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FOREST RESEARCH NOTES

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FOREST STATISTICS FOR EASTERN OREGON AND EASTERN WASHINGTON

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FROM INVENTORY PHASE OF FOREST SURVEY

PACIFIC NORTHWEST
FOREST AND RANGE EXPERIMENT STATION

U.S. COURT HOUSE PORTLAND, OREGON

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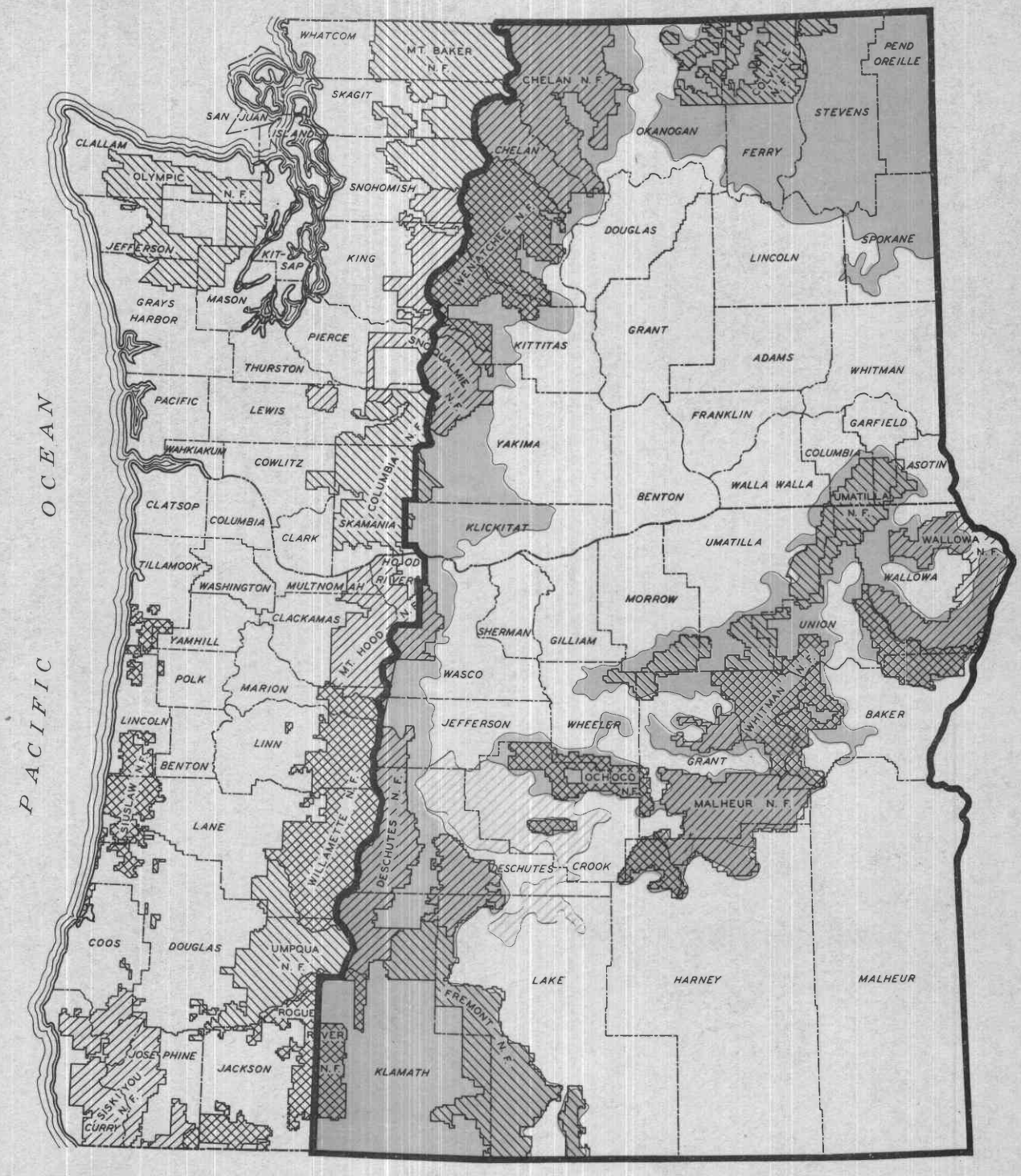


FIGURE I. FORESTED AREA EAST OF CASCADE RANGE IN OREGON AND WASHINGTON

PACIFIC NORTHWEST FOREST EXPERIMENT STATION — FOREST SURVEY

1938

FOREST ZONE — JUNIPER WOODLAND ZONE

FOREWORD

The forest survey, a Nation-wide project authorized by Congress in 1928, consists of a complete and detailed investigation of the country's present and future forest resources in five major parts: (1) an inventory of the country's existing forest resources in terms of areas occupied by forest-cover types and of timber volumes, by species, in board feet and cubic feet, and a study of conditions on cut-over and on burned forest lands; (2) a study of the depletion of the forests through cutting and through loss from fire, insects, disease, and other causes; (3) a determination of the current and potential growth on forest areas; (4) an investigation of present and prospective requirements of the United States for forest products; and (5) an analysis and correlation with other economic data of the findings of these studies in order to make available to public and private agencies the basic facts and guiding principles necessary to formulate and execute rational plans, national, regional, and local, for orderly, sound management and use of forest resources.

The Pacific Northwest Forest and Range Experiment Station was designated to conduct the forest survey of Oregon and Washington. Field work was commenced in the Douglas fir region of western Oregon and western Washington in 1930 and completed in 1933. In 1934 field work was commenced in eastern Oregon and eastern Washington and completed late in 1936. Previous publications on the survey by this station include forest statistics for each of the forested counties in Oregon and Washington except Stevens, Pend Oreille, and Spokane Counties, Washington; Forest Research Notes No. 13, Forest Resources of the Douglas Fir Region, No. 17, Pulpwood Resources of Western Oregon and Western Washington, No. 20, Forest Growth in the Douglas Fir Region, and No. 22, Timber Volume and Type Acreage on the National Forests of the North Pacific Region. In addition, lithographed $\frac{1}{4}$-inch-to-the-mile maps showing in colors the principal forest cover types for all of Oregon and Washington and 1-inch-to-the-mile detailed type maps for each forested county have been prepared. Spokane, Stevens, and Pend Oreille Counties in northeastern Washington are in the territory assigned to the Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana, and the forest inventory of these counties, including publication of county reports, was made by the survey staff of that station.

FOREST RESOURCES OF EASTERN OREGON AND EASTERN WASHINGTON

By R. W. Cowlin and F. L. Moravets[1]

INTRODUCTION

Oregon and Washington are divided by the Cascade Range into two geographic regions, which vary greatly in character of forest cover. Forest conditions in the region west of the summit, the Douglas fir region, were described in previous publications of the forest survey. This report presents basic forest inventory data for that part of the two States[2] east of the Cascade Range (fig. 1). The combined area of eastern Oregon and eastern Washington is 67 million acres, amounting to roughly two-thirds the total area of the two States. In western Oregon and western Washington more than 80 percent of the area is forest land and the larger part of the land now classified as agricultural was originally forested; only above timber line in the Cascade Range and Olympic Mountains is tree growth limited by climatic conditions. In eastern Oregon and eastern Washington meager precipitation limits tree growth over extensive areas and only about 35 percent of the total area is forest land. The treeless area consists of river valleys, plateaus, deserts, rolling hills, and in southeastern Oregon scattered buttes and mountains. One extensive mountain range in southeastern Oregon, the Steens Mountain, is practically nonforested.

The principal industry of eastern Oregon and eastern Washington is agriculture and the Bureau of the Census report for 1930 shows nearly 24 million acres in farms, which lacks only about a million acres of equalling the forest land area. The principal agricultural products are wheat, livestock, hay, apples, dairy products, and potatoes. Of the total farm area 8.5 million acres was classified as crop land, 14 million acres as pasture land, and 200 thousand acres as woodland not pastured. Approximately 2 million acres of the pasture land was also classified as woodland.

1/ IN ADDITION TO THE REGULAR FOREST SURVEY STAFF, THE FOLLOWING WERE EMPLOYED UNDER EMERGENCY CONSERVATION WORK FUNDS, ON THE FIELD WORK, MAP PREPARATION, AND OFFICE COMPILATION: G. N. ALLMAN, GLENN BAILEY, MARION BECQUET, R. W. COX, R. H. EDDY, N. R. EDMONDSON, E. A. ERICKSON, GRACE FREDRICKSEN, G. W. FROST, F. HARLESS, V. HARLESS, A. W. HODGMAN, L. W. HUNTINGTON, W. IRWIN, G. H. JACKSON, CLAUDE KERR, M. J. LAURIDSEN, W. V. LITCHFIELD, D. L. LYNCH, H. E. MILLER, W. E. PLETO, R. W. TAYLOR, A. D. THRANE, L. E. TUCKER, W. E. SANKELA, C. S. SMITH, H. M. WOLFE, AND J. WOOD.

2/ ALL THAT PORTION OF OREGON AND WASHINGTON EAST OF THE SUMMIT OF THE CASCADE RANGE, INCLUDING KLICKITAT COUNTY, WASHINGTON, BUT EXCLUDING HOOD RIVER AND JACKSON COUNTIES, OREGON.

Grazing is not restricted to pasture land and large areas of forest land not classified as woodland pasture are used to range stock, particularly during the summer.

The forest industries rank next to agriculture among the basic industries. Out of a total (1930) population in this region of 634 thousand persons 260 thousand were gainfully employed. Approximately 32 percent of the gainful workers were employed in agriculture and 8 percent in the forest industries.

In addition to furnishing raw material for industry, fuel for domestic use, and forage for stock, forests contribute to economic enterprise in this region by providing recreational facilities and favorably influencing stream flow. Although dry farming predominates, the irrigated areas are the most productive and the source of water supply for all these areas is in the forest zone.

According to the Bureau of the Census the area of irrigated land in eastern Oregon and eastern Washington was 1.3 million acres in 1929, which is about 15 percent of the total crop land. The value of land and buildings of irrigated farms was 42 percent of the value of land and buildings of all farms in 1930. In the heavily forested counties the value and acreage of irrigated farms is very much greater in proportion to the value and acreage of all farms than in the nonforested and lightly forested counties.

During the 12-year period from 1925-36, inclusive, lumber production in this region averaged 1,435 million board feet annually. It is significant to note that the only year during this period when production dropped below a billion board feet was 1932, in the depth of the depression. The strength of the industry was shown by the quick recovery from this low, and in 1935 production climbed to a billion and a half feet and in 1936 it reached 1,857 million feet exceeding 1929 production, the previous high year of the period, by 33 million feet.

A brief discussion of the statistical data follows: Explanation of the methods and terms used immediately precedes the tables.

Saw-Timber Volume

The volume of saw timber by species and ownership is given for eastern Oregon in table 1 and for eastern Washington in table 5 and is shown graphically for the two States combined in figure 2. In all, 18 conifers and 3 hardwoods were considered to have saw-timber volume. Owing to the similarity of dendrological and structural characteristics white fir was combined with lowland white fir and Shasta red fir with noble fir.

Eastern Oregon and eastern Washington combined have a total timber volume of 132 billion board feet. Ponderosa pine is the most important species and forms more than 50 percent of the stand on 11.6 million acres, which amounts to 47 percent of the total forest land in the region. This species is the most widely distributed conifer in the United States and occurs commonly throughout the forested portions of western United States. It ranks second to Douglas fir in saw-timber volume among the Nation's commercial timber species. This region has 83 billion board feet, log scale, of ponderosa pine saw timber which is approximately 36 percent of the national total volume of this valuable species. During the period 1925-36, inclusive, 82 percent of the lumber cut in eastern Oregon and eastern Washington was ponderosa pine.

Eastern Oregon has a total timber volume of 87.7 billion board feet, of which 75 percent, 65.4 billion board feet, is ponderosa pine and 9 percent, 7.8 billion board feet, is Douglas fir. Eastern Washington has a total timber volume of 44.5 billion board feet, only about half as much as eastern Oregon. In this State ponderosa pine forms 40 percent of the total with 17.9 billion board feet and Douglas fir amounts to 27 percent with 11.9 billion board feet.

Approximately 30 percent of the saw-timber volume in this region is privately owned compared to nearly 50 percent in the Douglas fir region. Indian ownership[3/] is much more important here, amounting to 15 percent of the total volume. The national forests have 42 percent of the total volume and the remaining 13 percent is in other forms of public ownership.

The situation is slightly different with respect to ponderosa pine volume, 34 percent is privately owned, 18 percent is owned by Indians, and 43 percent is on the national forests, leaving very little in other public ownership.

In addition to the species for which saw-timber volume was shown in the tables, cordwood volume was estimated for western juniper, Oregon white oak, and mountain mahogany trees 4 inches or more in diameter 1 foot above the ground. In eastern Oregon there were 3,564 thousand cords of juniper, 40 thousand cords of white oak, and 27 thousand cords of mountain mahogany; in eastern Washington there were 92 thousand cords of white oak and a very small amount of juniper. These species are chiefly valuable for fuel and fence posts. Cordwood volume was also estimated for aspen, northern black cottonwood, and red alder trees less than saw-timber size, amounting to 30 thousand, 23 thousand, and 1 thousand cords, respectively, in the two States combined.

3/ LANDS OWNED BY INDIANS, EITHER TRIBAL LANDS OR TRUST ALLOTMENTS, ARE MANAGED BY THE FEDERAL GOVERNMENT BUT ARE NOT CONSIDERED AS FEDERAL LAND.

Forest Land

The area of all cover types by ownership class is given in table 2 for eastern Oregon and table 6 for eastern Washington.

Of the combined total of 24,729,995 acres of forest land in eastern Oregon and eastern Washington, 45 percent is in national forest ownership, 32 percent is privately owned, 11 percent is in Indian ownership, and the remaining 12 percent is in the various public ownership classes other than national forest. Figure 3 shows graphically the ownership of forest land.

A little more than a third of eastern Oregon is forested. As shown in figure 1, the forest land in this portion of the State occurs in two separate zones.[4] One zone parallels the Cascade Range, extending from the Columbia River on the north to the California line on the south and eastward from the summit of the Range a distance of from 20 to 115 miles. Ponderosa pine types predominate in this zone, except in a narrow belt along the summit occupied by fir-mountain hemlock, lodgepole pine, upper-slope mixture, and subalpine types. The pure ponderosa pine type, large, type 20.5, occupies approximately a third of the total area of the zone and the other mature and immature ponderosa pine types occupy most of the remainder of the area. Ponderosa pine in this zone reaches good development and is of good quality; stands usually average from 8 to 15 M board feet per acre, and on the best sites greatly exceed these figures.

The other zone in eastern Oregon lies in the northeastern portion of the State and occupies the main range and spurs of the Blue Mountains and the Wallowa Mountains. Ponderosa pine types, pure or nearly so in composition, occur throughout nearly all of the southern half of this zone. In the northern half the upper-slope mixture and lodgepole pine types predominate on much of the area. Here the ponderosa pine types are limited principally to the lower slopes. There is a considerable acreage of subalpine type and barren land along the higher ridges and slopes of the Wallowa Mountains.

In the central part of the State and lying between the two areas of forest land is the juniper woodland zone. Although western juniper is found throughout most of eastern Oregon, it is here that it reaches its best development and forms almost continuous stands.

4/ FOREST TYPES ARE SHOWN IN MUCH GREATER DETAIL ON THE INCH-TO-THE-MILE COUNTY MAPS AND ¼-INCH LITHOGRAPHED STATE MAPS. COPIES OF THESE MAPS MAY BE PROCURED FROM THE PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION.

About two-fifths of eastern Washington is forested and, as in eastern Oregon, there are two large forest zones. One lying along the Cascade Range reaches eastward from the summit a distance of from 20 to 50 miles and consists of two quite distinct parallel belts of forest land. One belt adjacent to the summit of the Cascade Range, and occupying the higher slopes and ridges, is composed of fir-mountain hemlock, Douglas fir, upper-slope mixture, lodgepole pine, barren, and subalpine types. Although much of the timber in this belt is of value principally for watershed protection, some good timber is found in the Douglas fir types, particularly in Kittitas and Klickitat Counties. The other belt occupying the lower slopes and extending down to the "dry" timber line is composed of ponderosa pine types. The best timber in this belt is found in southwestern Yakima and northwestern Klickitat Counties where ponderosa pine forms excellent stands of high-quality timber.

The second zone in eastern Washington is located in the northeastern part of the State and is dominated by the Colville Mountains. It may be considered an extension of the Inland Empire forest region of Idaho and Montana. Ponderosa pine types predominate in the southern half of the zone, while the majority of the area in the northern half is occupied by upper-slope mixture types composed of various combinations of western larch, Douglas fir, white pine, and lodgepole pine.

In addition to the two large forest zones in eastern Washington, there is a forested area of a few hundred thousand acres in the southeastern corner of the State. This area is an extension of the Blue Mountain forested area of northeastern Oregon and is about equally divided among the ponderosa pine, upper-slope mixture, and subalpine types.

The generalized types by ownership class for eastern Oregon are shown in table 3 and for eastern Washington in table 7. The distribution of generalized types for both States combined is shown graphically in figure 4. Ponderosa pine types of saw-timber size occupy more than half of the forested area in eastern Oregon and more than a third in eastern Washington. In the two States combined there is more than 10 million acres of ponderosa pine saw timber. Other coniferous saw-timber types, not including lodgepole pine, total 3.3 million acres. Of the second-growth types less than saw-timber size, ponderosa pine types occupy 1.9 million acres and other coniferous types 1.8 million acres. The area of ponderosa pine saw timber is more than 5 times that of ponderosa pine second growth, a highly significant fact. Lodgepole pine types which are of little commercial value occupy 2.2 million acres; a slightly larger area was classified as noncommercial forest land. In the two States deforested cut-over and burned areas amount to only 534 thousand acres. Considering the adaptability of ponderosa pine stands to selective cutting, the large acreage of saw-timber types, the comparatively

small area of idle commercial forest land, the stability of ownership, and the secondary income obtainable from grazing, the possibilities of region-wide sustained yield are very encouraging.

Productive Capacity of Forest Land

Tables 4 and 8 give the area of forest land by site quality classes for eastern Oregon and eastern Washington, respectively. The "Site Quality" of a forest area is its relative productive capacity, determined by climatic, soil, topographic, and other factors. The index of site quality is the average height of the dominant stand at the age of 100 years. Six site quality classes are recognized for ponderosa pine and five for Douglas fir, class I being in each case the highest. In the survey the ponderosa pine classification was used for the pure ponderosa pine, ponderosa pine mixture, and white fir and lowland white fir types; the Douglas fir classification was used for the Douglas fir, upper-slope mixture, and fir-mountain hemlock types.

The deforested areas, cut-over land and burns, were classified on the basis of the original type. Approximately 151,000 acres of lodgepole pine types, occurring on areas formerly occupied by either ponderosa pine or upper-slope mixture types, was classified as to site, but the remainder of the area of lodgepole pine types was not classified. Likewise no classification was given to the juniper, noncommercial rocky, subalpine, oak, and hardwood types, all of which are of little or no value for timber production.

The forest lands occupied by the types given the ponderosa pine site classification in eastern Oregon average higher in productive capacity than those in eastern Washington. Approximately 77 percent of the area so classified in eastern Oregon is of Site Class IV or better, whereas in eastern Washington 67 percent is of Site Class IV or better. The reverse is true of the forest lands occupied by the types given the Douglas fir classification; eastern Washington has a greater percentage of its area of such lands in Site Class IV or better than has eastern Oregon.

EXPLANATION OF METHODS AND TERMS

SOURCES OF DATA - IN THE SURVEY OF OREGON AND WASHINGTON USE WAS MADE, SO FAR AS POSSIBLE, OF ALL EXISTING INFORMATION ON DISTRIBUTION OF FOREST TYPES AND ALL AVAILABLE ESTIMATES OF TIMBER VOLUME, INCLUDING COUNTY CRUISES AND MAPS AND TIMBER ESTIMATES MADE BY OTHER PUBLIC AGENCIES. TIMBER ESTIMATES OF PRIVATE LANDS WERE FURNISHED BY THE OWNERS WITH THE UNDERSTANDING THAT THEY WOULD BE PUBLISHED ONLY IN COMBINATION WITH CRUISES OF OTHER OWNERS AND FOR LARGE AREAS. THIS COOPERATION OF TIMBER OWNERS WAS A VERY MATERIAL AID TO THE PROJECT. TIMBER EXPERTS THOROUGHLY CHECKED IN THE FIELD SUCH EXISTING ESTIMATES AS WERE AVAILABLE AND DETERMINED ADJUSTMENT FACTORS BY WHICH TO RECONCILE THEM TO THE STANDARD ADOPTED BY THE FOREST SURVEY. SOME 113,000 ACRES IN EASTERN OREGON AND EASTERN WASHINGTON WERE INTENSIVELY CRUISED TO ADJUST THE CRUISE ON AREAS FOR WHICH THERE WERE EXISTING USABLE DATA. THE SURVEY FIELD PERSONNEL MADE TYPE MAPS AND TIMBER ESTIMATES OF ALL FOREST AREAS IN THE REGION FOR WHICH NO USABLE DATA EXISTED.

TIMBER ESTIMATING STANDARDS - THE TIMBER ESTIMATES, SUMMARIZED IN THE FOLLOWING TABLES WERE MADE IN BOARD FEET, LOG SCALE, SCRIBNER RULE. ALL CRUISING, WHETHER FOR ADJUSTMENT PURPOSES OR FOR AREAS NOT COVERED BY EXISTING ESTIMATES, WAS SO DONE AS TO INCLUDE ALL LIVING CONIFEROUS TREES (EXCEPT JUNIPER) THAT WOULD MAKE AT LEAST ONE 16-FOOT LOG 8 INCHES IN DIAMETER INSIDE BARK AT THE SMALL END AND ALL HARDWOOD TREES THAT WOULD MAKE AT LEAST ONE 8-FOOT LOG 10 INCHES IN DIAMETER INSIDE BARK AT THE SMALL END.

ALLOWANCE HAS BEEN MADE IN THESE ESTIMATES FOR DECAY, DEFECTS, AND SUCH BREAKAGE AS IS INEVITABLE IN EXPLOITATION; IN OTHER WORDS, THE ESTIMATES ARE FOR NET VOLUME USABLE IN SAW-TIMBER OPERATIONS PRACTICING INTENSIVE UTILIZATION. THE STANDARDS OF UTILIZATION EMPLOYED IN THE SURVEY ARE PROBABLY SLIGHTLY MORE INTENSIVE FOR THE MORE VALUABLE SPECIES AND CONSIDERABLY SO FOR THE LESS VALUABLE SPECIES THAN THOSE OBSERVED BY THE AVERAGE PRESENT-DAY SAW-TIMBER OPERATOR, OWING LARGELY TO THE INCLUSION OF TREES AS SMALL AS 12 INCHES D.B.H.

DIFFERENCES BETWEEN PRESENT AND PREVIOUS ESTIMATES DO NOT NECESSARILY INDICATE INCREASES OR DECREASES IN VOLUME OF TIMBER. SUCH DIFFERENCES MAY BE DUE IN LARGE MEASURE TO DIFFERENCES BETWEEN THE PRESENT AND PREVIOUS CRUISES IN STANDARDS AND IN COMPLETENESS. THE PRESENT ESTIMATES COVER ALL FOREST TREES OF THE ABOVE SPECIFICATIONS OUTSIDE OF MUNICIPALITIES, WHETHER IN SMALL FARM WOODS OR ON EXTENSIVE FOREST AREAS.

THE ESTIMATES HEREIN GIVEN MAKE NO DISTINCTION WITH REGARD TO ACCESSIBILITY OR AVAILABILITY TO MARKET, ALTHOUGH IT IS RECOGNIZED THAT SOME OF THE TIMBER IS READILY ACCESSIBLE AND SOME IS UTTERLY REMOTE. NEITHER DO THEY DIFFERENTIATE AMONG CLASSES OF FOREST PRODUCTS, THE WHOLE VOLUME ABOVE THE STATED LIMITS BEING EXPRESSED IN BOARD FEET OF SAW TIMBER.

OWNERSHIP CLASSES - TIMBER VOLUME AND FOREST-TYPE ACREAGES HAVE BEEN COMPILED BY OWNERSHIP CLASSES. INFORMATION ON OWNERSHIP WAS TAKEN FROM THE BEST PUBLIC RECORDS AVAILABLE. IT IS OF COURSE RECOGNIZED THAT OWNERSHIP IS CONSTANTLY CHANGING. THE TOTALS FOR OWNERSHIP CLASSES WILL IN MANY CASES NOT COIN-

CIDE WITH STATISTICS FROM OTHER SOURCES; NOR IN FACT WILL FIGURES FOR TOTAL AREA OF THE STATES ALWAYS AGREE WITH FIGURES HITHERTO ACCEPTED. THE FOLLOWING OWNERSHIP CLASSES WERE CONSIDERED:

PRIVATE. ALL PRIVATELY OWNED FOREST PROPERTY, INCLUDING FARM WOODS.

STATE, AVAILABLE FOR CONVERSION. INCLUDES ANY STATE-OWNED FOREST PROPERTY NOT RESERVED FROM CUTTING.

STATE, RESERVED FOR ANY PURPOSE. INCLUDES STATE-OWNED FOREST PROPERTY USED FOR PARKS, NATIONAL-GUARD CAMPGROUNDS, ETC.

COUNTY. INCLUDES FOREST PROPERTY DEEDED TO THE COUNTY. TAX-DELINQUENT LAND NOT DEEDED TO THE COUNTY IS CLASSIFIED AS "PRIVATE."

MUNICIPAL. INCLUDES ALL MUNICIPALLY OWNED FOREST PROPERTY OUTSIDE THE PLATTED LIMITS OF MUNICIPALITIES, SUCH AS CITY WATERSHEDS.

INDIAN. INCLUDES BOTH TRIBAL LANDS AND TRUST ALLOTMENTS.

REVESTED LAND GRANTS. INCLUDES O AND C AND OTHER LAND GRANTS THAT HAVE REVERTED TO FEDERAL OWNERSHIP, WHETHER CLASSIFIED AS "TIMBER", "AGRICULTURAL", OR "POWER WITHDRAWALS."

FEDERAL OTHER THAN NATIONAL FORESTS AND REVESTED LAND GRANTS, AVAILABLE FOR CUTTING. INCLUDES PUBLIC DOMAIN, ETC.

FEDERAL OTHER THAN NATIONAL FORESTS AND REVESTED LAND GRANTS, RESERVED FROM CUTTING. INCLUDES NATIONAL PARKS, WILD-LIFE REFUGES, MILITARY RESERVATIONS, ETC.

NATIONAL FOREST, AVAILABLE FOR CUTTING.

NATIONAL FOREST, RESERVED FROM CUTTING.

RAILROAD SELECTION PENDING. FEDERAL LANDS DESIGNATED FOR SELECTION AS RAILROAD GRANTS BUT NOT YET DEEDED.

THE TERM "RESERVED FROM CUTTING" AS APPLIED TO STATE LAND AND TO NATIONAL-FOREST OR OTHER FEDERAL LAND DENOTES THAT THE TIMBER IS UNAVAILABLE FOR CUTTING BECAUSE OF STATUTE, PROCLAMATION, OR POLICY, THE LAND USUALLY BEING OFFICIALLY DEDICATED TO PARK, WATERSHED OR OTHER USES TO THE EXCLUSION OF TIMBER CUTTING. THE TERM "AVAILABLE FOR CUTTING", IN CONTRAST TO THE ABOVE, MEANS THAT THERE IS NO LEGAL OR FORMAL PROHIBITION ON TIMBER CUTTING.

AGE CLASSES AND DEGREE OF STOCKING - IN ADDITION TO TYPE MAPPING ACCORDING TO COMPOSITION AND SIZE, THE EVEN-AGED IMMATURE FOREST STANDS, THOSE IN WHICH MOST OF THE DOMINANT TREES ARE UNDER 22 INCHES IN DIAMETER, WERE CLASSIFIED ACCORDING TO AGE IN 10-YEAR CLASSES AND ACCORDING TO THEIR DENSITY IN THREE DEGREES OF STOCKING. IF A FOREST OF SEEDLINGS, SAPLINGS, OR SMALL "SECOND GROWTH" IS DENSE ENOUGH TO COVER 70 TO 100 PERCENT OF THE AREA (AS MEASURED BY THE STOCKED-QUADRAT METHOD), IT IS CLASSIFIED AS "WELL STOCKED"; IF 40 TO 69 PERCENT IS COVERED, IT IS CALLED "MEDIUM STOCKED"; IF 10 TO 39 PERCENT, IT IS "POORLY STOCKED." AREAS LESS THAN 10 PERCENT STOCKED ARE CONSIDERED AS "NONRESTOCKING." IF UNEVEN AGED THE STANDS WERE CLASSIFIED ON THE BASIS OF THE STOCKING OF POLES AND REPRODUCTION COMBINED.

TREE SPECIES - THE TIMBER ESTIMATES HAVE BEEN KEPT SEPARATELY FOR ALL THE TREE SPECIES THAT USUALLY REACH SAW-TIMBER SIZE AND CHARACTER. THE ABSENCE OF VOLUME ESTIMATES FOR ANY SPECIES IN TABLES I AND 5 DOES NOT NECESSARILY MEAN THAT THE SPECIES DOES NOT OCCUR IN THE STATE IN QUESTION; A SPECIES MAY BE PRES-

ENT BUT NOT HAVE BEEN FOUND IN SIGNIFICANT QUANTITY OR IN TREES OF COMMERCIAL SIZE, OR IT MAY BE CONFINED TO THE NONCOMMERCIAL TYPES. THIS IS PARTICULARLY TRUE OF SUCH SPECIES AS JUNIPER AND THE HARDWOODS THAT OFTEN DO NOT ATTAIN SAW-TIMBER SPECIFICATIONS. THE COMMON NAMES EMPLOYED BY THE FOREST SERVICE (U.S.D.A. MISC. CIR. 92) HAVE BEEN USED THROUGHOUT.

DEFINITION OF TERMS - THE ABBREVIATION "DBH" SIGNIFIES THE DIAMETER AT BREAST HEIGHT ($4\frac{1}{2}$ FEET ABOVE GROUND) OUTSIDE THE BARK.

IN DESCRIBING DOUGLAS FIR TIMBER THE TERMS "OLD GROWTH" AND "SECOND GROWTH" SHOULD BE REGARDED AS RELATIVE DESCRIPTIVE TERMS TO DISTINGUISH THE OLDER, MORE MATURE TIMBER FROM THE YOUNGER AND MORE RAPID GROWING TIMBER. THERE IS NO SHARP LINE OF DEMARCATION BETWEEN THE TWO. LIKEWISE THE TERMS "LARGE" AND "SMALL" APPLIED TO OTHER SPECIES ARE RELATIVE.

DEFINITIONS OF TYPES

THE FOREST COVER AND LAND USE TYPES RECOGNIZED BY THE FOREST SURVEY OF EASTERN OREGON AND EASTERN WASHINGTON ARE DEFINED BELOW. NOT ALL OF THESE TYPES OCCUR IN ANY ONE STATE.

NONFOREST LAND TYPES

1. BARRENS: AREAS TOO ROCKY, OR TOO SOILLESS, OR TOO EXPOSED TO SUPPORT A REAL VEGETATIVE COVER OF EITHER TREES, SHRUBS, HERBS, OR GRASS. ALSO INCLUDES CITIES, TOWNS, AND UNMEANDERED WATER SURFACE.

2. CULTIVATED, GRASS, GRASS SWAMP, SAGEBRUSH, OR BRUSH: INCLUDES AREAS NOW IN AGRICULTURAL USE OR LYING FALLOW AND AREAS WHOSE PRINCIPAL PRESENT VEGETATION IS EITHER GRASS, SAGEBRUSH, OR BRUSH, INCLUDING MARSHY, SWAMPY AREAS NOT CONSIDERED LAKES. DOES NOT INCLUDE "FOREST LAND", I.E., LAND WHICH FROM ALL EVIDENCE HAS BEEN FORESTED IN RECENT DECADES. NO DIFFERENTIATION IS MADE BETWEEN CULTIVATED LAND, NATURAL PASTURES, AND RANGE LANDS.

WOODLAND TYPES

4. OAK: A STAND CONTAINING APPROXIMATELY 60 PERCENT OR MORE OF ONE OR MORE SPECIES OF OAK. NO SEPARATION OF AGE CLASSES.

JUNIPER: A STAND COMPOSED PRINCIPALLY OF JUNIPER, OFTEN WITH MORE OR LESS MOUNTAIN MAHOGANY. LAND WHERE THE TREES ARE SO SCATTERED THAT THEY OCCUPY LESS THAN ABOUT 5 PERCENT OF THE GROUND SURFACE IS NOT CLASSIFIED AS JUNIPER WOODLAND.

5A. DENSE JUNIPER: A STAND IN WHICH THE JUNIPER TREES ARE SO LARGE OR NUMEROUS THAT THEY OCCUPY 10 PERCENT OR MORE OF THE LAND AREA.

5B. SCATTERED JUNIPER: A STAND IN WHICH THE JUNIPER TREES ARE SO SMALL OR SCATTERED THAT THEY OCCUPY LESS THAN 10 PERCENT OF THE LAND AREA, ALTHOUGH ABOUT 5 PERCENT OR MORE.

5½. PONDEROSA PINE WOODLAND: AN AREA WITH SOLITARY TREES, OR GROUPS OF TREES TOO SMALL TO MAP SEPARATELY, IN WHICH MATURE PONDEROSA PINE IS THE PREDOMINATING TREE. A BORDERLINE ZONE, CHARACTERISTIC OF THE FRINGES OF THE DESERT AND OF THE BREAKS BETWEEN TIMBERED PLATEAUS AND TREELESS CANYONS, WHERE THE AREA OF GRASS OR SAGEBRUSH MAY BE AS GREAT OR GREATER THAN THE AREA OF TIMBER. THIS TYPE USUALLY MERGES AT ITS UPPER BOUNDARY WITH TIMBERLAND TYPES AND AT ITS LOWER LIMIT WITH OPEN LAND. FOR THE ZONE AS A WHOLE THE VOLUME PER ACRE IS ORDINARILY LESS THAN 3,000 FEET. THE TREES ARE NOT NECESSARILY NONCOMMERCIAL. IMMATURE TYPES ARE NOT INCLUDED.

TIMBERLAND TYPES

DOUGLAS FIR: FORESTS CONTAINING APPROXIMATELY 60 PERCENT OR MORE, BY VOLUME, OF DOUGLAS FIR. THE FOLLOWING SIZE CLASSES ARE RECOGNIZED:

6. DOUGLAS FIR, LARGE OLD GROWTH: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES MORE THAN 40 INCHES IN DBH.

7. DOUGLAS FIR, SMALL OLD GROWTH: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 22 TO 40 INCHES IN DBH.

8. DOUGLAS FIR, LARGE SECOND GROWTH: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 22 TO 40 INCHES IN DBH. COARSE-GRAINED TIMBER THAT WILL CUT ONLY A SMALL PERCENTAGE OF THE UPPER GRADES OF LUMBER.

9A. DOUGLAS FIR, 12-20 INCHES DBH: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 12 TO 20 INCHES IN DBH.

9B. DOUGLAS FIR, 6-10 INCHES DBH: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE FROM 6 TO 10 INCHES IN DBH.

10. DOUGLAS FIR, LESS THAN 6 INCHES DBH: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 6 INCHES IN DBH.

WESTERN RED CEDAR: FORESTS CONTAINING APPROXIMATELY 40 PERCENT OR MORE, BY VOLUME, OF WESTERN RED CEDAR. LARGELY CONFINED TO SWAMPS AND STREAM MARGINS ON THE NATIONAL FORESTS OF EASTERN WASHINGTON.

17. WESTERN RED CEDAR, MORE THAN 24 INCHES DBH: FORESTS OF SAW-TIMBER SIZE IN WHICH MOST OF THE VOLUME IS IN TREES MORE THAN 24 INCHES IN DBH.

19A. WESTERN RED CEDAR, 12-24 INCHES DBH: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES FROM 12 TO 24 INCHES IN DBH.

19B. WESTERN RED CEDAR, LESS THAN 12 INCHES DBH: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 12 INCHES IN DBH.

PONDEROSA PINE: FORESTS CONTAINING APPROXIMATELY 50 PERCENT OR MORE, BY VOLUME, OF PONDEROSA PINE, SUGAR PINE, OR JEFFREY PINE, OR ANY COMBINATION OF THESE SPECIES, EXCEPT THOSE IN WHICH SUGAR PINE IS THE KEY TREE, IN

WHICH THE STANDS ARE CONTINUOUS IN CONTRAST TO THE MORE OPEN PONDEROSA PINE WOODLAND TYPE. THREE SIZE CLASSES ARE RECOGNIZED.

20. PONDEROSA PINE, LARGE: FORESTS IN WHICH THE DOMINANT STAND AVERAGES MORE THAN 22 INCHES IN DBH, SO-CALLED "YELLOW PINE" (MORE THAN ABOUT 150 OR 200 YEARS OLD), NO MATERIAL PART OF WHICH HAS BEEN CUT. INCLUDES OCCASIONAL STANDS OF MATURE OR OVERMATURE PONDEROSA PINE THAT AVERAGE SMALLER THAN 22 INCHES IN DBH.

20.5 PURE PONDEROSA PINE, LARGE: FORESTS CONTAINING APPROXIMATELY 80 PERCENT OR MORE, BY VOLUME, OF PONDEROSA PINE OR JEFFREY PINE.

20A. PONDEROSA PINE-SUGAR PINE MIXTURE, LARGE: FORESTS WITH MORE THAN 50 PERCENT PONDEROSA PINE, BY VOLUME, AND 20 PERCENT OR MORE OF SUGAR PINE, IN WHICH MOST OF THE VOLUME IS IN TREES MORE THAN 22 INCHES IN DBH.

20B. SUGAR PINE MIXTURE, LARGE: FORESTS CONTAINING 20 PERCENT OR MORE, BY VOLUME, OF SUGAR PINE AND LESS THAN 50 PERCENT OF PONDEROSA PINE, USUALLY IN MIXTURE WITH DOUGLAS FIR, PONDEROSA PINE, OR WHITE FIR, IN WHICH MOST OF THE VOLUME IS IN TREES MORE THAN 22 INCHES IN DBH.

21. PONDEROSA PINE, SMALL: EITHER (A) SELECTIVELY CUT STANDS OF ANY AGE IN WHICH THE VOLUME OF PONDEROSA PINE TREES 12" OR MORE IN DBH IS 1,000 BOARD FEET OR MORE PER ACRE, OR (B) IMMATURE STANDS, SO-CALLED "BULL PINE" (LESS THAN 150 TO 200 YEARS OLD), OF 1,000 BOARD FEET OR MORE PER ACRE, USUALLY WITH THE GREATER PART OF VOLUME IN PONDEROSA PINE TREES FROM 12 TO 22 INCHES IN DBH BUT INCLUDING THE OCCASIONAL IMMATURE STANDS IN WHICH THE TREES EXCEED 22 INCHES IN DBH.

22. PONDEROSA PINE, SEEDLINGS, SAPLINGS, AND POLES: FORESTS ON OLD BURNS OR HEAVILY CUT-OVER LAND IN WHICH MOST OF THE TREES ARE LESS THAN 12 INCHES IN DBH AND THE STAND OF SAW TIMBER, IF ANY, AMOUNTS TO LESS THAN 1,000 BOARD FEET PER ACRE.

FIR-HEMLOCK: FORESTS IN WHICH EITHER NOBLE FIR, SILVER FIR, ALPINE FIR, SHASTA RED FIR, WHITE FIR, MOUNTAIN HEMLOCK (OR, OCCASIONALLY, WESTERN HEMLOCK), OR ANY COMBINATION OF THESE SPECIES COMPOSES AT LEAST 50 PERCENT OF THE VOLUME OF THE STAND. THIS TYPE IS CHARACTERISTIC OF THE UPPER SLOPES OF THE CASCADE RANGE. TWO SIZE CLASSES ARE RECOGNIZED.

23. FIR-HEMLOCK, LARGE: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 12 INCHES OR MORE IN DBH AND PHYSICALLY SUITABLE FOR SAWLOGS. (MATURE STANDS NOT SUITABLE FOR SAWLOGS ARE ORDINARILY INCLUDED IN THE SUBALPINE TYPE.)

24. FIR-HEMLOCK, SMALL: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 12 INCHES IN DBH, USUALLY YOUNG TREES ON OLD BURNS.

LODGEPOLE PINE: FORESTS CONTAINING AT LEAST 50 PERCENT, BY VOLUME, OF LODGEPOLE PINE, OFTEN ALMOST PURE. THREE SIZE CLASSES ARE RECOGNIZED.

25. LODGEPOLE PINE, 12 INCHES AND LARGER DBH: FORESTS IN WHICH 50 PERCENT OR MORE OF THE DOMINANT TREES ARE 12 INCHES OR MORE IN DBH.

26. LODGEPOLE PINE, 6-10 INCHES DBH: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE FROM 6 TO 10 INCHES IN DBH.

26A. LODGEPOLE PINE, LESS THAN 6 INCHES DBH: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 6 INCHES IN DBH.

PINE MIXTURE: MIXED FORESTS OF WHICH PONDEROSA PINE CONSTITUTES ABOUT 20 TO 50 PERCENT, BY VOLUME, WITH A VARIABLE QUANTITY OF WESTERN LARCH, WHITE FIR, DOUGLAS FIR, LODGEPOLE PINE, WHITE PINE, OR OTHER SPECIES OR OF ANY COMBINATION OF THESE SPECIES. CHARACTERISTIC OF NORTH SLOPES AND COOLER BASINS. TWO SIZE CLASSES ARE RECOGNIZED.

27. PINE MIXTURE, LARGE: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 12 INCHES OR MORE IN DBH AND IN WHICH NO MATERIAL QUANTITY OF CUTTING HAS BEEN DONE.

28. PINE MIXTURE, SMALL: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 12 INCHES IN DBH.

UPPER-SLOPE MIXTURE: MIXED FORESTS ORDINARILY ABOVE THE PONDEROSA PINE ZONE, NEVER CONTAINING MORE THAN A NEGLIGIBLE QUANTITY OF THAT SPECIES. CHARACTERISTIC OF THE COLDER, MOISTER SITES. CONTAINS VARIABLE PROPORTIONS OF LARCH, WHITE FIR, ALPINE FIR, DOUGLAS FIR, ENGELMANN SPRUCE, LODGEPOLE PINE, WHITE PINE, AND OCCASIONALLY OTHER SPECIES. WHERE ENGELMANN SPRUCE, WHITE PINE, OR LARCH FORMS 50 PERCENT OR MORE OF THE STAND, BY VOLUME, MAPPED AS A SEPARATE SUBTYPE AND DESIGNATED BY ADDING SPECIES SYMBOL TO TYPE NUMBER, E.G., 27.5 ES. TWO SIZE CLASSES ARE RECOGNIZED.

27.5 UPPER-SLOPE MIXTURE, LARGE: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 12 INCHES OR MORE IN DBH.

28.5 UPPER-SLOPE MIXTURE, SMALL: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 12 INCHES IN DBH.

WHITE FIR: FORESTS CONTAINING 50 PERCENT OR MORE, BY VOLUME, OF ABIES GRANDIS OR A. CONCOLOR. USUALLY OCCUR WITHIN THE RANGE OF PONDEROSA PINE.

29. WHITE FIR, LARGE: FORESTS IN WHICH MOST OF THE VOLUME IS IN TREES 12 INCHES OR MORE IN DBH (MORE THAN ABOUT 150 YEARS OLD).

30. WHITE FIR, SMALL: FORESTS IN WHICH MOST OF THE DOMINANT TREES ARE LESS THAN 12 INCHES IN DBH (UNDER ABOUT 150 YEARS OLD).

HARDWOOD: FORESTS IN WHICH MAPLE, ASPEN, COTTONWOOD, ETC. PREDOMINATE; PURE OR IN MIXTURE. (DOES NOT TAKE PRECEDENCE OVER OAK WOODLAND.)

31. HARDWOOD: FORESTS IN WHICH MOST OF THE TREES ARE LESS THAN 12 INCHES IN DBH.

31.5 HARDWOOD: FORESTS IN WHICH MOST OF THE TREES ARE 12 INCHES OR MORE IN DBH.

33. SUBALPINE: FORESTS AT UPPER LIMITS OF TREE GROWTH, USUALLY UNMERCHANTABLE BECAUSE OF POOR FORM AND SMALL SIZE. PRINCIPAL COMPONENTS ARE ALPINE FIR, MOUNTAIN HEMLOCK, SHASTA RED FIR, LODGEPOLE PINE, WHITEBARK PINE, WESTERN WHITE PINE, AND ALPINE LARCH. USUALLY INTERSPERSED WITH MEADOWS AND GLADES. NO VOLUME IS RECORDED FOR THIS TYPE.

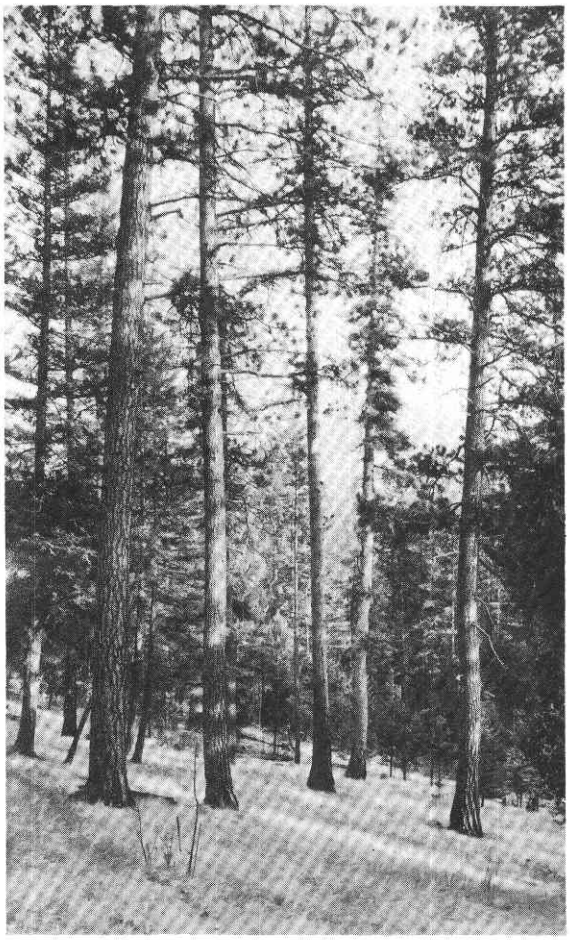
NONRESTOCKED CUTOVER: LOGGED AREAS THAT HAVE NOT SATISFACTORILY RESTOCKED (ARE LESS THAN 10 PERCENT STOCKED) OR THAT DO NOT SUPPORT A RESIDUAL STAND OF 1,000 BOARD FEET PER ACRE, AND THAT ARE NOT PUT TO OTHER USE.

35A. AREAS CUT SINCE BEGINNING OF 1920.

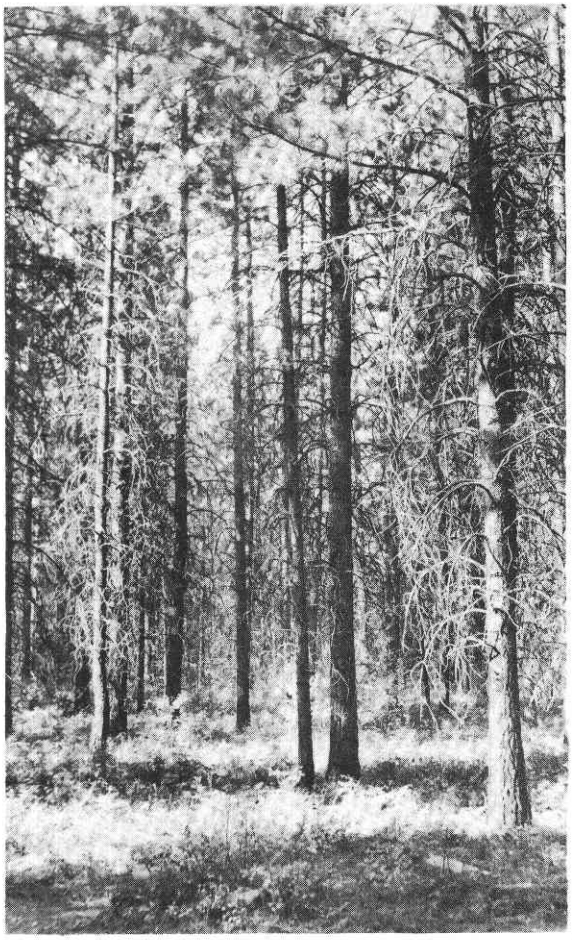
35B. AREAS CUT BEFORE 1920.

37. DEFORESTED BURNS: LANDS NOT CUT OVER ON WHICH THE STAND HAS BEEN KILLED BY FIRE, AND THAT HAVE NOT RESTOCKED. THE REMAINING GREEN TIMBER, IF ANY, IS NOT LOGGABLE. AREAS DEFORESTED BY INSECTS ARE DESIGNATED BY 37B; AREAS DEFORESTED BY WIND THROW ARE DESIGNATED BY 37W.

38. NONCOMMERCIAL ROCKY AREAS: AREAS WITHIN THE RANGE OF COMMERCIAL TIMBER BELOW THE LIMITS OF THE SUBALPINE TYPE THAT ARE TOO ROCKY, TOO STEEP, OR TOO STERILE TO PRODUCE A STAND OF COMMERCIAL SIZE, DENSITY, AND QUALITY. THE TIMBER MAY BE OF ANY SPECIES; IT IS NOT, AND IS NOT LIKELY TO BE, OF COMMERCIAL VALUE, BECAUSE OF DIFFICULT LOGGING CONDITIONS, LOW QUALITY, POOR FORM, AND LOW VOLUME. ORDINARILY THE STAND AVERAGES LESS THAN 5,000 BOARD FEET PER ACRE UNLESS OF PONDEROSA PINE, IN WHICH CASE IT AVERAGES LESS THAN 2,000 BOARD FEET PER ACRE. NO VOLUME IS RECORDED FOR THIS TYPE. THIS TYPE DOES NOT INCLUDE UPPER PORTIONS OF VALLEYS OR HIGHER SLOPES THAT ARE NOW INACCESSIBLE BUT ARE POTENTIALLY LOGGABLE.

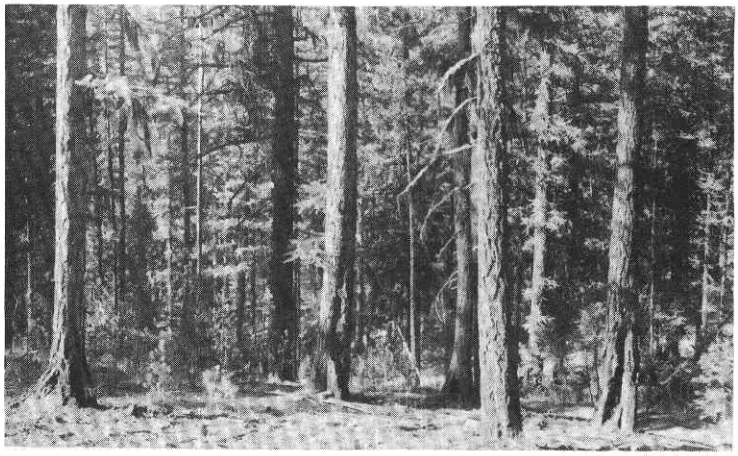


TYPE 20, PONDEROSA PINE, LARGE, CONTAINING SOME WESTERN LARCH AND DOUGLAS FIR



TYPE 21, PONDEROSA PINE, SMALL

TYPE 22, PONDEROSA PINE, SEEDLINGS, SAPLINGS, AND POLES ON CUT-OVER LAND



TYPE 27½, UPPER-SLOPE MIXTURE, LARGE, COMPOSED OF WESTERN LARCH, DOUGLAS FIR, AND LOWLAND WHITE FIR

TYPE 28½, UPPER-SLOPE MIXTURE, SMALL, COMPOSED OF WESTERN LARCH, DOUGLAS FIR, AND LODGEPOLE PINE

TYPE 26, LODGEPOLE PINE, MEDIUM

TYPE 5A, DENSE JUNIPER

FOREST STATISTICS FOR THE STATE OF OREGON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 1.--VOLUME OF SAW TIMBER,[1] BY SPECIES AND BY OWNERSHIP CLASS

THOUSANDS OF BOARD FEET, LOG SCALE, SCRIBNER RULE

SUR-VEY SYM-BOL	SPECIES	PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: REVESTED O. AND C. LAND GRANT	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING[2]	FEDERAL: NATIONAL FOREST AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST RESERVED FROM CUTTING	TOTAL
Y	PONDEROSA PINE	23,230,582	129,534	320	286,086	7,601	9,670,196	143,410	636,193	150,317	168,248	30,839,716	172,820	65,435,023
SP	SUGAR PINE	386,047	5,810				179,793	34,838	260		492	128,660	629	736,529
W	WESTERN WHITE PINE	13,379	208		35		10,464	7,050	14		6,629	297,571	24,408	359,758
LP	LODGEPOLE PINE	79,431	1,301		787	4	6,464	450	2,749	20	30,834	538,890	30,288	691,218
DF	DOUGLAS FIR	1,853,267	18,933		37,862	7,398	534,605	60,973	40,101		4,197	5,117,666	92,704	7,767,706
C	WESTERN RED CEDAR	128					57					5,238	3	5,426
YC	ALASKA CEDAR	8										434		442
IC	INCENSE CEDAR	120,305	1,125		299		47,353	972	689		552	49,640	651	221,586
H	WESTERN HEMLOCK	696					6,624				5,070	208,285	4,502	225,177
MH	MOUNTAIN HEMLOCK	7,080			1,925		92,473				166,722	1,282,452	164,629	1,715,281
WF	WHITE AND LOWLAND WHITE FIR	1,563,545	11,292		19,082	3,902	417,337	45,012	13,778	58	22,078	3,149,452	61,842	5,307,378
NF	NOBLE AND SHASTA RED FIR	73,375					47,682	69,029	3,330		198,590	735,612	123,058	1,250,676
A	SILVER FIR						591					13,546	16,750	30,887
AF	ALPINE FIR	11,158			116	665	947		9			147,899	8,212	169,006
WL	WESTERN LARCH	615,257	4,095		22,947	1,547	23,631		16,481			2,465,525	30,658	3,180,141
ES	ENGELMANN SPRUCE	70,964	480		1,633	834	12,119		1,592		97	448,135	29,076	564,930
BC	NORTHERN BLACK COTTONWOOD	11,516	10		15	15	2,952		146			2,317		16,971
ASP	ASPEN	1,715										40		1,755
	TOTAL	28,038,453	172,788	320	370,787	21,966	11,053,288	361,734	715,342	150,395	603,509	45,431,078	760,230	87,679,890

1/ TREES 12 INCHES AND MORE IN D.B.H. 2/ CRATER LAKE NATIONAL PARK.

FOREST STATISTICS FOR THE STATE OF OREGON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 2.—AREA, IN ACRES, OF ALL FOREST COVER TYPES, BY OWNERSHIP CLASS

SURVEY TYPE NO.	TYPE DEFINITION	PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND ALLOTMENTS	FEDERAL: REVESTED O. AND C. LAND GRANT	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING 1/	FEDERAL: NATIONAL FOREST AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST RESERVED FROM CUTTING	TOTAL
	WOODLAND:													
4	OAK: FOREST CONTAINING 60% OR MORE OF OAK	28,880	1,990		1,040	545		400	1,215			2,125		36,195
5A	DENSE JUNIPER: JUNIPER (OR MOUNTAIN MAHOGANY) FOREST OCCUPYING 10% OR MORE OF THE AREA	127,110	8,270	40	30,830	50	1,000		247,065			4,775		419,140
5B	SCATTERED JUNIPER: JUNIPER (OR MOUNTAIN MAHOGANY) FOREST OCCUPYING 5 TO 10% OF THE AREA	438,210	30,005	70	47,410	210	17,870	520	521,210	155		61,340		1,117,000
5C	PONDEROSA PINE WOODLAND: SCATTERED STANDS OF PONDEROSA PINE ON UNFAVORABLE SITES	192,720	4,480	20	6,740	70	48,675	1,480	56,265	295		174,800		485,545
	PONDEROSA PINE: FOREST CONTAINING 50% OR MORE OF PONDEROSA PINE													
20	PONDEROSA PINE, LARGE: FOREST CONTAINING 50 TO 80% OF PONDEROSA PINE, MORE THAN 22" D.B.H.	232,130	1,800		5,755	115	79,725	6,085	7,220		1,505	508,515	3,710	846,640
20.5	PURE PONDEROSA PINE, LARGE: FOREST CONTAINING 80% OR MORE OF PONDEROSA PINE, MORE THAN 22" D.B.H.	1,779,320	11,120	50	26,760	395	588,900	4,505	71,770	11,300	5,645	2,289,795	9,605	4,793,165
20A	PONDEROSA PINE-SUGAR PINE MIXTURE, LARGE: FOREST CONTAINING 50% OR MORE OF PONDEROSA PINE AND 20% OR MORE OF SUGAR PINE, MORE THAN 22" D.B.H.	11,745					9,750	875				7,760		30,130
21	PONDEROSA PINE, SMALL: 12 TO 22" D.B.H.	257,485	2,055	35	8,910		150,455	435	8,325	1,110	260	250,750	195	680,015
22	PONDEROSA PINE SEEDLINGS, SAPLINGS, AND POLES: LESS THAN 12" D.B.H.	519,610	4,615	10	11,305	860	4,095	4,050	15,765	185	100	231,705	260	792,560
	PINE MIXTURE: MIXED FOREST CONTAINING 20 TO 50% OF PONDEROSA PINE													
20B	SUGAR PINE MIXTURE, LARGE: FOREST CONTAINING 20% OR MORE OF SUGAR PINE AND LESS THAN 50% OF PONDEROSA PINE, MORE THAN 22" D.B.H.	23,555	625				190	4,595			25	6,665		35,655
27	PINE MIXTURE, LARGE: 12" OR MORE D.B.H.	107,695	810		2,985	630	22,565	3,825	3,205		1,480	302,210	4,215	449,620
28	PINE MIXTURE, SMALL: LESS THAN 12" D.B.H.	97,865	1,180		1,635	535	6,905		1,695			36,605	575	146,995
	DOUGLAS FIR: FOREST CONTAINING 60% OR MORE OF DOUGLAS FIR													
6	DOUGLAS FIR, LARGE OLD GROWTH: MORE THAN 40" D.B.H.	775	30					595				3,095	1,210	5,705
7	DOUGLAS FIR, SMALL OLD GROWTH: 22 TO 40" D.B.H.	9,340			230		6,260	3,720	55		65	38,580	1,860	60,110
8	DOUGLAS FIR, LARGE SECOND GROWTH: 22 TO 40" D.B.H.	5,460			160				190			10,910	190	16,910
9A	DOUGLAS FIR, LARGE POLES: 12 TO 20" D.B.H.	4,325	100		65		100		140			28,895	35	33,660
9B	DOUGLAS FIR, SMALL POLES: 6 TO 10" D.B.H.	6,610	145		90		120		1,140			27,940	100	36,145
10	DOUGLAS FIR SEEDLINGS AND SAPLINGS: LESS THAN 6" D.B.H.	3,725			5		295	20	55		40	2,980		7,120
	WESTERN RED CEDAR: FOREST CONTAINING 40% OR MORE OF WESTERN RED CEDAR													
17	WESTERN RED CEDAR, LARGE: 24" OR MORE D.B.H.											180		180
	FIR-MOUNTAIN HEMLOCK: FOREST CONTAINING 50% OR MORE OF NOBLE FIR, SHASTA RED FIR, SILVER FIR, ALPINE FIR, OR MOUNTAIN HEMLOCK, OR OF ANY COMBINATION OF THESE SPECIES													
23	FIR-MOUNTAIN HEMLOCK, LARGE: 12" OR MORE D.B.H.	5,070			275		13,440	5,470	215		43,710	239,195	42,780	350,155
24	FIR-MOUNTAIN HEMLOCK, SMALL: LESS THAN 12" D.B.H.	165					6,225	900	105		1,010	18,585	3,010	30,000
	UPPER-SLOPE MIXTURE: MIXED FOREST OF VARIOUS COMBINATIONS OF WESTERN LARCH, DOUGLAS FIR, ENGELMANN SPRUCE, THE BALSAM FIRS, MOUNTAIN HEMLOCK, LODGEPOLE PINE, WESTERN WHITE PINE, AND OCCASIONALLY OTHER SPECIES													
27½	UPPER-SLOPE MIXTURE, LARGE: 12" OR MORE D.B.H.	107,650	965		4,325	640	5,195		72,330			608,990	7,925	808,020
28½	UPPER-SLOPE MIXTURE, SMALL: LESS THAN 12" D.B.H.	74,720	385		1,065	185	10,170		1,335			147,585	10,075	245,520
	WHITE FIR OR LOWLAND WHITE FIR: FOREST CONTAINING 50% OR MORE OF WHITE FIR OR LOWLAND WHITE FIR													
29	WHITE FIR OR LOWLAND WHITE FIR, LARGE: 12" OR MORE D.B.H.	23,180	195		810		1,590	1,195	500		675	75,960	255	104,360
30	WHITE FIR OR LOWLAND WHITE FIR, SMALL: LESS THAN 12" D.B.H.	1,140			150				45		45	2,075		3,455
	LODGEPOLE PINE: FOREST CONTAINING 50% OR MORE OF LODGEPOLE PINE													
25	LODGEPOLE PINE, LARGE: 12" OR MORE D.B.H.	3,530			160		235		165		4,795	48,075	595	57,555
26	LODGEPOLE PINE, MEDIUM: 6 TO 10" D.B.H.	187,560	1,905		6,550	80	160,985	1,905	53,115	30	45,005	840,700	27,065	1,324,900
26A	LODGEPOLE PINE, SMALL: LESS THAN 6" D.B.H.	34,660	210		1,260	40	22,685		4,795		3,010	167,360	7,065	241,085
	HARDWOODS: FOREST CONTAINING 50% OR MORE OF HARDWOODS													
31.5	HARDWOODS, LARGE: 12" OR MORE D.B.H.	5,945	10				755		135			20		6,865
31	HARDWOODS, SMALL: LESS THAN 12" D.B.H.	5,935	55		30		35		2,750	5		5,270		14,080
33	SUBALPINE: FOREST AT UPPER LIMITS OF TREE GROWTH, USUALLY UNMERCHANTABLE	10,105			175	140	12,015		3,740		24,435	229,445	135,300	415,355
	NONRESTOCKED CUTOVER: LOGGED AREA NOT SATISFACTORILY RESTOCKED AND NOT CARRYING A RESIDUAL STAND OF 1 M OR MORE PER ACRE													
35A	CUT SINCE BEGINNING OF 1920	46,150	280		1,210		50	2,380	795			6,620	40	57,525
35B	CUT BEFORE 1920	6,105			25				175			1,465		7,770
	DEFORESTED AREA: NONRESTOCKED AREA DEFORESTED OTHERWISE THAN BY CUTTING													
37	DEFORESTED BURN	19,505	360		1,400		9,410	1,985	6,060		1,115	40,740	2,550	83,125
37B	AREA ON WHICH STAND WAS KILLED BY INSECTS	150			115				130			640		1,035
38	NONCOMMERCIAL ROCKY AREA	40,895	2,385		1,375	125	2,050	2,555	35,375		1,145	242,140	13,955	342,000
	TOTAL FOREST TYPES	4,413,025	73,975	225	162,845	4,620	1,181,745	47,495	1,117,080	13,080	134,145	6,664,490	272,570	14,085,295
1,18, AND 2	NONFOREST LAND: CULTIVATED, GRASS, SAGEBRUSH, BARRENS, URBAN AREAS, AND UNMEANDERED WATER SURFACES													
	TOTAL	26,743,105 ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP								2,090		1,088,805	53,405	2/ 27,887,405
										15,170		7,753,295	325,975	41,972,700

1/ CRATER LAKE NATIONAL PARK AND UPPER KLAMATH WILDLIFE REFUGE. 2/ FOR FOUR COUNTIES, AND FOR NATIONAL FORESTS IN ALL COUNTIES, DATA ON AREA OF NONFOREST LAND WERE OBTAINED IN THE FOREST SURVEY. FOR NONFOREST LAND OUTSIDE NATIONAL FORESTS IN THE OTHER COUNTIES, TOTALS WERE COMPUTED BY SUBTRACTING FOREST-SURVEY AREA FIGURES FROM COUNTY AREA FIGURES ISSUED BY THE BUREAU OF THE CENSUS.

FOREST STATISTICS FOR THE STATE OF OREGON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 3.—AREA, IN ACRES, OF GENERALIZED FOREST TYPES, BY OWNERSHIP CLASS

TYPE DEFINITION		PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: REVESTED O. AND C. LAND GRANT	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING 1/	FEDERAL: NATIONAL FOREST AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST RESERVED FROM CUTTING	TOTAL
WOODLAND: OAK AND JUNIPER														
SURVEY TYPES 4, 5A, AND 5B		594,200	40,265	110	79,280	805	18,870	920	769,490	155		68,240		1,572,335
HARDWOODS: COTTONWOOD, ASPEN, AND RED ALDER														
SURVEY TYPES 31 AND 31.5		11,880	65		30		790		2,885	5		5,290		20,945
PONDEROSA PINE AND SUGAR PINE 12" OR MORE D.B.H.														
SURVEY TYPES 5½, 20, 20.5, 20A, 20B, 21, AND 27		2,598,650	20,890	105	51,150	1,210	900,260	21,800	146,785	12,705	8,995	3,540,495	17,725	7,320,770
PONDEROSA PINE AND SUGAR PINE LESS THAN	ON CUTOVER AREAS	560,135	4,385	10	10,960	680	3,210	4,040	9,275			171,440	15	764,150
12" D.B.H.	ON OLD BURNS	57,340	1,410		1,980	715	7,790	10	8,185	185	100	96,870	820	175,405
SURVEY TYPES 22 AND 28	TOTAL	617,475	5,795	10	12,940	1,395	11,000	4,050	17,460	185	100	268,310	835	939,555
CONIFERS 12" OR MORE D.B.H. OTHER THAN PONDEROSA PINE,														
SUGAR PINE, AND LODGEPOLE PINE														
SURVEY TYPES 6, 7, 8, 9A, 17, 23, 27½, AND 29		155,800	1,290		5,865	640	26,585	10,980	73,430		44,450	1,005,805	54,255	1,379,100
CONIFERS LESS THAN 12" D.B.H. OTHER THAN	ON CUTOVER AREAS	60,100	225		940		60		835		20	6,765		68,945
PONDEROSA PINE, SUGAR PINE, AND LODGEPOLE PINE	ON OLD BURNS	26,260	305		370	185	16,750	920	1,845		1,075	192,400	13,185	253,295
SURVEY TYPES 9B, 10, 24, 28½, AND 30	TOTAL	86,360	530		1,310	185	16,810	920	2,680		1,095	199,165	13,185	322,240
LODGEPOLE PINE 12" OR MORE D.B.H.														
SURVEY TYPE 25		3,530			160		235		165		4,795	48,075	595	57,555
LODGEPOLE PINE LESS THAN 12" D.B.H.														
SURVEY TYPES 26 AND 26A		222,220	2,115		7,810	120	183,670	1,905	57,910	30	48,015	1,008,060	34,130	1,565,985
NONCOMMERCIAL AREAS														
SURVEY TYPES 33 AND 38		51,000	2,385		1,550	265	14,065	2,555	39,115		25,580	471,585	149,255	757,355
NONRESTOCKED CUT-OVER AREAS, DEFORESTED BURNS, AND AREAS ON														
WHICH STANDS HAVE BEEN KILLED BY INSECTS														
SURVEY TYPES 35A, 35B, 37, AND 37B		71,910	640		2,750		9,460	4,365	7,160		1,115	49,465	2,590	149,455
TOTAL FOREST TYPES		4,413,025	73,975	225	162,845	4,620	1,181,745	47,495	1,117,080	13,080	134,145	6,664,490	272,570	14,085,295
NONFOREST LAND														
SURVEY TYPES 1, 1B, AND 2		26,743,105 ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP								2,090		1,088,805	53,405	2/ 27,387,405
TOTAL										15,170		7,753,295	325,975	41,972,700

1/ CRATER LAKE NATIONAL PARK AND UPPER KLAMATH WILDLIFE REFUGE. 2/ FOR FOUR COUNTIES, AND FOR NATIONAL FORESTS IN ALL COUNTIES, DATA ON AREA OF NONFOREST LAND WERE OBTAINED IN THE FOREST SURVEY. FOR NONFOREST LAND OUTSIDE NATIONAL FORESTS IN THE OTHER COUNTIES, TOTALS WERE COMPUTED BY SUBTRACTING FOREST-SURVEY AREA FIGURES FROM COUNTY AREA FIGURES ISSUED BY THE BUREAU OF THE CENSUS.

FOREST STATISTICS FOR THE STATE OF OREGON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 4.--AREA OF FOREST LAND, BY SITE QUALITY

SITE CLASSIFICATION				AREA IN PERCENTAGE OF--		
TYPE 1/	SITE QUALITY CLASS		AREA IN ACRES	COMMERCIAL CONIFEROUS FOREST LAND	TOTAL FOREST LAND	TOTAL AREA
COMMERCIAL CONIFEROUS	PONDEROSA PINE	II	8,913	0.1	0.1	
		III	504,928	5.0	3.6	1.2
		IV	5,987,808	58.9	42.5	14.3
		V	1,787,921	17.5	12.7	4.3
		VI	136,477	1.3	0.9	0.3
		TOTAL	8,426,047	82.8	59.8	20.1
	DOUGLAS FIR	III	35,245	0.3	0.3	0.1
		IV	283,543	2.8	2.0	0.7
		V	1,433,520	14.1	10.2	3.4
		TOTAL	1,752,308	17.2	12.5	4.2
TOTAL COMMERCIAL CONIFEROUS			10,178,355	100.0	72.3	24.3
LODGEPOLE PINE 2/			1,554,860		11.0	3.7
JUNIPER AND MOUNTAIN MAHOGANY			1,537,455		10.9	3.7
NONCOMMERCIAL ROCKY			342,030		2.4	0.8
SUBALPINE			415,455		3.0	1.0
OAK			36,195		0.3	0.1
HARDWOOD			20,945		0.1	
TOTAL OTHER THAN COMMERCIAL CONIFEROUS			3,906,940		27.7	9.3
ALL FOREST TYPES			14,085,295		100.0	33.6
NONFOREST TYPES			3/ 27,887,405			66.4
GRAND TOTAL			41,972,700			100.0

1/ DEFORESTED AREAS, TYPES 35A, 35B, 37, AND 37B, WERE CLASSIFIED AS TO SITE ON THE BASIS OF ORIGINAL TYPE.

2/ EXCLUDES 72,420 ACRES OF LODGEPOLE PINE TYPES CLASSIFIED AS COMMERCIAL CONIFEROUS.

3/ FOR FOUR COUNTIES, AND FOR NATIONAL FORESTS IN ALL COUNTIES, DATA ON AREA OF NONFOREST LAND WERE OBTAINED IN THE FOREST SURVEY. FOR NONFOREST LAND OUTSIDE NATIONAL FORESTS IN THE OTHER COUNTIES, TOTALS WERE COMPUTED BY SUBTRACTING FOREST-SURVEY AREA FIGURES FROM COUNTY AREA FIGURES ISSUED BY THE BUREAU OF THE CENSUS.

FOREST STATISTICS FOR THE STATE OF WASHINGTON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 5.--VOLUME OF SAW TIMBER,[1] BY SPECIES AND BY OWNERSHIP CLASS

THOUSANDS OF BOARD FEET, LOG SCALE, SCRIBNER RULE

SURVEY SYMBOL	SPECIES	PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING[2]	FEDERAL: NATIONAL FOREST: AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST: RESERVED FROM CUTTING	TOTAL
Y	PONDEROSA PINE	5,282,183	1,640,338	11	197,275	141	5,500,946	186,578	194,956	2,433	4,820,401	106,998	17,932,260
W	WESTERN WHITE PINE	405,902	32,348	150	5,826		37,534	4,349	31,994		482,153	34,450	1,034,706
LP	LODGEPOLE PINE	79,325	23,936		4,094		26,635	5,630	10,866		250,981	74,282	475,749
DF	DOUGLAS FIR	3,439,150	777,011	18	244,713		1,512,128	187,748	262,014	190	5,197,042	307,187	11,927,201
C	WESTERN RED CEDAR	92,295	4,108	7	1,914		13,269	1,476	18,055		296,641	12,044	439,809
YC	ALASKA CEDAR	204	89				827		1,902		23,258	3,255	29,535
H	WESTERN HEMLOCK	323,035	10,041	27	5,920		762	2,658	66,468		634,092	80,801	1,123,804
MH	MOUNTAIN HEMLOCK	78,424	2,459				115,379		102,186		665,663	58,115	1,022,226
WF	WHITE AND LOWLAND WHITE FIR	391,229	49,657	81	4,674		198,809	4,401	26,269		492,052	30,362	1,197,534
NF	NOBLE FIR	11,525	888						6,140		17,042	35	35,630
A	SILVER FIR	373,986	9,063		80			45	217,574		1,615,648	259,385	2,475,781
AF	ALPINE FIR	27,334	5,790				114,227	5	20,757		254,098	107,025	529,236
WL	WESTERN LARCH	1,063,719	314,652	18	134,356		688,346	152,581	46,714		2,021,221	83,757	4,505,364
ES	ENGELMANN SPRUCE	81,288	42,635		4,521		83,912	1,527	38,973		955,337	671,247	1,879,440
RA	RED ALDER	76						25					101
OM	BIGLEAF MAPLE	5									16		21
BC	NORTHERN BLACK COTTONWOOD	32,164	737		47		11,332	330	745		15,910	2,396	63,661
ASP	ASPEN	577									90		667
	TOTAL	11,682,421	2,913,752	312	603,420	141	8,304,106	547,353	1,045,613	2,623	17,741,645	1,831,339	44,672,725

1/ TREES 12 INCHES AND MORE IN D.B.H. 2/ FORT GEORGE WRIGHT, SPOKANE COUNTY.

FOREST STATISTICS FOR THE STATE OF WASHINGTON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 6. -AREA, IN ACRES, OF ALL FOREST COVER TYPES, BY OWNERSHIP CLASS

SURVEY TYPE NO.	TYPE DEFINITION	PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING 1/	FEDERAL: NATIONAL FOREST: AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST: RESERVED FROM CUTTING	TOTAL
	WOODLAND:												
4	OAK: FOREST CONTAINING 60% OR MORE OF OAK	21,990	1,280		1,025		4,055	1,835					30,185
58	SCATTERED JUNIPER: JUNIPER (OR MOUNTAIN MAHOGANY) FOREST OCCUPYING 5 TO 10% OF THE AREA	185	60										245
5½	PONDEROSA PINE WOODLAND: SCATTERED STANDS OF PONDEROSA PINE ON UNFAVORABLE SITES	143,700	22,095		6,525	25	87,440	24,200	665		49,910	60	334,650
	PONDEROSA PINE: FOREST CONTAINING 50% OR MORE OF PONDEROSA PINE												
20	PONDEROSA PINE, LARGE: FOREST CONTAINING 50 TO 80% OF PONDEROSA PINE, MORE THAN 22" D.B.H.	153,950	45,975		9,685		241,040	9,715	12,650		224,860	7,875	705,750
20.5	PURE PONDEROSA PINE, LARGE: FOREST CONTAINING 80% OR MORE OF PONDEROSA PINE, MORE THAN 22" D.B.H.	354,225	128,165		7,885	10	424,695	12,715	12,970		321,580	2,715	1,264,960
21	PONDEROSA PINE, SMALL: 12 TO 22" D.B.H.	600,180	59,710		39,215	60	182,180	16,255	340	2,230	64,355	110	964,635
22	PONDEROSA PINE SEEDLINGS, SAPLINGS, AND POLES: LESS THAN 12" D.B.H.	560,075	42,420		42,445	85	49,100	15,685	385	455	22,415	150	733,215
	PINE MIXTURE: MIXED FOREST CONTAINING 20 TO 50% OF PONDEROSA PINE												
27	PINE MIXTURE, LARGE: 12" OR MORE D.B.H.	108,610	18,880		9,270		117,150	6,185	4,930		154,015	6,160	425,200
28	PINE MIXTURE, SMALL: LESS THAN 12" D.B.H.	154,010	12,665		14,520		24,460	6,775	740		22,000	130	235,300
	DOUGLAS FIR: FOREST CONTAINING 60% OR MORE OF DOUGLAS FIR												
6	DOUGLAS FIR, LARGE OLD GROWTH: MORE THAN 40" D.B.H.	330							100		470	90	990
7	DOUGLAS FIR, SMALL OLD GROWTH: 22 TO 40" D.B.H.	84,255	19,640		4,560		14,840	4,830	8,570		159,965	9,305	305,965
8	DOUGLAS FIR, LARGE SECOND GROWTH: 22 TO 40" D.B.H.	53,320	19,205		8,710		16,985	6,925	2,405		49,810	600	157,960
9A	DOUGLAS FIR, LARGE POLES: 12 TO 20" D.B.H.	32,410	3,580		6,230		4,255	3,065	1,455		65,475	305	116,775
9B	DOUGLAS FIR, SMALL POLES: 6 TO 10" D.B.H.	35,785	4,110		3,380		2,000	6,630	2,605		51,465	385	106,360
10	DOUGLAS FIR SEEDLINGS AND SAPLINGS: LESS THAN 6" D.B.H.	33,860	6,320		5,055		1,065	4,700	2,560		24,380	1,130	79,070
	WESTERN RED CEDAR: FOREST CONTAINING 40% OR MORE OF WESTERN RED CEDAR												
17	WESTERN RED CEDAR, LARGE: MORE THAN 24" D.B.H.	2,415	50				290	10	125		10,595	210	13,695
19A	WESTERN RED CEDAR POLES: 12 TO 24" D.B.H.	1,155	175					125			1,785		3,240
19B	WESTERN RED CEDAR SEEDLINGS AND SAPLINGS: LESS THAN 12" D.B.H.	440			105			130			650		1,325
	FIR-MOUNTAIN HEMLOCK: FOREST CONTAINING 50% OR MORE OF NOBLE FIR, SHASTA RED FIR, SILVER FIR, ALPINE FIR, OR MOUNTAIN HEMLOCK, OR OF ANY COMBINATION OF THESE SPECIES												
23	FIR-MOUNTAIN HEMLOCK, LARGE: 12" OR MORE D.B.H.	35,680	1,105				17,475		25,035		163,660	18,065	261,020
24	FIR-MOUNTAIN HEMLOCK, SMALL: LESS THAN 12" D.B.H.	11,980	65				5,430		6,260		46,715	3,860	74,310
	UPPER-SLOPE MIXTURE: MIXED FOREST OF VARIOUS COMBINATIONS OF WESTERN LARCH, DOUGLAS FIR, ENGELMANN SPRUCE, THE BALSAM FIRS, MOUNTAIN HEMLOCK, LODGEPOLE PINE, WESTERN WHITE PINE, AND OCCASIONALLY OTHER SPECIES												
27½	UPPER-SLOPE MIXTURE, LARGE: 12" OR MORE D.B.H.	189,510	55,845	15	23,045		104,695	25,580	14,540		511,170	86,730	1,011,130
28½	UPPER-SLOPE MIXTURE, SMALL: LESS THAN 12" D.B.H.	455,635	52,610	805	102,970		62,585	80,600	7,845		406,260	22,255	1,191,565
	WHITE FIR OR LOWLAND WHITE FIR: FOREST CONTAINING 50% OR MORE OF WHITE FIR OR LOWLAND WHITE FIR												
29	WHITE FIR OR LOWLAND WHITE FIR, LARGE: 12" OR MORE D.B.H.	3,730	5		65		1,895	50	450		8,650	30	14,875
30	WHITE FIR OR LOWLAND WHITE FIR, SMALL: LESS THAN 12" D.B.H.	1,890	880		380			60			690		3,900
	LODGEPOLE PINE: FOREST CONTAINING 50% OR MORE OF LODGEPOLE PINE												
25	LODGEPOLE PINE, LARGE: 12" OR MORE D.B.H.	4,095	1,715		15		3,825	330	715		14,960	3,500	29,155
26	LODGEPOLE PINE, MEDIUM: 6 TO 10" D.B.H.	21,275	36,060		1,450		23,010	2,420	1,885		181,765	20,095	287,960
26A	LODGEPOLE PINE, SMALL: LESS THAN 6" D.B.H.	54,110	13,070	160	7,865		28,945	4,260	1,370		146,900	37,590	294,270
	HARDWOODS: FOREST CONTAINING 50% OR MORE OF HARDWOODS												
31.5	HARDWOODS, LARGE: 12" OR MORE D.B.H.	8,300	70		15		2,445	115	25		835		11,805
31	HARDWOODS, SMALL: LESS THAN 12" D.B.H.	5,300	215		15		1,050	10	75		645		7,310
33	SUBALPINE: FOREST AT UPPER LIMITS OF TREE GROWTH, USUALLY UNMERCHANTABLE	36,105	10,160	700	945		14,320	4,040	49,940		567,850	181,405	865,465
	NONRESTOCKED CUTOVER: LOGGED AREA NOT SATISFACTORILY RESTOCKED AND NOT CARRYING A RESIDUAL STAND OF 1 M OR MORE PER ACRE												
35A	CUT SINCE BEGINNING OF 1920	67,220	9,935		14,620		1,170	5,435	195		7,370		105,945
35B	CUT BEFORE 1920	31,935	1,140		3,905		55	345			220		37,600
	DEFORESTED AREA: NONRESTOCKED AREA DEFORESTED OTHERWISE THAN BY CUTTING												
37	DEFORESTED BURN	75,700	16,635		26,380		17,655	31,145	4,045		64,320	5,205	241,085
38	NONCOMMERCIAL ROCKY AREA	89,340	34,070		7,500	35	62,380	35,670	27,805		419,640	51,345	727,785
	TOTAL FOREST TYPES	3,432,730	617,910	1,680	347,780	215	1,516,490	309,840	190,685	2,685	3,765,380	459,305	10,644,700
1B, 2 AND 2	NONFOREST LAND: CULTIVATED, GRASS, SAGEBRUSH, BARRENS, URBAN AREAS, AND UNMEANDERED WATER SURFACES										277,495	95,545	16,469,970
	TOTAL				16,096,930 ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP						4,042,875	554,850	27,114,670

1/ FORT GEORGE WRIGHT, SPOKANE COUNTY.

FOREST STATISTICS FOR THE STATE OF WASHINGTON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 7. -AREA, IN ACRES, OF GENERALIZED FOREST TYPES, BY OWNERSHIP CLASS

TYPE DEFINITION		PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	MUNICIPAL	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING	FEDERAL: RAILROAD SELECTION PENDING	FEDERAL: RESERVED FROM CUTTING 1/	FEDERAL: NATIONAL FOREST AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST RESERVED FROM CUTTING	TOTAL
WOODLAND: OAK AND JUNIPER													
SURVEY TYPES 4 AND 5B		22,175	1,340		1,025		4,055	1,835					30,430
HARDWOODS: COTTONWOOD, RED ALDER, AND ASPEN													
SURVEY TYPES 31 AND 31.5		13,600	285		30		3,495	125	100		1,480		19,115
PONDEROSA PINE 12" OR MORE D.B.H.													
SURVEY TYPES 5½, 20, 20.5, 21, AND 27		1,360,695	274,825		72,580	95	1,052,505	69,070	31,555	2,230	814,720	16,920	3,695,195
PONDEROSA PINE LESS THAN 12" D.B.H.	ON CUTOVER AREAS	585,900	43,750		45,355	85	44,330	12,875	300	455	18,815	110	751,975
SURVEY TYPES 22 AND 28	ON OLD BURNS	128,185	11,335		11,610		29,230	9,585	825		25,600	170	216,540
	TOTAL	714,085	55,085		56,965	85	73,560	22,460	1,125	455	44,415	280	968,515
CONIFERS 12" OR MORE IN D.B.H. OTHER THAN PONDEROSA													
PINE AND LODGEPOLE PINE													
SURVEY TYPES 6, 7, 8, 9A, 17, 19A, 23, 27½, AND 29		402,805	99,605	15	42,610		160,435	40,585	52,680		971,815	115,335	1,885,885
CONIFERS LESS THAN 12" D.B.H. OTHER THAN	ON CUTOVER AREAS	259,545	23,995		40,045		1,985	14,085			23,065		362,720
PONDEROSA PINE AND LODGEPOLE PINE	ON OLD BURNS	280,045	39,990	805	71,845		69,095	78,035	19,270		506,860	27,630	1,093,575
SURVEY TYPES 9B, 10, 19B, 24, 28½, AND 30	TOTAL	539,590	63,985	805	111,890		71,080	92,120	19,270		529,925	27,630	1,456,295
LODGEPOLE PINE 12" OR MORE IN D.B.H.													
SURVEY TYPE 25		4,095	1,715		15		3,825	330	715		14,960	3,500	29,155
LODGEPOLE PINE LESS THAN 12" D.B.H.													
SURVEY TYPES 26 AND 26A		75,385	49,130	160	9,315		51,955	6,680	3,255		328,605	57,685	582,230
NONCOMMERCIAL AREAS													
SURVEY TYPES 33 AND 38		125,445	44,230	700	8,445	35	76,700	39,710	77,745		987,490	232,750	1,593,250
NONRESTOCKED CUT-OVER AREAS AND DEFORESTED BURNS													
SURVEY TYPES 35A, 35B, AND 37		174,855	27,710		44,905		18,880	36,925	4,240		71,910	5,205	384,630
TOTAL FOREST TYPES		3,432,730	617,910	1,680	347,780	215	1,516,490	309,840	190,685	2,685	3,765,380	459,305	10,644,700
NONFOREST LAND													
SURVEY TYPES 1, 1B, AND 2		16,696,930 ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP CLASS									277,495	95,545	16,469,970
TOTAL											4,042,875	554,850	27,114,670

1/ FORT GEORGE WRIGHT, SPOKANE COUNTY.

FOREST STATISTICS FOR THE STATE OF WASHINGTON EAST OF THE CASCADE RANGE
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 8. -AREA OF FOREST LAND, BY SITE QUALITY

SITE CLASSIFICATION				AREA IN PERCENTAGE OF--		
TYPE 1/	SITE QUALITY CLASS		AREA IN ACRES	COMMERCIAL CONIFEROUS FOREST LAND	TOTAL FOREST LAND	TOTAL AREA
COMMERCIAL CONIFEROUS	PONDEROSA PINE	I	560			
		II	32,220	0.4	0.3	0.1
		III	493,095	5.8	4.6	1.8
		IV	2,677,420	31.7	25.1	9.9
		V	1,436,140	17.0	13.5	5.3
		VI	134,570	1.6	1.3	0.5
		TOTAL	4,774,005	56.5	44.8	17.6
	DOUGLAS FIR	II	320			
		III	125,160	1.5	1.2	0.5
		IV	1,323,685	15.7	12.4	4.9
		V	2,221,765	26.3	20.9	8.2
		TOTAL	3,670,930	43.5	34.5	13.6
TOTAL COMMERCIAL CONIFEROUS			8,444,935	100.0	79.3	31.2
LODGEPOLE PINE 2/			546,905		5.1	2.0
JUNIPER			245			
NONCOMMERCIAL ROCKY			727,785		6.9	2.7
SUBALPINE			875,530		8.2	3.2
OAK			30,185		0.3	0.1
HARDWOOD			19,115		0.2	0.1
TOTAL OTHER THAN COMMERCIAL CONIFEROUS			2,199,765		20.7	8.1
ALL FOREST TYPES			10,644,700		100.0	39.3
NONFOREST TYPES			3/ 16,469,970			60.7
GRAND TOTAL			27,114,670			100.0

1/ DEFORESTED AREAS, TYPES 35A, 35B, AND 37, WERE CLASSIFIED AS TO SITE ON THE BASIS OF ORIGINAL TYPE.

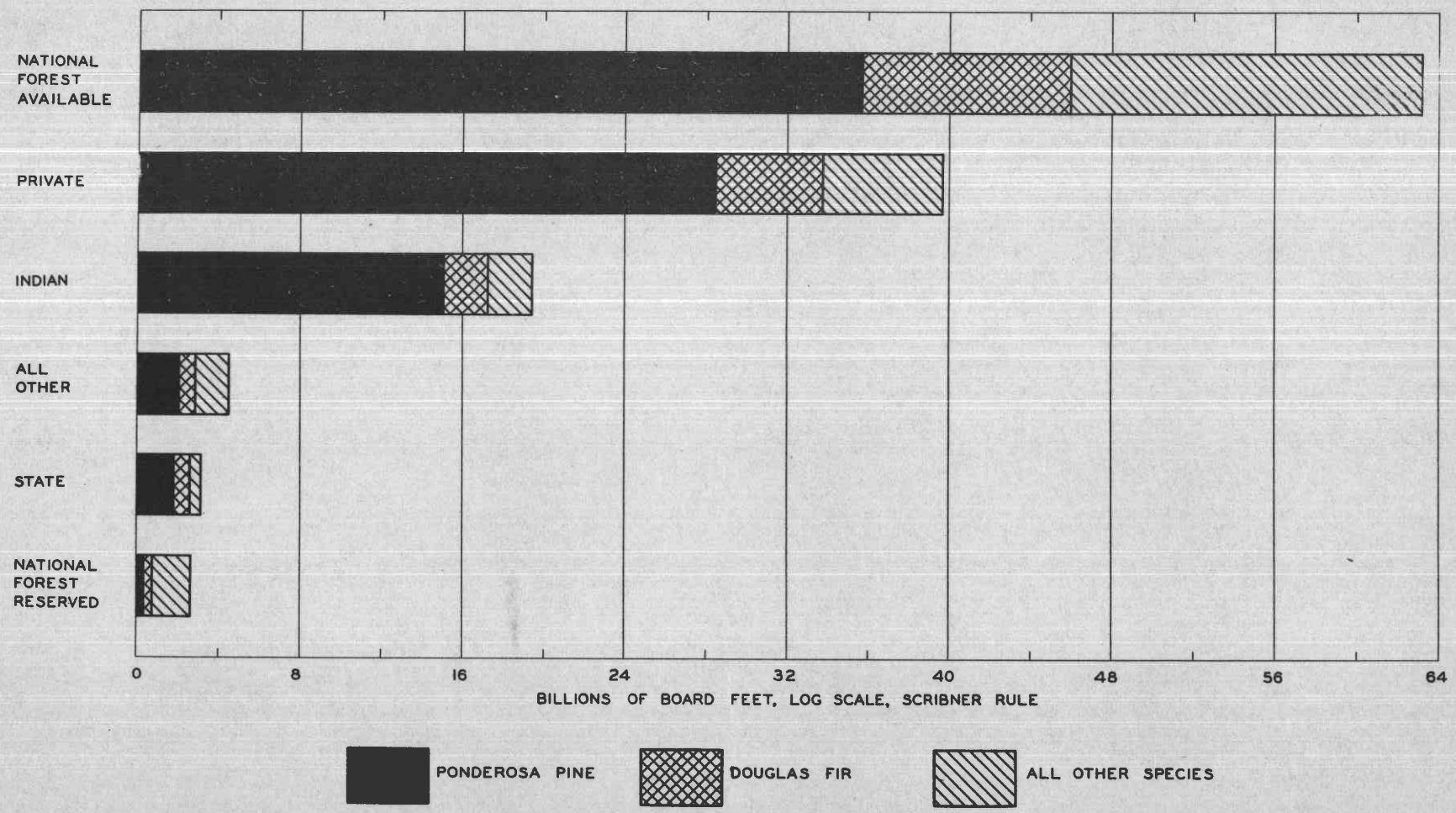
2/ EXCLUDES 78,830 ACRES OF LODGEPOLE PINE TYPES CLASSIFIED AS COMMERCIAL CONIFEROUS.

3/ FOR FERRY COUNTY, AND FOR NATIONAL FORESTS IN ALL COUNTIES, DATA ON AREA OF NONFOREST LAND WERE OBTAINED IN THE FOREST SURVEY. FOR NONFOREST LAND OUTSIDE NATIONAL FORESTS IN THE OTHER COUNTIES, TOTALS WERE COMPUTED BY SUBTRACTING FOREST-SURVEY AREA FIGURES FROM COUNTY AREA FIGURES ISSUED BY THE BUREAU OF THE CENSUS.

FOREST STATISTICS FOR EASTERN OREGON AND EASTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

FIGURE 2. SAW-TIMBER VOLUME BY SPECIES AND BY OWNERSHIP CLASS (FROM TABLES I & 5)



FOREST STATISTICS FOR EASTERN OREGON AND EASTERN WASHINGTON

FROM INVENTORY PHASE OF FOREST SURVEY

FIGURE 3. OWNERSHIP OF FOREST LAND (FROM TABLES 2 & 6)

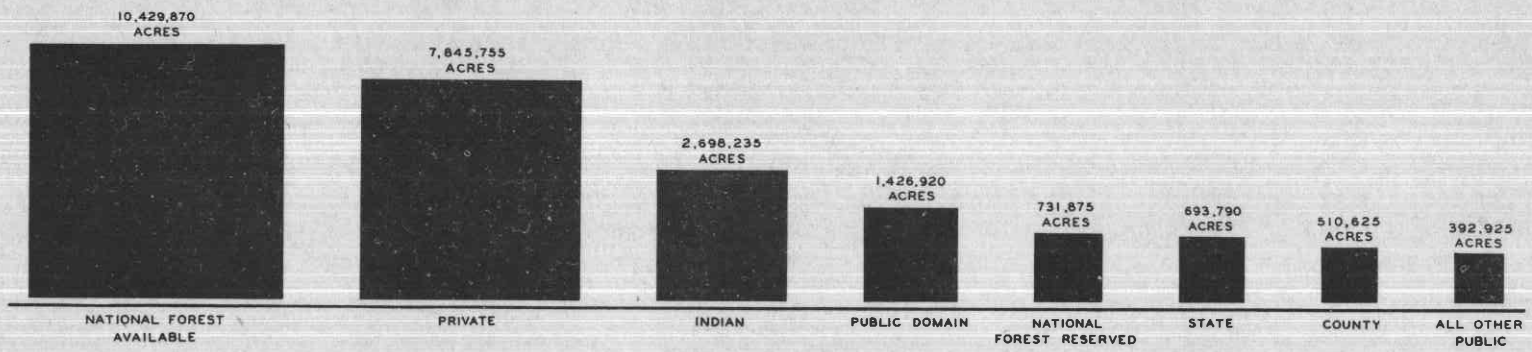
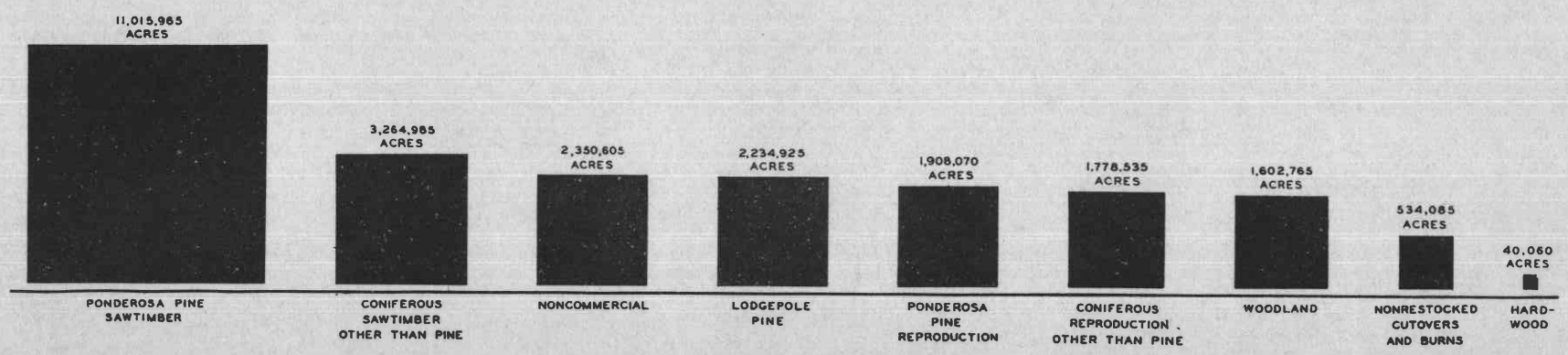



FIGURE 4. DISTRIBUTION OF FOREST LAND BY GENERALIZED TYPES, ALL OWNERSHIP CLASSES (FROM TABLES 3 & 7)