they are considered as a single entry.

^{2/} Combined to avoid disclosure.

Table 56.—Log consumption by pulp and board mills in Washington by species, area, and type of material, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Hemlock	True fir	Spruce	Cedar	Hardwood ^{1/}
Puget Sound							
Sound	474,094	22,950	243,529	86,358	7,847	11,760	101,650
Cull	66,000	700	41,830	23,470	--	--	--
Total	540,094	23,650	285,359	109,828	7,847	11,760	101,650
Olympic Peninsula							
Sound	399,576	6,443	338,523	25,698	7,879	348	20,685
Cull	32,260	10,260	19,800	2,200	--	--	--
Total	431,836	16,703	358,323	27,898	7,879	348	20,685
Lower Columbia- and Inland Empire ^{2/}							
Sound	70,780	--	52,263	623	6,057	--	11,837
Cull	77,253	8,000	55,042	14,211	--	--	--
Total	148,033	8,000	107,305	14,834	6,057	--	11,837
Total, State							
Sound	944,450	29,393	634,315	112,679	21,783	12,108	134,172
Cull	175,513	18,960	116,672	39,881	--	--	--
Total	1,119,963	48,353	750,987	152,560	21,783	12,108	134,172

^{1/} Cottonwood and alder.

^{2/} Combined to avoid disclosure.

Table 57.—Number of "other" industry mills in Washington by type of mill, area, and county, 1968

(Number of mills)

Economic area and county	All types	Shake and shingle	Export	Pole, post, and piling
Puget Sound				
King	5	3	1	1
Kitsap	1	--	--	1
Pierce	6	1	4	1
Skagit	22	20	--	2
Snohomish	23	18	5	--
Whatcom	6	4	1	1
Total	63	46	11	6
Olympic Peninsula				
Clallam	17	15	1	1
Grays Harbor	65	56	9	--
Jefferson	7	7	--	--
Lewis	11	11	--	--
Mason	2	--	--	2
Pacific	4	4	--	--
Thurston	4	--	1	3
Total	110	93	11	6
Lower Columbia				
Clark	5	4	--	1
Cowlitz	13	7	4	2
Skamania	2	2	--	--
Wahkiakum	4	4	--	--
Total	24	17	4	3
Inland Empire				
Pend Oreille	2	1	--	1
Spokane	1	--	--	1
Stevens	3	1	--	2
Total	6	2	--	4
Total State	203	158	26	19

Table 58.—Installed 8-hour capacity of shake and shingle mills in Washington by area and county, 1968

(Squares)

Economic area and county	Shake and shingle
Puget Sound	
King, Pierce, Kitsap ^{1/}	287
Skagit	1,962
Snohomish	1,101
Whatcom	<u>133</u>
Total	<u><u>3,483</u></u>
Olympic Peninsula	
Clallam	1,634
Grays Harbor	5,335
Jefferson	517
Mason	--
Lewis	465
Pacific	347
Thurston	<u>--</u>
Total	<u><u>8,298</u></u>
Lower Columbia	
Clark	133
Cowlitz	539
Skamania	7
Wahkiakum	<u>271</u>
Total	<u><u>950</u></u>
Inland Empire	
Pend Oreille	20
Spokane	--
Stevens	<u>25</u>
Total	<u><u>45</u></u>
Total, State	12,776

^{1/} Combined to avoid disclosure.

Table 59.—Number of "other" industry mills in Washington with selected equipment by area and county, 1968

Economic area and county	Chipper	Barker	Burner
Puget Sound			
King	--	1	1
Kitsap	--	1	--
Pierce	--	1	1
Skagit	1	3	17
Snohomish	--	--	15
Whatcom	--	--	4
Total	1	6	38
Olympic Peninsula			
Clallam	--	1	13
Grays Harbor	3	1	45
Jefferson	--	--	5
Lewis	--	--	8
Mason	--	2	--
Pacific	--	--	4
Thurston	--	2	2
Total	3	6	77
Lower Columbia			
Clark	--	--	1
Cowlitz	2	3	2
Wahkiakum	--	--	3
Total	2	3	6
Inland Empire			
Pend Oreille	--	--	1
Spokane	--	1	1
Stevens	2	2	1
Total	2	3	3
Total State	8	18	124

Table 60.—Number of “other” industry mills in Washington by years of tenure of present ownership, type of mill, and years of site occupancy, 1968

Type of mill and site occupancy (years)	All mills	Tenure of present ownership (years)				
		0-2	3-5	6-10	11-20	21+
Shake and shingle						
0-2	24	24	--	--	--	--
3-5	36	1	35	--	--	--
6-10	46	5	6	35	--	--
11-20	37	5	6	3	23	--
21+	15	3	2	1	4	5
Total	158	38	49	39	27	5
Export						
0-2	7	7	--	--	--	--
3-5	9	1	8	--	--	--
6-10	6	1	--	5	--	--
11-20	--	--	--	--	--	--
21+	4	--	2	--	2	--
Total	26	9	10	5	2	--
Pole, post, and piling						
0-2	--	--	--	--	--	--
3-5	5	--	5	--	--	--
6-10	3	--	--	3	--	--
11-20	3	--	1	--	2	--
21+	8	1	--	1	--	6
Total	19	1	6	4	2	6
Total						
0-2	31	31	--	--	--	--
3-5	50	2	48	--	--	--
6-10	55	6	6	43	--	--
11-20	40	5	7	3	25	--
21+	27	4	4	2	6	11
Total	203	48	65	48	31	11

Table 61.—Average number of operating days per year of “other” industry mills in Washington by type of mill and area, 1968

Economic area	Shingle and shake	Export	Pole, post, and piling
Puget Sound	203	244	235
Olympic Peninsula	215	251	187
Lower Columbia	183	248	269
Inland Empire	188	--	189
Total, State	208	248	216

Table 62.—Log consumption by "other" industry mills in Washington by type of material, area, and type of mill, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of mill	All types	Sound		Cull
		Live	Dead	
Puget Sound				
Shake and shingle	76,555	71,169	5,386	--
Export	502,903	500,903	1,000	1,000
Pole, post, and piling	29,700	29,700	--	--
Total	609,158	601,772	6,386	1,000
Olympic Peninsula				
Shake and shingle	191,026	125,417	61,001	4,608
Export	585,822	583,082	--	2,740
Pole, post, and piling	12,758	12,705	--	53
Total	789,606	721,204	61,001	7,401
Lower Columbia and Inland Empire ^{1/}				
Shake and shingle	37,292	34,637	2,465	190
Export	145,706	142,706	--	3,000
Pole, post, and piling	14,467	14,467	--	--
Total	197,465	191,810	2,465	3,190
Total State				
Shake and shingle	304,873	231,223	68,852	4,798
Export	1,234,431	1,226,691	1,000	6,740
Pole, post, and piling	56,925	56,872	--	53
Total	1,596,229	1,514,786	69,852	11,591

^{1/} Combined to avoid disclosure.

Table 63.—Log consumption by “other” industry mills in Washington by timber age group, area, and type of mill, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of mill	All age groups	Old growth (100+ years)	Young growth (less than 100 years)
Puget Sound			
Shake and shingle	76,555	75,674	881
Export	502,903	398,457	104,446
Pole, post, and piling	29,700	7,159	22,541
Total	609,158	481,290	127,868
Olympic Peninsula			
Shake and shingle	191,026	190,985	41
Export	585,822	484,388	101,434
Pole, post, and piling	12,758	408	12,350
Total	789,606	675,781	113,825
Lower Columbia and Inland Empire ^{1/}			
Shake and shingle	37,292	36,658	634
Export	145,706	79,460	66,246
Pole, post, and piling	14,467	1,300	13,167
Total	197,465	117,418	80,047
Total State			
Shake and shingle	304,873	303,317	1,556
Export	1,234,431	962,305	272,126
Pole, post, and piling	56,925	8,867	48,058
Total	1,596,229	1,274,489	321,740

^{1/} Combined to avoid disclosure.

Table 64.—Ownership origin of logs consumed by "other" industry mills in Washington by area and type of mill, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of mill	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
Shake and shingle	76,555	26,990	8,649	60	90	1,925	35,013	3,828
Export	502,903	109,290	72,934	--	6,239	184,030	78,948	51,462
Pole, post, and piling	29,700	5,543	980	--	247	1,920	11,443	9,567
Total	609,158	141,823	82,563	60	6,576	187,875	125,404	64,857
Olympic Peninsula								
Shake and shingle	191,026	9,309	48,516	272	41,577	--	63,891	27,461
Export	585,822	28,546	154,201	--	1,397	230,537	92,844	78,297
Pole, post, and piling	12,758	1,761	5,987	136	1,212	14	10	3,638
Total	789,606	39,616	208,704	408	44,186	230,551	156,745	109,396
Lower Columbia and Inland Empire ^{1/}								
Shake and shingle	37,292	1,731	280	--	23	20,660	13,851	747
Export	145,706	46,172	31,940	--	--	1,940	35,906	29,748
Pole, post, and piling	14,467	1,520	822	--	1,946	150	3,900	6,129
Total	197,465	49,423	33,042	--	1,969	22,750	53,657	36,624
Total State								
Shake and shingle	304,873	38,030	57,445	332	41,690	22,585	112,755	32,036
Export	1,234,431	184,008	259,075	--	7,636	416,507	207,698	159,507
Pole, post, and piling	56,925	8,824	7,789	136	3,405	2,084	15,353	19,334
Total	1,596,229	230,862	324,309	468	52,731	441,176	335,806	210,877

^{1/} Combined to avoid disclosure.

Table 65.—Ownership origin of logs consumed by "other" industry mills in Washington by area and county, 1968
(Thousand board feet, Scribner log rule)

Economic area and county	All owners	National Forest	State	Bureau of Land Management	Other public	Forest industry		Farmer and miscellaneous private
						Own wood supply	Other wood supply	
Puget Sound								
King	27,992	16,059	2,000	--	--	--	500	9,433
Kitsap, Pierce ^{1/}	288,113	21,430	31,280	--	--	184,930	44,019	6,434
Skagit	48,837	10,805	3,477	60	337	1,925	29,005	3,228
Snohomish	210,770	76,025	39,372	--	6,239	1,000	47,497	40,637
Whatcom	33,446	17,504	6,434	--	--	--	4,383	5,125
Total	609,158	141,823	82,563	60	6,576	187,875	125,404	64,857
Olympic Peninsula								
Clallam	106,345	21,277	54,724	--	82	--	27,212	3,050
Grays Harbor	597,500	15,863	137,137	272	35,059	230,537	95,805	82,827
Jefferson	14,592	--	5,303	--	7,833	--	1,456	--
Lewis	7,841	735	4,079	--	--	--	2,272	755
Mason, Thurston ^{1/}	42,658	1,741	5,967	136	1,212	14	30,000	3,588
Pacific	20,670	--	1,494	--	--	--	--	19,176
Total	789,606	39,616	208,704	408	44,186	230,551	156,745	109,396
Lower Columbia								
Clark	1,344	1,156	58	--	23	--	38	69
Cowlitz	181,099	46,373	32,290	--	--	22,650	48,939	30,847
Skamania, Wahkiakum ^{1/}	4,765	51	32	--	--	--	4,680	2
Total	187,208	47,580	32,380	--	23	22,650	53,657	30,918
Inland Empire								
Pend Oreille, Spokane ^{1/}	3,052	1,184	548	--	250	100	--	970
Stevens	7,205	659	114	--	1,696	--	--	4,736
Total	10,257	1,843	662	--	1,946	100	--	5,706
Total, State	1,596,229	230,862	324,309	468	52,731	441,176	335,806	210,877

^{1/} Combined to avoid disclosure.

Table 66.—Relative dependency of Washington "other" industry mills for logs by ownership origin, area, and type of mill, 1968
(Number of mills)

Economic area and type of mill	National Forest			State			Bureau of Land Management			Other public			Forest industry			Farmer and miscellaneous private													
	Dependency			Dependency			Dependency			Dependency			Dependency			Dependency													
	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	12	13	6	15	25	16	4	1	45	1	--	--	45	1	--	--	44	1	1	--	11	14	7	14	35	6	2	3	
Shake and shingle	2	4	5	--	3	7	--	1	11	--	--	--	9	2	--	--	8	1	--	2	5	3	2	1	3	7	1	--	
Export	2	3	--	1	4	2	--	--	6	--	--	--	5	--	--	--	5	1	--	--	1	2	3	--	1	3	2	--	
Pole, post, and piling	16	20	11	16	32	25	4	2	62	1	--	--	59	3	--	--	57	3	1	2	17	19	12	15	39	16	5	3	
Total	72	11	5	5	57	14	8	14	92	1	--	--	62	9	8	14	93	--	--	--	51	6	4	32	71	8	5	9	
Olympic Peninsula	8	2	1	--	3	1	5	2	11	--	--	--	10	1	--	--	9	1	--	1	4	2	3	2	3	7	--	1	
Shake and shingle	3	3	--	--	1	3	1	1	5	1	--	--	5	1	--	--	5	--	--	1	5	1	--	--	2	2	1	1	
Export	83	16	6	5	61	18	14	17	108	2	--	--	77	11	8	14	107	1	--	2	60	9	7	34	76	17	6	11	
Pole, post, and piling	Total	10	--	2	5	11	4	1	1	17	--	--	16	1	--	--	15	--	--	2	8	2	1	6	14	3	--	--	
Lower Columbia	--	2	2	--	1	2	1	--	4	--	--	4	--	--	--	3	1	--	--	1	2	1	--	1	1	1	2	--	
Shake and shingle	3	--	--	--	2	1	--	--	3	--	--	3	--	--	--	2	1	--	--	--	--	--	3	--	3	--	3	--	
Export	13	2	4	5	14	7	2	1	24	--	--	--	23	1	--	--	20	2	--	2	9	4	2	9	15	7	2	--	
Pole, post, and piling	Total	1	--	--	1	1	--	--	2	--	--	--	2	--	--	--	2	--	--	--	2	--	--	--	--	1	--	1	
Inland Empire	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Shake and shingle	1	--	--	1	1	1	--	--	2	--	--	--	2	--	--	--	2	--	--	--	2	--	--	--	--	1	--	--	
Export	1	1	2	--	--	2	2	--	4	--	--	--	1	3	--	--	3	1	--	--	4	--	--	--	--	2	1	1	
Pole, post, and piling	2	1	2	1	1	3	2	--	6	--	--	--	3	3	--	--	5	1	--	--	6	--	--	--	--	3	1	2	
Total	95	24	13	26	94	35	13	16	156	2	--	--	125	11	8	14	154	1	1	2	72	22	12	52	120	18	7	13	
Washington State	10	8	8	--	7	10	6	3	26	--	--	--	23	3	--	--	20	3	--	3	10	7	6	3	7	15	3	1	
Shake and shingle	9	7	2	1	7	8	3	1	18	1	--	--	14	4	--	1	15	3	--	1	10	3	3	3	3	10	4	2	
Export	114	39	23	27	108	53	22	20	200	3	--	--	162	18	8	15	189	7	1	6	92	32	21	58	130	43	14	16	
Pole, post, and piling	Total	162	18	8	15	162	18	8	15	162	18	8	15	162	18	8	15	162	18	8	15	162	18	8	15	162	18	8	15

Table 67.—Log consumption by "other" industry mills in Washington by species, area, and type of material, 1968
(Thousand board feet, Scribner log rule)

Economic area and type of material	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}
Puget Sound								
Sound	608,158	154,697	280,099	73,601	1,470	--	710	97,581
Cull	1,000	100	500	300	--	--	--	100
Total	609,158	154,797	280,599	73,901	1,470	--	710	97,681
Olympic Peninsula								
Sound	782,205	86,626	336,272	65,235	41,486	--	2,018	250,568
Cull	7,401	61	2,579	79	--	--	--	4,682
Total	789,606	86,687	338,851	65,314	41,486	--	2,018	255,250
Lower Columbia								
Sound	184,208	63,050	62,882	13,003	735	831	507	43,200
Cull	3,000	1,200	1,200	--	--	--	--	600
Total	187,208	64,250	64,082	13,003	735	831	507	43,800
Inland Empire								
Sound	10,067	--	--	--	--	--	--	10,067
Cull	190	--	--	--	--	--	--	190
Total	10,257	--	--	--	--	--	--	10,257
Total State								
Sound	1,584,638	304,373	679,253	151,839	43,691	831	3,235	401,416
Cull	11,591	1,361	4,279	379	--	--	--	5,572
Total	1,596,229	305,734	683,532	152,218	43,691	831	3,235	406,988

^{1/} Includes cedar, western larch, and lodgepole pine.

Table 68.—Log consumption by "other" industry mills in Washington by species, area, and county, 1968
(Thousand board feet, Scribner log rule)

Economic area and county	All species	Douglas fir	Hemlock	True firs	Spruce	Ponderosa pine	White pine	Other softwoods ^{1/}
Puget Sound								
Island	--	--	--	--	--	--	--	--
King	27,992	2,509	10,000	6,000	--	--	--	9,483
Kitsap and Pierce ^{2/}	288,113	84,269	149,319	45,820	1,470	--	--	7,235
San Juan	--	--	--	--	--	--	--	--
Skagit	48,837	1,860	--	--	--	--	--	46,977
Snohomish	210,770	61,742	109,196	12,414	--	--	710	26,708
Whatcom	33,446	4,417	12,084	9,667	--	--	--	7,278
Total	609,158	154,797	280,599	73,901	1,470	--	710	97,681
Olympic Peninsula								
Clallam	106,345	2,890	37,000	11,500	5,750	--	--	49,205
Grays Harbor	597,500	67,619	293,751	53,814	35,736	--	2,018	144,562
Jefferson	14,592	--	--	--	--	--	--	14,592
Lewis	7,841	--	--	--	--	--	--	7,841
Mason and Thurston ^{2/}	42,658	16,178	8,100	--	--	--	--	18,380
Pacific	20,670	--	--	--	--	--	--	20,670
Total	789,606	86,687	338,851	65,314	41,486	--	2,018	255,250
Lower Columbia								
Clark	1,344	--	--	--	--	--	--	1,344
Cowlitz	181,099	64,250	64,082	13,003	735	831	507	37,691
Skamania and Wahkiakum ^{2/}	4,765	--	--	--	--	--	--	4,765
Total	187,208	64,250	64,082	13,003	735	831	507	43,800
Inland Empire								
Pend Oreille and Spokane ^{2/}	3,052	--	--	--	--	--	--	3,052
Stevens	7,205	--	--	--	--	--	--	7,205
Total	10,257	--	--	--	--	--	--	10,257
Total State	1,596,229	305,734	683,532	152,218	43,691	831	3,235	406,988

^{1/} Includes cedar, lodgepole pine, and western larch.

^{2/} Combined to avoid disclosure.

Table 69.—Production and disposition of wood and bark residues by shake and shingle mills in Washington by area, and county, 1968
(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/}	19,740	813	18,927	13,627	582	13,045	6,113	231	5,882
Skagit	64,292	3,746	60,546	45,311	3,054	42,257	18,981	692	18,289
Snohomish	20,351	8,003	12,348	13,891	5,714	8,177	6,460	2,289	4,171
Whatcom	3,241	--	3,241	1,998	--	1,998	1,243	--	1,243
Total	107,624	12,562	95,062	74,827	9,350	65,477	32,797	3,212	29,585
Olympic Peninsula									
Clallam	50,237	12,750	37,487	36,738	9,900	26,838	13,499	2,850	10,649
Grays Harbor	94,881	25,784	69,097	63,090	21,509	41,581	31,791	4,275	27,516
Jefferson	13,475	--	13,475	9,182	--	9,182	4,293	--	4,293
Lewis	33,914	13	33,901	23,932	13	23,919	9,982	--	9,982
Pacific	18,346	--	18,346	13,460	--	13,460	4,886	--	4,886
Total	210,853	38,547	172,306	146,402	31,422	114,980	64,451	7,125	57,326
Lower Columbia and Inland Empire ^{2/}									
Clark	1,612	655	957	1,085	402	683	527	253	274
Cowlitz	36,785	24,719	12,066	23,457	15,912	7,545	13,328	8,807	4,521
Skamania, Stevens, and Pend Oreille ^{2/}	705	--	705	437	--	437	268	--	268
Wahkiakum	6,576	--	6,576	4,473	--	4,473	2,103	--	2,103
Total	45,678	25,374	20,304	29,452	16,314	13,138	16,226	9,060	7,166
Total, State	364,155	76,483	287,672	250,681	57,086	193,595	113,474	19,397	94,077

^{1/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{2/} Combined to avoid disclosure.

Table 70.—Production and disposition of wood residues by shake and shingle mills in Washington by type of residue, use, area, and county, 1968 (Tons, dry weight)

Economic area and county	All types											Coarse ^{1/}						Fine ^{2/}																											
	Total used ^{3/}			Pulp			Board			Fuel			Misc.			Unused			Total used ^{3/}			Pulp			Board			Fuel			Misc.			Unused											
	Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}		Total	used ^{3/}										
Puget Sound	13,627	582	--	--	828	--	--	562	40	13,065	4,621	188	--	--	150	38	4,433	9,006	394	--	--	--	392	2	8,612	45,311	3,054	--	--	2,134	92	42,257	14,895	1,996	1,852	1,076	92	12,899	30,416	1,058	--	--	1,058	--	29,358
King and Pierce	13,881	5,714	--	--	5,714	--	--	5,714	--	8,177	5,096	1,852	--	--	1,852	--	3,244	8,795	3,862	--	--	--	3,862	--	4,933	1,998	--	--	--	--	--	--	--	--	--	--	--	--	--	1,021	--	1,021			
Whatcom	74,827	9,350	828	--	8,390	132	65,477	25,589	4,036	828	--	3,078	130	21,553	49,238	5,314	--	5,312	2	43,924																									
Total	146,402	31,422	3,182	--	27,744	496	114,980	51,093	9,252	3,182	--	5,886	184	41,841	95,309	22,170	--	21,858	312	73,139																									
Olympic Peninsula	36,738	9,900	--	--	9,900	--	26,838	10,516	2,250	--	--	2,250	--	8,266	26,222	7,650	--	7,650	--	18,572																									
Clallam	63,090	21,509	3,182	--	17,834	493	41,581	25,057	6,999	3,182	--	3,636	181	18,058	38,033	14,510	--	14,198	312	23,523																									
Grays Harbor	9,182	--	--	--	9,182	--	3,447	3,447	--	--	--	--	--	5,735	16,091	10	--	10	--	16,081																									
Jefferson	23,932	13	--	--	10	3	23,919	7,841	3	--	--	--	--	4,232	9,228	--	--	--	9,228																										
Lewis	13,460	--	--	--	--	--	13,460	4,232	--	--	--	--	--	4,232	9,228	--	--	--	9,228																										
Pacific	146,402	31,422	3,182	--	27,744	496	114,980	51,093	9,252	3,182	--	5,886	184	41,841	95,309	22,170	--	21,858	312	73,139																									
Total	146,402	31,422	3,182	--	27,744	496	114,980	51,093	9,252	3,182	--	5,886	184	41,841	95,309	22,170	--	21,858	312	73,139																									
Lower Columbia and Inland Empire	1,085	402	--	--	157	245	683	409	192	--	--	157	35	217	676	210	--	--	210	466																									
Clark	23,457	15,912	--	--	15,623	289	7,545	11,463	7,964	--	--	7,823	141	3,499	11,994	7,948	--	--	7,800	148	4,046																								
Cowlitz	437	--	--	--	--	--	437	210	--	--	--	--	--	210	227	--	--	--	--	227																									
Skamania, Stevens, and Bend	4,473	--	--	--	--	--	4,473	1,657	--	--	--	--	--	1,657	2,816	--	--	--	--	2,816																									
Orcille	29,452	16,314	--	--	15,780	534	13,138	13,739	8,156	--	--	7,980	176	5,583	15,713	8,158	--	--	7,800	358	7,555																								
Wahkiakum	250,681	57,086	4,010	--	51,914	1,162	193,595	90,421	21,444	4,010	--	16,944	490	68,977	160,260	35,662	--	--	34,970	672	124,618																								
Total	250,681	57,086	4,010	--	51,914	1,162	193,595	90,421	21,444	4,010	--	16,944	490	68,977	160,260	35,662	--	--	34,970	672	124,618																								

^{1/} End block trim, spalts.

^{2/} Splints and sawdust.

^{3/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{4/} Combined to avoid disclosure.

Table 71.—Production and disposition of bark residues by shake and shingle mills in Washington by use, area, and county, 1968
(Tons, dry weight)

Economic area and county	Bark						
	Total	Total used ^{1/}	Pulp	Board	Fuel	Misc.	Unused
Puget Sound							
King and Pierce ^{2/}	6,113	231	--	--	228	3	5,882
Skagit	18,981	692	--	--	692	--	18,289
Snohomish	6,460	2,289	--	--	2,289	--	4,171
Whatcom	1,243	--	--	--	--	--	1,243
Total	32,797	3,212	--	--	3,209	3	29,585
Olympic Peninsula							
Clallam	13,499	2,850	--	--	2,850	--	10,649
Grays Harbor	31,791	4,275	--	--	4,116	159	27,516
Jefferson	4,293	--	--	--	--	--	4,293
Lewis	9,982	--	--	--	--	--	9,982
Pacific	4,886	--	--	--	--	--	4,886
Total	64,451	7,125	--	--	6,966	159	57,326
Lower Columbia and Inland Empire^{2/}							
Clark	527	253	--	--	10	243	274
Cowlitz	13,328	8,807	--	--	8,627	180	4,521
Skamania, Stevens, and Pend Oreille ^{2/}	268	--	--	--	--	--	268
Wahkiakum	2,103	--	--	--	--	--	2,103
Total	16,226	9,060	--	--	8,637	423	7,166
Total, State	113,474	19,397	--	--	18,812	585	94,077

^{1/} Used residues were not necessarily consumed in the economic area in which they were produced.

^{2/} Combined to avoid disclosure.

Table 72.—Log scales used by timber industries in Washington by type of scale, area, and industry, 1968

(Number of reported uses)

Economic area and industry	Scribner		Other ^{1/}
	Long log	Short log	
Puget Sound			
Lumber	42	40	--
Veneer and plywood	11	3	--
Pulp and board	3	1	2
Other	60	1	6
Total	116	45	8
Olympic Peninsula			
Lumber	41	25	1
Veneer and plywood	15	5	--
Pulp and board	4	--	2
Other	101	39	7
Total	161	69	10
Lower Columbia			
Lumber	21	13	1
Veneer and plywood	8	2	--
Pulp and board	3	--	1
Other	23	--	5
Total	55	15	7
Central Washington			
Lumber	3	22	--
Veneer and plywood	--	1	--
Pulp and board	--	--	--
Other	--	--	--
Total	3	23	--
Inland Empire			
Lumber	16	23	--
Veneer and plywood	2	1	--
Pulp and board	--	1	--
Other	5	1	2
Total	23	26	2
Total, State			
Lumber	123	123	2
Veneer and plywood	36	12	--
Pulp and board	10	2	5
Other	189	41	20
Total	358	178	27

^{1/} Cords, bolts, shake blocks, lineal feet, pieces, tons, cubic feet, units, and others.

