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PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON
(From Inventory and Growth Phase of Forest Survey)

By

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PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

Introduction

Increasing attention is being given to the possibility of making the United States permanently self sufficient in its paper, pulp, and pulpwood requirements. A steady increase in consumption of paper and other wood-cellulose products, accompanied by a corresponding increase in imports of paper, pulp, and pulpwood, has aroused considerable interest in the quantity of standing timber in this country suitable for pulpwood. Any significant expansion of pulpwood production in the United States can take place only in the Pacific Northwest, in Alaska, or in the South.[1]

This report presents detailed information concerning the pulpwood resources of the Douglas fir region of western Oregon and western Washington. It is one of a series of factual bulletins[2] on the forest resources of this region based on data obtained in a regional forest survey completed in 1934. Survey volume data previously published were for trees of saw-log size, 16 inches or larger in d.b.h., and were in terms of board feet, log scale. This report gives, for all species suitable for pulpwood, the gross cubic-foot volume of all trees 4 inches and larger in d.b.h. and the cordwood volume of all trees 7 inches and larger in d.b.h.; the area occupied by each of the principal pulp-timber types; and the present and potential growth of stands of these types.

Species Included

The species included are the following:

Common name	Botanical name
Western hemlock	*Tsuga heterophylla*
Sitka spruce	*Picea sitchensis*
Silver fir	*Abies amabilis*
Noble fir	*Abies nobilis*
Shasta red fir	*Abies magnifica shastensis*
Lowland white fir	*Abies grandis*
White fir	*Abies concolor*
Alpine fir	*Abies lasiocarpa*
Mountain hemlock	*Tsuga mertensiana*
Engelmann spruce	*Picea engelmannii*
Northern black cottonwood	*Populus trichocarpa hastata*.

Western hemlock and Sitka spruce are the region's most important pulp-timber species, and data are given separately for each of them. The six balsam firs listed are similar in the characteristics that determine suitability for pulpwood, and consequently are combined. Mountain hemlock and Engelmann spruce are combined because they are relatively unimportant, occurring only in comparatively remote locations and in scattered stands. Black cottonwood, although limited in occurrence, is considered separately because it is the only broad-leafed or "hardwood" species included.

1/ Curran, C. E., and Behre, C. Edward. National Pulp and Paper Requirements in Relation to Forest Conservation. Senate Document 105, 74th Congress, 2nd Session. 1935.

2/ Previous publications include: (a) Forest statistics for each of the 38 counties in the region, showing saw-log volumes in board feet log scale, areas of forest types, and areas of forest site classes, (b) Forest Research Notes No. 13, which summarizes in regional totals the data contained in the 38 county pamphlets, (c) various articles in the trade journals, and (d) 1-inch-to-the-mile detailed cover-type maps for each county and national forest in the region.

Douglas fir (Pseudotsuga taxifolia), although it is used in small quantities for certain classes of wood pulp and may hereafter become an important source of wood pulp, is not considered in this report.

Ownership Classes

Only timber available for cutting is considered here. By "available for cutting" is meant unaffected by laws or declared public policies restricting commercial logging. Timber not available for cutting includes that on municipal property set aside for watershed protection, in State parks and national parks, and on certain national-forest areas that are reserved from cutting as a protection to watersheds, to maintain recreational values, or for scientific purposes. The term "available for cutting" as applied to public timber is not intended to imply that the timber is available for sale to prospective loggers at this time. Such an implication would be particularly false as applying to timber on national forests.

The timber available for cutting is separated into three ownership classes, data for each of which are presented separately: Private, national forest, and other public. The last includes county, State, Indian, O. & C. revested land grant, unappropriated public domain, and miscellaneous Federal.

Cubic-Volume Estimates

Tables 1 to 5 contain the basic volume data. They give the gross cubic content of sound wood in all trees 4 inches and larger in d.b.h., by counties and ownership classes. They summarize these data for each State and for each of 11 geographic units, shown in figure 1, into which the Douglas fir region is divided for purposes of description. (It should not be assumed that these units are self-contained production units; on the contrary, it is to be expected that a part of the pulpwood grown in any given unit will be transported for manufacture to points outside the unit.)

These tables give the total sound-wood content of the stem of the tree, exclusive of limb wood and bark, in thousands of cubic feet. They omit not only decayed material but the entire volume of "cull" trees, that is, living trees in which more than two thirds of the board-foot content is defective. No deductions were made in the cubic-volume estimates for breakage in logging, such as are ordinarily made in board-foot estimates. The trees are divided into three classes: (1) All trees 16 inches and larger in d.b.h. in saw-timber stands (saw-log trees), (2) all trees 4 to 14 inches in d.b.h. in saw-timber stands (understory trees), and (3) all trees 4 inches and larger in d.b.h. in second-growth stands. The third class consists almost entirely of trees less than 20 inches in d.b.h. Stands in which the greater part of the volume is in trees about 20 inches or less in d.b.h. were classified as second-growth stands and all larger stands were classified as saw timber.

Table 6 recapitulates by geographic units the data contained in tables 1 to 5, inclusive. Table 7 gives the net utilizable volume of pulpwood, by species, in thousands of cords. A standard 4'x4'x8' cord of peeled wood was assumed as the unit of measure. Different degrees of utilization were assumed for each of the three tree-size groups. The cubic volume of sound material in cull trees is given in table 8.

Utilization Standards and Conversion Factors

The data in table 7 were obtained by applying appropriate conversion factors to the cubic-foot data in table 6. For all trees 16 inches or more in d.b.h. in saw-timber stands, the general practice in pulpwood cutting is to utilize to a top of about 12 inches (8 inches to 15 inches), and to cut at stump heights averaging about 28 inches. Under this practice about 88 percent of the total cubic volume of the trees is utilized for pulpwood, and about 5½ percent is left in the top and 6½ percent in the stump. Therefore the part of the solid cubic wood content of trees 16 inches and larger in d.b.h., shown in tables 1 to 5, that is utilizable under present woods practices is about 88 percent.

The utilization standard assumed for trees 14 inches and less in d.b.h. in saw-timber stands, and also for trees in second-growth stands, would include trees as small as 7 inches in diameter to a 6-inch top. On this basis about 65 percent of the total cubic feet of wood in the understory trees in saw-timber stands and about 70 percent of the total cubic feet of wood in the second-growth stands would be utilized. The explanation of the fact that utilization is a little higher for second-growth stands than for understory trees in saw-timber stands is that the former include some larger trees.

In all three cases (saw-timber trees, understory trees in saw-timber stands, and trees in second-growth stands) the volume of utilizable wood (in thousands of cubic feet) was converted to cords of the dimensions mentioned by dividing by 86.[3] On the basis of the utilization standards specified for various classes of trees, the values in table 6 were converted to cords by dividing by 98 for saw-timber trees, 132 for understory trees, and 123 for second-growth trees. If other standards of utilization were assumed, other conversion factors would be used. If, for example, in second-growth stands only trees 12 inches and larger in d.b.h. were utilized and the minimum top diameter were 8 inches, only 45 percent of the total cubic volume of the stands would be utilized and the factor to be used to convert volume in thousands of cubic feet to volume in cords would be 191.

Analysis of Volume Data

The total cubic volume of pulpwood species available for cutting in the Douglas fir region is nearly 39 billion cubic feet. Almost 70 percent of this volume is in western Washington. The units leading in volume of pulpwood resources are the Central Puget Sound and Grays Harbor units in Washington. Each of these units has approximately 8 billion cubic feet of pulp timber. The two combined have 41 percent of the pulp-timber volume in the region. The geographical distribution of pulpwood volume is shown in figures 2 and 3. About 46 percent of the pulp-timber volume is privately owned, 42 percent is on national forests, and the remainder is on other public lands.

Western hemlock forms 62 percent of the total pulpwood volume and is the leading species in all units but two, the Umpqua River and Rogue River units in southern Oregon, where the balsam firs predominate. The balsam firs rank next in volume. There has been very little logging of these species, as they commonly occur at higher elevations than western hemlock and Sitka spruce and are not so accessible to the pulp-manufacturing centers. Northern black cottonwood is an insignificant factor in the pulpwood situation in this region.

More than 80 percent of the total cubic volume of pulp timber is contained in the so-called saw-log trees, and the remainder is almost equally divided between the understory and the second-growth trees.

Economic Availability

Tables 1 to 7 do not take into consideration the economic availability of timber. All timber of saw-log size in the Douglas fir region was divided by the Forest Survey into three availability classes, as follows:

Class 1 -- Timber that could be logged at a profit under the production and marketing conditions prevailing during the five years 1925-29.

Class 2 -- Timber that under those conditions could be logged at a loss of not more than $5 per thousand board feet.

Class 3 -- The remaining timber.

In this classification all timber was classified into two ownership groups, (1) national forest and (2) all other, and into three species groups, (1) Douglas fir, (2) pulp species, and (3) miscellaneous. The reason for grouping all public lands other than national forests with private lands and contrasting this group with national forests was that in general national-forest lands are in solid blocks and contain the more remote areas in the region, while other public lands, in both large and small holdings, are scattered among privately owned lands and for the most part will be operated in conjunction with them.

Table 9 shows the proportions of the volume of pulp timber of saw-log size in these three availability classes. Most of the pulp timber elsewhere than on national forests is in class 1, but only a small part of that on national forests is in this class. The national forests of western Washington contain more class 1 pulp timber than those of western Oregon.

It must be remembered that table 9 is in percentages. Although the percentage of privately owned timber in class 1 is the same in western Oregon as in western Washington, the quantity of such timber in class 1 is much greater in western Washington than in western

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3/ The solid content of a standard 4'x4'x8' cord of peeled and split wood was determined as 86 cubic feet by J. E. Lodewick, by methods described in an article entitled "How much is a cord of pulpwood", in Pacific Pulp & Paper Industry, September, 1935.

Oregon. The units having the largest amounts of pulpwood volume elsewhere than on national forests, as shown by table 6, are also, for the most part, those having the largest percentages of pulp timber in availability class 1.

Pulpwood Types, and Areas Occupied

The areas occupied by the principal pulpwood types are given in table 10. The definitions of the types included in this table follow:

WESTERN HEMLOCK: A forest containing 50 percent or more, by volume, of western hemlock with varying quantities of Douglas fir, western red cedar (*Thuja plicata*), silver fir, and Sitka spruce.

Western hemlock, large: A forest of saw-timber size in which most of the volume is in trees more than 20 inches in d.b.h.

Western hemlock, small: A forest in which most of the volume is in trees 6 to 20 inches in d.b.h.

Western hemlock, seedlings and saplings: A forest in which most of the dominant trees are less than 6 inches in d.b.h.

SITKA SPRUCE: A forest containing 50 percent or more, by volume, of Sitka spruce, rarely in pure stands, usually in mixture with Douglas fir, western hemlock, or western red cedar.

Sitka spruce, large: A forest of saw-timber size in which most of the volume is in trees more than 24 inches in d.b.h.

Sitka spruce, small: A forest in which most of the volume is in trees 6 to 24 inches in d.b.h.

Sitka spruce, seedlings and saplings: A forest in which most of the dominant trees are less than 6 inches in d.b.h.

BALSAM FIR-MOUNTAIN HEMLOCK: A forest containing at least 50 percent, by volume, of noble fir, silver fir, Shasta red fir, mountain hemlock, or any combination of these species. The characteristic forest of the upper slopes of the Cascade Range, the Coast Mountains in Oregon, and the Olympic Mountains in Washington.

Balsam fir-mountain hemlock, large: A forest in which most of the dominant trees are 16 inches or more in d.b.h. and physically suitable for saw timber. (Mature stands of this composition not suitable for saw timber are ordinarily classed as of the subalpine type.)

Balsam fir-mountain hemlock, small: A forest in which most of the dominant trees are less than 16 inches in d.b.h., usually a young stand on an old burn.

WHITE FIR: A forest containing 50 percent or more, by volume, of *Abies grandis* or *A. concolor*. Usually within the ranges of ponderosa pine (*Pinus ponderosa*) and sugar pine (*P. lambertiana*).

White fir, large: A forest in which most of the dominant trees are more than about 20 inches in d.b.h. (more than about 150 years old).

White fir, small: A forest in which most of the dominant trees are less than about 20 inches in d.b.h. (less than about 150 years old).

Table 10 combines (1) the second-growth western hemlock types, (2) the second-growth Sitka spruce types, and (3) the balsam fir-mountain hemlock types and white fir types.

The types listed include only those in which pulp species predominate, by volume. Other types in western Oregon and western Washington, occupying large areas, contain 1 to 50 percent, by volume, of pulp species. Nearly all saw-timber stands in the region contain some volume of pulpwood species. Exceptions, all in Oregon, are the saw-timber stands on certain areas in the Willamette Valley, in the central portion of Douglas County, in part of Jackson County, and practically throughout Josephine and Curry Counties, which are composed predominantly of Douglas fir or of Douglas fir and ponderosa pine.

Heretofore the demand for pulpwood in the Douglas fir region has been supplied by waste from the manufacture of hemlock and spruce lumber, supplemented by pulpwood logs and a relatively small quantity of forest pulpwood cut in cordwood form. Generally speaking, pulpwood supplies have been an incidental result of logging for saw logs and veneer logs, usually in the Douglas fir and western red cedar types. As a consequence, pulpwood has been cheaper than if it had had to bear the entire burden of logging and transportation costs.

Although there are still extensive Douglas fir and western red cedar saw-timber stands in which pulpwood will be an incidental product of logging for saw logs, the bulk of the remaining pulpwood supply is in stands in which the pulp species predominate. Table 11 gives the areas, by units, of these two general classes of saw-timber stands. In certain localities, particularly in western Washington, the Douglas fir and western red cedar types will be logged out in the relatively near future. This will probably result in increased exploitation of the pulpwood types. Even in these types, a considerable part of the timber will be used for products other than pulpwood, principally lumber and veneer.

The pulpwood types can be divided into (1) the western hemlock-Sitka spruce group and (2) the balsam fir-mountain hemlock group. The timber of the western hemlock-Sitka spruce types is chiefly in private ownership, and that of the balsam fir-mountain hemlock types is chiefly in public (predominantly national forest) ownership. This is illustrated in figure 4. Stands of the western hemlock-Sitka spruce types occur principally on high-quality sites; the balsam fir-mountain hemlock stands, in addition to occupying poorer sites, are less accessible. Many of the western hemlock-Sitka spruce second-growth stands occupy areas once either clear cut or selectively logged, and a large part of the volume of second-growth timber of these species is in availability class 1. By far the greater part of the volume of second-growth balsam fir and mountain hemlock is in availability classes 2 and 3. Second-growth areas of high site quality close to existing mills will probably be logged and another crop grown on them and harvested long before the old-growth stands of balsam fir-mountain hemlock types on many remote areas are operated.

Growth

Data concerning the growth of the pulpwood species in each geographic unit of the Douglas fir region are presented in table 12 in millions of cubic feet. These data are gross figures, and represent the annual increment of second-growth stands of pulpwood species. The rotation age assumed is 100 years. This rotation is required to produce saw timber in the Douglas fir region, and must be adopted if, as seems likely, the pulp industry is developed in integration with the lumber industry. Not all the increment shown can be considered available for conversion to pulp, and the data are valuable mainly for comparative purposes.

Three types of growth computations are presented in this table: Current annual, realizable mean annual, and potential annual. Current annual growth is the annual growth of all second-growth stands in their present condition. Realizable mean annual growth is the hypothetical average annual growth of all existing stands from now until the time when they are cut, computed by decades. Potential annual growth is the average annual growth that, with intensive forest practice, can be obtained on all commercial forest land after all nongrowing virgin forests have been replaced by young forests. In computing this value an allowance of 25 percent has been made for incomplete stocking, temporarily bare areas, and permanently nonrestocked cut-over areas.

The current annual growth of the pulpwood species amounts to 264 million cubic feet, or about 0.7 of 1 percent of the total volume of existing stands of pulp timber. The large proportionate area occupied by the nongrowing mature timber types in this region is responsible for the low rate of current annual growth. Approximately 66 percent of the current annual growth is taking place in western Washington. Most of the growth in western Oregon is taking place in the three northerly units. Current annual growth is less than one third of potential annual growth. Annual growth estimated as realizable during the first decade is slightly less than current annual growth. However, according to estimates realizable annual growth during the second decade will average about one third greater than

during the first, and during the third decade will average about one half greater than during the first, these increases resulting from replacement of nongrowing virgin timber by growing young forests.

Depletion Contrasted with Existing Volume and with Growth *

Figure 5 shows the distribution of pulpwood volume, growth, and depletion by geographic units, and the location and comparative size of pulp-manufacturing plants. Although the data presented here are not sufficiently detailed to serve as a basis for estimating the supply of pulpwood available to any particular pulp mill, they can be used with the survey type maps to estimate the supplies available to the larger manufacturing centers. During the period 1925-29 the volume of wood material of pulp species removed annually by logging averaged 230 million cubic feet. This does not include logging waste, that is, timber knocked down in logging and timber felled but not removed. This waste is exceptionally high in the pulp species. It varies considerably from year to year and among individual operations. The volume mentioned as logged includes not only that used for pulpwood but also that used for saw logs and other products. In recent years the volume of these species logged has greatly decreased; during the period 1925-33 it averaged only 187 million cubic feet per year.

The current annual depletion (including losses from cutting, fire, insects, windthrow, and other causes) of timber of pulpwood species in the Douglas fir region is slightly greater than the current annual growth, but is considerably less than the potential annual growth. The quantities of timber of the pulp species that will be available for pulp will of course be influenced by the extent to which the species are used for saw timber. There is need for a much closer integration of the sawmill and pulp-manufacturing industries, which would bring about more economical utilization of pulp material in the woods, fuller use of existing transportation systems, and more extensive use of sawmill waste for pulpwood. It is apparent that the Douglas fir region could for many years to come furnish sufficient raw material for a wood-pulp industry several times as large as that now existing in the region, solely from present timber resources. With proper management of the forest land this development could be maintained permanently.

* This section slightly rephrased in this reprint of January 6, 1936.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 1.--VOLUME[1] OF WESTERN HEMLOCK 4 INCHES AND MORE IN D.B.H. AVAILABLE FOR CUTTING[2], BY OWNERSHIP

IN THOUSANDS OF CUBIC FEET

WESTERN OREGON

Unit	County	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC: 2nd-growth stands (trees 4" to about 20" DBH)	OTHER PUBLIC: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH)	TOTAL: Total
COLUMBIA RIVER OREGON	Clatsop	694,849	73,637	186,942	955,428					16,625	1,891	16,060	34,576	711,474	75,528	203,002	990,004
	Columbia	22,402	8,197	10,000	40,599					189	525	522	1,236	22,591	8,722	10,522	41,835
	Washington	42,723	10,053	12,024	64,800					138	942	735	1,815	42,861	10,995	12,759	66,615
	Multnomah	1,754	1,968	4,968	8,690	3,660	906	7	4,573	3,521	267	157	3,945	8,935	3,141	5,132	17,208
	Hood River	9,926	1,538	3,360	14,824	55,986	14,072	5,385	75,443	109	136	267	512	66,021	15,746	9,012	90,779
	Clackamas	113,037	17,310	17,029	147,376	405,889	89,856	50,541	546,286	6,803	2,022	4,434	13,259	525,729	109,188	72,004	706,921
	Total	884,691	112,703	234,323	1,231,717	465,535	104,834	55,933	626,302	27,385	5,783	22,175	55,343	1,377,611	223,320	312,431	1,913,362
WILLAMETTE RIVER	Yamhill	2,028	3,447	5,955	11,430	913	97	404	1,414	401	823	1,104	2,328	3,342	4,367	7,463	15,172
	Polk	87,829	9,092	13,717	110,638	7,123	719	965	8,807	41,968	2,921	943	45,832	136,920	12,732	15,625	165,277
	Marion	70,066	6,751	15,285	92,102	189,558	26,430	9,158	225,146	8,173	1,007	1,452	10,632	267,797	34,188	25,895	327,880
	Benton	1,033	4,925	4,000	9,958	562	169	18	749	7,274	1,928	2,050	11,252	8,869	7,022	6,068	21,959
	Linn	519,401	29,686	28,625	577,712	317,108	40,275	23,263	380,646	65,475	3,697	2,437	71,609	901,984	73,658	54,325	1,029,967
	Lane (eastern part)	153,233	36,913	32,121	222,267	251,833	89,390	44,152	385,375	31,221	12,717	9,299	53,237	436,287	139,020	85,572	660,879
	Total	833,590	90,814	99,703	1,024,107	767,097	157,080	77,960	1,002,137	154,512	23,093	17,285	194,890	1,755,199	270,967	194,948	2,221,134
NORTH OREGON COAST	Tillamook	461,936	46,392	23,732	532,060	53,582	5,241	3,729	62,552	32,531	4,690	23,717	60,938	548,049	56,323	51,178	655,550
	Lincoln	234,246	35,368	24,299	293,933	47,264	6,487	13,970	67,721	38,112	5,907	10,368	54,407	319,622	47,762	48,637	416,061
	Lane (western part)	10,226	6,309	7,286	23,821	26,835	9,856	11,654	48,327	559	610	1,740	2,909	37,620	16,777	20,660	75,057
	Total	706,408	88,069	55,317	849,814	127,681	21,586	29,333	178,600	71,202	11,207	35,845	118,254	905,291	120,862	120,495	1,146,668
UMPQUA RIVER	Douglas (eastern part)	35,038	42,348	20,335	97,721	106,575	80,700	4,682	191,957	26,154	33,729	6,550	66,433	167,767	156,777	31,567	356,111
	Total	35,038	42,348	20,335	97,721	106,575	80,700	4,682	191,957	26,154	33,729	6,550	66,433	167,767	156,777	31,567	356,111
SOUTH OREGON COAST	Douglas (western part)	12,799	14,297	18,284	45,380	8,045	3,974	19,064	31,083	4,343	4,965	41,853	51,161	25,187	23,236	79,201	127,624
	Coos	106,761	32,752	17,567	157,080	1,504	6,988	405	8,897	42,675	17,985	7,366	68,026	150,940	57,725	25,338	234,003
	Curry	7,219	24,347	4,710	36,276	627	47,611	1,569	49,807	154	6,866	1,173	8,193	8,000	78,824	7,452	94,276
	Total	126,779	71,396	40,561	238,736	10,176	58,573	21,038	89,787	47,172	29,816	50,392	127,380	184,127	159,785	111,991	455,903
ROGUE RIVER	Josephine		92		92		2,638		2,638		986		986		3,716		3,716
	Jackson	828	6,582	111	7,521	13,931	19,480		33,411	530	8,616		9,146	15,289	34,678	111	50,078
	Total	828	6,674	111	7,613	13,931	22,118		36,049	530	9,602		10,132	15,289	38,394	111	53,794
TOTAL WESTERN OREGON		2,587,334	412,024	450,350	3,449,708	1,490,995	444,891	188,946	2,124,832	386,955	113,230	132,247	572,432	4,405,284	970,145	771,543	6,146,972

WESTERN WASHINGTON

Unit	County	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC: 2nd-growth stands (trees 4" to about 20" DBH)	OTHER PUBLIC: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH)	TOTAL: Total
NORTH PUGET SOUND	Whatcom	225,593	37,281	41,123	303,967	185,742	47,016	24,072	256,830	70,257	12,950	13,522	96,729	481,592	97,217	78,717	657,526
	Skagit	475,085	64,586	82,691	622,362	347,553	69,775	22,398	439,726	92,340	11,504	17,174	121,018	914,978	145,865	122,263	1,183,106
	Snohomish	336,016	47,563	139,624	523,203	609,946	101,039	17,600	728,585	136,865	19,232	15,840	171,927	1,082,827	167,824	173,064	1,423,715
	Island	239	877	4,503	5,619					9	39	452	500	248	916	4,955	6,119
	San Juan	132	56	10,429	10,617							706	706	132	56	11,134	11,322
	Total	1,037,065	150,333	278,370	1,465,768	1,143,241	217,850	64,070	1,425,141	299,471	43,715	47,693	390,879	2,479,777	411,878	390,133	3,281,788
CENTRAL PUGET SOUND	Clallam	1,136,086	101,073	93,755	1,330,914	861,484	81,376	54,248	997,108	167,332	31,824	37,732	236,888	2,164,902	214,273	185,735	2,564,910
	Jefferson (eastern part)	11,996	7,248	8,684	27,928	158,120	18,250	19,952	196,322	1,550	1,021	3,383	5,954	171,666	26,519	32,019	230,204
	Kitsap	3,928	4,818	12,048	20,794					34	709	1,423	2,166	3,962	5,527	13,471	22,960
	Mason	6,624	18,754	6,849	32,227	288,959	33,986	1,823	324,768	3,596	2,791	726	7,113	299,179	55,531	9,398	364,108
	King	700,253	82,750	157,921	940,924	279,955	36,481	6,541	322,977	87,141	8,755	13,332	109,228	1,067,349	127,986	177,794	1,373,129
	Pierce	519,424	39,432	16,836	575,692	266,209	31,587	26,192	323,988	50,141	6,200	2,004	58,345	835,774	77,219	45,032	958,025
	Total	2,378,311	254,075	296,093	2,928,479	1,854,727	201,680	108,756	2,165,163	309,794	51,300	58,600	419,694	4,542,832	507,055	463,449	5,513,336
SOUTH PUGET SOUND	Thurston	23,877	12,036	10,045	45,960	147	64		211	254	1,102	802	2,158	24,278	13,204	10,847	48,329
	Lewis	712,908	109,985	31,577	854,470	435,980	67,587	36,884	539,451	142,925	13,829	3,727	160,481	1,291,813	191,401	71,188	1,554,402
	Total	736,785	122,023	41,622	900,430	436,127	67,651	36,884	539,662	143,179	14,931	4,529	162,639	1,316,091	204,605	82,035	1,602,731
GRAYS HARBOR	Jefferson (western part)	429,102	44,060	38,993	512,155	696,674	88,299	5,706	784,679	544,102	70,086	10,485	624,673	1,669,878	196,445	55,184	1,921,507
	Grays Harbor	905,022	102,570	241,747	1,249,339	526,738	51,701	4,901	583,340	234,834	51,368	13,183	299,385	1,666,594	205,639	259,831	2,132,064
	Pacific	977,098	203,031	205,529	1,385,658					103,759	22,332	16,821	142,912	1,080,857	225,363	222,350	1,528,570
	Total	2,311,222	349,661	486,269	3,147,152	1,223,412	134,000	10,607	1,368,019	882,695	143,786	40,489	1,066,970	4,417,329	627,447	537,365	5,582,141
COLUMBIA RIVER WASHINGTON	Wahkiakum	175,485	17,211	113,544	306,240					48,483	4,470	12,475	65,428	223,968	21,681	126,019	371,668
	Cowlitz	378,502	49,250	49,626	477,378	31,780	4,254	1,482	37,516	90,822	10,141	7,985	108,948	501,104	63,645	59,093	623,842
	Clark	872	3,978	11,751	16,601					102	369	699	1,170	974	4,347	12,450	17,771
	Skamania	70,256	17,103	21,009	108,368	616,529	108,182	60,873	785,584	10,368	2,767	5,037	18,172	697,153	128,052	86,919	912,124
	Total	625,115	87,542	195,930	908,587	648,309	112,436	62,355	823,100	149,775	17,747	26,196	193,718	1,423,199	217,725	284,481	1,925,405
TOTAL WESTERN WASHINGTON		7,088,498	963,634	1,298,284	9,350,416	5,305,816	733,597	281,672	6,321,085	1,784,914	271,479	177,507	2,233,900	14,179,228	1,968,710	1,757,463	17,905,401
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		9,675,832	1,375,658	1,748,634	12,800,124	6,796,811	1,178,488	470,618	8,445,917	2,111,869	384,709	309,754	2,806,332	18,584,512	2,938,855	2,529,006	24,052,373

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 8 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 3.--VOLUME[1] OF BALSAM FIRS 4 INCHES AND MORE IN D.B.H. AVAILABLE FOR CUTTING[2], BY OWNERSHIP

IN THOUSANDS OF CUBIC FEET

UNIT AND COUNTY		PRIVATE				NATIONAL FOREST				OTHER PUBLIC[3]				TOTAL			
		Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total
WESTERN OREGON																	
COLUMBIA RIVER OREGON	Clatsop	147,118	5,085		152,203					3,841	120		3,961	150,959	5,205		156,164
	Columbia	3,048	536		3,584						45		45	3,048	581		3,629
	Washington	5,866	1,001		6,867					176	84		260	6,042	1,085		7,127
	Multnomah	2,344	149	1,865	4,358	1,592	126	33	1,751	51	30	58	139	3,987	305	1,956	6,248
	Hood River	9,970	8,297	5,752	24,019	106,129	13,549	12,732	132,410	567	916	451	1,934	116,666	22,762	18,935	158,363
	Clackamas	50,088	2,549	6,037	58,674	241,366	14,498	15,339	271,203	1,295	182	1,384	2,861	292,729	17,229	22,760	332,718
	Total	218,414	17,617	13,654	249,685	349,087	28,173	28,104	405,364	5,930	1,377	1,893	9,200	573,431	47,167	43,651	664,249
WILLAMETTE RIVER	Yamhill	2,963	568	5	3,536		19		19	480	137	48	665	3,443	724	53	4,220
	Polk	33,458	1,532	63	35,053	1,145	206	60	1,411	9,972	454	29	10,455	44,575	2,192	152	46,919
	Marion	19,006	1,218	9,110	29,334	97,241	10,418	3,372	111,031	650	161	871	1,682	116,896	11,797	13,353	142,046
	Benton	17,300	900	2,000	20,200	379	26	9	414	4,114	325	1,125	5,564	21,793	1,251	3,134	26,178
	Linn	103,093	4,919	9,554	117,566	193,494	16,297	50,106	259,947	11,561	598	870	12,959	308,148	21,704	60,630	390,472
	Lane (eastern part)	16,060	6,232	121	22,413	191,100	48,312	13,850	253,262	10,607	2,200		12,807	217,767	56,744	12,971	287,482
	Total	191,879	15,369	20,853	228,101	483,359	75,258	66,467	625,084	37,384	3,805	2,943	44,132	712,622	94,412	90,283	897,317
NORTH OREGON COAST	Tillamook	60,708	2,234		62,942		206		206	150	251		401	60,858	2,693		63,551
	Lincoln	39,248	2,343		41,591		916		916	1,075	374		1,449	40,323	3,633		43,956
	Lane (western part)	19	637		656		1,382		1,382	82	56		137	101	2,074		2,175
	Total	99,975	5,214		105,189		2,506		2,506	1,307	680		1,987	101,282	8,400		109,682
UMPQUA RIVER	Douglas (eastern part)	37,521	29,227	20,280	87,028	455,641	76,430	5,845	538,916	28,450	26,965	6,959	62,374	521,612	132,622	34,084	688,318
	Total	37,521	29,227	20,280	87,028	455,641	76,430	5,845	538,916	28,450	26,965	6,959	62,374	521,612	132,622	34,084	688,318
SOUTH OREGON COAST	Douglas (western part)	2,011	742		2,753		274		274	2,037	443		2,480	4,048	1,459		5,507
	Coos	34,942	4,456	17,757	57,155	240	995	420	1,655	41,507	1,226	11,268	54,001	76,689	6,677	29,445	112,811
	Curry	36,854	3,130	13,748	53,712	5,505	3,206	1,632	10,343	666	559	1,429	2,654	43,003	6,896	16,799	66,697
	Total	73,787	8,328	31,505	113,620	5,745	4,475	2,052	12,272	44,210	2,228	12,697	59,135	123,740	15,031	46,244	185,015
ROGUE RIVER	Josephine	1,765	8,292	6,983	17,040	42,482	23,851	1,363	67,696	1,819	18,327	215	20,361	46,066	50,650	8,481	105,217
	Jackson	184,254	27,431	3,246	154,931	481,029	29,614	24,586	535,229	143,910	21,610	50,281	215,801	749,193	78,655	78,353	906,201
	Total	186,019	35,723	10,229	171,991	523,511	53,465	26,109	602,925	145,729	40,137	50,496	236,362	795,279	129,305	86,834	1,011,418
TOTAL WESTERN OREGON		747,615	111,476	96,521	955,614	1,817,341	340,267	139,597	2,157,195	263,010	75,192	74,988	413,190	2,827,966	426,937	301,096	3,555,999
WESTERN WASHINGTON																	
NORTH PUGET SOUND	Whatcom	76,838	3,263	5,517	85,618	198,925	12,322	6,593	217,840	26,040	847	1,384	28,271	301,803	16,432	13,494	331,729
	Skagit	214,130	7,084	16,560	237,774	295,085	18,810	7,412	321,305	41,727	1,109	2,993	45,829	550,942	27,003	26,957	604,902
	Snohomish	121,305	5,283	6,888	133,480	437,445	24,060	6,322	467,827	76,871	2,905	1,065	80,841	635,621	32,248	13,459	681,328
	Island	194	35	2,097	2,326					23	1	225	249	217	36	2,322	2,575
	San Juan	139			139									139			139
	Total	412,606	15,665	30,162	458,437	931,455	55,192	20,327	1,007,974	144,661	4,862	5,667	155,190	1,488,722	75,719	56,192	1,620,633
CENTRAL PUGET SOUND	Clallam	175,308	3,741	251	179,300	336,458	8,880	2,932	348,270	75,660	1,323		77,213	587,456	14,154	2,983	604,593
	Jefferson (eastern part)	120	110		230	31,787	1,325		33,112	13	20		33	31,920	1,455		33,375
	Kitsap	56	62		118					165	12		177	221	74		295
	Mason	234	715		949	93,163	4,172	35	97,370		45		45	93,397	4,932	35	98,364
	King	395,398	14,559	5,465	415,358	266,196	10,326	2,545	279,069	24,846	669		25,515	684,372	25,554	8,010	717,936
	Pierce	139,124	5,761	8,686	153,511	180,828	7,072	1,862	189,762	15,627	492	3,158	19,267	335,579	13,315	13,666	362,560
	Total	708,170	24,948	14,342	747,460	908,434	31,765	7,194	947,413	116,341	2,751	3,158	122,250	1,732,945	59,484	24,694	1,817,123
SOUTH PUGET SOUND	Thurston	1,564	538		2,122		4		4	43	56		99	1,627	598		2,225
	Lewis	180,902	7,633	455	188,990	485,089	21,500	92,326	598,915	21,820	861	343	23,044	687,811	30,014	93,124	810,949
	Total	182,466	8,171	455	191,112	485,089	21,504	92,326	598,919	21,863	937	343	23,143	689,436	30,612	93,124	813,174
GRAYS HARBOR	Jefferson (western part)	55,165	1,802		56,967	476,397	15,235	201	491,831	391,790	12,072		403,862	923,352	29,107	201	952,660
	Grays Harbor	26,385	3,962		30,347	288,041	9,049		297,090	53,633	1,931		55,564	368,059	14,942		383,001
	Pacific	100,190	2,290		102,480					8,165	151		8,316	108,355	2,441		110,796
	Total	181,740	8,054		189,794	764,438	24,284	201	788,921	453,588	14,154		467,742	1,399,766	46,490	201	1,446,457
COLUMBIA RIVER WASHINGTON	Wahkiakum	60,704	1,953		62,657					16,432	424		16,856	77,136	2,377		79,513
	Cowlitz	205,129	7,452	5,080	217,671	58,350	2,392	4,076	64,818	59,681	1,371		61,052	323,160	11,215	9,156	343,541
	Clark	2,636	306	6,906	9,848					86	27	280	393	2,722	333	7,186	10,241
	Skamania	74,300	4,164	9,605	88,069	531,904	25,065	196,632	753,601	5,829	349		6,178	612,033	29,578	206,237	847,838
	Total	342,769	13,875	21,601	378,245	590,254	27,457	200,708	818,419	82,028	2,171	280	84,479	1,015,051	43,503	222,579	1,281,133
TOTAL WESTERN WASHINGTON		1,827,771	70,713	66,564	1,965,048	3,679,670	160,220	350,758	4,190,648	818,481	24,875	9,448	852,804	6,325,922	255,808	396,790	6,978,520
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		2,575,386	182,191	163,085	2,920,662	5,497,011	400,487	490,355	6,347,853	1,081,491	100,067	84,436	1,265,994	9,153,888	682,745	697,886	10,534,519

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 4.--VOLUME[1] OF MT. HEMLOCK AND ENGELMANN SPRUCE 4 INCHES AND MORE IN D.B.H. AVAILABLE FOR CUTTING[2], BY OWNERSHIP

IN THOUSANDS OF CUBIC FEET

WESTERN OREGON

UNIT AND COUNTY		PRIVATE				NATIONAL FOREST				OTHER PUBLIC[3]				TOTAL			
		Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total
COLUMBIA RIVER OREGON	Clatsop																
	Columbia																
	Washington																
	Multnomah	18			18	105		5	110					123		5	128
	Hood River	4		321	325	45,412		4,730	50,142			26	26	45,416		5,077	50,493
	Clackamas					94,877			94,877					94,877			94,877
	Total	22		321	343	140,394		4,735	145,129			26	26	140,416		5,082	145,498
WILLAMETTE RIVER	Yamhill																
	Polk																
	Marion					57,454		328	57,782					57,454		328	57,782
	Benton																
	Linn	907			907	43,629			43,629					44,536			44,536
	Lane (eastern part)	4,567			4,567	488,120		3,161	491,281	258			258	492,945		3,161	496,106
	Total	5,474			5,474	589,203		3,489	592,692	258			258	594,935		3,489	598,424
NORTH OREGON COAST	Tillamook																
	Lincoln																
	Lane (western part)																
	Total																
UMPQUA RIVER	Douglas (eastern part)					197,569		993	198,562					197,569		993	198,562
	Total					197,569		993	198,562					197,569		993	198,562
SOUTH OREGON COAST	Douglas (western part)																
	Coos																
	Curry					259			259					259			259
	Total					259			259					259			259
ROGUE RIVER	Josephine																
	Jackson					3,263			3,263	32			32	3,295			3,295
	Total					3,263			3,263	32			32	3,295			3,295
TOTAL WESTERN OREGON		5,496		321	5,817	930,688		9,217	939,905	290		26	316	936,474		9,564	946,038

WESTERN WASHINGTON

UNIT AND COUNTY		PRIVATE				NATIONAL FOREST				OTHER PUBLIC[3]				TOTAL			
		Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total	Saw-timber stands: Trees 16" or more DBH	Saw-timber stands: Understory trees 4" to 14" DBH	2nd-growth stands (trees 4" to about 20" DBH)	Total
NORTH PUGET SOUND	Whatcom	281		281	6,362		150	6,512						6,643		150	6,793
	Skagit	148		372	520	10,549		259	10,808	16		45	61	10,713		676	11,389
	Snohomish	6,696		65	6,761	112,754		906	114,660	4,944		59	5,003	125,394		1,033	126,427
	Island																
	San Juan																
	Total	7,125		437	7,562	130,665		1,315	131,980	4,960		104	5,064	142,750		1,859	144,609
CENTRAL PUGET SOUND	Clallam					23,593			23,593					23,593			23,593
	Jefferson (eastern part)					384			384					384			384
	Kitsap																
	Mason					2,149		4	2,153					2,149		4	2,153
	King	34,621		719	35,340	26,401		335	26,736	882			882	61,904		1,054	62,958
	Pierce	632		1	633	2,540	430	109	3,079					3,172	430	110	3,712
	Total	35,253		720	35,973	55,067	430	448	55,945	882			882	91,202	430	1,168	92,800
SOUTH PUGET SOUND	Thurston																
	Lewis	38		14	52	40,975		1,264	42,239					41,013		1,278	42,291
	Total	38		14	52	40,975		1,264	42,239					41,013		1,278	42,291
GRAYS HARBOR	Jefferson (western part)					7,302		27	7,329					7,302		27	7,329
	Grays Harbor					3,324			3,324					3,324			3,324
	Pacific																
	Total					10,626		27	10,653					10,626		27	10,653
COLUMBIA RIVER WASHINGTON	Wahkiakum																
	Cowlitz																
	Clark																
	Skamania	1,678		2,216	3,894	25,895		32,437	58,332					27,573		34,703	62,276
	Total	1,678		2,216	3,894	25,895		32,437	58,332					27,573		34,703	62,276
TOTAL WESTERN WASHINGTON		44,094		3,387	47,481	263,228	430	35,544	299,202	5,842		104	5,946	313,164	430	39,035	352,629
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		49,590		3,708	53,298	1,193,916	430	44,761	1,239,107	6,132		130	6,262	1,249,638	430	48,599	1,298,667

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 2.--VOLUME[1] OF SITKA SPRUCE 4 INCHES AND MORE IN D.B.H. AVAILABLE FOR CUTTING[2], BY OWNERSHIP

IN THOUSANDS OF CUBIC FEET

WESTERN OREGON

Unit and County	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC: 2nd-growth stands (trees 4" to about 20" DBH)	OTHER PUBLIC: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH)	TOTAL: Total
COLUMBIA RIVER OREGON																
Clatsop	219,545	4,692	27,447	251,684					5,139	149	3,757	9,045	224,684	4,841	31,204	260,729
Columbia																
Washington																
Multnomah																
Hood River																
Clackamas																
Total	219,545	4,692	27,447	251,684					5,139	149	3,757	9,045	224,684	4,841	31,204	260,729
WILLAMETTE RIVER																
Yamhill	47			47	201			201					248			248
Polk	892			892									892			892
Marion																
Benton																
Linn																
Lane (eastern part)	9			9									9			9
Total	948			948	201			201					1,149			1,149
NORTH OREGON COAST																
Tillamook	173,873	2,652	26,638	203,163	38,032	406	1,642	40,080	13,782	243	6,483	20,528	225,687	3,323	34,763	263,773
Lincoln	156,299	2,285	15,123	173,697	11,467	113	3,991	15,571	16,842	325	2,253	19,420	184,598	2,723	21,367	208,688
Lane (western part)	10,798	238	4,393	15,429	14,944	184	5,094	20,222	646	33	85	764	26,382	455	9,572	36,409
Total	340,954	5,175	46,154	392,283	64,443	706	10,727	75,875	31,270	621	8,821	40,712	436,667	6,501	65,702	508,870
UMPQUA RIVER																
Douglas (eastern part)																
Total																
SOUTH OREGON COAST																
Douglas (western part)	208,345	2,165	12,117	222,627	4,125	429	9,525	14,079		819	21,805	22,624	212,470	3,413	43,447	259,330
Coos	22,069	1,609	54,411	78,089	2	381	405	788	16	817	8,118	8,951	22,087	2,807	62,934	87,828
Curry	5,332	1,277	12,650	19,259		2,635	1,500	4,135		355	845	1,200	5,332	4,265	14,995	24,592
Total	235,746	5,051	79,178	319,975	4,127	3,445	11,430	19,000	16	1,991	30,768	32,775	239,889	10,485	121,376	371,750
ROGUE RIVER																
Josephine																
Jackson																
Total																
TOTAL WESTERN OREGON	797,198	14,918	152,779	964,890	68,771	4,148	22,157	95,076	36,425	2,761	43,346	82,532	902,394	21,827	218,282	1,142,498

WESTERN WASHINGTON

Unit and County	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC: 2nd-growth stands (trees 4" to about 20" DBH)	OTHER PUBLIC: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH)	TOTAL: Total
NORTH PUGET SOUND																
Whatcom	227	279		1,206	715	644		1,359	369	144		513	2,011	1,067		3,078
Skagit	3,135	465		3,598	3,137	896		4,033	676	109		785	6,946	1,470		8,416
Snohomish	5,647	469	4,707	10,823	1,181	1,038		2,219	960	213	9	1,182	7,788	1,720	4,716	14,224
Island	280			280									280			280
San Juan																
Total	9,287	1,213	4,707	15,907	5,033	2,578		7,611	2,005	466	9	2,480	17,025	4,257	4,716	25,998
CENTRAL PUGET SOUND																
Clallam	215,841	4,694	16,541	237,076	31,977	1,676	8,739	42,392	228,113	813	7,202	236,128	475,931	7,183	32,482	515,596
Jefferson (eastern part)	595	2		597		211		211		1		1	595	214		809
Kitsap	40			40									40			40
Mason	235	5		239		253		253		2		2	235	261		494
King	9,992	768		10,760	153	371		524	996	99		1,095	11,141	1,238		12,379
Pierce	17,236	1,255		18,491					1,088	57		1,145	18,324	1,312		19,636
Total	243,937	6,725	16,541	267,203	32,130	2,511	8,739	43,380	230,197	972	7,202	238,371	506,264	10,208	32,482	548,954
SOUTH PUGET SOUND																
Thurston	224	3		227									224	3		227
Lewis	11,399	338		11,737	147	437		584	468	65		533	12,014	840		12,854
Total	11,623	341		11,964	147	437		584	468	65		533	12,238	843		13,081
GRAYS HARBOR																
Jefferson (western part)	88,592	2,493	9,911	100,996	121,237	3,368	1,241	125,840	77,175	1,927	2,614	81,716	287,004	7,782	13,766	308,552
Grays Harbor	173,937	3,885	79,268	257,090	28,002	1,451	1,359	30,792	82,218	4,346	3,824	90,388	284,157	9,662	84,451	378,270
Pacific	166,208	21,822	55,561	243,591					17,827	2,422	5,014	25,263	184,035	24,244	60,575	268,854
Total	428,737	28,200	144,740	601,677	149,239	4,793	2,600	156,632	177,220	8,695	11,452	197,367	755,196	41,688	158,792	955,676
COLUMBIA RIVER WASHINGTON																
Wahkiakum	30,971	472	14,343	45,786					7,668	127	2,031	9,826	38,639	599	16,374	55,612
Cowlitz	840	108		948		4		4	143			143	983	112		1,095
Clark																
Skamania	1	100		101	89	833		922	537	1		538	627	934		1,561
Total	31,812	680	14,343	46,835	89	837		926	8,348	128	2,031	10,507	40,249	1,645	16,374	58,268
TOTAL WESTERN WASHINGTON	726,096	37,159	180,331	943,586	186,638	11,156	11,339	209,133	418,238	10,326	20,694	449,258	1,330,972	58,641	212,364	1,601,977
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	1,523,289	52,077	333,110	1,908,476	255,409	15,304	33,496	304,209	454,663	13,087	64,040	531,790	2,233,361	80,468	430,646	2,744,475

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 5.--VOLUME[1] OF BLACK COTTONWOOD 4 INCHES AND MORE IN D.B.H. AVAILABLE FOR CUTTING[2], BY OWNERSHIP

IN THOUSANDS OF CUBIC FEET

Unit and County	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: End-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: End-growth stands (trees 4" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC: End-growth stands (trees 4" to about 20" DBH)	OTHER PUBLIC: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: End-growth stands (trees 4" to about 20" DBH)	TOTAL: Total
WESTERN OREGON																
COLUMBIA RIVER OREGON: Clatsop																
Columbia	2,362		7,000	9,362					661		403	1,064	3,023		7,403	10,426
Washington	154		2,516	2,670							5	5	154		2,521	2,675
Multnomah	1,799		8,852	10,651							172	172	1,799		9,024	10,823
Hood River	77		379	456	556			556			79	79	633		458	1,091
Clackamas	1,992		4,500	6,492							34	34	1,992		4,534	6,526
Total	6,384		23,247	29,631	556			556	661		693	1,354	7,601		23,940	31,541
WILLAMETTE RIVER: Yamhill	582		1,755	2,337			795	795			4	4	582		2,552	3,134
Polk	134		153	287									134		153	287
Marion	1,941		5,239	7,180	9			9					1,950		5,239	7,189
Benton	231		300	531			30	30			110	110	231		430	661
Linn	1,525		7,941	9,466	6		4	10	2		658	660	1,533		8,603	10,136
Lane (eastern part)	2,430		7,839	10,269	162		484	646	25		574	599	2,617		8,897	11,514
Total	7,143		22,927	30,070	177		1,301	1,478	27		1,346	1,373	7,347		25,574	32,921
NORTH OREGON COAST: Tillamook																
Lincoln																
Lane (western part)																
Total																
UMPQUA RIVER: Douglas (eastern part)	42			42									42			42
Total	42			42									42			42
SOUTH OREGON COAST: Douglas (western part)																
Coos	78			78									78			78
Curry	62			62									62			62
Total	140			140									140			140
ROGUE RIVER: Josephine	42		1,327	1,369							17	17	42		1,304	1,346
Jackson	578		1,497	2,075					3		60	63	581		1,557	2,138
Total	620		2,784	3,404					3		77	80	623		2,861	3,484
TOTAL WESTERN OREGON	14,329		48,958	63,287	733		1,301	2,034	691		2,116	2,807	15,753		52,375	68,128
WESTERN WASHINGTON																
NORTH PUGET SOUND: Whatcom	706		5,342	6,048	71		252	323	197		484	681	1,034		6,078	7,112
Skagit	4,150		22,170	26,320	51		296	347	246		1,866	2,112	4,447		24,299	28,746
Snohomish	1,014		17,870	18,884	851		14	865	66		1,618	1,684	1,931		19,102	20,713
Island																
San Juan																
Total	5,920		45,510	51,430	922		562	1,484	479		4,008	4,487	7,112		49,579	57,091
CENTRAL PUGET SOUND: Clallam	22		375	397			9	9	3		38	41	25		422	447
Jefferson (eastern part)					4			4					4			4
Kitsap																
Mason	43		269	312	164		3	167			43	43	207		315	522
King	1,030		13,456	14,486	11		18	29	12		440	452	1,053		13,922	14,975
Pierce	2,045		19,346	21,391	48			48	491		1,118	1,609	2,584		20,464	23,048
Total	3,140		33,456	36,596	227		28	255	506		1,639	2,145	3,873		35,123	38,996
SOUTH PUGET SOUND: Thurston	299		2,555	2,854					21		162	183	320		2,717	3,037
Lewis	1,017		1,874	2,891	403			403	23		22	45	1,443		1,896	3,339
Total	1,316		4,429	5,745	403			403	44		184	228	1,763		4,613	6,376
GRAYS HARBOR: Jefferson (western part)	171		614	785	329		172	501	94		178	272	594		964	1,558
Grays Harbor	798		3,962	4,760	157		123	280	458		243	701	1,413		4,328	5,741
Pacific																
Total	969		4,576	5,545	486		295	781	552		421	973	2,007		5,292	7,299
COLUMBIA RIVER WASHINGTON: Wahkiakum	534		1,079	1,603					130		89	219	654		1,168	1,822
Cowlitz	1,666		1,786	3,452	121		4	125	385		4	389	2,112		1,794	3,906
Clark	926		5,191	6,117					12	9	98	119	938	9	5,289	6,236
Skamania	456		493	949	261		172	433	49		13	62	766		678	1,444
Total	3,572		8,549	12,121	382		176	558	516	9	204	729	4,470	9	8,929	13,408
TOTAL WESTERN WASHINGTON	14,977		96,520	111,497	2,151		960	3,111	2,097	9	6,456	8,562	19,225	9	103,936	123,170
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	29,306		145,478	174,784	2,884		2,261	5,145	2,788	9	8,572	11,369	34,978	9	156,311	191,298

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 6.--VOLUME[1] OF PULP TIMBER SPECIES AVAILABLE FOR CUTTING[2], BY OWNERSHIP AND FOREST UNITS

IN THOUSANDS OF CUBIC FEET

WESTERN OREGON

UNIT	SPECIES	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC[3]: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC[3]: 2nd-growth stands (trees 4" to about 20" DBH	OTHER PUBLIC[3]: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH	TOTAL: Total
COLUMBIA RIVER OREGON	Western hemlock	884,691	112,703	234,323	1,231,717	465,535	104,834	55,933	626,302	27,385	5,783	22,175	55,343	1,377,611	223,320	312,431	1,913,362
	Sitka spruce	219,545	4,692	27,447	251,684					5,139	149	3,757	9,045	224,684	4,841	31,204	260,729
	Engelmann spruce & Mt. hemlock	22		321	343	140,394		4,735	145,129			26	26	140,416		5,082	145,498
	Balsam firs	218,414	17,617	13,654	249,685	349,087	28,173	28,104	405,364	5,930	1,377	1,893	9,200	573,431	47,167	43,651	664,249
	Cottonwood	6,384		23,247	29,631	556			556	661		693	1,354	7,601		23,940	31,541
	Total	1,329,056	135,012	298,992	1,763,060	955,572	133,007	88,772	1,177,351	39,115	7,309	28,544	74,968	2,323,743	275,328	416,308	3,015,379
WILLAMETTE RIVER	Western hemlock	833,590	90,814	99,703	1,024,107	767,097	157,080	77,960	1,002,137	154,512	23,093	17,285	194,890	1,755,199	270,987	194,948	2,221,134
	Sitka spruce	948			948	201			201					1,149			1,149
	Engelmann spruce & Mt. hemlock	5,474			5,474	589,203		3,489	592,692	258			258	594,935		3,489	598,424
	Balsam firs	191,879	15,369	20,853	228,101	483,359	75,238	66,487	625,084	37,364	3,805	2,943	44,132	712,622	94,412	90,283	897,317
	Cottonwood	7,143		22,927	30,070	177		1,301	1,478	27		1,346	1,373	7,347		25,574	32,921
	Total	1,039,034	106,183	143,483	1,288,700	1,840,037	232,318	149,237	2,221,592	192,181	26,898	21,574	240,653	3,071,252	365,399	314,294	3,750,945
NORTH OREGON COAST	Western hemlock	706,408	88,089	55,317	849,814	127,681	21,586	29,333	178,600	71,202	11,207	35,845	118,254	905,291	120,882	120,495	1,146,668
	Sitka spruce	340,954	5,175	46,154	392,283	64,443	705	10,727	75,875	31,270	621	8,821	40,712	436,667	6,501	65,702	508,870
	Engelmann spruce & Mt. hemlock																
	Balsam firs	99,975	5,214		105,189		2,506		2,506	1,307	680		1,987	101,282	8,400		109,682
	Cottonwood																
	Total	1,147,337	98,478	101,471	1,347,286	192,124	24,797	40,060	256,981	103,779	12,508	44,666	160,953	1,443,240	136,783	186,197	1,765,220
UMPQUA RIVER	Western hemlock	35,038	42,348	20,335	97,721	106,575	80,700	4,682	191,957	26,154	33,729	6,550	66,433	167,767	156,777	31,567	356,111
	Sitka spruce																
	Engelmann spruce & Mt. hemlock					197,569		993	198,562					197,569		993	198,562
	Balsam firs	37,521	29,227	20,280	87,028	455,641	76,430	6,845	538,916	28,450	26,965	6,959	62,374	521,612	132,622	34,084	688,318
	Cottonwood	42			42									42			42
	Total	72,601	71,575	40,615	184,791	759,785	157,130	12,520	929,435	54,604	60,694	13,509	128,807	886,990	289,399	66,644	1,243,033
SOUTH OREGON COAST	Western hemlock	126,779	71,396	40,561	238,736	10,176	58,573	21,038	89,787	47,172	29,816	50,392	127,380	184,127	159,785	111,991	455,903
	Sitka spruce	235,746	5,051	79,178	319,975	4,127	3,443	11,430	19,000	16	1,991	30,768	32,775	239,889	10,485	121,376	371,750
	Engelmann spruce & Mt. hemlock					259			259					259			259
	Balsam firs	73,787	8,328	31,505	113,620	5,743	4,475	2,042	12,260	44,210	2,228	12,697	59,135	123,740	15,031	46,244	185,015
	Cottonwood	140			140									140			140
	Total	436,452	84,775	151,244	672,471	20,305	66,491	34,510	121,306	91,398	34,035	93,857	219,290	548,155	185,301	279,611	1,013,067
ROGUE RIVER	Western hemlock	828	6,674	111	7,613	13,931	22,118		36,049	530	9,602		10,132	15,289	38,394	111	53,794
	Sitka spruce																
	Engelmann spruce & Mt. hemlock					3,263			3,263	32			32	3,295			3,295
	Balsam firs	126,039	35,723	10,229	171,991	523,511	53,445	26,109	603,065	145,729	40,137	50,496	236,362	795,279	129,305	86,834	1,011,418
	Cottonwood	620		2,764	3,404					3		77	80	623		2,861	3,484
	Total	127,487	42,397	13,124	183,008	540,705	75,563	26,109	642,377	146,294	49,739	50,573	246,606	814,486	167,699	89,806	1,071,991
TOTAL WESTERN OREGON		4,151,967	538,420	748,929	5,439,316	4,308,528	689,306	351,208	5,349,042	627,371	191,183	252,723	1,071,277	9,087,866	1,418,909	1,352,860	11,859,635

WESTERN WASHINGTON

UNIT	SPECIES	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 4" to 14" DBH	PRIVATE: 2nd-growth stands (trees 4" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 4" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 4" to about 20" DBH	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC[3]: Saw-timber stands: Understory trees 4" to 14" DBH	OTHER PUBLIC[3]: 2nd-growth stands (trees 4" to about 20" DBH	OTHER PUBLIC[3]: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 4" to 14" DBH	TOTAL: 2nd-growth stands (trees 4" to about 20" DBH	TOTAL: Total
NORTH PUGET SOUND	Western hemlock	1,037,065	150,333	278,370	1,465,768	1,143,241	217,830	64,070	1,425,141	299,471	43,715	47,693	390,879	2,479,777	411,878	390,133	3,281,788
	Sitka spruce	9,987	1,213	4,707	15,907	5,033	2,578		7,611	2,005	466	9	2,480	17,025	4,257	4,716	25,998
	Engelmann spruce & Mt. hemlock	7,125		437	7,562	130,665		1,318	131,983	4,960		104	5,064	142,750		1,859	144,609
	Balsam firs	412,606	15,665	30,166	458,437	931,455	55,192	20,359	1,007,006	144,661	4,862	5,867	155,190	1,488,722	75,719	56,192	1,620,633
	Cottonwood	5,980		45,510	51,490	653		461	1,114	479		4,008	4,487	7,112		49,979	57,091
	Total	1,472,763	167,211	359,190	1,999,164	2,211,047	275,600	86,208	2,372,855	451,576	49,043	57,481	558,100	4,135,386	491,854	502,879	5,130,119
CENTRAL PUGET SOUND	Western hemlock	2,378,311	254,075	296,093	2,928,479	1,854,727	201,680	108,756	2,165,163	309,794	51,300	58,600	419,694	4,542,832	507,055	463,449	5,513,336
	Sitka spruce	243,937	6,725	16,541	267,203	32,130	2,511	8,739	43,380	230,197	972	7,202	238,371	506,264	10,208	32,482	548,954
	Engelmann spruce & Mt. hemlock	35,253		720	35,973	55,067	430	448	55,945	882			882	91,202	430	1,168	92,800
	Balsam firs	708,170	24,948	14,342	747,460	908,434	31,785	7,194	947,413	116,341	2,751	3,158	122,250	1,732,945	59,484	24,694	1,817,123
	Cottonwood	3,140		33,456	36,596	227		28	255	506		1,639	2,145	3,873		35,123	38,996
	Total	3,368,811	285,748	361,152	4,015,711	2,850,585	236,406	125,165	3,212,156	657,720	55,023	70,599	783,342	6,877,116	577,177	556,916	8,011,209
SOUTH PUGET SOUND	Western hemlock	736,785	122,023	41,622	900,430	436,127	67,651	35,884	539,662	143,179	14,931	4,529	162,639	1,316,091	204,605	82,035	1,602,731
	Sitka spruce	11,623	341		11,964	147	437		584	468	65		533	12,238	843		13,081
	Engelmann spruce & Mt. hemlock	38		14	52	40,975		1,264	42,239					41,013		1,278	42,291
	Balsam firs	182,486	8,171	455	191,112	485,089	21,504	92,326	598,919	21,863	937	343	23,143	689,438	30,612	93,124	813,174
	Cottonwood	1,316		4,429	5,745	403			403	44		184	228	1,763		4,613	6,376
	Total	932,248	130,535	46,520	1,109,303	962,741	89,592	129,474	1,181,807	165,554	15,933	5,056	186,543	2,060,543	236,060	181,050	2,477,653
GRAYS HARBOR	Western hemlock	2,311,222	349,661	486,269	3,147,152	1,223,412	134,000	10,607	1,368,019	882,695	143,786	40,489	1,066,970	4,417,329	627,447	537,365	5,582,141
	Sitka spruce	428,737	28,200	144,740	601,677	149,239	4,793	2,600	156,632	177,220	8,695	11,452	197,367	755,196	41,688	158,792	955,676
	Engelmann spruce & Mt. hemlock					10,626		27	10,653					10,626		27	10,653
	Balsam firs	181,740	8,054		189,794	764,438	24,282	201	788,921	453,588	14,154		467,742	1,399,766	46,490	201	1,446,457
	Cottonwood	969		4,576	5,545	486		295	781	552		421	973	2,007		5,292	7,299
	Total	2,922,668	385,915	635,585	3,944,168	2,148,201	163,075	13,730	2,325,006	1,514,055	166,635	52,362	1,733,052	6,584,924	715,625	701,677	8,002,226
COLUMBIA RIVER WASHINGTON	Western hemlock	625,115	87,542	195,930	908,587	648,309	112,436	62,355	823,100	149,775	17,747	26,196	193,718	1,423,199	217,725	284,481	1,925,405
	Sitka spruce	31,812	680	14,343	46,835	89	837		926	8,348	128	2,031	10,507	40,249	1,645	16,374	58,268
	Engelmann spruce & Mt. hemlock	1,678		2,216	3,894	25,895		32,487	58,382					27,573		34,703	62,276
	Balsam firs	342,769	13,875	21,601	378,245	590,254	27,457	200,698	818,409	82,028	2,171	280	84,479	1,015,051	43,503	222,579	1,281,133
	Cottonwood	3,572		8,549	12,121	382		176	558	516	9	204	729	4,470	9	8,929	13,408
	Total	1,004,946	102,097	242,639	1,349,682	1,264,929	140,730	295,716	1,701,375	240,667	20,055	28,711	289,433	2,510,542	262,882	567,066	3,340,490
TOTAL WESTERN WASHINGTON		9,701,436	1,071,506	1,645,086	12,418,028	9,437,503	905,403	650,293	10,993,199	3,029,572	306,689	214,209	3,550,470	22,168,511	2,283,598	2,509,588	26,961,697
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		13,853,403	1,609,926	2,394,015	17,857,344	13,746,031	1,594,709	1,001,501	16,342,241	3,656,943	497,872	466,932	4,621,747	31,256,377	3,702,507	3,862,448	38,821,332

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 7.--VOLUME[1] OF PULP TIMBER SPECIES AVAILABLE FOR CUTTING[2], BY OWNERSHIP AND FOREST UNITS

IN THOUSANDS OF CORDS

WESTERN OREGON

UNIT	SPECIES	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 7" to 14" DBH	PRIVATE: 2nd-growth stands (trees 7" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 7" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 7" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC[3]: Saw-timber stands: Understory trees 7" to 14" DBH	OTHER PUBLIC[3]: 2nd-growth stands (trees 7" to about 20" DBH)	OTHER PUBLIC[3]: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 7" to 14" DBH	TOTAL: 2nd-growth stands (trees 7" to about 20" DBH)	TOTAL: Total
COLUMBIA RIVER OREGON	Western hemlock	9,028	854	1,905	11,787	4,750	794	455	5,999	280	44	180	504	14,058	1,692	2,540	18,290
	Sitka spruce	2,240	36	223	2,499					52	1	31	84	2,292	37	254	2,583
	Engelmann spruce & Mt. hemlock			3	3	1,433		38	1,471					1,433		41	1,474
	Balsam firs	2,230	133	111	2,474	3,562	214	228	4,004	60	10	16	86	5,852	357	355	6,564
	Cottonwood	64		189	253	6			6	7		6	13	77		195	272
	Total	13,562	1,023	2,431	17,016	9,751	1,008	721	11,480	399	55	233	687	23,712	2,086	3,385	29,183
WILLAMETTE RIVER	Western hemlock	8,506	688	810	10,004	7,828	1,190	633	9,651	1,576	175	142	1,893	17,910	2,053	1,585	21,548
	Sitka spruce	9			9	2			2					11			11
	Engelmann spruce & Mt. hemlock	56			56	6,013		28	6,041	2			2	6,071		28	6,099
	Balsam firs	1,958	116	170	2,244	4,932	570	541	6,043	382	29	23	434	7,272	715	734	8,721
	Cottonwood	73		186	259	1		11	12	1		10	11	75		207	282
	Total	10,602	804	1,166	12,572	18,776	1,760	1,213	21,749	1,961	204	175	2,340	31,339	2,768	2,554	36,661
NORTH OREGON COAST	Western hemlock	7,208	667	450	8,325	1,303	163	239	1,705	726	86	291	1,103	9,237	916	980	11,133
	Sitka spruce	3,479	40	375	3,894	657	6	87	750	320	3	72	395	4,456	49	534	5,039
	Engelmann spruce & Mt. hemlock																
	Balsam firs	1,020	39		1,059		19		19	13	6		19	1,033	64		1,097
	Cottonwood																
	Total	11,707	746	825	13,278	1,960	188	326	2,474	1,059	95	363	1,517	14,726	1,029	1,514	17,269
UMPQUA RIVER	Western hemlock	357	321	166	844	1,088	611	38	1,737	267	255	53	575	1,712	1,187	257	3,156
	Sitka spruce																
	Engelmann spruce & Mt. hemlock					2,016		8	2,024					2,016		8	2,024
	Balsam firs	383	221	164	768	4,649	579	56	5,284	290	205	57	552	5,322	1,005	277	6,604
	Cottonwood	1			1									1			1
	Total	741	542	330	1,613	7,753	1,190	102	9,045	557	460	110	1,127	9,051	2,192	542	11,786
SOUTH OREGON COAST	Western hemlock	1,294	541	329	2,164	104	444	171	719	461	226	410	1,117	1,879	1,211	910	4,000
	Sitka spruce	2,406	38	644	3,088	42	26	93	161		15	250	265	2,448	79	987	3,514
	Engelmann spruce & Mt. hemlock					3			3					3			3
	Balsam firs	753	63	257	1,073	56	34	17	109	451	17	103	571	1,262	114	377	1,753
	Cottonwood	1			1									1			1
	Total	4,454	642	1,230	6,326	207	504	281	992	932	258	763	1,953	5,593	1,404	2,274	9,271
ROGUE RIVER	Western hemlock	9	50	1	60	142	168		310	5	73		78	156	291	1	448
	Sitka spruce																
	Engelmann spruce & Mt. hemlock					34			34					34			34
	Balsam firs	1,286	271	84	1,641	5,342	404	212	5,958	1,488	304	410	2,202	8,116	979	706	9,801
	Cottonwood	6		22	28							1	1	6		23	29
	Total	1,301	321	107	1,729	5,518	572	212	6,302	1,493	377	411	2,281	8,312	1,270	730	10,312
TOTAL WESTERN OREGON		42,367	4,078	6,089	52,534	43,965	5,222	2,855	52,042	6,401	1,449	2,055	9,906	92,733	10,749	10,999	114,481

WESTERN WASHINGTON

UNIT	SPECIES	PRIVATE: Saw-timber stands: Trees 16" or more DBH	PRIVATE: Saw-timber stands: Understory trees 7" to 14" DBH	PRIVATE: 2nd-growth stands (trees 7" to about 20" DBH)	PRIVATE: Total	NATIONAL FOREST: Saw-timber stands: Trees 16" or more DBH	NATIONAL FOREST: Saw-timber stands: Understory trees 7" to 14" DBH	NATIONAL FOREST: 2nd-growth stands (trees 7" to about 20" DBH)	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Saw-timber stands: Trees 16" or more DBH	OTHER PUBLIC[3]: Saw-timber stands: Understory trees 7" to 14" DBH	OTHER PUBLIC[3]: 2nd-growth stands (trees 7" to about 20" DBH)	OTHER PUBLIC[3]: Total	TOTAL: Saw-timber stands: Trees 16" or more DBH	TOTAL: Saw-timber stands: Understory trees 7" to 14" DBH	TOTAL: 2nd-growth stands (trees 7" to about 20" DBH)	TOTAL: Total
NORTH PUGET SOUND	Western hemlock	10,583	1,139	2,263	13,985	11,666	1,680	881	13,837	3,055	331	389	3,775	25,304	3,120	5,173	31,597
	Sitka spruce	102	9	39	150	51	20		71	20	4		24	173	33	39	245
	Engelmann spruce & Mt. hemlock	72		3	75	1,333		11	1,344	51		1	52	1,456		15	1,471
	Balsam firs	4,210	119	245	4,574	9,506	418	166	10,088	1,476	37	46	1,559	15,191	574	456	16,221
	Cottonwood	61		370	431	7		4	11	6		31	37	74		405	479
	Total	15,028	1,267	2,920	19,215	22,562	2,098	701	25,351	4,608	372	467	5,447	42,198	3,727	4,088	50,013
CENTRAL PUGET SOUND	Western hemlock	24,269	1,925	2,407	28,601	18,986	1,529	884	21,399	3,161	388	477	4,026	46,356	3,841	3,768	53,965
	Sitka spruce	2,489	51	135	2,675	328	19	71	418	2,349	7	58	2,414	5,166	77	264	5,507
	Engelmann spruce & Mt. hemlock	360		5	365	562	3	4	569	9			9	931	3	9	943
	Balsam firs	7,226	189	117	7,532	9,269	241	59	9,569	1,186	21	25	1,254	17,683	451	201	18,335
	Cottonwood	32		272	304	2			2	5		14	19	39		286	325
	Total	34,376	2,165	2,936	39,477	29,087	1,791	1,018	31,896	6,712	416	574	7,702	70,175	4,372	4,528	79,075
SOUTH PUGET SOUND	Western hemlock	7,518	925	338	8,781	4,450	513	292	5,255	1,462	112	37	1,611	13,430	1,550	667	15,647
	Sitka spruce	119	2		121	2	3		5	4	1		5	125	6		131
	Engelmann spruce & Mt. hemlock	1			1	418		10	428					419		10	429
	Balsam firs	1,862	62	4	1,928	4,960	163	781	5,864	223	7	2	232	7,035	232	787	8,024
	Cottonwood	13		36	49	4			4			2	2	17		38	55
	Total	9,513	989	378	10,880	9,824	679	1,083	11,556	1,689	120	41	1,850	21,026	1,788	1,472	24,286
GRAYS HARBOR	Western hemlock	23,584	2,648	3,954	30,186	12,484	1,015	86	13,585	9,007	1,090	329	10,426	45,075	4,753	4,369	54,197
	Sitka spruce	4,373	215	1,177	5,765	1,523	36	21	1,580	1,810	65	93	1,968	7,706	316	1,291	9,313
	Engelmann spruce & Mt. hemlock					109			109					109			109
	Balsam firs	1,855	61		1,916	7,800	184	2	7,986	4,628	107		4,735	14,283	352	2	14,637
	Cottonwood	11		36	47	4		3	7	5		4	9	20		43	63
	Total	29,823	2,924	5,167	37,914	21,920	1,236	112	23,267	15,450	1,262	426	17,138	67,193	5,421	5,705	78,319
COLUMBIA RIVER WASHINGTON	Western hemlock	6,379	663	1,593	8,635	6,615	852	507	7,974	1,529	134	213	1,876	14,523	1,649	2,313	18,485
	Sitka spruce	324	5	117	446	1	6		7	86	1	16	103	411	12	133	556
	Engelmann spruce & Mt. hemlock	17		18	35	265		264	529					282		282	564
	Balsam firs	3,498	105	176	3,779	6,023	208	1,631	7,862	835	18	3	856	10,356	331	1,810	12,497
	Cottonwood	36		70	106	4		1	5	6		1	7	46		72	118
	Total	10,254	773	1,974	13,001	12,908	1,066	2,403	16,377	2,456	153	233	2,842	25,618	1,992	4,610	32,220
TOTAL WESTERN WASHINGTON		98,994	8,118	13,375	120,487	96,301	6,859	5,297	108,447	30,915	2,323	1,741	34,979	226,210	17,300	20,403	263,913
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		141,361	12,196	19,464	173,021	140,266	12,081	8,142	160,489	37,316	3,772	3,796	44,884	318,943	28,049	31,402	378,394

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 8.--VOLUME[1] OF SOUND WOOD IN CULL SAW-TIMBER TREES[2] IN STANDS AVAILABLE FOR CUTTING[3]

VOLUME, BY SPECIES AND OWNERSHIP, IN THOUSANDS OF CORDS

WESTERN OREGON

UNIT	SPECIES	PRIVATE	NATIONAL FOREST	OTHER PUBLIC[4]	TOTAL
COLUMBIA RIVER OREGON	Western hemlock	315	166	10	491
	Sitka spruce	78		2	80
	Engelmann spruce & Mt. hemlock		50		50
	Balsam firs	78	125	2	205
	Total	471	341	14	826
WILLAMETTE RIVER	Western hemlock	655	571	104	1,330
	Sitka spruce				
	Engelmann spruce & Mt. hemlock	4	400		404
	Balsam firs	111	310	22	443
	Total	770	1,281	126	2,177
NORTH OREGON COAST	Western hemlock	256	55	26	337
	Sitka spruce	125	29	11	165
	Engelmann spruce & Mt. hemlock				
	Balsam firs	36			36
	Total	417	84	37	538
UMPQUA RIVER	Western hemlock	25	76	19	120
	Sitka spruce				
	Engelmann spruce & Mt. hemlock		71		71
	Balsam firs	14	163	9	186
	Total	39	310	28	377
SOUTH OREGON COAST	Western hemlock	53	6	19	78
	Sitka spruce	84	2		86
	Engelmann spruce & Mt. hemlock				
	Balsam fire	26	2	16	44
	Total	163	10	35	208
ROGUE RIVER	Western hemlock	1	10		11
	Sitka spruce				
	Engelmann spruce & Mt. hemlock		1		1
	Balsam firs	45	187	52	284
	Total	46	198	52	296
TOTAL WESTERN OREGON		1,906	2,224	292	4,422

WESTERN WASHINGTON

UNIT	SPECIES	PRIVATE	NATIONAL FOREST	OTHER PUBLIC[4]	TOTAL
NORTH PUGET SOUND	Western hemlock	190	217	56	463
	Sitka spruce	3	1	1	5
	Engelmann spruce & Mt. hemlock	2	35	1	38
	Balsam fire	109	247	38	394
	Total	304	500	96	900
CENTRAL PUGET SOUND	Western hemlock	429	348	55	832
	Sitka spruce	43	5	40	88
	Engelmann spruce & Mt. hemlock	6	10		16
	Balsam fire	127	169	21	317
	Total	605	532	116	1,253
SOUTH PUGET SOUND	Western hemlock	171	102	34	307
	Sitka spruce	3			3
	Engelmann spruce & Mt. hemlock		11		11
	Balsam firs	48	129	6	183
	Total	222	242	40	504
GRAYS HARBOR	Western hemlock	401	212	153	766
	Sitka spruce	74	26	31	131
	Engelmann spruce & Mt. hemlock		2		2
	Balsam firs	32	132	79	243
	Total	507	372	263	1,142
COLUMBIA RIVER WASHINGTON	Western hemlock	110	132	26	268
	Sitka spruce	9		2	11
	Engelmann spruce & Mt. hemlock		7		7
	Balsam firs	78	183	18	279
	Total	197	322	46	565
TOTAL WESTERN WASHINGTON		1,835	1,968	561	4,324
TOTAL WESTERN OREGON AND WESTERN WASHINGTON		3,741	4,192	853	8,746

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Trees of saw-timber size that were excluded from saw-log estimates because they were two thirds or more defective. 3/ Not reserved from cutting by statute, proclamation, or policy. 4/ Includes state selection area in Snohomish County, Washington.

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

From Inventory Phase of Forest Survey

Table 9.--Economic availability of pulp species of saw-timber size

Unit	Private lands and public lands other than national forests				National forests				Total volume all ownerships
	Volume	Portion of volume included in class 1	2	3	Volume	Portion of volume included in class 1	2	3	
	Thousands of cords	Per-cent	Per-cent	Per-cent	Thousands of cords	Per-cent	Per-cent	Per-cent	Per-cent
WESTERN OREGON									
Columbia River	17,703	71	27	2	11,480	20	70	10	29,183
Willamette River	14,912	57	40	3	21,749	20	68	12	36,661
North Oregon Coast	14,795	61	37	2	2,474	46	53	1	17,269
Umpqua River	2,740	23	65	12	9,045	4	70	26	11,785
South Oregon Coast	8,279	74	25	1	992	86	5	9	9,271
Rogue River	4,010	39	45	16	6,302	22	61	17	10,312
TOTAL WESTERN OREGON	62,439	62	35	3	52,042	20	66	14	114,481
WESTERN WASHINGTON									
North Puget Sound	24,662	46	44	10	25,351	25	56	19	50,013
Central Puget Sound	47,179	60	37	3	31,896	41	46	13	79,075
South Puget Sound	12,730	62	33	5	11,556	22	60	18	24,286
Grays Harbor	55,052	69	27	4	23,267	52	30	18	78,319
Columbia River	15,843	65	31	4	16,377	17	69	14	32,220
TOTAL WESTERN WASHINGTON	155,466	62	33	5	108,447	34	50	16	263,913
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	217,905	62	34	4	160,489	29	55	16	378,394

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 10.--AREAS[1] OF PRINCIPAL PULPWOOD TYPES AVAILABLE FOR CUTTING[2], BY OWNERSHIP

WESTERN OREGON

UNIT	Size of stand	PRIVATE: Western hemlock types	PRIVATE: Sitka spruce types	PRIVATE: Balsam firs: and Mt. hemlock: types	PRIVATE: Total	NATIONAL FOREST: Western hemlock types	NATIONAL FOREST: Sitka spruce types	NATIONAL FOREST: Balsam firs: and Mt. hemlock: types	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Western hemlock types	OTHER PUBLIC[3]: Sitka spruce types	OTHER PUBLIC[3]: Balsam firs: and Mt. hemlock: types	OTHER PUBLIC[3]: Total	TOTAL: Western hemlock types	TOTAL: Sitka spruce types	TOTAL: Balsam firs: and Mt. hemlock: types	TOTAL: Total
		acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres	acres
COLUMBIA RIVER OREGON	Over about 20" DBH	94,860	18,870	15,305	129,035	61,208		71,081	132,289	2,530	840	135	3,505	158,598	19,710	86,521	264,829
	From 0 to about 20" DBH	74,490	3,285	4,135	81,910	8,613		37,914	46,527	8,200	875	3,750	12,825	91,303	4,160	45,799	141,262
	Total	169,350	22,155	19,440	210,945	69,821		108,995	178,816	10,730	1,715	3,885	16,330	249,901	23,870	132,320	406,091
WILLAMETTE RIVER	Over about 20" DBH	15,135		9,207	24,342	39,989		279,352	319,341	4,095		730	4,825	59,219		289,289	348,508
	From 0 to about 20" DBH	10,840		2,818	13,658	1,784		32,225	34,009	1,220		80	1,300	13,844		35,123	48,967
	Total	25,975		12,025	38,000	41,773		311,577	353,350	5,315		810	6,125	73,063		324,412	397,475
NORTH OREGON COAST	Over about 20" DBH	80,987	40,288	3,525	124,800	12,542	7,086		19,628	12,408	4,821	65	17,294	105,937	52,195	3,590	161,722
	From 0 to about 20" DBH	13,197	18,814		32,011	866	3,075		3,941	9,947	2,076		12,023	24,010	23,965		47,975
	Total	94,184	59,102	3,525	156,811	13,408	10,161		23,569	22,355	6,897	65	29,317	129,947	76,160	3,590	209,697
UMPQUA RIVER	Over about 20" DBH	280			280	983		145,525	146,508			200	200	1,263		145,725	146,988
	From 0 to about 20" DBH	80			80			4,515	4,515	80		190	270	160		4,708	4,868
	Total	360			360	983		150,043	151,026	80		390	470	1,423		150,433	151,856
SOUTH OREGON COAST	Over about 20" DBH	1,205	19,024	3,895	24,124	75	363	674	1,112	75		1,705	1,780	1,355	19,387	6,274	27,016
	From 0 to about 20" DBH	355	15,365	2,935	18,645	10		30	40	65	645	760	1,470	430	16,010	3,715	20,155
	Total	1,560	34,389	6,830	42,769	85	363	704	1,152	140	645	2,465	3,250	1,785	35,397	9,989	47,171
ROGUE RIVER	Over about 20" DBH			14,380	14,380			64,455	64,455			23,679	23,679			102,512	102,512
	From 0 to about 20" DBH	70		1,562	1,632			9,499	9,499			3,741	3,741	70		14,802	14,872
	Total	70		15,942	16,012			73,954	73,954			27,420	27,420	70		117,314	117,384
TOTAL WESTERN OREGON	Over about 20" DBH	192,467	78,182	46,312	316,961	114,797	7,449	561,085	683,331	19,108	5,661	26,514	51,283	326,372	91,292	633,911	1,051,575
	From 0 to about 20" DBH	99,032	37,464	11,440	147,936	11,273	3,075	84,156	98,504	19,512	3,596	8,521	31,629	129,817	44,135	104,147	278,099
	Total	291,499	115,646	57,752	464,897	126,070	10,524	645,271	781,835	38,620	9,257	35,035	82,912	456,189	135,427	738,058	1,329,674

WESTERN WASHINGTON

UNIT	Size of stand	PRIVATE: Western hemlock types	PRIVATE: Sitka spruce types	PRIVATE: Balsam firs: and Mt. hemlock: types	PRIVATE: Total	NATIONAL FOREST: Western hemlock types	NATIONAL FOREST: Sitka spruce types	NATIONAL FOREST: Balsam firs: and Mt. hemlock: types	NATIONAL FOREST: Total	OTHER PUBLIC[3]: Western hemlock types	OTHER PUBLIC[3]: Sitka spruce types	OTHER PUBLIC[3]: Balsam firs: and Mt. hemlock: types	OTHER PUBLIC[3]: Total	TOTAL: Western hemlock types	TOTAL: Sitka spruce types	TOTAL: Balsam firs: and Mt. hemlock: types	TOTAL: Total
NORTH PUGET SOUND	Over about 20" DBH	117,284	230	47,987	165,501	219,678	848	222,231	442,757	46,741		15,126	61,867	383,703	1,078	285,344	670,125
	From 0 to about 20" DBH	47,010	860	2,160	50,030	12,509		16,125	28,634	13,095	5	1,120	14,220	72,614	865	19,465	92,944
	Total	164,294	1,090	50,147	215,531	232,187	848	238,416	471,451	59,836	5	16,246	76,087	456,317	1,943	304,809	763,069
CENTRAL PUGET SOUND	Over about 20" DBH	243,009	18,689	66,873	328,571	238,239	1,989	107,376	347,604	69,134	4,846	3,985	77,965	550,382	25,524	178,234	754,140
	From 0 to about 20" DBH	98,278		9,015	107,293	18,217		15,603	33,820	22,615	25		22,640	139,110	25	24,618	163,753
	Total	341,287	18,689	75,888	435,864	256,456	1,989	122,979	381,424	91,749	4,871	3,985	100,605	689,492	25,549	202,852	917,893
SOUTH PUGET SOUND	Over about 20" DBH	34,080		11,510	45,590	43,704		84,426	128,130	6,550		1,120	7,650	84,314		97,056	181,370
	From 0 to about 20" DBH	1,904		2,150	4,054	1,116		19,892	21,008	630			630	3,650		22,016	25,666
	Total	35,984		13,640	49,624	44,820		104,312	149,132	7,160		1,120	8,280	87,964		119,072	207,036
GRAYS HARBOR	Over about 20" DBH	345,808	37,066	12,315	395,183	171,024	14,956	91,296	277,256	149,126	15,749	50,288	215,163	665,952	67,751	153,899	887,602
	From 0 to about 20" DBH	185,170	9,745		194,921	2,650	30	82	2,732	18,866	745		19,611	206,692	10,520	52	217,264
	Total	530,978	46,811	12,315	590,104	173,674	14,986	91,348	279,988	167,992	16,494	50,288	234,774	872,644	78,271	153,951	1,104,866
COLUMBIA RIVER WASH.	Over about 20" DBH	43,469	1,435	43,881	88,785	83,677		92,476	176,153	9,512	380	6,254	16,086	136,658	1,755	142,611	281,024
	From 0 to about 20" DBH	32,811	3,328	5,059	41,198	2,692		80,710	83,402	5,755	594		6,349	41,258	3,922	85,769	130,949
	Total	76,280	4,763	48,940	129,983	86,369		173,186	259,555	15,267	914	6,254	22,435	177,916	5,677	228,380	411,973
TOTAL WESTERN WASHINGTON	Over about 20" DBH	783,644	57,430	182,566	1,023,630	756,322	17,773	597,805	1,371,900	281,043	20,915	76,773	378,731	1,821,009	96,108	857,144	2,774,261
	From 0 to about 20" DBH	365,179	13,933	18,364	397,476	37,184	30	132,436	169,650	60,961	1,369	1,120	63,450	465,324	15,332	151,920	630,576
	Total	1,148,823	71,363	200,930	1,421,106	793,506	17,803	730,241	1,541,550	342,004	22,284	77,893	442,181	2,284,333	111,440	1,009,064	3,404,837
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	Over about 20" DBH	976,111	136,608	228,878	1,340,591	871,119	25,222	1,158,890	2,055,231	300,151	26,576	103,287	430,014	2,147,381	187,400	1,491,055	3,825,836
	From 0 to about 20" DBH	464,211	51,397	29,804	545,412	48,457	3,105	215,622	268,184	80,473	4,965	9,641	95,079	593,141	59,467	256,067	908,675
	Total	1,440,322	186,999	258,682	1,886,003	919,576	28,327	1,375,512	2,323,415	380,624	31,541	112,928	525,093	2,740,522	246,867	1,747,122	4,734,511

1/ Data corrected to 1932 for 3 counties, to 1933 for 33 counties, to 1934 for 2 counties. 2/ Not reserved from cutting by statute, proclamation, or policy. 3/ Includes state selection area in Snohomish County, Washington.

Table 11.--Comparative areas of pulpwood types and other types of saw-timber size in thousands of acres

Unit	Stands of saw-timber size in which pulp species predominate			Stands of saw-timber size in which other species predominate		
	Private	Public	Total	Private	Public	Total
WESTERN OREGON						
Columbia River Oregon	129	136	265	335	260	595
Willamette River	24	324	348	1,065	1,187	2,252
North Oregon Coast	125	37	162	284	270	554
Umpqua River	-	147	147	647	1,097	1,744
South Oregon Coast	24	3	27	490	570	1,060
Rogue River	14	88	102	408	918	1,326
TOTAL WESTERN OREGON	316	735	1,051	3,229	4,302	7,531
WESTERN WASHINGTON						
North Puget Sound	166	505	671	238	186	424
Central Puget Sound	329	426	755	460	298	758
South Puget Sound	46	136	182	479	159	638
Grays Harbor	395	492	887	236	164	400
Columbia River Washington	89	192	281	249	260	509
TOTAL WESTERN WASHINGTON	1,025	1,751	2,776	1,662	1,067	2,729
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	1,341	2,486	3,827	4,891	5,369	10,260

Table 12.--Current, realizable, and potential annual growth[1] on areas available for cutting, all pulpwood species combined

Unit	Current annual growth	Realizable mean annual growth	Potential annual growth
	Million cu. ft.	Million cu. ft.	Million cu. ft.
WESTERN OREGON			
Columbia River Oregon	32	27	74
Willamette River	25	18	64
North Oregon Coast	17	14	51
Umpqua River	4	3	19
South Oregon Coast	8	6	24
Rogue River	5	4	31
TOTAL WESTERN OREGON	91	72	263
WESTERN WASHINGTON			
North Puget Sound	33	29	118
Central Puget Sound	48	47	172
South Puget Sound	22	18	53
Grays Harbor	42	40	179
Columbia River Washington	28	24	67
TOTAL WESTERN WASHINGTON	173	158	589
TOTAL WESTERN OREGON AND WESTERN WASHINGTON	264	230	852

1/ Preliminary data, subject to correction in later reports.

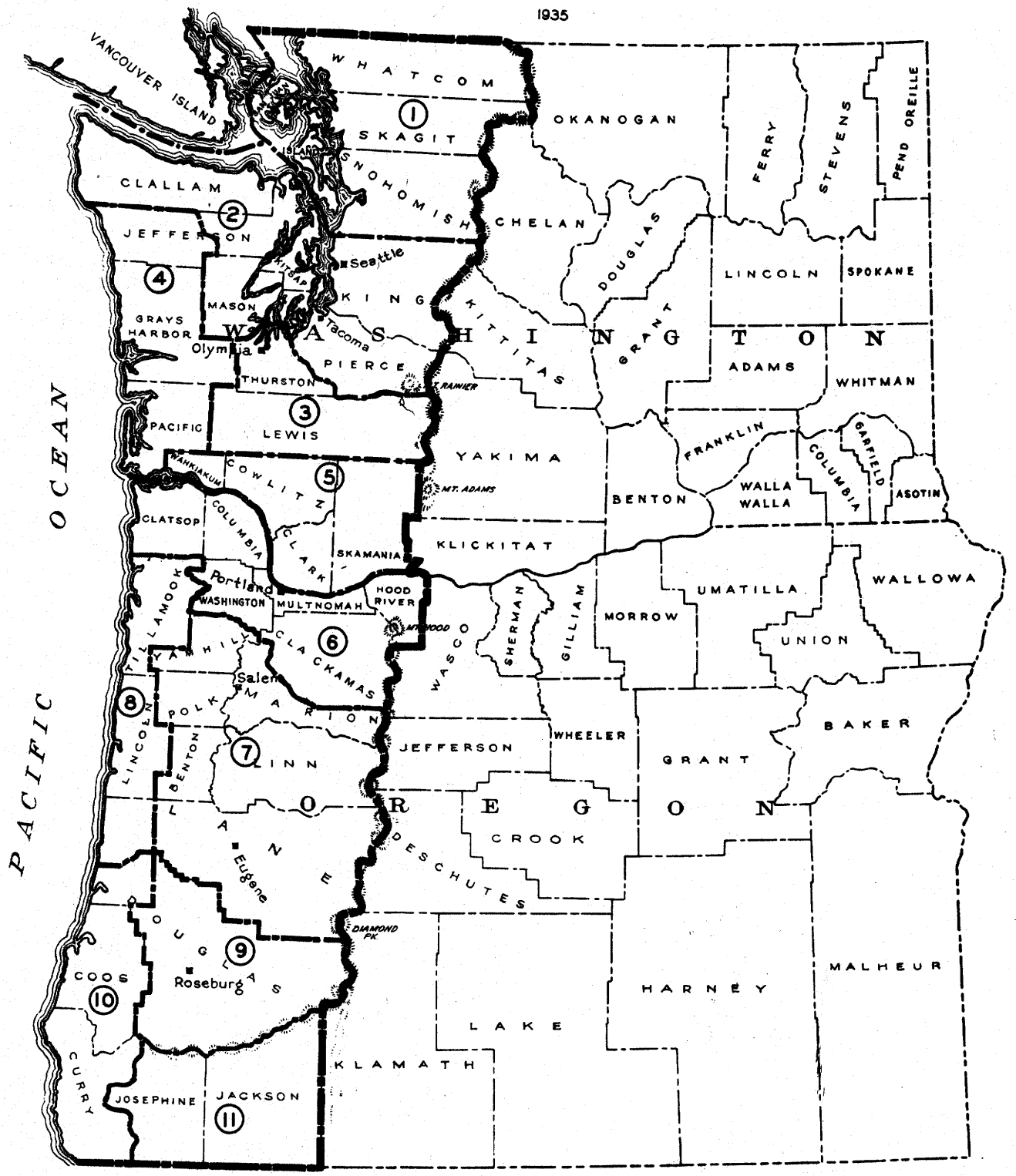
FIG. I

MAP OF OREGON & WASHINGTON SHOWING

THE ELEVEN FOREST UNITS OF THE DOUGLAS FIR REGION

PACIFIC NORTHWEST FOREST EXPERIMENT STATION FOREST SURVEY

1935



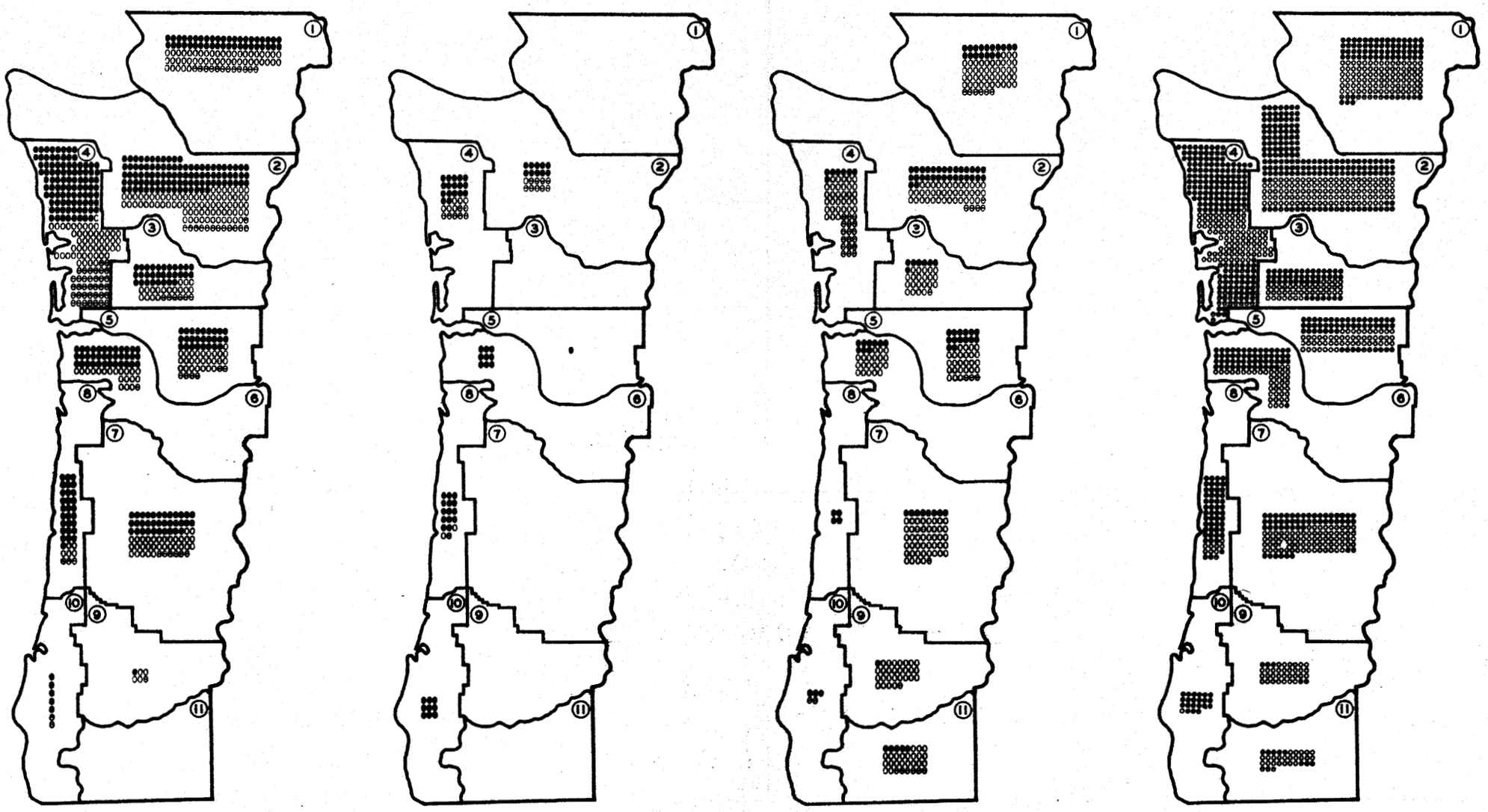
1. NORTH PUGET SOUND UNIT
2. CENTRAL PUGET SOUND UNIT
3. SOUTH PUGET SOUND UNIT
4. GRAYS HARBOR UNIT
5. COLUMBIA RIVER WASHINGTON UNIT
6. COLUMBIA RIVER OREGON UNIT
7. WILLAMETTE RIVER UNIT
8. NORTH OREGON COAST UNIT
9. UMPQUA RIVER UNIT
10. SOUTH OREGON COAST UNIT
11. ROGUE RIVER UNIT

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

FIG. 2 CORDS OF PULPWOOD IN SAW-TIMBER TREES OVER 16" DBH

DATA FROM TABLE 7



A. WESTERN HEMLOCK

B. SITKA SPRUCE

C. BALSAM FIRS, MOUNTAIN HEMLOCK, AND ENGELMANN SPRUCE

D. TOTAL ALL SPECIES

EACH CIRCLE = 250,000 CORDS

●-PRIVATE. O-NATIONAL FOREST AVAILABLE FOR CUTTING. ⊖-OTHER PUBLIC AVAILABLE FOR CUTTING.

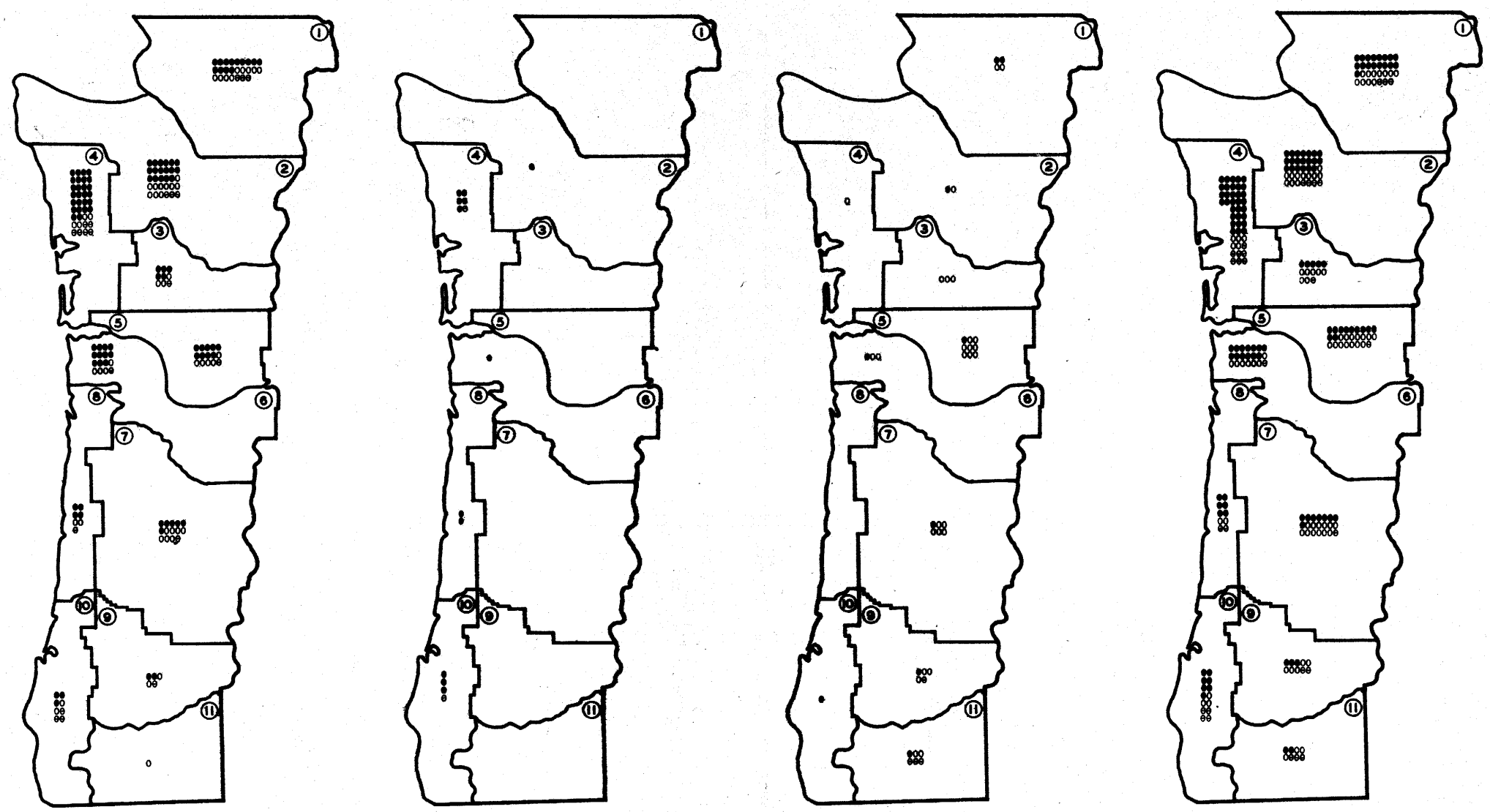
(1) NORTH PUGET SOUND UNIT
(2) CENTRAL PUGET SOUND UNIT
(3) SOUTH PUGET SOUND UNIT
(4) GRAYS HARBOR UNIT
(5) COLUMBIA RIVER WASHINGTON UNIT
(6) COLUMBIA RIVER OREGON UNIT
(7) WILLAMETTE RIVER UNIT
(8) NORTH OREGON COAST UNIT
(9) UMPQUA RIVER UNIT
(10) SOUTH OREGON COAST UNIT
(11) ROGUE RIVER UNIT

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

FIG. 3 CORDS OF PULPWOOD IN OTHER THAN SAW-TIMBER TREES[1]

DATA FROM TABLE 7



A. WESTERN HEMLOCK

B. SITKA SPRUCE

C. BALSAM FIRS, MOUNTAIN HEMLOCK, AND ENGELMANN SPRUCE

D. TOTAL ALL SPECIES

EACH CIRCLE = 250,000 CORDS

●-PRIVATE. O-NATIONAL FOREST AVAILABLE FOR CUTTING. ⊖-OTHER PUBLIC AVAILABLE FOR CUTTING.

1/ INCLUDES TREES 7" AND OVER DBH IN SECOND-GROWTH STANDS AND UNDERSTORY TREES 7 TO 14" DBH. DBH IN SAWTIMBER STANDS.

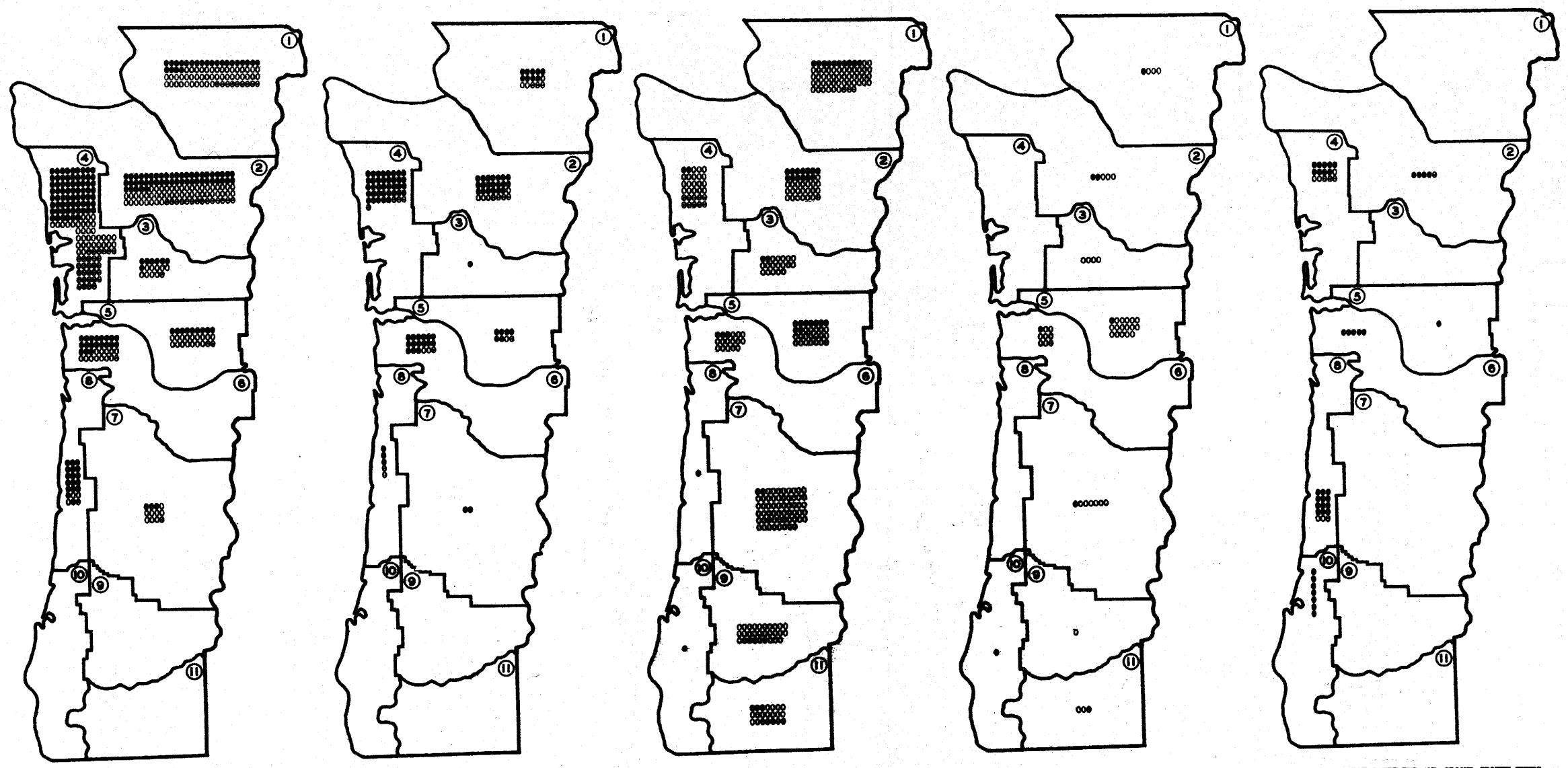
1. NORTH PUGET SOUND UNIT
2. CENTRAL PUGET SOUND UNIT
3. SOUTH PUGET SOUND UNIT
4. GRAYS HARBOR UNIT
5. COLUMBIA RIVER WASHINGTON UNIT
6. COLUMBIA RIVER OREGON UNIT
7. WILLAMETTE RIVER UNIT
8. NORTH OREGON COAST UNIT
9. UMPQUA RIVER UNIT
10. SOUTH OREGON COAST UNIT
11. ROGUE RIVER UNIT

PULPWOOD RESOURCES OF WESTERN OREGON AND WESTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

FIG. 4 DISTRIBUTION OF MAJOR PULPWOOD TYPES

DATA FROM TABLE 10



A. WESTERN HEMLOCK SAWTIMBER TYPES

B. WESTERN HEMLOCK SECOND-GROWTH TYPES

C. BALSAM FIRS AND MT. HEMLOCK SAWTIMBER TYPES

D. BALSAM FIRS AND MT. HEMLOCK SECOND-GROWTH TYPES

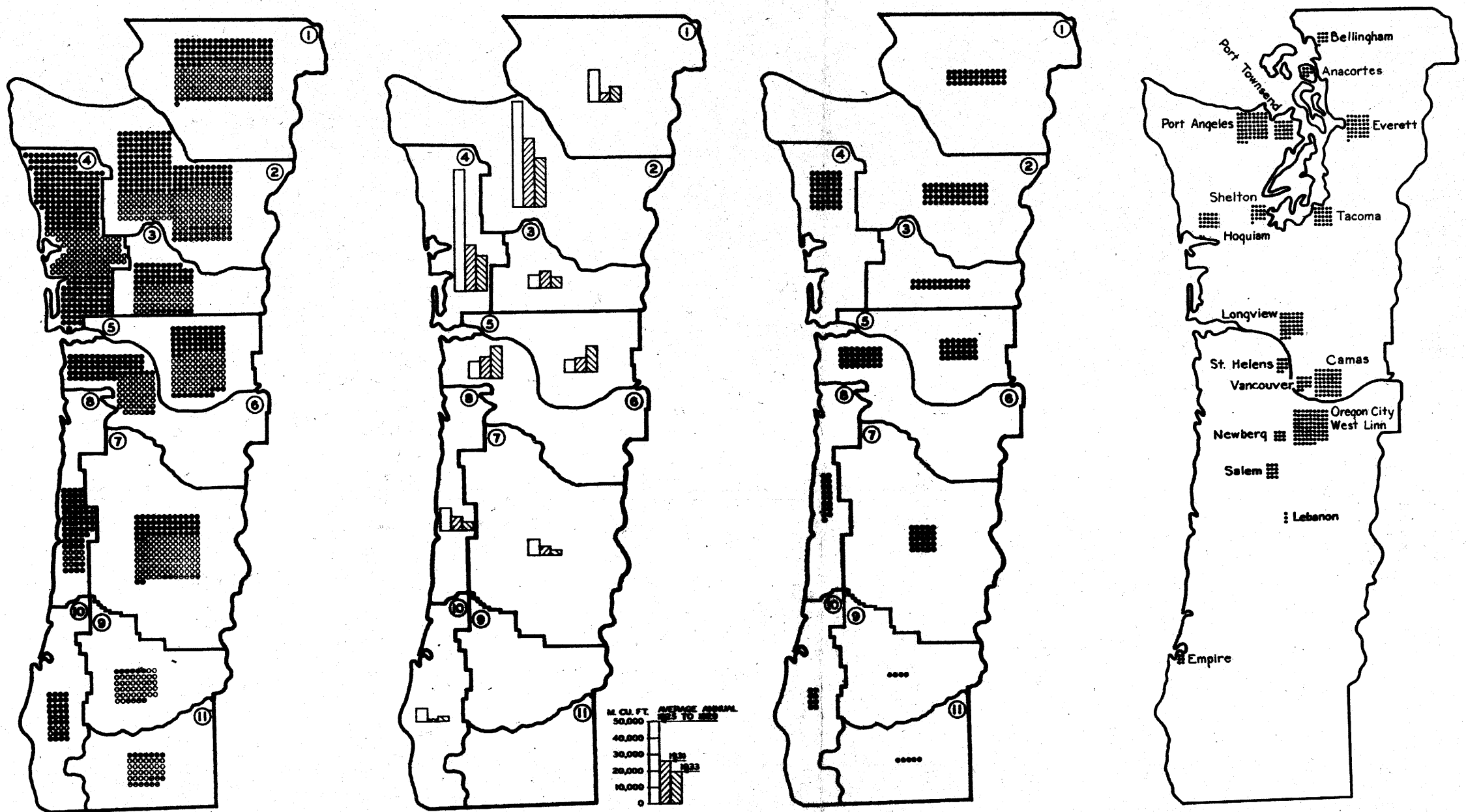
E. SITKA SPRUCE SAWTIMBER AND SECOND-GROWTH TYPES

EACH CIRCLE = 5,000 ACRES

●-PRIVATE. ○-NATIONAL FOREST AVAILABLE FOR CUTTING. ⊖-OTHER PUBLIC AVAILABLE FOR CUTTING.

1. NORTH PUGET SOUND UNIT
2. CENTRAL PUGET SOUND UNIT
3. SOUTH PUGET SOUND UNIT
4. GRAYS HARBOR UNIT
5. COLUMBIA RIVER WASHINGTON UNIT
6. COLUMBIA RIVER OREGON UNIT
7. WILLAMETTE RIVER UNIT
8. NORTH OREGON COAST UNIT
9. UMPQUA RIVER UNIT
10. SOUTH OREGON COAST UNIT
11. ROGUE RIVER UNIT

FIG. 5 — DISTRIBUTION OF PULPWOOD VOLUME, DEPLETION, AND GROWTH, AND OF PULP-MILL CAPACITY



A. PULPWOOD IN TREES 7" AND LARGER DBH, ALL SPECIES, BY OWNERSHIP

Each circle = 250,000 cords

●=PRIVATE. ○=NATIONAL FOREST AVAILABLE FOR CUTTING. ●=OTHER PUBLIC AVAILABLE FOR CUTTING.

B. ANNUAL SAW-LOG CUTTING DEPLETION OF PULP SPECIES FOR 1925-29, 1931 AND 1933

THOUSANDS OF CUBIC FEET

C. CURRENT ANNUAL GROWTH OF ALL PULPWOOD SPECIES, ALL OWNERSHIPS

●=1 million cubic feet

D. INSTALLED PULP-MILL CAPACITY OF PULP-MANUFACTURING CENTERS IN WESTERN OREGON AND WESTERN WASHINGTON

•=10 tons daily (per 24 hours)

① NORTH PUGET SOUND UNIT. ② CENTRAL PUGET SOUND UNIT. ③ SOUTH PUGET SOUND UNIT. ④ GRAYS HARBOR UNIT. ⑤ COLUMBIA RIVER WASHINGTON UNIT. ⑥ COLUMBIA RIVER OREGON UNIT.
⑦ WILLAMETTE RIVER UNIT. ⑧ NORTH OREGON COAST UNIT. ⑨ UMPQUA RIVER UNIT. ⑩ SOUTH OREGON COAST UNIT. ⑪ ROGUE RIVER UNIT.