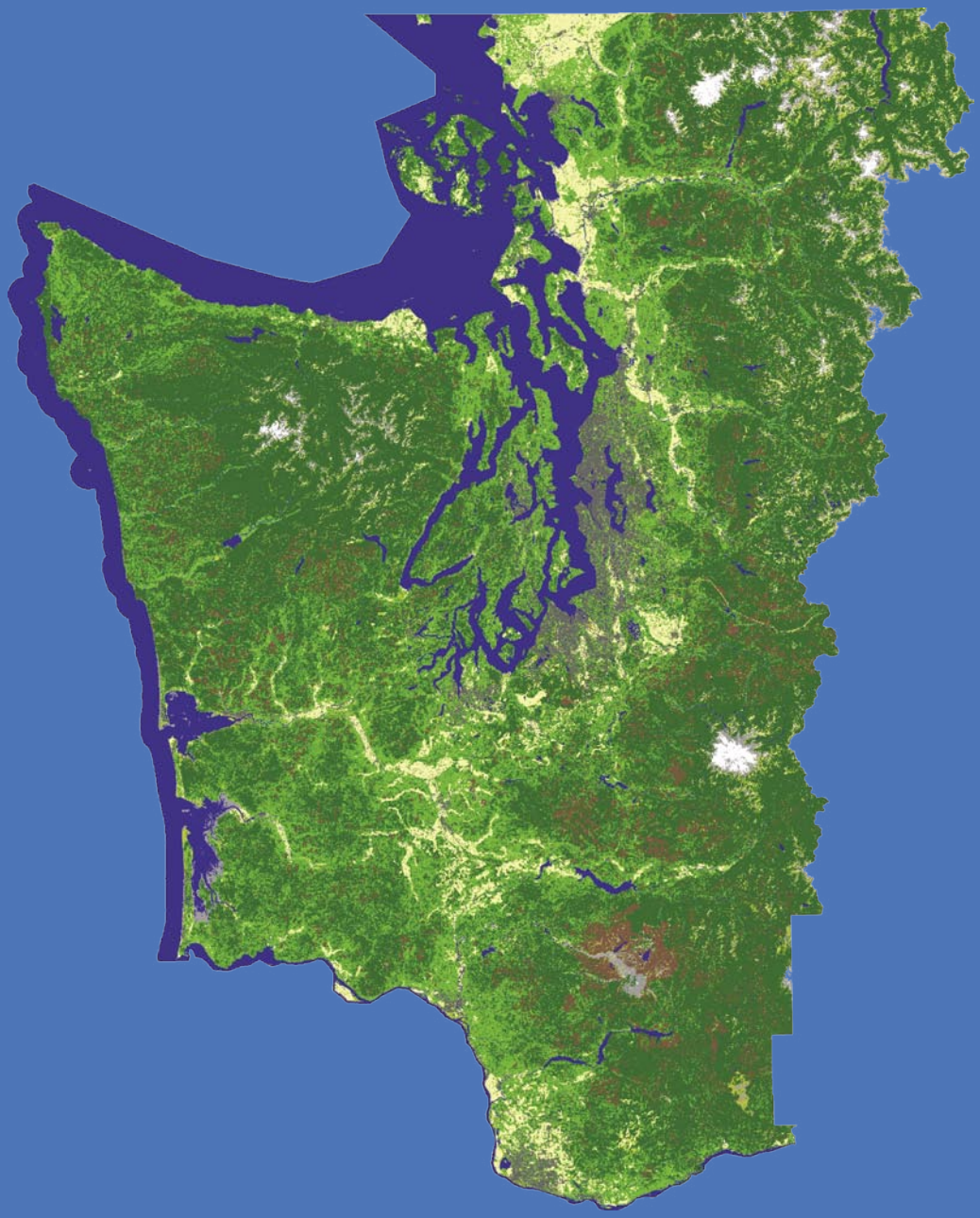
Timber Resource Statistics for Nonnational Forest Land in Western Washington, 2001

Andrew N. Gray, Charles F. Veneklase, and Robert D. Rhoads



Resource Bulletin
PNW-RB-246
May 2005

USDA United States Department of Agriculture

Forest Service

PNW Pacific Northwest Research Station

The **Forest Service** of the U.S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

Authors

Andrew N. Gray is an ecologist, **Charles F. Veneklase** is a computer specialist, and **Robert D. Rhoads** is a data collection team leader, Forestry Sciences Laboratory, P.O. Box 3890, Portland, OR 97208-3890.

Caption for cover figure

The image on the cover is a classified satellite image of western Washington from 1992 produced by the U.S. Geological Survey Multi-Resolution Land Characterization Consortium. In this representation, evergreen forest is shown in dark green, mixed and deciduous forest in light green, early-successional shrub- and forb-lands in brown, urban areas in dark gray, agricultural areas in yellow, perennial ice and snow in white, bare ground in light gray, and water in blue.

Abstract

Gray, Andrew N.; Veneklase, Charles F.; Rhoads, Robert D. 2005. Timber resource statistics for nonnational forest land in western Washington, 2001. Resour. Bull. PNW-RB-246. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 117 p.

This report is a summary of timber resource statistics for an inventory of the 19 counties in western Washington: Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, Mason, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Wahkiakum, and Whatcom. The inventory in 2000 sampled all private and public lands except those administered by the National Forest System and those that were reserved from management for wood products. Area information for parks and other reserves was obtained directly from the organizations managing these areas. Statistical tables provide estimates of land area, timber volume, growth, mortality, and harvest for individual survey units for western Washington as a whole.

Keywords: Forest surveys, forest inventory, statistics (forest), timber resources, resources (forest), western Washington.

Summary

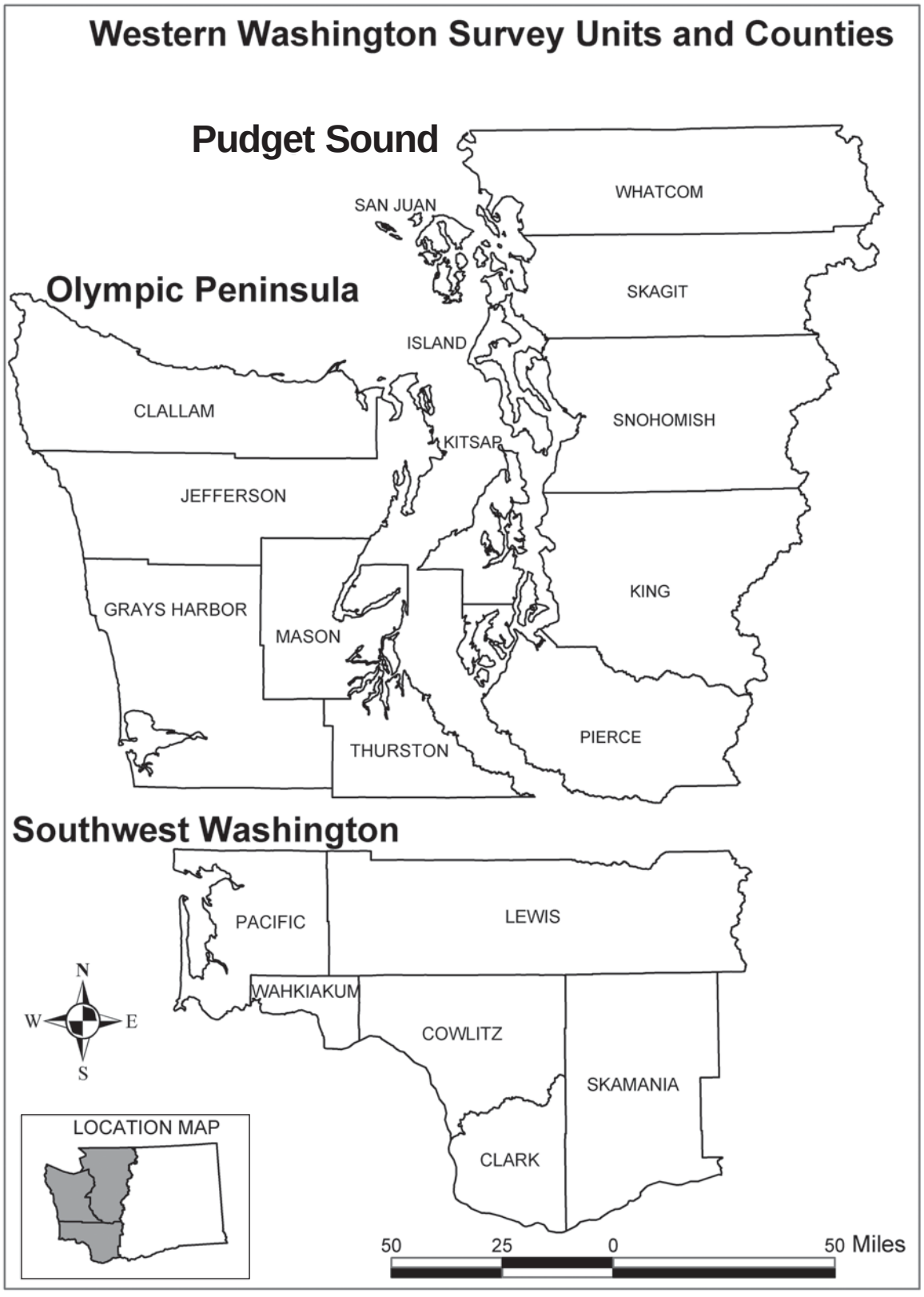
Western Washington has an estimated 11.9 million acres of land outside of that administered by the U.S. Department of Agriculture, Forest Service, National Forest System (NFS). This land is collectively referred to in the text of this report as “non-NFS.” About 72 percent of the non-NFS land was forested with 59 percent being timberland (forest land capable of producing industrial wood products and not reserved from management for wood products). Forest industry owned about 50 percent of the non-NFS timberland, whereas the proportions for other private and other public were 26 and 24 percent, respectively. Net volume of growing stock was estimated as 27.7 billion cubic feet, with 83 percent in conifer species. The three species with the greatest volume were Douglas-fir (42 percent), western hemlock (28 percent), and red alder (11 percent). About 37 percent of the volume was on land owned by other public owners, 38 percent by forest industry, and 24 percent by other private owners. Estimated annual growth of growing stock for non-NFS lands was 1.2 billion cubic feet, while the average annual mortality was 0.3 billion cubic feet and the average annual harvest was 1.0 billion cubic feet. About 4 percent of the non-NFS timberland present in 1990 was converted to nonforest land uses, and 1 percent was designated as reserved.

Preface

Forest Inventory and Analysis (FIA) is a nationwide program of the USDA Forest Service authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. Work units at Forest Service research and experiment stations conduct forest resource inventories throughout the 50 states. The FIA Program of the Pacific Northwest Research Station in Portland, Oregon, is responsible for forest inventories in Alaska, California, Hawaii, Oregon, and Washington.

Contents

List of Tables


Western Washington Survey Units and Counties
Pudget Sound
Olympic Peninsula
Southwest Washington
WHATCOM
SAN JUAN
SKAGIT
ISLAND
CLALLAM
SNOHOMISH
KITSAP
JEFFERSON
KING
GRAYS HARBOR
MASON
PIERCE
THURSTON
PACIFIC
LEWIS
WAHKIAKUM
COWLITZ
SKAMANIA
CLARK
N
W
E
S
LOCATION MAP
50
25
0
50 Miles

This page has been left blank intentionally.
Document continues on next page.

Introduction

The Forest Inventory and Analysis (FIA) unit of the USDA Forest Service, Pacific Northwest Research Station conducted a multiresource inventory in the forests of western Washington in 2000. The inventory included all lands except those administered by the USDA Forest Service National Forest System (NFS). This report summarizes the timber resource statistics for the nonnational forests land of western Washington. Data collected by the NFS for their lands will be included in a forthcoming statistical report for the entire state. Other resources sampled but not included in this report are understory vegetation, insect and disease damage, coarse woody debris, and snags. These data will be incorporated in future analyses of the status of western Washington's forests. For inventory purposes, the area of western Washington is divided into three regions: the Puget Sound area, the Olympic Peninsula, and southwest Washington.

Western Washington was first inventoried in 1931-33 (Andrews and Cowlin 1940); subsequent inventories were conducted in 1937-41 (various forest survey reports by county), 1948-60 (various forest survey reports by county), 1963-67 (Bolsinger 1969, 1971; Hazard 1965), 1978-79 (Bassett and Oswald 1981a, 1981b, 1982), and 1988-90 (MacLean and others 1991a, 1991b, 1991c, 1992). The current grid system is a systematic sample that was implemented in the early 1960s; before this grid, a type map system was used for inventory statistics.

In the late 1990s, the national FIA Program implemented several changes to the base plot grid, the timing of sampling, and the field plot design to improve national standardization and comparability across states and ownerships (Gillespie 1999). If the new annualized design had been implemented in Washington starting in 2000, it would have been 19 years between completion of the last inventory in 1990 and the sampling of all 10 annual panels in 2009. It was decided instead to close out the old field sample design with a rapid periodic sample in 2000 to provide a current estimate of forest conditions and trends. This sample collected less field data than the most recent inventory in 1990. The new annualized inventory design was started in Washington in 2002.

This report contains statistical tables that provide current estimates of forest land area, change estimates, number of trees, timber volume, growth, mortality, and harvest for nonnatural forest lands.

Highlights

Forested land constituted about 72 percent of the 11.9 million acres of non-NFS land in 2000 (table 1). About 82 percent of the nonnational forest land, or 7.0 million acres, qualified as timberland: forest land capable of producing industrial wood products and not reserved from management for wood products (see the "Terminology" section for definitions of all terms in this report). The amount of timberland declined by about 5 percent between 1990 and 2000, with 4 percent being converted to nonforest uses and 1 percent being converted to reserved categories (table 25a). This was an acceleration from the 1980-90 period, when timberland area declined by about 3 percent (MacLean and others 1992). Most of the losses in timberland came from conversion of 146,000 acres to urban land uses, and another 100,000 acres of previous timberland being reclassified as roads.

The harvest of timber declined on all ownerships between the 1980s and 1990s, (table 28a). In the 1980s, production averaged 0.77, 0.70, and 3.5 billion board feet per year from national forest, other public, and private lands, respectively (MacLean and others 1992). In the 1990s, production averaged 0.12, 0.49, and 2.8 billion board feet per year, respectively, for a total decline of 20 percent.

Nevertheless, standing volume on non-NFS timberlands in western Washington declined from 29.1 to 27.7 billion cubic feet based on plots measured during the previous and present inventories (table 26a). Most of the decline is attributed to the conversion of timberland to nonforest land uses; on lands that remained timberland, growth was only 2 percent lower than removals plus mortality. The growth compared to mortality and removals differed by survey unit, with growth exceeding mortality and removals by 5 percent in the Puget Sound area (table 26b) and 17 percent in the southwest area (table 26d), but was lower by 20 percent in the Olympic Peninsula (table 26c). Growth was greater than mortality and removals on other public lands, but not on private lands.

The stand size class for non-NFS owners in western Washington tended to be skewed to the small size classes. About 6 percent of the non-NFS lands had stands with a quadratic mean diameter (QMD) of 21 inches or greater ("large sawtimber"), and 43 percent had a QMD less than 9 inches ("seedling-sapling" and "poletimber") (table 7a). Public owners such as state, county, and other federal owners had about 10 percent of their lands with a QMD of 21 inches or greater. Forest industry and nonindustrial private owners had about 3 and 9 percent of their land in the larger diameters, respectively. Forty-eight percent of all non-NFS lands had QMDs between 9 and 21 inches.

Inventory Procedures

Western Washington was inventoried by using a double sampling for stratification scheme (Cochran 1977). The sampling is implemented on a permanent systematic grid and produces an even geographic distribution of both secondary (field) and primary (photo) plots across the state. Photo plots are placed at random inside each square of the grid.

The primary sample for the non-NFS lands of western Washington consisted of a grid of about 26,000 points established in 1999 by using aerial photographs taken in 1998. Data collected on each point included amount of tree cover by species group, average conifer height, owner, land use classification, and forest stage of development. In anticipation of including reserved lands such as national parks in future annualized inventories, data were collected on primary sample points on reserved lands.

The secondary sample consisted of 828 forest and nonforest field locations established in previous inventories and remeasured or reclassified in 2000. To collect the necessary data for this rapid periodic closeout inventory, the secondary sample consisted of two systematically selected plots out of every three of the base inventory grid sampled in 1988-89. This sample represents about a 1-in-24 subsample of the primary sample.

In 1988-89, a cluster of five subplots was measured at grid locations that met the definition for accessible timberland. At that time, the subplots sampled a single homogeneous condition (i.e., land use class or stand type), by moving subplots into the condition if necessary. Variable-radius sampling was used to select trees over 7 inches diameter at breast height (d.b.h.), and a smaller fixed-radius plot was used to sample trees <7 inches d.b.h. Plots that were sawtimber stands (average diameter ≥9 inches d.b.h. for conifer stands or ≥11 inches d.b.h. for hardwood stands) during the 1978-79 inventory and that had not been disturbed since then were measured by using a "walk-through" protocol in 1988-89. Under this protocol, trees that grew into the prism plot in the intervening period were not measured, and trees on sub-plots numbered 3 to 5 had fewer measurements taken on them. For stands with an average diameter <5 inches d.b.h., supplemental "stocking plots" were installed to obtain more detailed information on stand composition.

In 2000, three of the five previously measured subplots on timberland plots that remained in the same condition as the grid point (the center of subplot 1) and which met the criteria for accessible timberland were fully measured, including trees that grew into the fixed and variable-radius plots. Supplemental stocking plots were not installed. Access was denied to 10 of the timberland plots; careful examination of aerial photography indicated no harvest or other disturbance had

occurred to these plots, so tree growth and mortality were projected from the previously collected data by using species-specific growth regressions and mortality rates derived from the other inventory data.

Inventory data are summarized by using various land, owner, and forest type criteria in the following tables. Definitions for some of the owner categories used in the Pacific Northwest differ from those used in national FIA summary publications. For example, in national publications "forest industry" only includes owners that operate wood-processing plants; in Pacific Northwest reports it also includes other owners that grow timber for industrial use. See the "Terminology" section for definitions of terms.

Land and Water Area Updated

The U.S. Department of Commerce, Bureau of the Census compiles and publishes the acreage of land and water in the United States every 10 years (U.S. Department of Commerce 2000). These area figures, available by state and county, are used as the basis for the gross number of acres to be inventoried in each county. The previous inventory was based on 1980 census data, and the current inventory uses 1990 census figures. Raster-scanned topographic maps from the U.S. Department of the Interior, Geological Survey and a geographic information system were used for the newer assessment by the Bureau of the Census to identify water bodies and landforms and to determine the size of much smaller areas than was previously possible. As a result, the definition of inland water was changed to reflect the finer resolution. Streams with a minimum width of 200 feet are now recognized, compared to 660 feet in 1980; small water bodies are now at least 4.5 acres, compared to 40 acres in the past. In addition, areas covered intermittently with water were reclassified as "land"; the largest impact was in Pacific County, where land area was increased by 43,000 acres from the 1980 to the 1990 census.

Change in Reserved Land Definitions

The standard national definition for reserved lands used by FIA has been changed to: "Reserved land is withdrawn by law(s) prohibiting the management of land for the production of wood products (not merely controlling or prohibiting wood harvesting methods)... The prohibition against management for wood products cannot be changed through decision of the land manager (management agency) or through a change in land management personnel, but rather is permanent in nature" (U.S. Department of Agriculture, Forest Service 2000). In the 1988-90 inventory,

reserved lands were lands that prohibited timber utilization (as opposed to **management** for timber production) and included lands that were administratively withdrawn at the discretion of the landowner.

For non-NFS lands, the change in definition means that lands managed by conservation groups or any other private entity are no longer considered reserved, and public conservation lands that may occasionally harvest timber but do not include timber production in their mandate (e.g., National Wildlife Refuges) are now considered reserved.

Analysis of Change Between Inventories for Nonnational Forest Lands

To analyze change in forest statistics, the 1988-89 data were recompiled to account for technical changes in the 2000 inventory. The summaries presented in tables 25 through 27 have been developed from remeasured plots outside of national forests and include recompiled data from the 1988-89 inventory. Caution should be used in comparing present statistics and those published by MacLean and others (1991a, 1991b, 1991c) because of procedural changes, stratification differences, and plot changes. Comparing estimates from previous to current ones is comparing independent estimates of the resource at different points in time; although both are valid estimates, they will not be the same.

Reliability of Inventory Data

Inventories conducted by FIA are designed to provide sampling errors consistent with national standards set by the Forest Service. The target error for area of timberland is ≤3 percent per million acres and ≤10 percent per billion cubic feet of growing-stock volume.

Estimates for inventory categories that occupy large areas are more precise than estimates for small areas. Estimates for an entire survey unit—such as the Puget Sound, Olympic Peninsula, or southwest units in western Washington—are more reliable than estimates for individual counties. As estimates are made for smaller portions of the sample population, the confidence intervals increase in relation to the size of the estimate. Confidence intervals are quantitative expressions of the variability inherent in the estimation procedures for area and volume. The tabulation below indicates, for instance, a 68-percent (one standard error) chance that the true timberland area for non-NFS owners in the Puget Sound unit (2,264,000 acres) is within the range of 2,194,000 to 2,334,000 acres.

Standard errors for non-NFS timberland area, by owner class and survey unit, are displayed below:

Survey unit	Other public	Forest industry	Other private	All owners
		Thousand acres (± standard error)		
Puget Sound	639±43	862±51	763±66	2,264±70
Olympic Peninsula	606±25	1,206±45	610±47	2,423±56
Southwest	414±31	1,418±56	524±55	2,356±63

Standard errors for growing-stock volume on non-NFS timberland, by owner class and survey unit, are displayed below:

Survey unit	Other public	Forest industry	Other private	All owners
		Million cubic feet (± standard error)		
Puget Sound	4,046±390	2,728±368	3,106±391	9,880±617
Olympic Peninsula	3,724±353	3,524±467	1,984±327	9,232±647
Southwest	2,585±279	4,379±405	1,578±290	8,542±551

Confidence intervals vary with the size of the estimate and the amount of variance associated with the estimate. The tables report the sampling error for the row and column totals in terms of percentages, calculated by dividing the standard error by the estimated value. The following is a set of approximate confidence intervals calculated by using a regression analysis between actual standard error and the estimate involved. These regressions have r-square values greater than 0.85, indicating that 85 percent of the variance in the relation can be explained by the equation. The actual error estimates for the cells in each table can be obtained from the Portland FIA unit, either in writing or from their Web site (http://www.fs.fed.us/pnw/fia/).

Timberland area			Growing-stock volume		
Estimate	**Interval**	**Percent**	**Estimate**	**Interval**	**Percent**
Thousand acres			*Million cubic feet*		
3,000	±84	3	6,000	±507	8
2,000	±79	4	4,000	±411	10
1,500	±75	5	2,000	±288	14
1,000	±70	7	1,000	±201	20
800	±67	8	800	±179	22
600	±63	10	600	±154	26
400	±57	14	400	±125	31
200	±48	24	200	±88	44
100	±38	38	100	±61	61
50	±29	58	50	±43	86
25	±20	79	25	±30	120

Terminology

available other forest land—Forest land incapable of growing 20 cubic feet per acre per year (mean annual increment at culmination in fully stocked, natural stands) of industrial wood because of adverse conditions such as sterile soils, dry climate, poor drainage, subalpine sites, steepness, or rockiness.

class of timber—A classification of trees as growing stock, cull, and salvable dead. Growing-stock trees are divided into poletimber and sawtimber trees.

condition class—A mapped area on a plot with a distinct land class (for example, timberland, oak woodland, nonforest) or a distinct vegetative condition (for example, forest type, stand size). The first condition identified at plot center is the only condition that is remeasured and used for the analysis of periodic change.

county and municipal lands—Lands owned by county and other local public agencies.

cull trees—Live trees of noncommercial species and live trees of commercial species that are more than 75-percent defective. Noncommercial species are apple, black locust, holly, junipers, Pacific yew, Pacific dogwood, white alder, and willow. Cull trees are not growing-stock trees.

cull trees, rotten—Cull trees with defect caused primarily by rot.

cull trees, sound—Trees of noncommercial species or cull trees of commercial species with defect caused primarily by poor form and roughness.

diameter class—A classification of trees based on diameter outside the bark measured at breast height, 4½ feet above the ground. The common abbreviation for diameter at breast height is d.b.h. Trees are grouped into 2-inch classes up to 21 inches d.b.h., after which the class intervals become broader.

even-aged stands—Stands where 70 percent or more of the tree stocking falls within three adjacent 10-year age classes.

forest industry lands—Lands owned by companies that grow timber for industrial use. Includes companies both with and without wood processing plants.

forest land—Land at least 10 percent stocked with live trees, or land that had this minimum tree stocking in the past and is not currently developed for nonforest use. The minimum area recognized is 1 acre; it must be 115 feet wide.

forest types—Stands are assigned a pure softwood, pure hardwood, or softwood-hardwood forest type. Stands with 70 percent or more of the stocking in live softwood trees are classified as pure softwood types and are assigned the type name of the softwood species with the greatest stocking among all softwoods on the condition class plot. Stands with 70 percent or more of the stocking in live hardwood trees are classified as pure hardwood types and are assigned the type name of the hardwood species with the greatest stocking among all hardwoods on the condition

class plot. Mixed species types are assigned if softwood stocking is 31 to 69 percent total stocking on the plot; stands with 50 to 69 percent of the stocking in live softwood trees are classed as softwood-hardwood types and receive a type name that includes the softwood species with the greatest softwood stocking, followed by the hardwood species with the greatest hardwood stocking; stands with 51 to 69 percent of the stocking in live hardwood trees are classed as hardwood-softwood types and receive a type name that includes the hardwood species with the greatest hardwood stocking, followed by the softwood species with the greatest softwood stocking. For ease in reporting, only the primary forest type will be identified in the summary tables.

growing-stock trees—All live trees growing on timberland except cull trees (see "cull trees").

growing-stock volume—Net volume in cubic feet of live sawtimber and poletimber growing-stock trees from the top of a stump 12 inches tall to a minimum 4-inch top (of central stem) inside the bark. Net volume is gross volume less deductions for rot and missing bole sections.

growth, current net annual, growing stock—The increase in growing-stock volume on timberland during the last year of the period between the previous and current inventories. Components of current net annual growth for growing-stock volume include (a) the increment in net volume of poletimber and sawtimber growing-stock trees alive at the beginning of the year and surviving to year end; plus (b) ingrowth, the net volume of growing-stock trees reaching poletimber or sawtimber size during the year; minus (c) mortality, the net volume of poletimber and sawtimber growing-stock trees that died during the year.

growth, current net annual, sawtimber—The increase in sawtimber volume on timberland during the last year of the period between the previous and current inventories. Components of current net annual growth for sawtimber volume include (a) the increment in net volume of sawtimber trees alive at the beginning of the year and surviving to year end; plus (b) ingrowth, the net volume of trees reaching sawtimber size during the year; minus (c) mortality, the net volume of sawtimber trees that died during the year.

growth, periodic gross, growing stock—The increase in growing-stock volume between the previous and current inventories that is attributable to increasing tree size. Periodic gross growth includes (a) the increment in net volume of poletimber and sawtimber growing-stock trees alive at both the previous and current inventories; (b) the increment in net volume of poletimber and sawtimber growing-stock trees alive at the previous inventory and harvested between inventories; and (c) ingrowth, the net volume of growing-stock trees reaching poletimber or sawtimber size between inventories.

growth, periodic gross, sawtimber—The increase in sawtimber volume between the previous and current inventories that is attributable to increasing tree size. Periodic gross growth includes (a) the increment in net volume of sawtimber trees alive at both the previous and current inventories; (b) the increment in net volume of sawtimber trees alive at the previous inventory and harvested between inventories; and (c) ingrowth, the net volume of trees reaching sawtimber size between inventories.

hardwoods—Nonconiferous trees, usually broad-leaved. See "Names of Trees" for a list of hardwood species in this report.

industrial wood—All commercial roundwood products except fuelwood. Roundwood includes logs or bolts that are in straight sections at least 8 feet long for hardwoods and 12 feet long for softwoods.

land area—Area reported as land by the Bureau of the Census (U.S. Department of Commerce 2000). Total land area includes dry land and land temporarily or partially covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, and canals less than 200 feet wide; and lakes, reservoirs, and ponds less than 4.5 acres in area.

land class—A classification of land by major use. The minimum area for classification is 1 acre.

mean annual increment (MAI) at culmination—A measure of the productivity of forest land expressed as the average increase in cubic-foot volume per acre per year. For a given species and site index, the mean is based on the age at which the MAI culminates for fully stocked natural stands. The MAI is calculated from equations and is based on the site index of the plot.

mortality, average annual, sawtimber—The annual net volume of sawtimber trees that died between the previous and current inventories.

national forest lands—Federal lands that have been designated by Executive order or statute as national forest or purchase units and other lands under the administration of the U.S. Department of Agriculture, Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Native American lands—Tribal and allotted lands held in trust by the federal government. Native American lands are grouped with farmer and miscellaneous private lands as other private lands.

net volume—Gross volume less deductions for sound and rotten defects. Growing-stock net volume is gross cubic-foot volume less deductions for rot and missing bole sections on poletimber and sawtimber growing-stock trees. Sawtimber net volume is gross board-foot volume less deductions for rot, sweep, crook, missing bole sections, and other defects that affect the use of sawtimber trees for lumber.

noncommercial species—A tree species not suitable for industrial wood products: apple, black locust, holly, junipers, Pacific yew, Pacific dogwood, white alder, and willow. Noncommercial species will not be included in growing-stock volume tables; however, if one or more of these species dominate on a plot, the forest type might be classified as a noncommercial species.

nonforest land—Land that has never supported forests or formerly was forested and currently is developed for nonforest uses. Included are lands used for agricultural crops, Christmas tree farms, cottonwood plantations, improved pasture, residential areas, city parks, constructed roads, operating railroads and their right-of-way clearings, powerline and pipeline clearings, streams more than 30 feet wide, and 1- to 40-acre areas of water classified by the U.S. Department of Commerce, Bureau of the Census, as land. If intermingled in forest areas, unimproved roads and other nonforest strips must be more than 120 feet wide, and clearings or other areas must be 1 acre or larger to qualify as nonforest land.

nonstocked areas—Timberland less than 10 percent stocked with live trees. Recent clearcuts scheduled for planting are classified as nonstocked area.

other private lands—Private lands not owned by forest industry. Native American lands, farmer-owned lands, and miscellaneous private lands are included.

other public lands—Lands administered by public agencies other than the U.S. Department of Agriculture, Forest Service. Other public lands do not include Native American lands, which are included with other private lands.

poletimber stands—Stands with a quadratic mean diameter (mean diameter weighted by basal area) from 5.0 to 9.0 inches at breast height in a softwood stand and from 5.0 to 11.0 inches at breast height in a hardwood stand.

poletimber trees—Live growing-stock trees of commercial species that are 5.0 inches in d.b.h. or larger but smaller than sawtimber trees.

reserved other forest—Forest land incapable of growing 20 cubic feet per acre per year (mean annual increment at culmination in fully stocked, natural stands) of industrial wood that is withdrawn by laws prohibiting the management of land for the production of wood products.

reserved timberland—Forest land capable of growing 20 cubic feet or more per acre per year (mean annual increment at culmination in fully stocked, natural stands) of industrial wood that is withdrawn by laws prohibiting the management of land for the production of wood products.

roundwood—Logs, bolts, or other round sections cut from trees.

sapling and seedling stands—Stands with a quadratic mean diameter (mean diameter weighted by basal area) less than 5.0 inches at breast height.

sapling and seedling trees—Live trees of commercial species that are less than 5.0 inches d.b.h. and have no diseases, defects, or deformities likely to prevent their becoming poletimber trees.

saw-log portion—The bole of sawtimber trees between the stump and the saw-log top. Saw-log top is 7.0 inches in diameter outside bark on softwoods and 9.0 inches in diameter outside bark on hardwoods.

sawtimber stands—Stands with a quadratic mean diameter (mean diameter weighted by basal area) larger than 9.0 inches at breast height in a softwood stand and larger than 11.0 inches at breast height in a hardwood stand. Small sawtimber stands are sawtimber stands with a mean diameter (weighted by basal area) less than 21.0 inches at breast height. Large sawtimber stands are sawtimber stands that have a mean diameter 21.0 inches or larger at breast height.

sawtimber trees—Live softwood trees of commercial species at least 9.0 inches d.b.h. and live hardwood trees of commercial species at least 11.0 inches d.b.h. At least 25 percent of the board-foot volume in a sawtimber tree must be free from defect. Softwood trees must contain at least one 12-foot saw log with a top diameter of not less than 7 inches outside bark; hardwood trees must contain at least one 8-foot saw log with a top diameter of not less than 9 inches outside bark.

sawtimber volume—Net volume of sawtimber trees measured in board feet. Softwood volume is estimated from the top of a stump 12 inches tall up to a minimum 6-inch top diameter, inside bark, and hardwood volume is estimated from the top of a stump 12 inches tall up to a minimum 8-inch top diameter, inside bark. Net sawtimber volume equals gross volume less deduction for rot, sweep, crook, and other defects that affect use for lumber.

Scribner rule—The common board-foot log rule used locally in western Washington to determine sawtimber volume. Scribner volume is estimated in terms of 32-foot logs for softwoods and 16-foot logs for hardwoods. See “sawtimber volume” for utilization limits.

site class—A classification of the potential productivity of forest land expressed as mean annual increment (MAI) at culmination in fully stocked natural stands. Six classes in this report are based on a range of MAI values that were calculated on every plot.

site index—A measure of the productivity of forest land expressed as the average height of dominant and codominant trees at a specified age.

softwoods—Coniferous trees, usually evergreen, with needles or scalelike leaves. See “Names of Trees” for a list of softwood species in this report.

stand age—The 10-year age class that best characterizes the stand. See “even-aged stand” and “uneven-aged stand” for more details.

stand-size class—A classification of stands based on tree size. Stand-size classes are sawtimber, poletimber, and sapling-seedling stands.

state lands—Lands owned by states or administered by state agencies.

timber harvest—Volume of roundwood removed from forest land for products. Timber harvest statistics reported in table 28 were collected by the Washington Department of Natural Resources.

timber volume—Includes the net volume in cubic feet of poletimber and sawtimber trees and salvable dead sawtimber trees, and the net volume in cubic feet of cull trees of commercial species. In table 17, the volume of cull trees includes the gross volume of noncommercial species. Volume is measured from the top of a stump 12 inches tall to a minimum 4-inch top diameter, inside bark.

timberland—Forest land capable of growing 20 cubic feet or more per acre per year (mean annual increment at culmination in fully stocked, natural stands) of industrial wood and not in a reserved status through withdrawal of the area by laws prohibiting the management of land for the production of wood products.

uneven-aged stands—Stands where less than 70 percent of the tree stocking falls in three adjacent 10-year age classes.

upper stem portion—The bole of sawtimber trees above the saw-log top—7.0 inches diameter outside bark for softwoods and 9.0 inches diameter outside bark for hardwoods—to a minimum top diameter of 4.0 inches inside bark, or to the point where the central stem divides into limbs.

Names of Trees

Common name	Scientific name[1]
Softwoods:	
Alaska-cedar	*Chamaecyparis nootkatensis* (D. Don) Spach
Douglas-fir	*Psuedotsuga menziesii* (Mirb.) Franco
Engelmann spruce	*Picea engelmannii* Parry ex Engelm.
Grand fir	*Abies grandis* (Dougl. ex D. Don) Lindl.
Juniper	*Juniperus* spp.
Lodgepole pine	*Pinus contorta* Dougl. ex Loud.
Mountain hemlock	*Tsuga mertensiana* (Bong.) Carr.
Noble fir	*Abies procera* Rehd.
Pacific silver fir	*Abies amabilis* (Dougl. ex Loud.) Dougl. ex Forbes
Pacific yew	*Taxus brevifolia* Nutt.
Ponderosa pine	*Pinus ponderosa* Dougl. ex Laws.
Sitka spruce	*Picea sitchensis* (Bong.) Carr.
Western hemlock	*Tsuga heterophylla* (Raf.) Sarg.
Western redcedar	*Thuja plicata* Donn ex D. Don
Western white pine	*Pinus monticola* Dougl. ex D. Don
Hardwoods:	
Apple	*Malus* spp.
Bigleaf maple	*Acer macrophyllum* Pursh
Black cottonwood	*Populus trichocarpa* Torr. & Gray
Black locust	*Robinia pseudoacacia* L.
Cherry	*Prunus* spp.
Holly	*Ilex* spp.
Oregon ash	*Fraxinus latifolia* Benth.
Oregon white oak	*Quercus garryana* Dougl. ex Hook.
Pacific dogwood	*Cornus nuttallii* Audubon
Pacific madrone	*Arbutus menzeisii* Pursh
Red alder	*Alnus rubra* Bong.
Western paper birch	*Betula papyrifera* Marsh var. *commutata* (Regel) Fern.
White alder	*Alnus rhombifolia* Nutt.
Willow	*Salix* spp.

[1] Nomenclature per Little (1979).

Acknowledgments

Many people were involved in the collection of data and the design of the inventory. Thanks go to the data collection staff for field work and photointerpretation: Dale Baer, Jim Belsher-Howe, Brian Daum, Pete Delzotto, Matthew Ferrante, Colleen Grenz, Jake Hawkins, Floyd Kednay, David Laughman, J.D. Lloyd, Chris Lowen, David Mausel, Sharon Mazzucco, Susanna Melson, Delphine Miguet, John P. O'Connor, Melissa Patterson, Shannon D. Phelps, Scott Rash, Sarah Reinstein, Cort Skolout, and Louis White. Thanks to George McFadden, Greg Johnson, and Ralph Alig who provided valuable reviews. A special thanks to the many landowners who allowed field crews on their lands to visit plots and measure trees.

Metric Equivalents

1 acre = 0.405 hectare
1 acre = 4046.86 square meters
1,000 acres = 404.7 hectares
1,000 cubic feet = 28.3 cubic meters
1 cubic foot per acre = 0.07 cubic meter per hectare
1 foot = 0.3048 meter
1 inch = 2.54 centimeters
1 mile = 1.609 kilometers

Literature Cited

Andrews, H.J.; Cowlin, R.W. 1940. Forest resources of the Douglas-fir region. Misc. Publ. 389. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 169 p.

Bassett, P.M.; Oswald, D.D. 1981a. Timber resource statistics for southwest Washington. Resour. Bull. PNW-91. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 24 p.

Bassett, P.M.; Oswald, D.D. 1981b. Timber resource statistics for the Olympic Peninsula, Washington. Resour. Bull. PNW-91. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 31 p.

Bassett, P.M.; Oswald, D.D. 1982. Timber resource statistics for the Puget Sound area, Washington. Resour. Bull. PNW-104. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 31 p.

Bolsinger, C.L. 1969. The timber resources of the Olympic Peninsula, Washington. Resour. Bull. PNW-31. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 60 p.

Bolsinger, C.L. 1971. The timber resources of the Puget Sound area, Washington. Resour. Bull. PNW-36. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 72 p.

Cochran, W.G. 1977. Sampling techniques, 3rd ed. New York: John Wiley and Sons. 413 p.

Gillespie, A.J.R. 1999. Rationale for a national annual forest inventory program. Journal of Forestry. 97: 16-20.

Hazard, J.W. 1965. The timber resources of the Puget Sound area, Washington. Resour. Bull. PNW-15. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 32 p.

Little, E.L., Jr. 1979. Checklist of United States trees (native and naturalized). Agric. Handb. 541. Washington, DC: U.S. Department of Agriculture, Forest Service. 375 p.

MacLean, C.D.; Bassett, P.M.; Yeary, G. 1992. Timber resource statistics for western Washington. Resour. Bull. PNW-RB-191. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 135 p.

MacLean, C.D.; Ohmann, J.L.; Bassett, P.M. 1991a. Preliminary timber resource statistics for southwest Washington. Resour. Bull. PNW-RB-177. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 46 p.

MacLean, C.D.; Ohmann, J.L.; Bassett, P.M. 1991b. Preliminary timber resource statistics for the Olympic Peninsula, Washington. Resour. Bull. PNW-RB-178. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 45 p.

MacLean, C.D.; Ohmann, J.L.; Bassett, P.M. 1991c. Preliminary timber resource statistics for the Puget Sound area, Washington. Resour. Bull. PNW-RB-179. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 46 p.

U.S. Department of Agriculture, Forest Service. 2000. Forest Inventory and Analysis national core field guide, volume 1: field data collection procedures for phase 2 plots, version 1.4. 208 p. Internal report. On file with: U.S. Department of Agriculture, Forest Service, Forest Inventory and Analysis, 201 14th St., Washington, DC 20250.

U.S. Department of Commerce, Bureau of the Census. 2000. 2000 US Gazetteer. Washington, DC. http://www.census.gov/geo/www/gazetteer/places2k.html. (15 July 2001).

Table 1—Estimated nonnational forest land area by county, land class, and reserve status, western Washington, January 1, 2001

	Forest land						
County	**Timberland**	**Reserved timberland**	**Available other forest**	**Reserved other forest**	**Total forest**	**Non-forest**	**Total land**
			Thousand acres				
Puget Sound:							
Island	54	3	19	0	76	58	133
King	560	25	34	0	620	384	1,004
Kitsap	192	2	0	0	194	59	253
Pierce	405	93	0	42	540	401	941
San Juan	41	7	0	0	49	63	112
Skagit	381	55	24	23	483	252	735
Snohomish	360	27	18	3	408	290	698
Whatcom	271	161	0	93	525	374	899
Total	2,264	374	95	162	2,895	1,881	4,776
Olympic Peninsula:							
Clallam	471	269	0	28	769	149	918
Grays Harbor	929	16	9	1	957	131	1,088
Jefferson	382	391	0	45	818	171	990
Mason	349	32	0	3	384	104	488
Thurston	291	4	0	0	294	171	465
Total	2,423	712	9	78	3,222	726	3,948
Southwest:							
Clark	178	2	12	2	194	207	401
Cowlitz	583	1	0	0	584	112	696
Lewis	794	20	0	5	820	276	1,095
Pacific	505	15	26	0	546	77	624
Skamania	168	6	0	1	176	28	204
Wahkiakum	128	1	13	1	142	27	169
Total	2,356	46	51	8	2,462	727	3,189
Total	7,043	1,131	156	249	8,579	3,334	11,912

Note: totals may be off because of rounding; data subject to sampling error.

0 = fewer than 500 acres found.

Table 2a—Estimated area of nonnational forest reserved timberland and other forest land by forest type, western Washington, January 1, 2001

Forest type	Reserved timberland	Other forest		Total
		Available	Reserved	
		Thousand acres		
Softwood types:				
Douglas-fir	326	30	1	357
Fir/spruce/mountain hemlock group	48	0	0	48
Lodgepole pine	3	19	0	23
Mountain hemlock	256	0	244	500
Pacific silver fir	149	12	0	161
Sitka spruce	6	29	0	35
Subalpine fir	0	21	0	21
Western hemlock	305	23	0	328
Western redcedar	6	0	0	6
Western white pine	2	0	0	2
Total softwood types	1,101	134	246	1,480
Hardwood types:				
Cottonwood/willow	2	0	3	5
Other western hardwoods group	9	0	0	9
Red alder	20	22	0	41
Western oak group	0	0	0	0
Total hardwood types	31	22	3	55
All types	1,131	156	249	1,535

Note: Totals may be off because of rounding; data subject to sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 2b—Estimated area of nonnational forest reserved timberland and other forest land by forest type, Puget Sound, January 1, 2001

Forest type	Reserved timberland	Other forest		Total
		Available	Reserved	
		Thousand acres		
Softwood types:				
Douglas-fir	137	30	0	167
Fir/spruce/mountain hemlock group	41	0	0	41
Lodgepole pine	2	19	0	21
Mountain hemlock	69	0	161	231
Pacific silver fir	45	12	0	57
Sitka spruce	0	0	0	0
Subalpine fir	0	21	0	21
Western hemlock	59	12	0	71
Western redcedar	3	0	0	3
Total softwood types	356	95	162	613
Hardwood types:				
Other western hardwoods group	8	0	0	8
Red alder	9	0	0	9
Total hardwood types	18	0	0	18
All types	374	95	162	631

Note: Totals may be off because of rounding; data subject to sampling error.

0 = fewer than 500 acres found.

Table 2c—Estimated area of nonnational forest reserved timberland and other forest land by forest type, Olympic Penninsula, January 1, 2001

Forest type	Reserved timberland	Other forest		Total
		Available	Reserved	
		Thousand acres		
Softwood types:				
Douglas-fir	170	0	0	170
Fir/spruce/mountain hemlock group	2	0	0	2
Lodgepole pine	1	0	0	1
Mountain hemlock	183	0	78	261
Pacific silver fir	105	0	0	105
Sitka spruce	1	0	0	1
Western hemlock	239	0	0	239
Western redcedar	3	0	0	3
Total softwood types	704	0	78	782
Hardwood types:				
Cottonwood/willow	1	0	0	1
Other western hardwoods group	0	0	0	0
Red alder	7	9	0	16
Western oak group	0	0	0	0
Total hardwood types	8	9	0	17
All types	712	9	78	799

Note: Totals may be off because of rounding; data subject to sampling error.

0 = fewer than 500 acres found.

Table 2d—Estimated area of nonnational forest reserved timberland and other forest land by forest type, southwest Washington, January 1, 2001

Forest type	Reserved timberland	Other forest		Total
		Available	Reserved	
		Thousand acres		
Softwood types:				
Douglas-fir	19	0	0	19
Fir/spruce/mountain hemlock group	5	0	0	5
Lodgepole pine	0	0	0	0
Mountain hemlock	4	0	5	9
Sitka spruce	4	29	0	33
Western hemlock	7	10	0	18
Western white pine	2	0	0	2
Total softwood types	41	39	5	85
Hardwood types:				
Cottonwood/willow	1	0	3	4
Other western hardwoods group	0	0	0	0
Red alder	4	12	0	16
Total hardwood types	5	12	3	20
All types	46	51	8	106

Note: Totals may be off because of rounding; data subject to sampling error.

0 = fewer than 500 acres found.

Table 3—Estimated area of nonnational forest timberland by county and owner class, western Washington, January 1, 2001

	Public				Private				All owners	
County	Miscellaneous federal	State	County	Total public	Forest industry	Native American	Miscellaneous private	Total private	Total	SE
	Thousand acres									%
Puget Sound:										
Island	0	0	0	0	0	0	54	54	54	34
King	0	37	140	177	249	0	134	383	560	7
Kitsap	0	0	15	15	75	0	102	177	192	8
Pierce	30	40	0	69	223	0	112	335	405	8
San Juan	0	0	0	0	0	0	41	41	41	41
Skagit	0	130	12	142	122	16	101	239	381	6
Snohomish	0	121	0	121	109	14	117	239	360	9
Whatcom	0	115	0	115	84	11	62	156	271	8
Total	30	442	167	639	862	41	722	1,625	2,264	3
Olympic Peninsula:										
Clallam	0	146	0	146	285	10	30	325	471	6
Grays Harbor	0	65	61	126	481	200	123	804	929	3
Jefferson	0	188	0	188	130	11	54	195	382	5
Mason	0	65	0	65	215	0	69	284	349	10
Thurston	16	49	16	82	94	0	114	208	291	8
Total	16	513	77	606	1,206	221	390	1,817	2,423	2
Southwest:										
Clark	0	67	0	67	37	0	74	111	178	12
Cowlitz	0	90	0	90	396	0	97	494	583	4
Lewis	0	94	28	122	463	0	209	672	794	5
Pacific	0	64	0	64	366	0	76	441	505	6
Skamania	0	50	10	59	66	0	43	109	168	12
Wahkiakum	0	13	0	13	90	0	26	115	128	17
Total	0	377	37	414	1,418	0	524	1,942	2,356	3
Total	46	1,332	282	1,660	3,486	261	1,636	5,383	7,043	
SE for total (%)	48	5	15		2	16	6		1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error..

0 = fewer than 500 acres found.

Table 4a—Estimated area of nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Thousand acres				*%*
Softwood types:					
Douglas-fir	812	1,858	767	3,437	4
Lodgepole pine	0	16	10	27	73
Mountain hemlock	0	8	0	8	100
Noble fir	0	41	0	41	55
Pacific silver fir	85	92	8	185	24
Sitka spruce	0	45	14	59	46
Western hemlock	369	703	151	1,223	9
Western redcedar	61	75	159	295	20
Western white pine	0	0	10	10	100
Total softwood types	1,326	2,839	1,121	5,286	
Hardwood types:					
Bigleaf maple	62	76	151	288	21
Black cottonwood	9	16	25	50	51
Cherry	0	15	11	26	72
Oregon ash	12	11	22	46	50
Oregon white oak	0	0	11	11	100
Red alder	238	390	473	1,101	10
Western paper birch	0	0	11	11	100
Willow	0	14	23	36	58
Other hardwoods	0	10	13	23	71
Total hardwood types	321	532	740	1,593	
Nonstocked	12	115	37	164	27
All types	1,660	3,486	1,898	7,043	
SE for total (%)	3	2	5	1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 4b—Estimated area of nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – –	– – *Thousand acres* – – – – – – – –			*%*
Softwood types:					
Douglas-fir	290	403	234	927	9
Mountain hemlock	0	8	0	8	100
Pacific silver fir	59	70	8	138	27
Sitka spruce	0	10	0	10	100
Western hemlock	108	189	25	321	17
Western redcedar	49	18	76	142	30
Total softwood types	506	698	342	1,546	
Hardwood types:					
Bigleaf maple	40	27	96	163	28
Black cottonwood	0	0	12	12	100
Cherry	0	15	0	15	100
Oregon ash	12	0	12	25	71
Red alder	81	103	250	434	16
Western paper birch	0	0	11	11	100
Willow	0	0	12	12	100
Total hardwood types	133	145	394	672	
Nonstocked	0	19	27	46	52
All types	639	862	763	2,264	
SE for total (%)	7	6	9	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 4c—Estimated area of nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Thousand acres				%
Softwood types:					
Douglas-fir	291	609	250	1,150	8
Lodgepole pine	0	16	10	27	73
Pacific silver fir	13	0	0	13	100
Sitka spruce	0	15	14	29	71
Western hemlock	185	285	115	585	12
Western redcedar	13	48	84	144	28
Western white pine	0	0	10	10	100
Total softwood types	501	973	484	1,958	
Hardwood types:					
Bigleaf maple	13	35	30	78	40
Black cottonwood	0	16	0	16	100
Oregon ash	0	11	0	11	100
Oregon white oak	0	0	11	11	100
Red alder	80	117	74	271	21
Willow	0	0	10	10	100
Total hardwood types	93	179	126	398	
Nonstocked	12	54	0	66	43
All types	606	1,206	610	2,423	
SE for total (%)	4	4	8	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 4d—Estimated area of nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Thousand acres				*%*
Softwood types:					
Douglas-fir	231	846	283	1,360	6
Noble fir	0	41	0	41	55
Pacific silver fir	13	22	0	35	58
Sitka spruce	0	20	0	20	71
Western hemlock	76	230	11	316	17
Western redcedar	0	9	0	9	100
Total softwood types	319	1,168	294	1,781	
Hardwood types:					
Bigleaf maple	9	14	24	47	51
Black cottonwood	9	0	12	21	72
Cherry	0	0	11	11	100
Oregon ash	0	0	10	10	100
Red alder	77	170	149	396	16
Willow	0	14	0	14	100
Other hardwoods	0	10	13	23	71
Total hardwood types	95	208	220	523	
Nonstocked	0	42	10	52	50
All types	414	1,418	524	2,356	
SE for total (%)	7	4	10	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 5a—Estimated area of nonnational forest timberland by stand size class and owner class, western Washington, January 1, 2001

Stand size class	Other public	Forest industry	Other private	All owners Total	All owners SE
	– – – – – – – – Thousand acres – – – – – – – –				*%*
Seedling-sapling	175	1,124	530	1,829	7
Poletimber	215	727	252	1,194	9
Small sawtimber	1,085	1,410	912	3,407	4
Large sawtimber	173	110	165	449	15
Nonstocked	12	115	37	164	27
All classes	1,660	3,486	1,898	7,043	
SE for total (%)	3	2	5	1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 5b—Estimated area of nonnational forest timberland by stand size class and owner class, Puget Sound, January 1, 2001

Stand size class	Other public	Forest industry	Other private	All owners Total	All owners SE
	– – – – – – – – Thousand acres – – – – – – – –				*%*
Seedling-sapling	80	287	119	487	14
Poletimber	62	166	90	318	19
Small sawtimber	457	384	470	1,312	7
Large sawtimber	40	6	57	102	29
Nonstocked	0	19	27	46	52
All classes	639	862	763	2,264	
SE for total (%)	7	6	9	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 5c—Estimated area of nonnational forest timberland by stand size class and owner class, Olympic Peninsula, January 1, 2001

Stand size class	Other public	Forest industry	Other private	All owners Total	SE
	– – – – – – – – Thousand acres – – – – – – – –				*%*
Seedling-sapling	57	398	177	632	12
Poletimber	109	284	98	491	14
Small sawtimber	356	436	289	1,081	9
Large sawtimber	73	34	46	153	27
Nonstocked	12	54	0	66	43
All classes	606	1,206	610	2,423	
SE for total (%)	4	4	8	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 5d—Estimated area of nonnational forest timberland by stand size class and owner class, southwest Washington, January 1, 2001

Stand size class	Other public	Forest industry	Other private	All owners Total	SE
	– – – – – – – – Thousand acres – – – – – – – –				*%*
Seedling-sapling	38	439	234	710	11
Poletimber	44	277	65	386	17
Small sawtimber	272	589	153	1,014	8
Large sawtimber	60	71	62	194	23
Nonstocked	0	42	10	52	50
All classes	414	1,418	524	2,356	
SE for total (%)	7	4	10	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 6a—Estimated area of nonnational forest timberland by site class and owner class, western Washington, January 1, 2001

	Site class (cubic feet)						All classes	
Owner	**>225**	**165-224**	**120-164**	**85-119**	**50-84**	**20-49**	**Total**	**SE**
	Thousand acres							*%*
Other public	208	556	642	179	38	37	1,660	3
Forest industry	734	1,366	934	227	172	53	3,486	2
Other private	104	487	720	410	141	35	1,898	5
All owners	1,046	2,410	2,296	816	351	125	7,043	
SE for total (%)	10	6	6	12	18	32	1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = fewer than 500 acres found.

Site class is the mean annual cubic-foot growth per acre at culmination in fully stocked natural stands.

Table 6b—Estimated area of nonnational forest timberland by site class and owner class, Puget Sound, January 1, 2001

	Site class (cubic feet)						All classes	
Owner	**>225**	**165-224**	**120-164**	**85-119**	**50-84**	**20-49**	**Total**	**SE**
	Thousand acres							*%*
Other public	56	139	325	94	12	12	639	7
Forest industry	111	328	216	105	66	37	862	6
Other private	0	164	301	226	38	35	763	9
All owners	167	631	842	424	116	84	2,264	
SE for total (%)	29	13	10	16	32	39	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Site class is the mean annual cubic-foot growth per acre at culmination in fully stocked natural stands.

Table 6c—Estimated area of nonnational forest timberland by site class and owner class, Olympic Peninsula, January 1, 2001

	Site class (cubic feet)						All classes	
Owner	**>225**	**165-224**	**120-164**	**85-119**	**50-84**	**20-49**	**Total**	**SE**
	Thousand acres							*%*
Other public	113	205	176	74	13	24	606	4
Forest industry	335	464	342	64	0	0	1,206	4
Other private	80	111	221	105	93	0	610	8
All owners	529	781	740	243	106	24	2,423	
SE for total (%)	13	10	11	22	32	68	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = fewer than 500 acres found.

Site class is the mean annual cubic-foot growth per acre at culmination in fully stocked natural stands.

Table 6d—Estimated area of nonnational forest timberland by site class and owner class, southwest Washington, January 1, 2001

	Site class (cubic feet)						All classes	
Owner	**>225**	**165-224**	**120-164**	**85-119**	**50-84**	**20-49**	**Total**	**SE**
	Thousand acres							*%*
Other public	38	212	141	11	13	0	414	7
Forest industry	288	574	376	58	106	17	1,418	4
Other private	24	213	198	80	10	0	524	10
All owners	350	998	714	149	129	17	2,356	
SE for total (%)	16	9	11	27	31	100	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = fewer than 500 acres found.

Site class is the mean annual cubic-foot growth per acre at culmination in fully stocked natural stands.

Table 7a—Estimated area of nonnational forest timberland by forest type and stand size class, western Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Thousand acres					%
Softwood types:						
Douglas-fir	974	609	1,628	225	3,437	4
Lodgepole pine	16	0	10	0	27	73
Mountain hemlock	8	0	0	0	8	100
Noble fir	41	0	0	0	41	55
Pacific silver fir	104	37	32	13	185	24
Sitka spruce	10	0	26	24	59	46
Western hemlock	228	119	796	79	1,223	9
Western redcedar	39	12	163	82	295	20
Western white pine	10	0	0	0	10	100
Total softwood types	1,431	778	2,655	422	5,286	
Hardwood types:						
Bigleaf maple	39	92	148	9	288	21
Black cottonwood	25	0	16	9	50	51
Cherry	11	15	0	0	26	72
Oregon ash	0	0	46	0	46	50
Oregon white oak	0	11	0	0	11	100
Red alder	286	276	530	9	1,101	10
Western paper birch	0	0	11	0	11	100
Willow	14	23	0	0	36	58
Other hardwoods	23	0	0	0	23	71
Total hardwood types	398	416	751	28	1,593	
Nonstocked					164	27
Total	1,829	1,194	3,407	449	7,043	
SE for total (%)	7	9	4	15	1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 7b—Estimated area of nonnational forest timberland by forest type and stand size class, Puget Sound, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes Total	SE
			Thousand acres			*%*
Softwoods types:						
Douglas-fir	222	108	549	48	927	9
Mountain hemlock	8	0	0	0	8	100
Pacific silver fir	79	37	21	0	138	27
Sitka spruce	10	0	0	0	10	100
Western hemlock	61	10	251	0	321	17
Western redcedar	0	0	88	54	142	30
Total softwood types	381	155	908	102	1,546	
Hardwood types:						
Bigleaf maple	27	18	118	0	163	28
Black cottonwood	12	0	0	0	12	100
Cherry	0	15	0	0	15	100
Oregon ash	0	0	25	0	25	71
Red alder	66	117	250	0	434	16
Western paper birch	0	0	11	0	11	100
Willow	0	12	0	0	12	100
Total hardwood types	106	162	403	0	672	
Nonstocked					46	52
Total	487	318	1,312	102	2,264	
SE for total (%)	14	19	7	29	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 7c—Estimated area of nonnational forest timberland by forest type and stand size class, Olympic Peninsula, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Thousand acres					*%*
Softwood types:						
Douglas-fir	355	255	484	56	1,150	8
Lodgepole pine	16	0	10	0	27	73
Pacific silver fir	0	0	0	13	13	100
Sitka spruce	0	0	15	14	29	71
Western hemlock	157	47	328	53	585	12
Western redcedar	39	12	75	18	144	28
Western white pine	10	0	0	0	10	100
Total softwood types	578	313	913	153	1,958	
Hardwood types:						
Bigleaf maple	0	48	30	0	78	40
Black cottonwood	0	0	16	0	16	100
Oregon ash	0	0	11	0	11	100
Oregon white oak	0	11	0	0	11	100
Red alder	54	108	109	0	271	21
Willow	0	10	0	0	10	100
Total hardwood types	54	177	167	0	398	
Nonstocked					66	43
Total	632	491	1,081	153	2,423	
SE for total (%)	12	14	9	27	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 7d—Estimated area of nonnational forest timberland by forest type and stand size class, southwest Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes Total	All classes SE
			Thousand acres			*%*
Softwood types:						
Douglas-fir	397	247	595	121	1,360	6
Noble fir	41	0	0	0	41	55
Pacific silver fir	25	0	10	0	35	58
Sitka spruce	0	0	10	9	20	71
Western hemlock	10	62	217	27	316	17
Western redcedar	0	0	0	9	9	100
Total softwood types	472	309	834	166	1,781	
Hardwood types:						
Bigleaf maple	12	26	0	9	47	51
Black cottonwood	12	0	0	9	21	72
Cherry	11	0	0	0	11	100
Oregon ash	0	0	10	0	10	100
Red alder	166	50	170	9	396	16
Willow	14	0	0	0	14	100
Other hardwoods	23	0	0	0	23	71
Total hardwood types	238	76	180	28	523	
Nonstocked					52	50
Total	710	386	1,014	194	2,356	
SE for total (%)	11	17	8	23	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 acres found.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 8a—Estimated number of trees on nonnational forest timberland by species and diameter class, western Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)																All classes	
	Seedling	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Thousand trees																	*%*
Softwoods:																		
Alaska-cedar	2,159	6,478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,637	100
Douglas-fir	275,470	152,476	109,729	107,671	119,113	80,169	47,487	34,275	22,636	14,911	10,218	7,871	6,688	3,950	2,657	6,034	1,001,354	6
Engelmann spruce	0	0	0	0	0	0	0	0	97	0	0	0	0	0	0	0	97	100
Grand fir	0	7,214	3,107	491	0	456	281	607	164	0	74	96	209	124	61	183	13,067	47
Lodgepole pine	10,666	0	0	0	0	601	633	894	221	259	47	0	0	0	0	0	13,320	81
Mountain hemlock	2,159	2,119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,279	71
Noble fir	6,748	14,173	4,852	4,567	2,282	785	463	192	0	14	59	14	0	0	0	0	34,149	39
Pacific silver fir	57,326	63,487	20,526	7,623	7,322	5,952	4,652	1,420	754	738	245	351	312	268	195	606	171,778	23
Pacific yew	2,159	15,999	0	1,175	0	0	0	0	0	0	0	0	0	0	0	0	19,333	84
Sitka spruce	14,034	10,901	8,355	2,353	672	1,049	1,406	1,490	993	704	700	415	156	450	227	417	44,323	27
Western hemlock	163,160	323,124	156,560	88,385	78,740	55,556	36,271	24,928	15,871	9,294	5,580	4,514	2,353	1,855	1,076	2,304	969,572	8
Western redcedar	31,618	167,800	44,128	24,444	15,301	13,224	9,261	5,023	3,029	2,623	2,210	1,211	1,158	1,122	587	2,105	324,845	16
Western white pine	0	3,118	0	0	0	1,316	763	106	333	0	0	40	0	32	0	0	5,707	55
Total softwoods	565,501	766,889	347,258	236,708	223,430	159,108	101,218	68,934	44,099	28,543	19,134	14,512	10,878	7,801	4,804	11,649	2,610,462	
Hardwoods:																		
Apple	14,545	1,285	0	0	0	446	0	0	0	0	0	0	0	0	0	0	16,276	77
Bigleaf maple	10,381	27,668	11,734	11,533	8,681	5,521	4,415	3,872	2,054	2,817	1,396	978	682	290	334	626	92,980	22
Black cottonwood	2,845	27,558	1,432	0	0	186	200	0	330	302	264	223	309	215	198	322	34,386	76
Cherry	5,942	70,721	5,672	2,561	1,034	703	738	0	0	68	0	0	0	0	0	0	87,438	66
Holly	2,367	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,367	100
Oregon ash	2,932	0	0	1,503	376	1,874	380	941	211	279	110	141	37	132	0	41	8,957	52
Oregon white oak	0	0	0	481	0	1,093	443	0	0	0	0	0	0	0	0	0	2,016	100
Pacific madrone	0	0	0	571	716	231	179	0	430	0	0	0	0	0	0	0	2,126	49
Red alder	39,939	237,877	76,807	58,018	35,340	27,252	18,992	16,587	8,984	3,924	2,212	1,058	246	165	80	201	527,682	13
Western paper birch	1,413	0	0	907	0	349	653	110	0	134	0	0	0	0	0	0	3,566	56
Willow	3,851	24,672	7,667	2,229	664	470	373	0	285	0	0	0	0	0	0	0	40,213	51
Other hardwoods	3,545	99,710	16,235	1,499	1,055	309	0	212	0	71	0	0	0	0	0	0	122,636	29
Total hardwoods	87,760	489,491	119,549	79,302	47,865	38,434	26,373	21,721	12,295	7,595	3,982	2,398	1,274	801	613	1,190	940,642	
Total	653,260	1,256,380	466,806	316,009	271,295	197,542	127,591	90,655	56,394	36,137	23,116	16,910	12,152	8,603	5,416	12,839	3,551,105	
SE for total (%)	10	10	10	6	6	6	6	6	6	6	8	8	9	9	10	10	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 trees found.

Table 8b—Estimated number of trees on nonnational forest timberland by species and diameter class, Puget Sound, January 1, 2001

Tree species	Diameter class (inches at breast height)																All classes	
	Seedling	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Thousand trees																	%
Softwoods:																		
Alaska-cedar	2,159	6,478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,637	100
Douglas-fir	37,960	67,086	35,102	21,945	24,054	19,337	12,248	12,783	8,448	4,565	3,697	3,049	1,995	1,611	935	2,179	256,994	13
Engelmann spruce	0	0	0	0	0	0	0	0	97	0	0	0	0	0	0	0	97	100
Grand fir	0	0	0	0	0	0	0	162	88	0	74	0	102	65	40	84	615	69
Lodgepole pine	0	0	0	0	0	207	211	352	0	140	0	0	0	0	0	0	910	58
Mountain hemlock	2,159	2,119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,279	71
Noble fir	0	2,538	2,538	540	1,101	504	114	192	0	14	0	14	0	0	0	0	7,554	72
Pacific silver fir	42,810	47,924	16,500	5,221	5,133	3,920	3,582	922	524	497	202	178	115	27	55	95	127,704	27
Pacific yew	2,159	0	0	1,175	0	0	0	0	0	0	0	0	0	0	0	0	3,334	69
Sitka spruce	2,159	0	0	0	0	0	212	122	242	0	0	0	0	0	41	48	2,824	79
Western hemlock	47,499	104,735	51,843	23,129	28,330	18,891	11,128	8,315	3,937	2,366	1,675	1,027	719	160	77	521	304,352	15
Western redcedar	7,387	57,465	13,532	6,094	7,622	5,599	5,211	2,831	1,482	1,996	1,537	951	794	720	314	1,194	114,731	22
Western white pine	0	0	0	0	0	1,316	623	106	333	0	0	40	0	0	0	0	2,417	88
Total softwoods	144,293	288,345	119,514	58,103	66,241	49,773	33,329	25,785	15,152	9,578	7,185	5,258	3,724	2,584	1,462	4,122	834,448	
Hardwoods:																		
Bigleaf maple	2,159	6,478	1,859	2,866	3,186	2,733	2,581	2,702	1,410	1,699	850	320	332	209	236	411	30,031	34
Black cottonwood	2,845	25,448	1,432	0	0	0	200	0	86	272	216	223	220	100	85	170	31,296	83
Cherry	2,164	10,525	0	1,619	393	259	462	0	0	68	0	0	0	0	0	0	15,491	46
Oregon ash	0	0	0	0	376	216	167	754	86	0	55	44	37	30	0	41	1,807	71
Pacific madrone	0	0	0	571	469	231	179	0	358	0	0	0	0	0	0	0	1,807	56
Red alder	5,996	63,293	22,653	22,679	16,453	9,489	7,724	6,315	4,443	1,418	926	417	158	70	57	49	162,141	16
Western paper birch	1,413	0	0	907	0	349	653	110	0	134	0	0	0	0	0	0	3,566	56
Willow	0	1,757	0	1,457	0	470	171	0	0	0	0	0	0	0	0	0	3,856	62
Other hardwoods	0	14,969	1,870	455	261	0	0	212	0	71	0	0	0	0	0	0	17,838	55
Total hardwoods	14,578	122,470	27,813	30,555	21,138	13,749	12,138	10,093	6,382	3,662	2,047	1,004	747	410	377	671	267,834	
Total	158,871	410,815	147,328	88,658	87,379	63,522	45,467	35,878	21,534	13,240	9,232	6,262	4,471	2,993	1,839	4,794	1,102,282	
SE for total (%)	19	15	15	12	10	10	10	8	10	10	12	13	15	14	17	15	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 trees found.

Table 8c—Estimated number of trees on nonnational forest timberland by species and diameter class, Olympic Penninsula, January 1, 2001

Tree species	Diameter class (inches at breast height)																All classes	
	Seedling	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Thousand trees																	%
Softwoods:																		
Douglas-fir	119,080	45,197	43,259	45,882	45,665	27,833	14,559	8,968	4,586	4,206	2,436	2,299	1,922	932	754	1,589	369,168	9
Grand fir	0	7,214	0	0	0	456	138	445	0	0	0	51	0	0	21	0	8,325	62
Lodgepole pine	10,666	0	0	0	0	394	422	423	221	119	47	0	0	0	0	0	12,291	87
Pacific silver fir	0	0	2,061	421	547	1,001	1,070	319	155	179	43	33	122	143	62	445	6,601	48
Pacific yew	0	15,999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,999	100
Sitka spruce	11,875	9,037	8,355	1,862	672	619	738	1,088	752	704	567	334	86	450	186	211	37,534	31
Western hemlock	93,420	175,159	63,126	40,025	25,909	21,884	11,626	8,942	6,554	4,069	2,835	1,985	1,162	1,130	687	1,376	459,890	13
Western redcedar	19,348	93,193	28,256	14,879	6,794	6,799	3,770	1,624	1,291	560	497	127	365	239	162	578	178,483	24
Western white pine	0	3,118	0	0	0	0	140	0	0	0	0	0	0	32	0	0	3,290	70
Total softwoods	254,389	348,917	145,057	103,070	79,587	58,986	32,462	21,809	13,559	9,837	6,426	4,829	3,657	2,926	1,872	4,200	1,091,582	
Hardwoods:																		
Apple	12,255	1,285	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,540	91
Bigleaf maple	0	8,510	0	6,133	4,176	1,318	1,220	523	462	831	359	117	188	47	52	138	24,075	54
Black cottonwood	0	0	0	0	0	186	0	0	244	0	0	0	52	100	87	124	794	59
Cherry	3,778	1,758	1,821	421	641	234	166	0	0	0	0	0	0	0	0	0	8,818	53
Holly	2,367	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,367	100
Oregon ash	0	0	0	1,503	0	1,466	214	187	43	138	0	0	0	0	0	0	3,551	95
Oregon white oak	0	0	0	481	0	1,093	443	0	0	0	0	0	0	0	0	0	2,016	100
Pacific madrone	0	0	0	0	247	0	0	0	72	0	0	0	0	0	0	0	319	79
Red alder	6,426	60,593	34,563	12,696	9,318	9,411	6,932	5,240	1,709	691	493	381	0	37	24	28	148,541	25
Willow	1,544	10,808	3,088	772	664	0	202	0	285	0	0	0	0	0	0	0	17,364	94
Other hardwoods	3,545	39,849	1,936	321	0	309	0	0	0	0	0	0	0	0	0	0	45,960	38
Total hardwoods	29,915	122,804	41,408	22,327	15,047	14,016	9,176	5,949	2,816	1,659	853	498	240	184	163	290	267,345	
Total	284,304	471,721	186,465	125,397	94,633	73,002	41,638	27,758	16,375	11,496	7,279	5,327	3,897	3,110	2,035	4,490	1,358,927	
SE for total (%)	17	16	15	10	11	9	9	11	11	12	15	14	16	15	17	19	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = fewer than 500 trees found.

Table 8d—Estimated number of trees on nonnational forest timberland by species and diameter class, southwest Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)																All classes	
	Seedling	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Thousand trees																	*%*
Softwoods:																		
Douglas-fir	118,430	40,193	31,367	39,843	49,394	33,000	20,680	12,524	9,602	6,140	4,084	2,524	2,772	1,407	968	2,266	375,192	8
Grand fir	0	0	3,107	491	0	0	143	0	75	0	0	45	107	59	0	98	4,126	77
Lodgepole pine	0	0	0	0	0	0	0	120	0	0	0	0	0	0	0	0	120	100
Noble fir	6,748	11,635	2,314	4,027	1,181	282	349	0	0	0	59	0	0	0	0	0	26,595	45
Pacific silver fir	14,516	15,563	1,966	1,981	1,642	1,031	0	179	76	62	0	140	75	98	79	66	37,473	53
Sitka spruce	0	1,864	0	491	0	430	457	280	0	0	133	81	70	0	0	158	3,965	54
Western hemlock	22,241	43,230	41,592	25,230	24,501	14,781	13,517	7,670	5,380	2,858	1,070	1,502	472	566	312	406	205,329	15
Western redcedar	4,883	17,142	2,340	3,470	884	826	280	568	256	68	176	133	0	162	111	333	31,632	47
Total softwoods	166,818	129,627	82,687	75,534	77,602	50,349	35,427	21,341	15,388	9,128	5,523	4,424	3,496	2,292	1,470	3,326	684,432	
Hardwoods:																		
Apple	2,290	0	0	0	0	446	0	0	0	0	0	0	0	0	0	0	2,736	85
Bigleaf maple	8,222	12,680	9,875	2,533	1,319	1,469	614	647	182	288	186	541	161	33	46	78	38,874	30
Black cottonwood	0	2,110	0	0	0	0	0	0	0	30	48	0	38	15	26	29	2,296	92
Cherry	0	58,437	3,852	521	0	209	110	0	0	0	0	0	0	0	0	0	63,129	90
Oregon ash	2,932	0	0	0	0	192	0	0	81	140	55	96	0	102	0	0	3,599	83
Red alder	27,517	113,991	19,592	22,643	9,569	8,352	4,335	5,032	2,833	1,815	793	260	88	58	0	123	217,000	23
Willow	2,307	12,107	4,579	0	0	0	0	0	0	0	0	0	0	0	0	0	18,992	64
Other hardwoods	0	44,892	12,430	722	793	0	0	0	0	0	0	0	0	0	0	0	58,837	49
Total hardwoods	43,267	244,217	50,328	26,419	11,681	10,669	5,059	5,679	3,096	2,273	1,082	897	288	208	72	229	405,464	
Total	210,086	373,844	133,014	101,954	89,283	61,018	40,485	27,020	18,485	11,401	6,605	5,321	3,784	2,499	1,542	3,555	1,089,896	
SE for total (%)	18	22	22	12	12	10	10	11	11	13	13	13	16	16	19	16	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = fewer than 500 trees found.

Table 9a—Estimated net volume of growing-stock trees on nonnational forest timberland by species and diameter class, western Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)													All classes	
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million cubic feet														%
Softwoods:															
Douglas-fir	260	814	999	1,016	1,154	1,130	1,010	879	846	877	621	479	1,630	11,714	6
Engelmann spruce	0	0	0	0	0	4	0	0	0	0	0	0	0	4	100
Grand fir	1	0	4	6	28	9	0	6	8	30	20	12	48	172	38
Lodgepole pine	0	0	10	13	24	8	13	3	0	0	0	0	0	71	48
Noble fir	9	17	9	11	6	0	1	4	2	0	0	0	0	59	38
Pacific silver fir	21	45	63	90	47	37	51	24	41	50	47	39	255	810	27
Sitka spruce	3	5	12	33	40	48	43	49	33	20	63	38	187	573	23
Western hemlock	248	578	834	952	952	860	644	512	518	334	311	205	660	7,610	8
Western redcedar	56	102	147	159	135	103	128	128	98	98	115	73	398	1,742	14
Western white pine	0	0	29	23	5	18	0	0	5	0	5	0	0	83	77
Total softwoods	598	1,561	2,108	2,303	2,391	2,216	1,889	1,606	1,551	1,410	1,183	846	3,178	22,839	
Hardwoods:															
Bigleaf maple	34	67	71	97	124	83	158	108	88	64	36	41	131	1,101	16
Black cottonwood	0	0	2	5	0	19	20	21	25	44	37	36	85	295	29
Cherry	6	10	11	18	0	0	4	0	0	0	0	0	0	49	35
Oregon ash	4	1	27	10	30	8	14	8	6	4	11	0	10	133	46
Oregon white oak	2	0	14	9	0	0	0	0	0	0	0	0	0	25	100
Pacific madrone	3	7	3	2	0	23	0	0	0	0	0	0	0	38	57
Red alder	183	289	441	487	609	460	257	187	110	31	23	14	51	3,144	10
Western paper birch	3	0	6	16	3	0	6	0	0	0	0	0	0	34	58
Total hardwoods	236	374	575	645	765	593	459	324	229	143	106	91	277	4,818	
All species	834	1,936	2,683	2,948	3,156	2,809	2,349	1,930	1,780	1,553	1,289	937	3,455	27,657	
SE for total (%)	7	6	6	6	6	6	7	8	8	9	9	11	11	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 9b—Estimated net volume of growing-stock trees on nonnational forest timberland by species and diameter class, Puget Sound, January 1, 2001

Tree species	Diameter class (inches at breast height)													All classes	
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million cubic feet														%
Softwoods:															
Douglas-fir	52	166	255	283	432	424	326	323	329	268	254	172	603	3,887	11
Engelmann spruce	0	0	0	0	0	4	0	0	0	0	0	0	0	4	100
Grand fir	0	0	0	0	7	4	0	6	0	13	10	7	25	72	70
Lodgepole pine	0	0	4	5	8	0	6	0	0	0	0	0	0	23	60
Noble fir	1	8	6	3	6	0	1	0	2	0	0	0	0	26	49
Pacific silver fir	14	31	41	66	28	23	29	20	21	20	5	10	26	336	30
Sitka spruce	0	0	0	8	1	15	0	0	0	0	0	8	16	47	81
Western hemlock	61	219	292	292	314	195	162	142	100	95	27	16	139	2,051	14
Western redcedar	15	51	63	92	79	53	96	100	77	75	77	41	259	1,078	20
Western white pine	0	0	29	21	5	18	0	0	5	0	0	0	0	77	83
Total softwoods	144	474	690	769	880	736	621	591	533	471	374	253	1,068	7,602	
Hardwoods:															
Bigleaf maple	12	25	35	60	90	60	97	65	31	29	25	32	87	647	21
Black cottonwood	0	0	0	5	0	5	17	18	25	29	20	15	45	179	32
Cherry	3	2	2	12	0	0	4	0	0	0	0	0	0	24	51
Oregon ash	0	1	1	3	24	3	0	4	3	4	3	0	10	57	72
Pacific madrone	3	4	3	2	0	20	0	0	0	0	0	0	0	31	67
Red alder	83	132	159	202	232	227	90	83	40	19	10	11	13	1,301	15
Western paper birch	3	0	6	16	3	0	6	0	0	0	0	0	0	34	58
Total hardwoods	104	164	207	300	349	314	215	170	99	80	58	58	155	2,273	
All species	248	638	897	1,069	1,229	1,051	836	761	632	551	432	310	1,223	9,876	
SE for total (%)	15	10	11	10	8	10	10	13	13	15	15	18	17	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 9c—Estimated net volume of growing-stock trees on nonnational forest timberland by species and diameter class, Olympic Peninsula, January 1, 2001

Tree species	Diameter class (inches at breast height)													All classes	
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million cubic feet														%
Softwoods:															
Douglas-fir	109	288	335	293	299	224	274	207	252	250	149	141	427	3,247	12
Grand fir	0	0	4	3	21	0	0	0	5	0	0	4	0	38	69
Lodgepole pine	0	0	6	9	12	8	7	3	0	0	0	0	0	45	69
Pacific silver fir	1	5	12	24	10	7	16	4	4	20	24	13	211	352	50
Sitka spruce	2	5	7	19	31	33	43	43	28	12	63	30	65	382	28
Western hemlock	107	185	325	313	351	374	296	278	246	175	193	133	413	3,390	14
Western redcedar	33	45	75	61	41	41	28	20	9	23	21	20	64	481	19
Western white pine	0	0	0	2	0	0	0	0	0	0	5	0	0	7	77
Total softwoods	252	529	764	724	765	687	664	556	545	480	455	341	1,180	7,942	
Hardwoods:															
Bigleaf maple	16	34	19	25	14	15	42	28	11	21	6	7	31	268	31
Black cottonwood	0	0	2	0	0	15	0	0	0	9	14	15	31	85	70
Cherry	1	8	5	3	0	0	0	0	0	0	0	0	0	16	68
Oregon ash	4	0	22	7	6	2	7	0	0	0	0	0	0	49	83
Oregon white oak	2	0	14	9	0	0	0	0	0	0	0	0	0	25	100
Pacific madrone	0	3	0	0	0	3	0	0	0	0	0	0	0	7	68
Red alder	40	79	149	171	188	79	42	39	45	0	5	3	8	848	18
Total hardwoods	63	124	211	214	208	114	91	67	56	29	25	25	70	1,298	
All species	315	653	976	939	973	801	755	623	601	509	480	366	1,250	9,239	
SE for total (%)	11	12	10	10	12	12	12	16	15	16	16	18	22	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 9d—Estimated net volume of growing-stock trees on nonnational forest timberland by species and diameter class, southwest Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)													All classes	
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million cubic feet														%
Softwoods:															
Douglas-fir	99	360	409	439	424	482	410	349	265	359	217	167	600	4,580	10
Grand fir	1	0	0	3	0	5	0	0	3	17	10	0	23	62	54
Lodgepole pine	0	0	0	0	3	0	0	0	0	0	0	0	0	3	100
Noble fir	9	9	3	8	0	0	0	4	0	0	0	0	0	33	55
Pacific silver fir	5	9	10	0	9	6	5	0	16	11	19	16	17	122	61
Sitka spruce	1	0	4	7	7	0	0	6	5	8	0	0	106	144	43
Western hemlock	80	174	217	347	287	291	186	92	172	64	91	57	109	2,169	15
Western redcedar	8	6	9	6	16	9	3	8	12	0	17	13	75	183	22
Total softwoods	203	559	653	810	746	793	604	460	473	459	354	252	930	7,295	
Hardwoods:															
Bigleaf maple	7	8	16	12	20	8	18	15	46	15	4	3	13	186	33
Black cottonwood	0	0	0	0	0	0	3	3	0	6	3	6	9	31	74
Cherry	2	0	4	3	0	0	0	0	0	0	0	0	0	9	60
Oregon ash	0	0	3	0	0	3	7	4	3	0	7	0	0	27	80
Red alder	60	78	134	115	188	154	125	66	25	12	8	0	30	994	21
Total hardwoods	69	86	157	130	208	165	153	87	74	34	23	8	53	1,247	
All species	271	645	810	940	954	957	758	547	547	492	377	261	983	8,542	
SE for total (%)	12	12	9	11	11	12	13	14	13	16	16	20	18	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 10a—Estimated net volume of sawtimber on nonnational forest timberland by species and diameter class, western Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)											All classes	
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million board feet, Scribner rule												%
Softwoods:													
Douglas-fir	2,436	3,233	4,307	4,716	4,508	4,069	4,075	4,329	3,151	2,450	8,611	45,885	7
Engelmann spruce	0	0	0	16	0	0	0	0	0	0	0	16	100
Grand fir	7	18	120	37	0	31	35	146	103	62	247	804	39
Lodgepole pine	29	43	76	25	48	15	0	0	0	0	0	236	52
Noble fir	20	36	22	0	6	17	8	0	0	0	0	110	42
Pacific silver fir	134	266	165	143	226	116	200	260	246	196	1,381	3,334	32
Sitka spruce	25	100	129	198	180	211	134	100	306	188	1,019	2,591	24
Western hemlock	2,262	3,360	3,781	3,718	2,916	2,447	2,584	1,698	1,618	1,065	3,509	28,958	10
Western redcedar	319	449	433	346	477	484	399	401	429	290	1,644	5,672	16
Western white pine	94	84	19	80	0	0	24	0	23	0	0	323	75
Total softwoods	5,328	7,590	9,052	9,279	8,361	7,390	7,459	6,934	5,876	4,250	16,411	87,930	
Hardwoods:													
Bigleaf maple	0	346	541	376	779	567	458	340	187	208	676	4,478	17
Black cottonwood	0	21	0	99	105	104	140	257	208	209	506	1,648	29
Cherry	0	69	0	0	19	0	0	0	0	0	0	88	51
Oregon ash	0	38	127	38	59	40	30	20	53	0	55	460	47
Oregon white oak	0	21	0	0	0	0	0	0	0	0	0	21	100
Pacific madrone	0	5	0	99	0	0	0	0	0	0	0	104	84
Red alder	0	1,858	2,781	2,263	1,319	987	584	173	128	79	288	10,459	12
Western paper birch	0	61	12	0	27	0	0	0	0	0	0	101	61
Total hardwoods	0	2,419	3,461	2,875	2,307	1,698	1,212	789	576	496	1,524	17,358	
All species	5,328	10,008	12,512	12,155	10,668	9,088	8,672	7,723	6,452	4,746	17,935	105,288	
SE for total (%)	7	6	6	7	7	8	8	9	9	11	11	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 10b—Estimated net volume of sawtimber on nonnational forest timberland by species and diameter class, Puget Sound, January 1, 2001

Tree species	Diameter class (inches at breast height)											All classes	
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million board feet, Scribner rule												%
Softwoods:													
Douglas-fir	656	941	1,618	1,770	1,474	1,502	1,595	1,347	1,292	887	3,176	16,256	12
Engelmann spruce	0	0	0	16	0	0	0	0	0	0	0	16	100
Grand fir	0	0	28	16	0	31	0	63	50	38	131	357	71
Lodgepole pine	13	15	20	0	22	0	0	0	0	0	0	70	60
Noble fir	12	11	22	0	6	0	8	0	0	0	0	59	49
Pacific silver fir	87	191	95	86	124	101	96	108	28	42	146	1,104	35
Sitka spruce	0	19	2	66	0	0	0	0	0	38	82	206	80
Western hemlock	794	1,021	1,228	810	728	658	458	472	138	82	701	7,091	16
Western redcedar	133	269	256	185	358	388	312	315	294	164	1,077	3,753	23
Western white pine	94	80	19	80	0	0	24	0	0	0	0	296	82
Total softwoods	1,791	2,546	3,288	3,029	2,711	2,681	2,493	2,304	1,803	1,251	5,313	29,209	
Hardwoods:													
Bigleaf maple	0	216	395	268	480	343	165	156	132	162	452	2,770	22
Black cottonwood	0	21	0	24	87	95	140	168	116	87	273	1,011	32
Cherry	0	49	0	0	19	0	0	0	0	0	0	68	63
Oregon ash	0	8	101	13	0	22	15	20	16	0	55	250	72
Pacific madrone	0	5	0	87	0	0	0	0	0	0	0	91	95
Red alder	0	768	1,058	1,116	465	438	208	105	55	62	73	4,348	16
Western paper birch	0	61	12	0	27	0	0	0	0	0	0	101	61
Total hardwoods	0	1,128	1,565	1,508	1,078	898	528	448	319	312	854	8,638	
All species	1,791	3,674	4,854	4,536	3,789	3,579	3,021	2,752	2,121	1,563	6,166	37,847	
SE for total (%)	14	10	9	10	11	14	14	15	15	19	17	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 10c—Estimated net volume of sawtimber on nonnational forest timberland by species and diameter class, Olympic Peninsula, January 1, 2001

Tree species	Diameter class (inches at breast height)											All classes	
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million board feet, Scribner rule												%
Softwoods:													
Douglas-fir	796	906	1,113	925	1,212	940	1,223	1,236	766	728	2,255	12,100	15
Grand fir	7	10	92	0	0	0	25	0	0	23	0	157	67
Lodgepole pine	16	28	46	25	26	15	0	0	0	0	0	157	72
Pacific silver fir	28	75	32	25	78	14	22	102	116	68	1,144	1,704	53
Sitka spruce	17	64	106	132	180	193	119	64	306	150	319	1,649	30
Western hemlock	886	1,118	1,420	1,643	1,367	1,371	1,271	904	1,002	689	2,230	13,901	16
Western redcedar	165	164	126	130	106	68	34	86	74	78	233	1,262	22
Western white pine	0	4	0	0	0	0	0	0	23	0	0	27	86
Total softwoods	1,914	2,369	2,936	2,880	2,969	2,601	2,694	2,392	2,286	1,736	6,180	30,957	
Hardwoods:													
Bigleaf maple	0	89	62	72	204	146	58	104	31	32	157	955	32
Black cottonwood	0	0	0	75	0	0	0	52	72	86	172	456	72
Cherry	0	8	0	0	0	0	0	0	0	0	0	8	100
Oregon ash	0	30	27	9	33	0	0	0	0	0	0	99	63
Oregon white oak	0	21	0	0	0	0	0	0	0	0	0	21	100
Pacific madrone	0	0	0	13	0	0	0	0	0	0	0	13	100
Red alder	0	648	853	371	203	208	241	0	27	17	51	2,618	23
Total hardwoods	0	795	942	539	440	354	298	156	130	135	380	4,169	
All species	1,914	3,165	3,877	3,419	3,408	2,955	2,993	2,547	2,417	1,871	6,561	35,126	
SE for total (%)	11	10	12	12	12	16	16	17	17	19	23	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 10d—Estimated net volume of sawtimber on nonnational forest timberland by species and diameter class, southwest Washington, January 1, 2001

Tree species	Diameter class (inches at breast height)											All classes	
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	Total	SE
	Million board feet, Scribner rule												%
Softwoods:													
Douglas-fir	984	1,386	1,576	2,021	1,822	1,628	1,256	1,746	1,094	836	3,180	17,529	12
Grand fir	0	8	0	20	0	0	10	83	52	0	116	290	54
Lodgepole pine	0	0	9	0	0	0	0	0	0	0	0	9	100
Noble fir	8	26	0	0	0	17	0	0	0	0	0	52	71
Pacific silver fir	19	0	37	33	24	0	82	51	103	86	91	525	73
Sitka spruce	9	17	21	0	0	17	15	37	0	0	619	735	46
Western hemlock	582	1,221	1,133	1,265	821	418	855	322	478	294	579	7,966	17
Western redcedar	21	16	51	31	14	28	54	0	60	48	333	657	26
Total softwoods	1,623	2,674	2,828	3,370	2,680	2,108	2,272	2,238	1,787	1,264	4,918	27,764	
Hardwoods:													
Bigleaf maple	0	41	84	36	95	79	236	80	24	14	66	752	38
Black cottonwood	0	0	0	0	18	10	0	38	20	35	60	181	77
Cherry	0	13	0	0	0	0	0	0	0	0	0	13	100
Oregon ash	0	0	0	16	26	17	15	0	37	0	0	111	87
Red alder	0	442	870	777	651	340	135	68	46	0	164	3,493	26
Total hardwoods	0	496	953	829	790	446	386	185	127	49	290	4,551	
All species	1,623	3,170	3,781	4,199	3,470	2,554	2,658	2,424	1,914	1,313	5,208	32,315	
SE for total (%)	11	11	12	12	14	14	14	16	17	21	19	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 11a—Estimated net volume of growing-stock trees on nonnational forest timberland by tree species and owner class, western Washington, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	Million cubic feet				*%*
Softwoods:					
Douglas-fir	5,036	4,153	2,526	11,714	6
Engelmann spruce	4	0	0	4	100
Grand fir	10	39	123	172	38
Lodgepole pine	12	8	52	71	48
Noble fir	9	50	0	59	38
Pacific silver fir	516	180	114	810	27
Sitka spruce	60	455	59	573	23
Western hemlock	2,921	3,715	973	7,610	8
Western redcedar	490	499	753	1,742	14
Western white pine	0	4	79	83	77
Total softwoods	9,058	9,103	4,678	22,839	
Hardwoods:					
Bigleaf maple	389	165	547	1,101	16
Black cottonwood	48	161	85	295	29
Cherry	22	13	14	49	35
Oregon ash	26	40	67	133	46
Oregon white oak	0	0	25	25	100
Pacific madrone	6	20	13	38	57
Red alder	807	1,120	1,217	3,144	10
Western paper birch	0	12	23	34	58
Total hardwoods	1,297	1,531	1,990	4,818	
All species	10,355	10,634	6,668	27,657	
SE for total (%)	6	7	9	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 11b—Estimated net volume of growing-stock trees on nonnational forest timberland by tree species and owner class, Puget Sound, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – – *Million cubic feet* – – – – – – – –				*%*
Softwoods:					
Douglas-fir	1,934	965	988	3,887	11
Engelmann spruce	4	0	0	4	100
Grand fir	10	15	47	72	70
Lodgepole pine	0	8	15	23	60
Noble fir	9	16	0	26	49
Pacific silver fir	226	107	3	336	30
Sitka spruce	9	39	0	47	81
Western hemlock	863	937	251	2,051	14
Western redcedar	364	251	463	1,078	20
Western white pine	0	4	73	77	83
Total softwoods	3,420	2,342	1,841	7,602	
Hardwoods:					
Bigleaf maple	298	14	335	647	21
Black cottonwood	21	75	84	179	32
Cherry	5	5	14	24	51
Oregon ash	24	0	33	57	72
Pacific madrone	6	20	6	31	67
Red alder	274	256	771	1,301	15
Western paper birch	0	12	23	34	58
Total hardwoods	626	382	1,265	2,273	
All species	4,046	2,724	3,106	9,876	
SE for total (%)	10	13	13	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 11c—Estimated net volume of growing-stock trees on nonnational forest timberland by tree species and owner class, Olympic Peninsula, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	Million cubic feet				*%*
Softwoods:					
Douglas-fir	1,597	1,127	523	3,247	12
Grand fir	0	4	34	38	69
Lodgepole pine	12	0	33	45	69
Pacific silver fir	223	17	111	352	50
Sitka spruce	47	276	59	382	28
Western hemlock	1,496	1,311	583	3,390	14
Western redcedar	88	184	210	481	19
Western white pine	0	0	7	7	77
Total softwoods	3,463	2,920	1,558	7,942	
Hardwoods:					
Bigleaf maple	31	117	119	268	31
Black cottonwood	0	83	2	85	70
Cherry	14	3	0	16	68
Oregon ash	2	40	7	49	83
Oregon white oak	0	0	25	25	100
Pacific madrone	0	0	7	7	68
Red alder	214	369	266	848	18
Total hardwoods	261	611	425	1,298	
All species	3,724	3,532	1,984	9,239	
SE for total (%)	9	13	17	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 11d—Estimated net volume of growing-stock trees on nonnational forest timberland by tree species and owner class, southwest Washington, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – – Million cubic feet – – – – – – – –				*%*
Softwoods:					
Douglas-fir	1,505	2,061	1,014	4,580	10
Grand fir	0	19	42	62	54
Lodgepole pine	0	0	3	3	100
Noble fir	0	33	0	33	55
Pacific silver fir	66	56	0	122	61
Sitka spruce	4	140	0	144	43
Western hemlock	562	1,467	139	2,169	15
Western redcedar	39	64	80	183	22
Total softwoods	2,175	3,841	1,279	7,295	
Hardwoods:					
Bigleaf maple	59	34	92	186	33
Black cottonwood	28	3	0	31	74
Cherry	4	5	0	9	60
Oregon ash	0	0	27	27	80
Red alder	319	496	180	994	21
Total hardwoods	410	538	300	1,247	
All species	2,585	4,379	1,578	8,542	
SE for total (%)	11	9	18	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 12a—Estimated net volume of sawtimber on nonnational forest timberland by tree species and owner class, western Washington, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – Million board feet, Scribner rule – – – –				*%*
Softwoods:					
Douglas-fir	21,167	14,473	10,245	45,885	7
Engelmann spruce	16	0	0	16	100
Grand fir	48	200	557	804	39
Lodgepole pine	40	21	175	236	52
Noble fir	35	75	0	110	42
Pacific silver fir	2,320	520	494	3,334	32
Sitka spruce	281	2,077	233	2,591	24
Western hemlock	11,872	13,109	3,978	28,958	10
Western redcedar	1,568	1,610	2,494	5,672	16
Western white pine	0	15	308	323	75
Total softwoods	37,346	32,098	18,485	87,930	
Hardwoods:					
Bigleaf maple	1,498	590	2,390	4,478	17
Black cottonwood	289	887	472	1,648	29
Cherry	19	21	49	88	51
Oregon ash	110	57	294	460	47
Oregon white oak	0	0	21	21	100
Pacific madrone	5	87	13	104	84
Red alder	2,759	3,548	4,151	10,459	12
Western paper birch	0	32	68	101	61
Total hardwoods	4,679	5,221	7,457	17,358	
All species	42,025	37,319	25,943	105,288	
SE for total (%)	7	9	10	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 12b—Estimated net volume of sawtimber on nonnational forest timberland by tree species and owner class, Puget Sound, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – *Million board feet, Scribner rule* – – – –				*%*
Softwoods:					
Douglas-fir	8,507	3,577	4,172	16,256	12
Engelmann spruce	16	0	0	16	100
Grand fir	48	72	237	357	71
Lodgepole pine	0	21	49	70	60
Noble fir	35	23	0	59	49
Pacific silver fir	822	276	7	1,104	35
Sitka spruce	45	162	0	206	80
Western hemlock	3,051	2,954	1,086	7,091	16
Western redcedar	1,168	911	1,674	3,753	23
Western white pine	0	15	282	296	82
Total softwoods	13,692	8,010	7,507	29,209	
Hardwoods:					
Bigleaf maple	1,198	36	1,536	2,770	22
Black cottonwood	118	421	472	1,011	32
Cherry	19	0	49	68	63
Oregon ash	100	0	150	250	72
Pacific madrone	5	87	0	91	95
Red alder	805	680	2,862	4,348	16
Western paper birch	0	32	68	101	61
Total hardwoods	2,244	1,257	5,137	8,638	
All species	15,936	9,267	12,644	37,847	
SE for total (%)	11	16	14	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 12c—Estimated net volume of sawtimber on nonnational forest timberland by tree species and owner class, Olympic Peninsula, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – *Million board feet, Scribner rule* – – – –				*%*
Softwoods:					
Douglas-fir	6,330	3,878	1,892	12,100	15
Grand fir	0	23	133	157	67
Lodgepole pine	40	0	117	157	72
Pacific silver fir	1,154	62	487	1,704	53
Sitka spruce	218	1,198	233	1,649	30
Western hemlock	6,617	5,084	2,200	13,901	16
Western redcedar	281	447	534	1,262	22
Western white pine	0	0	27	27	86
Total softwoods	14,640	10,693	5,624	30,957	
Hardwoods:					
Bigleaf maple	45	408	502	955	32
Black cottonwood	0	456	0	456	72
Cherry	0	8	0	8	100
Oregon ash	9	57	33	99	63
Oregon white oak	0	0	21	21	100
Pacific madrone	0	0	13	13	100
Red alder	624	1,273	721	2,618	23
Total hardwoods	678	2,202	1,289	4,169	
All species	15,319	12,894	6,914	35,126	
SE for total (%)	11	17	22	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 12d—Estimated net volume of sawtimber on nonnational forest timberland by tree species and owner class, southwest Washington, January 1, 2001

Tree species	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – *Million board feet, Scribner rule* – – – –				*%*
Softwoods:					
Douglas-fir	6,331	7,017	4,182	17,529	12
Grand fir	0	104	186	290	54
Lodgepole pine	0	0	9	9	100
Noble fir	0	52	0	52	71
Pacific silver fir	344	182	0	525	73
Sitka spruce	17	718	0	735	46
Western hemlock	2,204	5,071	692	7,966	17
Western redcedar	119	252	286	657	26
Total softwoods	9,014	13,395	5,354	27,764	
Hardwoods:					
Bigleaf maple	254	146	352	752	38
Black cottonwood	172	10	0	181	77
Cherry	0	13	0	13	100
Oregon ash	0	0	111	111	87
Red alder	1,331	1,594	568	3,493	26
Total hardwoods	1,756	1,763	1,031	4,551	
All species	10,771	15,158	6,386	32,315	
SE for total (%)	12	12	22	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 13a—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and stand size class, western Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Million cubic feet					*%*
Softwood types:						
Douglas-fir	96	1,111	9,624	2,190	13,021	7
Lodgepole pine	0	0	35	0	35	100
Noble fir	3	0	0	0	3	100
Pacific silver fir	15	63	196	229	503	52
Sitka spruce	0	0	157	97	253	59
Western hemlock	47	350	6,010	927	7,333	11
Western redcedar	11	81	889	637	1,618	25
Western white pine	5	0	0	0	5	100
Total softwood types	178	1,604	16,911	4,080	22,773	
Hardwood types:						
Bigleaf maple	1	195	720	44	959	25
Black cottonwood	0	0	100	22	122	84
Cherry	8	6	0	0	13	72
Oregon ash	0	0	180	0	180	55
Oregon white oak	0	27	0	0	27	100
Red alder	55	697	2,660	76	3,488	13
Western paper birch	0	0	49	0	49	100
Willow	2	11	0	0	13	66
Other hardwoods	15	0	0	0	15	89
Total hardwood types	81	936	3,708	142	4,867	
Nonstocked					17	54
Total	258	2,540	20,619	4,223	27,657	
SE for total (%)	18	12	5	17	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 13b—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and stand size class, Puget Sound, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Million cubic feet					*%*
Softwood types:						
Douglas-fir	17	161	3,619	471	4,268	14
Pacific silver fir	10	63	163	0	236	52
Western hemlock	7	26	1,812	0	1,845	21
Western redcedar	0	0	663	489	1,152	33
Total softwood types	34	251	6,257	960	7,501	
Hardwood types:						
Bigleaf maple	1	8	627	0	636	34
Cherry	0	6	0	0	6	100
Oregon ash	0	0	84	0	84	71
Red alder	17	358	1,211	0	1,585	20
Western paper birch	0	0	49	0	49	100
Willow	0	4	0	0	4	100
Total hardwood types	18	375	1,970	0	2,364	
Nonstocked					11	81
Total	52	626	8,227	960	9,876	
SE for total (%)	31	27	7	33	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 13c—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and stand size class, Olympic Peninsula, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Million cubic feet					*%*
Softwood types:						
Douglas-fir	14	397	2,546	696	3,652	14
Lodgepole pine	0	0	35	0	35	100
Pacific silver fir	0	0	0	229	229	100
Sitka spruce	0	0	124	27	151	84
Western hemlock	40	134	2,500	763	3,437	18
Western redcedar	11	81	226	129	446	34
Western white pine	5	0	0	0	5	100
Total softwood types	71	611	5,430	1,844	7,956	
Hardwood types:						
Bigleaf maple	0	148	93	0	241	43
Black cottonwood	0	0	100	0	100	100
Oregon ash	0	0	75	0	75	100
Oregon white oak	0	27	0	0	27	100
Red alder	10	259	560	0	829	27
Willow	0	7	0	0	7	100
Total hardwood types	10	441	828	0	1,279	
Nonstocked					4	72
Total	81	1,052	6,259	1,844	9,239	
SE for total (%)	33	18	10	29	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 13d—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and stand size class, southwest Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	Million cubic feet					*%*
Softwood types:						
Douglas-fir	64	553	3,460	1,024	5,101	11
Noble fir	3	0	0	0	3	100
Pacific silver fir	5	0	33	0	38	87
Sitka spruce	0	0	33	70	102	75
Western hemlock	0	189	1,699	164	2,052	20
Western redcedar	0	0	0	20	20	100
Total softwood types	73	742	5,224	1,277	7,316	
Hardwood types:						
Bigleaf maple	0	38	0	44	82	63
Black cottonwood	0	0	0	22	22	101
Cherry	8	0	0	0	8	100
Oregon ash	0	0	21	0	21	100
Red alder	28	81	889	76	1,074	24
Willow	2	0	0	0	2	100
Other hardwoods	15	0	0	0	15	89
Total hardwood types	53	119	909	142	1,224	
Nonstocked					3	100
Total	126	861	6,133	1,419	8,542	
SE for total (%)	28	20	9	26	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 14a—Estimated net volume of sawtimber on nonnational forest timberland by forest type and stand size class, western Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	– – – – – – – Million board feet, Scribner rule – – – – – – –					*%*
Softwood types:						
Douglas-fir	217	1,081	36,730	10,924	48,951	9
Lodgepole pine	0	0	121	0	121	100
Pacific silver fir	14	56	638	1,134	1,842	66
Sitka spruce	0	0	630	499	1,129	61
Western hemlock	3	461	23,466	4,751	28,681	13
Western redcedar	4	220	3,176	2,726	6,126	27
Western white pine	12	0	0	0	12	100
Total softwood types	250	1,817	64,760	20,034	86,862	
Hardwood types:						
Bigleaf maple	0	456	3,047	206	3,709	28
Black cottonwood	0	0	488	133	621	82
Cherry	0	7	0	0	7	100
Oregon ash	0	0	667	0	667	53
Oregon white oak	0	25	0	0	25	100
Red alder	144	1,438	11,112	443	13,137	15
Western paper birch	0	0	183	0	183	100
Willow	0	26	0	0	26	89
Other hardwoods	9	0	0	0	9	100
Total hardwood types	153	1,952	15,497	782	18,384	
Nonstocked					42	73
Total	403	3,769	80,257	20,816	105,288	
SE for total (%)	36	17	5	18	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 14b—Estimated net volume of sawtimber on nonnational forest timberland by forest type and stand size class, Puget Sound, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	– – – – – – *Million board feet, Scribner rule* – – – – – –					*%*
Softwood types:						
Douglas-fir	31	153	13,961	2,339	16,484	15
Pacific silver fir	12	56	581	0	648	70
Western hemlock	0	36	6,708	0	6,745	23
Western redcedar	0	0	2,519	2,151	4,670	34
Total softwood types	43	244	23,770	4,490	28,547	
Hardwood types:						
Bigleaf maple	0	29	2,731	0	2,760	35
Cherry	0	7	0	0	7	100
Oregon ash	0	0	328	0	328	71
Red alder	48	792	5,150	0	5,990	21
Western paper birch	0	0	183	0	183	100
Willow	0	3	0	0	3	100
Total hardwood types	48	832	8,391	0	9,271	
Nonstocked					29	100
Total	91	1,076	32,161	4,490	37,847	
SE for total (%)	64	38	8	33	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 14c—Estimated net volume of sawtimber on nonnational forest timberland by forest type and stand size class, Olympic Peninsula, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	– – – – – – Million board feet, Scribner rule – – – – – – –					*%*
Softwood types:						
Douglas-fir	0	281	9,479	3,517	13,277	18
Lodgepole pine	0	0	121	0	121	100
Pacific silver fir	0	0	0	1,134	1,134	100
Sitka spruce	0	0	559	123	682	84
Western hemlock	3	179	10,136	3,968	14,286	20
Western redcedar	4	220	656	487	1,367	36
Western white pine	12	0	0	0	12	100
Total softwood types	19	679	20,951	9,230	30,880	
Hardwood types:						
Bigleaf maple	0	399	316	0	715	44
Black cottonwood	0	0	488	0	488	100
Oregon ash	0	0	244	0	244	100
Oregon white oak	0	25	0	0	25	100
Red alder	0	534	2,213	0	2,747	31
Willow	0	23	0	0	23	100
Total hardwood types	0	982	3,261	0	4,242	
Nonstocked					4	100
Total	19	1,661	24,212	9,230	35,126	
SE for total (%)	68	25	11	30	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 14d—Estimated net volume of sawtimber on nonnational forest timberland by forest type and stand size class, southwest Washington, January 1, 2001

Forest type	Seedling-sapling	Pole-timber	Small sawtimber	Large sawtimber	All classes	
					Total	SE
	– – – – – – Million board feet, Scribner rule – – – – – – –					*%*
Softwood types:						
Douglas-fir	185	647	13,290	5,068	19,190	13
Pacific silver fir	3	0	57	0	60	95
Sitka spruce	0	0	71	376	447	86
Western hemlock	0	246	6,621	783	7,650	22
Western redcedar	0	0	0	88	88	100
Total softwood types	188	893	20,038	6,315	27,435	
Hardwood types:						
Bigleaf maple	0	28	0	206	233	89
Black cottonwood	0	0	0	133	133	101
Oregon ash	0	0	95	0	95	100
Red alder	96	111	3,750	443	4,400	26
Other hardwoods	9	0	0	0	9	100
Total hardwood types	105	139	3,846	782	4,871	
Nonstocked					9	100
Total	293	1,032	23,884	7,097	32,315	
SE for total (%)	46	27	10	26	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 15a—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Million cubic feet				%
Softwood types:					
Douglas-fir	5,321	4,691	3,010	13,021	7
Lodgepole pine	0	0	35	35	100
Noble fir	0	3	0	3	100
Pacific silver fir	425	75	3	503	52
Sitka spruce	0	226	27	253	59
Western hemlock	2,898	3,695	740	7,333	11
Western redcedar	431	462	726	1,618	25
Western white pine	0	0	5	5	100
Total softwood types	9,074	9,153	4,546	22,773	
Hardwood types:					
Bigleaf maple	387	107	465	959	25
Black cottonwood	22	100	0	122	84
Cherry	0	6	8	13	72
Oregon ash	44	75	61	180	55
Oregon white oak	0	0	27	27	100
Red alder	827	1,170	1,491	3,488	13
Western paper birch	0	0	49	49	100
Willow	0	2	11	13	66
Other hardwoods	0	14	2	15	89
Total hardwood types	1,280	1,474	2,113	4,867	
Nonstocked	2	8	8	17	54
Total	10,355	10,634	6,668	27,657	
SE for total (%)	6	7	9	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 15b—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – – Million cubic feet – – – – – – – –				*%*
Softwood types:					
Douglas-fir	2,113	1,130	1,025	4,268	14
Pacific silver fir	194	39	3	236	52
Western hemlock	788	993	64	1,845	21
Western redcedar	360	228	564	1,152	33
Total softwood types	3,455	2,390	1,656	7,501	
Hardwood types:					
Bigleaf maple	281	1	354	636	34
Cherry	0	6	0	6	100
Oregon ash	44	0	40	84	71
Red alder	266	324	995	1,585	20
Western paper birch	0	0	49	49	100
Willow	0	0	4	4	100
Total hardwood types	591	331	1,442	2,364	
Nonstocked	0	2	8	11	81
Total	4,046	2,724	3,106	9,876	
SE for total (%)	10	13	13	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 15c—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Million cubic feet				*%*
Softwood types:					
Douglas-fir	1,655	1,235	763	3,652	14
Lodgepole pine	0	0	35	35	100
Pacific silver fir	229	0	0	229	100
Sitka spruce	0	124	27	151	84
Western hemlock	1,469	1,387	581	3,437	18
Western redcedar	70	214	162	446	34
Western white pine	0	0	5	5	100
Total softwood types	3,423	2,960	1,573	7,956	
Hardwood types:					
Bigleaf maple	63	86	93	241	43
Black cottonwood	0	100	0	100	100
Oregon ash	0	75	0	75	100
Oregon white oak	0	0	27	27	100
Red alder	237	308	284	829	27
Willow	0	0	7	7	100
Total hardwood types	299	569	411	1,279	
Nonstocked	2	3	0	4	72
Total	3,724	3,532	1,984	9,239	
SE for total (%)	9	13	17	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 15d—Estimated net volume of growing-stock trees on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Million cubic feet				*%*
Softwood types:					
Douglas-fir	1,553	2,326	1,223	5,101	11
Noble fir	0	3	0	3	100
Pacific silver fir	1	36	0	38	87
Sitka spruce	0	102	0	102	75
Western hemlock	641	1,315	95	2,052	20
Western redcedar	0	20	0	20	100
Total softwood types	2,196	3,802	1,318	7,316	
Hardwood types:					
Bigleaf maple	44	21	18	82	63
Black cottonwood	22	0	0	22	101
Cherry	0	0	8	8	100
Oregon ash	0	0	21	21	100
Red alder	324	538	213	1,074	24
Willow	0	2	0	2	100
Other hardwoods	0	14	2	15	89
Total hardwood types	389	574	261	1,224	
Nonstocked	0	3	0	3	100
Total	2,585	4,379	1,578	8,542	
SE for total (%)	11	9	18	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 16a—Estimated net volume of sawtimber on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Million board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	21,395	15,925	11,631	48,951	9
Lodgepole pine	0	0	121	121	100
Pacific silver fir	1,733	102	7	1,842	66
Sitka spruce	0	1,006	123	1,129	61
Western hemlock	12,459	13,447	2,774	28,681	13
Western redcedar	1,487	1,624	3,014	6,126	27
Western white pine	0	0	12	12	100
Total softwood types	37,074	32,104	17,683	86,862	
Hardwood types:					
Bigleaf maple	1,662	240	1,807	3,709	28
Black cottonwood	133	488	0	621	82
Cherry	0	7	0	7	100
Oregon ash	169	244	254	667	53
Oregon white oak	0	0	25	25	100
Red alder	2,988	4,214	5,935	13,137	15
Western paper birch	0	0	183	183	100
Willow	0	0	26	26	89
Other hardwoods	0	9	0	9	100
Total hardwood types	4,951	5,202	8,231	18,384	
Nonstocked	0	13	29	42	73
Total	42,025	37,319	25,943	105,288	
SE for total (%)	7	9	10	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 16b—Estimated net volume of sawtimber on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Million board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	8,677	3,881	3,926	16,484	15
Pacific silver fir	599	43	7	648	70
Western hemlock	3,049	3,438	258	6,745	23
Western redcedar	1,196	933	2,541	4,670	34
Total softwood types	13,520	8,295	6,731	28,547	
Hardwood types:					
Bigleaf maple	1,280	0	1,480	2,760	35
Cherry	0	7	0	7	100
Oregon ash	169	0	159	328	71
Red alder	967	964	4,059	5,990	21
Western paper birch	0	0	183	183	100
Willow	0	0	3	3	100
Total hardwood types	2,416	972	5,883	9,271	
Nonstocked	0	0	29	29	100
Total	15,936	9,267	12,644	37,847	
SE for total (%)	11	16	14	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 16c—Estimated net volume of sawtimber on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Million board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	6,259	4,291	2,728	13,277	18
Lodgepole pine	0	0	121	121	100
Pacific silver fir	1,134	0	0	1,134	100
Sitka spruce	0	559	123	682	84
Western hemlock	6,810	5,398	2,078	14,286	20
Western redcedar	291	603	474	1,367	36
Western white pine	0	0	12	12	100
Total softwood types	14,494	10,850	5,535	30,880	
Hardwood types:					
Bigleaf maple	176	224	316	715	44
Black cottonwood	0	488	0	488	100
Oregon ash	0	244	0	244	100
Oregon white oak	0	0	25	25	100
Red alder	649	1,084	1,014	2,747	31
Willow	0	0	23	23	100
Total hardwood types	824	2,040	1,378	4,242	
Nonstocked	0	4	0	4	100
Total	15,319	12,894	6,914	35,126	
SE for total (%)	11	17	22	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 16d—Estimated net volume of sawtimber on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Million board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	6,459	7,753	4,978	19,190	13
Pacific silver fir	0	60	0	60	95
Sitka spruce	0	447	0	447	86
Western hemlock	2,600	4,611	439	7,650	22
Western redcedar	0	88	0	88	100
Total softwood types	9,060	12,959	5,416	27,435	
Hardwood types:					
Bigleaf maple	206	16	12	233	89
Black cottonwood	133	0	0	133	101
Oregon ash	0	0	95	95	100
Red alder	1,372	2,166	862	4,400	26
Other hardwoods	0	9	0	9	100
Total hardwood types	1,711	2,191	969	4,871	
Nonstocked	0	9	0	9	100
Total	10,771	15,158	6,386	32,315	
SE for total (%)	12	12	22	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 17a—Estimated net volume of trees on nonnational forest timberland by class of timber and species group, western Washington, January 1, 2001

Class of timber	Softwood species	Hardwood species	All species	
			Total	SE
	– – – – *Million cubic feet* – – – –			*%*
Growing-stock trees:				
Sawtimber trees-				
Saw-log portion	19,985	3,297	23,281	4
Upper stem portion	696	336	1,032	5
Total, sawtimber	20,681	3,633	24,314	
Poletimber trees	2,159	1,186	3,345	5
All growing-stock trees	22,840	4,818	27,658	
Cull trees:				
Sound cull	6	66	72	29
Rotten cull	73	39	112	29
Total, cull trees	79	104	184	
All timber	22,919	4,923	27,842	
SE for total (%)	4	8	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes live trees 5.0 inches in d.b.h. and larger; sound cull includes trees of noncommercial species.

Table 17b—Estimated net volume of trees on nonnational forest timberland by class of timber and species group, Puget Sound, January 1, 2001

Class of timber	Softwood species	Hardwood species	All species	
			Total	SE
	– – – – *Million cubic feet* – – – –			*%*
Growing-stock trees:				
Sawtimber trees-				
Saw-log portion	6,756	1,638	8,394	7
Upper stem portion	230	160	390	8
Total, sawtimber	6,986	1,798	8,784	
Poletimber trees	618	475	1,093	10
All growing-stock trees	7,603	2,273	9,877	
Cull trees:				
Sound cull	2	26	27	42
Rotten cull	19	21	40	28
Total, cull trees	21	47	68	
All timber	7,624	2,320	9,944	
SE for total (%)	8	12	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes live trees 5.0 inches in d.b.h. and larger; sound cull includes trees of noncommercial species.

Table 17c—Estimated net volume of trees on nonnational forest timberland by class of timber and species group, Olympic Peninsula, January 1, 2001

Class of timber	Softwood species	Hardwood species	All species	
			Total	SE
	– – – – Million cubic feet – – – –			*%*
Growing-stock trees:				
Sawtimber trees-				
Saw-log portion	6,918	802	7,720	8
Upper stem portion	243	97	340	7
Total, sawtimber	7,161	899	8,060	
Poletimber trees	780	399	1,179	10
All growing-stock trees	7,942	1,298	9,239	
Cull trees:				
Sound cull	5	29	34	48
Rotten cull	46	6	51	57
Total, cull trees	51	35	85	
All timber	7,992	1,332	9,325	
SE for total (%)	8	14	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes live trees 5.0 inches in d.b.h. and larger; sound cull includes trees of noncommercial species.

Table 17d—Estimated net volume of trees on nonnational forest timberland by class of timber and species group, southwest Washington, January 1, 2001

Class of timber	Softwood species	Hardwood species	All species	
			Total	SE
	– – – – *Million cubic feet* – – – –			%
Growing-stock trees:				
Sawtimber trees-				
Saw-log portion	6,311	857	7,167	7
Upper stem portion	223	79	302	8
Total, sawtimber	6,534	936	7,469	
Poletimber trees	761	312	1,073	9
All growing-stock trees	7,295	1,247	8,542	
Cull trees:				
Sound cull	0	11	11	65
Rotten cull	8	12	20	38
Total, cull trees	8	23	31	
All timber	7,303	1,270	8,573	
SE for total (%)	7	18	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500,000 cubic feet found.

Includes live trees 5.0 inches in d.b.h. and larger; sound cull includes trees of noncommercial species.

Table 18a—Estimated current net annual volume growth of growing-stock trees on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	146,524	266,474	92,029	505,027	7
Lodgepole pine	0	0	357	357	100
Noble fir	0	1,248	0	1,248	100
Pacific silver fir	10,617	8,150	66	18,833	39
Sitka spruce	0	8,848	545	9,393	59
Western hemlock	54,189	150,274	20,466	224,928	11
Western redcedar	7,623	12,351	16,341	36,315	25
Western white pine	0	0	225	225	100
Total softwood types	218,952	447,345	130,029	796,326	
Hardwood types:					
Bigleaf maple	2,708	6,927	8,530	18,165	27
Black cottonwood	517	3,120	0	3,638	87
Cherry	0	650	2,061	2,711	80
Oregon ash	733	560	162	1,454	65
Oregon white oak	0	0	717	717	100
Red alder	19,731	32,439	33,203	85,372	16
Western paper birch	0	0	654	654	100
Willow	0	292	708	999	59
Other hardwoods	0	2,163	392	2,555	86
Total hardwood types	23,689	46,151	46,426	116,266	
Nonstocked	808	439	310	1,558	60
Total	243,450	493,935	176,764	914,149	
SE for total (%)	8	5	9	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 18b—Estimated current net annual volume growth of growing-stock trees on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	43,481	47,854	24,459	115,794	14
Pacific silver fir	9,253	4,297	66	13,616	47
Western hemlock	18,576	36,522	1,394	56,492	20
Western redcedar	7,346	2,741	11,249	21,337	34
Total softwood types	78,656	91,414	37,168	207,238	
Hardwood types:					
Bigleaf maple	-8	967	5,625	6,584	43
Cherry	0	650	0	650	100
Oregon ash	733	0	207	940	81
Red alder	3,924	7,466	23,570	34,960	24
Western paper birch	0	0	654	654	100
Willow	0	0	415	415	100
Total hardwood types	4,648	9,083	30,471	44,202	
Nonstocked	0	-32	310	278	100
Total	83,305	100,464	67,949	251,718	
SE for total (%)	14	12	13	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 18c—Estimated current net annual volume growth of growing-stock trees on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	57,510	74,357	26,525	158,393	12
Lodgepole pine	0	0	357	357	100
Pacific silver fir	1,186	0	0	1,186	100
Sitka spruce	0	4,399	545	4,944	90
Western hemlock	20,034	47,952	16,510	84,496	18
Western redcedar	276	9,430	5,092	14,798	38
Western white pine	0	0	225	225	100
Total softwood types	79,007	136,139	49,254	264,400	
Hardwood types:					
Bigleaf maple	1,915	3,561	1,338	6,813	40
Black cottonwood	0	3,120	0	3,120	100
Oregon ash	0	560	0	560	100
Oregon white oak	0	0	717	717	100
Red alder	11,029	8,610	4,551	24,190	34
Willow	0	0	293	293	100
Total hardwood types	12,944	15,851	6,898	35,693	
Nonstocked	808	340	0	1,149	77
Total	92,759	152,331	56,152	301,242	
SE for total (%)	14	9	15	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 18d—Estimated current net annual volume growth of growing-stock trees on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners Total	All owners SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	45,534	144,262	41,045	230,841	10
Noble fir	0	1,248	0	1,248	100
Pacific silver fir	177	3,854	0	4,031	85
Sitka spruce	0	4,449	0	4,449	73
Western hemlock	15,579	65,800	2,562	83,940	20
Western redcedar	0	180	0	180	100
Total softwood types	61,289	219,792	43,606	324,688	
Hardwood types:					
Bigleaf maple	801	2,399	1,568	4,768	62
Black cottonwood	517	0	0	517	100
Cherry	0	0	2,061	2,061	100
Oregon ash	0	0	-46	-46	100
Red alder	4,778	16,362	5,082	26,223	25
Willow	0	292	0	292	100
Other hardwoods	0	2,163	392	2,555	86
Total hardwood types	6,097	21,217	9,057	36,370	
Nonstocked	0	131	0	131	100
Total	67,386	241,140	52,663	361,190	
SE for total (%)	14	8	19	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 19a—Estimated net annual volume growth of sawtimber on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	728,815	1,026,854	375,617	2,131,286	7
Lodgepole pine	0	0	1,289	1,289	100
Pacific silver fir	30,218	28,803	236	59,258	46
Sitka spruce	0	46,611	2,798	49,409	62
Western hemlock	319,966	705,102	117,096	1,142,164	12
Western redcedar	50,155	88,674	78,583	217,412	28
Western white pine	0	0	795	795	100
Total softwood types	1,129,153	1,896,045	576,416	3,601,614	
Hardwood types:					
Bigleaf maple	29,074	10,005	64,957	104,036	32
Black cottonwood	3,864	18,474	0	22,338	85
Cherry	0	1,212	0	1,212	100
Oregon ash	4,361	1,041	1,043	6,445	72
Oregon white oak	0	0	825	825	100
Red alder	50,906	133,305	258,466	442,677	19
Western paper birch	0	0	3,339	3,339	100
Willow	0	0	4,600	4,600	76
Other hardwoods	0	2,028	0	2,028	100
Total hardwood types	88,206	166,065	333,230	587,501	
Nonstocked	0	1,503	1,279	2,782	61
Total	1,217,359	2,063,613	910,925	4,191,897	
SE for total (%)	8	6	11	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 19b—Estimated net annual volume growth of sawtimber on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	241,400	191,237	109,303	541,940	14
Pacific silver fir	25,307	10,865	236	36,409	57
Western hemlock	113,673	153,460	5,535	272,668	22
Western redcedar	48,689	16,266	62,016	126,971	33
Total softwood types	429,069	371,829	177,089	977,987	
Hardwood types:					
Bigleaf maple	8,698	0	52,823	61,522	45
Cherry	0	1,212	0	1,212	100
Oregon ash	4,361	0	1,020	5,382	84
Red alder	9,215	34,097	177,902	221,213	32
Western paper birch	0	0	3,339	3,339	100
Willow	0	0	3,213	3,213	100
Total hardwood types	22,274	35,309	238,297	295,880	
Nonstocked	0	0	1,279	1,279	100
Total	451,343	407,138	416,666	1,275,147	
SE for total (%)	14	12	17	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 19c—Estimated net annual volume growth of sawtimber on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	272,680	233,051	113,722	619,453	15
Lodgepole pine	0	0	1,289	1,289	100
Pacific silver fir	4,910	0	0	4,910	100
Sitka spruce	0	27,399	2,798	30,197	91
Western hemlock	113,268	251,734	102,403	467,405	19
Western redcedar	1,466	71,408	16,567	89,440	49
Western white pine	0	0	795	795	100
Total softwood types	392,325	583,592	237,575	1,213,491	
Hardwood types:					
Bigleaf maple	15,639	7,346	10,767	33,752	54
Black cottonwood	0	18,474	0	18,474	100
Oregon ash	0	1,041	0	1,041	100
Oregon white oak	0	0	825	825	100
Red alder	21,702	44,789	41,539	108,030	29
Willow	0	0	1,387	1,387	100
Total hardwood types	37,341	71,650	54,518	163,509	
Nonstocked	0	1,008	0	1,008	100
Total	429,666	656,249	292,093	1,378,009	
SE for total (%)	14	12	18	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 19d—Estimated net annual volume growth of sawtimber on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	214,735	602,566	152,592	969,893	11
Pacific silver fir	0	17,938	0	17,938	97
Sitka spruce	0	19,212	0	19,212	71
Western hemlock	93,025	299,908	9,159	402,091	21
Western redcedar	0	1,001	0	1,001	100
Total softwood types	307,760	940,625	161,751	1,410,135	
Hardwood types:					
Bigleaf maple	4,737	2,659	1,366	8,762	64
Black cottonwood	3,864	0	0	3,864	101
Oregon ash	0	0	23	23	100
Red alder	19,989	54,419	39,026	113,434	31
Other hardwoods	0	2,028	0	2,028	100
Total hardwood types	28,590	59,106	40,415	128,111	
Nonstocked	0	495	0	495	100
Total	336,350	1,000,225	202,166	1,538,741	
SE for total (%)	13	9	21	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 20a—Estimated average annual mortality volume of growing-stock trees on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	Thousand cubic feet				*%*
Softwood types:					
Douglas-fir	55,064	41,176	25,239	121,479	9
Lodgepole pine	0	0	133	133	100
Noble fir	0	18	0	18	100
Pacific silver fir	2,680	423	7	3,111	52
Sitka spruce	0	1,947	6	1,952	74
Western hemlock	36,352	33,499	7,750	77,601	13
Western redcedar	4,763	2,512	4,145	11,420	30
Western white pine	0	0	25	25	100
Total softwood types	98,859	79,575	37,305	215,738	
Hardwood types:					
Bigleaf maple	7,347	1,134	5,992	14,472	33
Black cottonwood	324	757	0	1,081	76
Cherry	0	42	44	86	71
Oregon ash	492	908	930	2,330	53
Oregon white oak	0	0	358	358	100
Red alder	16,273	19,453	21,594	57,320	15
Western paper birch	0	0	612	612	100
Willow	0	10	56	66	63
Other hardwoods	0	179	27	206	88
Total hardwood types	24,436	22,482	29,613	76,531	
Nonstocked	4	107	41	151	68
Total	123,299	102,164	66,958	292,420	
SE for total (%)	8	8	10	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 20b—Estimated average annual mortality volume of growing-stock trees on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	21,696	11,936	9,542	43,175	17
Pacific silver fir	1,664	210	7	1,881	66
Western hemlock	6,823	8,378	464	15,664	23
Western redcedar	4,308	1,355	2,979	8,642	38
Total softwood types	34,490	21,879	12,992	69,361	
Hardwood types:					
Bigleaf maple	6,073	6	4,750	10,828	41
Cherry	0	42	0	42	100
Oregon ash	492	0	511	1,003	71
Red alder	4,508	6,321	14,224	25,053	21
Western paper birch	0	0	612	612	100
Willow	0	0	22	22	100
Total hardwood types	11,072	6,368	20,119	37,558	
Nonstocked	0	92	41	134	76
Total	45,562	28,340	33,151	107,053	
SE for total (%)	13	15	14	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 20c—Estimated average annual mortality volume of growing-stock trees on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	18,367	12,562	6,567	37,496	17
Lodgepole pine	0	0	133	133	100
Pacific silver fir	1,009	0	0	1,009	100
Sitka spruce	0	1,393	6	1,399	100
Western hemlock	19,372	14,704	5,923	40,000	21
Western redcedar	455	998	1,166	2,619	34
Western white pine	0	0	25	25	100
Total softwood types	39,203	29,657	13,820	82,680	
Hardwood types:					
Bigleaf maple	946	820	1,048	2,814	52
Black cottonwood	0	757	0	757	100
Oregon ash	0	908	0	908	100
Oregon white oak	0	0	358	358	100
Red alder	4,372	4,914	4,747	14,032	29
Willow	0	0	34	34	100
Total hardwood types	5,318	7,399	6,186	18,903	
Nonstocked	4	14	0	18	83
Total	44,524	37,070	20,007	101,601	
SE for total (%)	14	15	19	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 20d—Estimated average annual mortality volume of growing-stock trees on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – – – – Thousand cubic feet – – – – – – –				*%*
Softwood types:					
Douglas-fir	15,001	16,678	9,130	40,808	14
Noble fir	0	18	0	18	100
Pacific silver fir	8	213	0	221	86
Sitka spruce	0	553	0	553	72
Western hemlock	10,157	10,418	1,363	21,938	24
Western redcedar	0	159	0	159	100
Total softwood types	25,166	28,039	10,492	63,697	
Hardwood types:					
Bigleaf maple	328	308	194	830	59
Black cottonwood	324	0	0	324	101
Cherry	0	0	44	44	100
Oregon ash	0	0	419	419	100
Red alder	7,394	8,218	2,623	18,235	28
Willow	0	10	0	10	100
Other hardwoods	0	179	27	206	88
Total hardwood types	8,046	8,715	3,308	20,070	
Nonstocked	0	0	0	0	0
Total	33,212	36,754	13,800	83,767	
SE for total (%)	18	12	19	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 21a—Estimated average annual mortality volume of sawtimber on nonnational forest timberland by forest type and owner class, western Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – – Thousand board feet, Scribner rule – – – –				*%*
Softwood types:					
Douglas-fir	208,327	137,749	89,926	436,001	11
Lodgepole pine	0	0	471	471	100
Pacific silver fir	10,392	554	17	10,964	63
Sitka spruce	0	7,759	26	7,785	79
Western hemlock	150,008	113,978	25,280	289,266	15
Western redcedar	13,187	7,690	17,124	38,000	32
Western white pine	0	0	56	56	100
Total softwood types	381,915	267,729	132,900	782,544	
Hardwood types:					
Bigleaf maple	28,680	2,351	23,611	54,642	37
Black cottonwood	1,979	3,772	0	5,751	74
Cherry	0	42	0	42	100
Oregon ash	1,537	2,997	4,153	8,687	52
Oregon white oak	0	0	421	421	100
Red alder	55,486	58,863	74,139	188,488	16
Western paper birch	0	0	2,070	2,070	100
Willow	0	0	96	96	83
Other hardwoods	0	50	0	50	100
Total hardwood types	87,682	68,076	104,489	260,247	
Nonstocked	0	24	145	169	87
Total	469,596	335,830	237,534	1,042,960	
SE for total (%)	10	10	11	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 21b—Estimated average annual mortality volume of sawtimber on nonnational forest timberland by forest type and owner class, Puget Sound, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule– – –				*%*
Softwood types:					
Douglas-fir	82,161	41,265	33,123	156,549	20
Pacific silver fir	5,634	215	17	5,866	85
Western hemlock	21,719	27,495	1,846	51,060	25
Western redcedar	11,195	4,497	13,664	29,356	40
Total softwood types	120,709	73,472	48,651	242,832	
Hardwood types:					
Bigleaf maple	26,068	0	20,023	46,091	43
Cherry	0	42	0	42	100
Oregon ash	1,537	0	2,225	3,762	72
Red alder	13,827	16,538	50,194	80,559	22
Western paper birch	0	0	2,070	2,070	100
Willow	0	0	18	18	100
Total hardwood types	41,431	16,580	74,530	132,542	
Nonstocked	0	0	145	145	100
Total	162,140	90,052	123,326	375,518	
SE for total (%)	17	18	15	10	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 21c—Estimated average annual mortality volume of sawtimber on nonnational forest timberland by forest type and owner class, Olympic Peninsula, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule– – –				*%*
Softwood types:					
Douglas-fir	67,678	45,619	23,132	136,429	20
Lodgepole pine	0	0	471	471	100
Pacific silver fir	4,758	0	0	4,758	100
Sitka spruce	0	5,954	26	5,980	100
Western hemlock	88,398	52,728	17,535	158,662	23
Western redcedar	1,992	2,404	3,460	7,856	39
Western white pine	0	0	56	56	100
Total softwood types	162,827	106,705	44,679	314,212	
Hardwood types:					
Bigleaf maple	1,026	2,255	3,515	6,796	58
Black cottonwood	0	3,772	0	3,772	100
Oregon ash	0	2,997	0	2,997	100
Oregon white oak	0	0	421	421	100
Red alder	11,544	16,169	15,616	43,329	34
Willow	0	0	77	77	100
Total hardwood types	12,570	25,194	19,629	57,393	
Nonstocked	0	24	0	24	100
Total	175,397	131,924	64,308	371,629	
SE for total (%)	16	18	24	10	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 21d—Estimated average annual mortality volume of sawtimber on nonnational forest timberland by forest type and owner class, southwest Washington, January 1, 2001

Forest type	Other public	Forest industry	Other private	All owners	
				Total	SE
	– – – Thousand board feet, Scribner rule – – –				*%*
Softwood types:					
Douglas-fir	58,488	50,864	33,671	143,023	17
Pacific silver fir	0	339	0	339	94
Sitka spruce	0	1,805	0	1,805	75
Western hemlock	39,890	33,755	5,899	79,544	26
Western redcedar	0	788	0	788	100
Total softwood types	98,378	87,552	39,570	225,500	
Hardwood types:					
Bigleaf maple	1,586	96	73	1,755	91
Black cottonwood	1,979	0	0	1,979	101
Oregon ash	0	0	1,928	1,928	100
Red alder	30,116	26,155	8,329	64,600	33
Other hardwoods	0	50	0	50	100
Total hardwood types	33,681	26,302	10,330	70,313	
Nonstocked	0	0	0	0	0
Total	132,059	113,854	49,900	295,813	
SE for total (%)	20	16	23	11	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 22a—Estimated area, net volume of growing stock, and net volume of sawtimber on nonnational forest timberland, by stand age and owner class, western Washington, January 1, 2001

Stand age	Other public			Forest industry			Other private			All owners		
	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume
	Thousand acres	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*
0-9	55	16	77	374	16	41	119	22	56	548	54	175
10-19	139	99	54	688	136	289	402	142	428	1,229	378	770
20-29	211	513	736	859	1,351	1,849	163	226	165	1,232	2,090	2,750
30-39	116	565	1,810	359	1,384	3,929	190	705	1,956	665	2,654	7,695
40-49	189	1,281	4,900	446	2,743	10,109	177	618	2,027	813	4,642	17,036
50-59	290	1,645	6,469	288	1,921	7,957	122	632	2,576	700	4,198	17,003
60-69	269	2,230	9,508	172	1,233	4,933	230	1,187	4,706	671	4,650	19,147
70-79	203	1,965	9,089	97	672	2,999	154	1,191	5,595	453	3,828	17,683
80-89	39	441	2,106	33	374	1,800	166	978	4,129	238	1,794	8,035
90-99	30	423	2,047	7	85	290	52	331	1,581	88	840	3,918
100-109	6	62	240	64	672	2,914	35	137	638	104	871	3,792
110-119	0	0	0	0	0	0	0	0	0	0	0	0
120-129	21	139	622	0	0	0	16	104	295	37	243	917
130-139	42	462	2,150	6	44	211	14	75	279	62	581	2,640
140-149	0	0	0	0	0	0	21	262	1,316	21	262	1,316
150-159	0	0	0	0	0	0	0	0	0	0	0	0
160-169	12	149	417	0	0	0	0	0	0	12	149	417
170-179	0	0	0	0	0	0	0	0	0	0	0	0
180-189	13	134	665	0	0	0	0	0	0	13	134	665
190-199	0	0	0	0	0	0	0	0	0	0	0	0
200-299	13	229	1,134	0	0	0	12	57	196	25	286	1,330
300+	0	0	0	0	0	0	0	0	0	0	0	0
Nonstocked	12	2	0	93	2	0	27	0	0	132	4	0
Total, all ages	1,660	10,355	42,025	3,486	10,634	37,319	1,898	6,668	25,943	7,043	27,657	105,288
SE for total (%)	3	6	7	2	7	9	5	9	10	1	4	5

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 acres, 500,000 cubic feet, or 500,000 board feet found.

Growing-stock volume includes noncull trees of commercial species 5.0 inches d.b.h. and larger.

Sawtimber volume is in Scribner rule, and includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 22b—Estimated area, net volume of growing stock, and net volume of sawtimber on nonnational forest timberland, by stand age and owner class, Puget Sound, January 1, 2001

Stand age	Other public			Forest industry			Other private			All owners		
	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume
	Thousand acres	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*
0-9	13	9	48	58	0	0	28	10	31	100	19	79
10-19	55	49	0	202	17	51	101	87	220	358	153	271
20-29	64	74	105	182	246	343	31	9	3	277	329	450
30-39	61	217	600	78	214	630	86	231	591	226	662	1,821
40-49	27	189	601	143	756	2,377	72	261	1,029	242	1,207	4,007
50-59	124	750	2,681	61	368	1,246	53	241	907	238	1,359	4,834
60-69	123	867	3,643	46	473	2,055	144	738	3,025	313	2,078	8,723
70-79	116	1,305	5,922	24	156	615	89	655	3,095	230	2,116	9,632
80-89	0	0	0	0	0	0	95	648	2,919	95	648	2,919
90-99	8	97	418	1	27	94	29	123	529	38	247	1,041
100-109	6	62	240	43	420	1,645	0	0	0	48	482	1,886
110-119	0	0	0	0	0	0	0	0	0	0	0	0
120-129	10	60	263	0	0	0	16	104	295	26	164	558
130-139	20	218	998	6	44	211	0	0	0	25	262	1,209
140-149	0	0	0	0	0	0	0	0	0	0	0	0
150-159	0	0	0	0	0	0	0	0	0	0	0	0
160-169	12	149	417	0	0	0	0	0	0	12	149	417
170-179	0	0	0	0	0	0	0	0	0	0	0	0
180-189	0	0	0	0	0	0	0	0	0	0	0	0
190-199	0	0	0	0	0	0	0	0	0	0	0	0
200-299	0	0	0	0	0	0	0	0	0	0	0	0
300+	0	0	0	0	0	0	0	0	0	0	0	0
Nonstocked	0	0	0	19	2	0	17	0	0	35	2	0
Total, all ages	639	4,046	15,936	862	2,724	9,267	763	3,106	12,644	2,264	9,876	37,847
SE for total (%)	7	10	11	6	13	16	9	13	14	3	6	7

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 acres, 500,000 cubic feet, or 500,000 board feet found.

Growing-stock volume includes noncull trees of commercial species 5.0 inches d.b.h. and larger.

Sawtimber volume is in Scribner rule, and includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 22c—Estimated area, net volume of growing stock, and net volume of sawtimber on nonnational forest timberland, by stand age and owner class, Olympic Peninsula, January 1, 2001

	Other public			Forest industry			Other private			All owners		
Stand age	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume
	Thousand acres	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*
0-9	26	1	0	110	0	0	29	0	0	165	1	0
10-19	31	15	28	263	32	7	150	53	208	444	100	243
20-29	112	345	430	322	428	548	54	45	39	488	818	1,017
30-39	22	137	424	99	397	1,177	81	347	911	202	881	2,512
40-49	79	475	1,943	85	569	2,258	83	280	699	247	1,325	4,900
50-59	73	268	1,035	115	603	2,310	21	79	256	209	950	3,600
60-69	105	975	4,112	72	581	2,356	45	211	658	222	1,768	7,125
70-79	68	571	2,785	42	305	1,350	43	294	1,241	153	1,170	5,376
80-89	29	319	1,549	23	305	1,424	31	187	705	84	811	3,678
90-99	12	184	924	5	58	196	11	64	283	28	306	1,404
100-109	0	0	0	22	252	1,268	14	27	123	36	279	1,391
110-119	0	0	0	0	0	0	0	0	0	0	0	0
120-129	0	0	0	0	0	0	0	0	0	0	0	0
130-139	13	70	291	0	0	0	14	75	279	27	145	570
140-149	0	0	0	0	0	0	21	262	1,316	21	262	1,316
150-159	0	0	0	0	0	0	0	0	0	0	0	0
160-169	0	0	0	0	0	0	0	0	0	0	0	0
170-179	0	0	0	0	0	0	0	0	0	0	0	0
180-189	13	134	665	0	0	0	0	0	0	13	134	665
190-199	0	0	0	0	0	0	0	0	0	0	0	0
200-299	13	229	1,134	0	0	0	12	57	196	25	286	1,330
300+	0	0	0	0	0	0	0	0	0	0	0	0
Nonstocked	12	2	0	49	0	0	0	0	0	61	2	0
Total, all ages	606	3,724	15,319	1,206	3,532	12,894	610	1,984	6,914	2,423	9,239	35,126
SE for total (%)	4	9	11	4	13	17	8	17	22	2	7	9

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 acres, 500,000 cubic feet, or 500,000 board feet found.

Growing-stock volume includes noncull trees of commercial species 5.0 inches d.b.h. and larger

Sawtimber volume is in Scribner rule, and includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 22d—Estimated area, net volume of growing stock, and net volume of sawtimber on nonnational forest timberland, by stand age and owner class, southwest Washington, January 1, 2001

Stand age	Other public			Forest industry			Other private			All owners		
	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume	Area	Growing-stock volume	Sawtimber volume
	Thousand acres	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*	*Thousand acres*	*Million cubic feet*	*Million board feet*
0-9	16	6	29	206	16	41	61	12	25	282	34	96
10-19	53	36	26	224	87	230	150	2	0	427	124	256
20-29	35	95	201	355	678	958	78	172	123	468	944	1,282
30-39	33	211	786	181	772	2,122	22	127	454	237	1,111	3,362
40-49	84	617	2,357	219	1,418	5,473	22	76	299	324	2,110	8,129
50-59	93	627	2,754	113	949	4,402	47	312	1,413	253	1,889	8,569
60-69	41	388	1,754	54	179	522	40	237	1,023	135	804	3,299
70-79	19	89	383	31	212	1,034	21	243	1,259	71	543	2,675
80-89	10	122	558	9	70	376	40	143	505	59	335	1,438
90-99	10	143	704	0	0	0	12	144	770	22	287	1,474
100-109	0	0	0	0	0	0	20	110	515	20	110	515
110-119	0	0	0	0	0	0	0	0	0	0	0	0
120-129	11	79	359	0	0	0	0	0	0	11	79	359
130-139	10	174	861	0	0	0	0	0	0	10	174	861
140-149	0	0	0	0	0	0	0	0	0	0	0	0
150-159	0	0	0	0	0	0	0	0	0	0	0	0
160-169	0	0	0	0	0	0	0	0	0	0	0	0
170-179	0	0	0	0	0	0	0	0	0	0	0	0
180-189	0	0	0	0	0	0	0	0	0	0	0	0
190-199	0	0	0	0	0	0	0	0	0	0	0	0
200-299	0	0	0	0	0	0	0	0	0	0	0	0
300+	0	0	0	0	0	0	0	0	0	0	0	0
Nonstocked	0	0	0	26	0	0	10	0	0	36	0	0
Total, all ages	414	2,585	10,771	1,418	4,379	15,158	524	1,578	6,386	2,356	8,542	32,315
SE for total (%)	7	11	12	4	9	12	10	18	22	3	6	8

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 acres, 500,000 cubic feet, or 500,000 board feet found.

Growing-stock volume includes noncull trees of commercial species 5.0 inches d.b.h. and larger.

Sawtimber volume is in Scribner rule, and includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Nonstocked areas were less than 10 percent stocked with live trees.

Table 23a—Estimated gross annual growth, average annual mortality, and average annual removals of growing stock on nonnational forest timberland, by species and owner class, western Washington, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand cubic feet											
Softwoods:												
Douglas-fir	189,926	47,393	65,686	279,872	33,592	305,321	97,594	19,874	75,935	567,392	100,859	446,942
Engelmann spruce	187	1	0	0	0	0	0	0	0	187	1	0
Grand fir	241	26	0	1,791	176	0	3,526	391	1,709	5,559	593	1,709
Lodgepole pine	269	124	0	72	27	2,433	1,340	295	0	1,681	446	2,433
Noble fir	568	232	0	5,760	219	663	0	0	0	6,328	452	663
Pacific silver fir	14,498	1,807	265	12,734	983	32,903	3,233	532	0	30,466	3,322	33,169
Sitka spruce	2,051	303	392	19,653	2,431	9,385	2,316	220	21,369	24,021	2,954	31,146
Western hemlock	96,888	38,864	15,667	188,116	34,512	273,917	34,203	9,055	38,421	319,207	82,431	328,005
Western redcedar	15,066	1,973	0	18,589	1,834	24,467	26,927	2,207	31,668	60,582	6,014	56,135
Western white pine	0	0	0	138	11	0	2,635	263	1,611	2,772	274	1,611
Total softwoods	319,694	90,723	82,009	526,726	73,786	649,090	171,775	32,836	170,713	1,018,195	197,344	901,812
Hardwoods:												
Bigleaf maple	9,390	9,960	1,580	6,958	1,938	5,547	14,797	6,501	5,774	31,145	18,398	12,901
Black cottonwood	1,586	575	2,184	5,987	2,504	558	3,236	1,393	2,398	10,809	4,472	5,141
Cherry	1,340	646	656	1,957	400	216	419	284	1,942	3,717	1,331	2,814
Oregon ash	676	312	0	977	498	0	1,233	1,115	0	2,885	1,925	0
Oregon white oak	0	0	0	0	0	0	974	356	0	974	356	0
Pacific madrone	89	94	780	65	621	0	337	281	0	491	996	780
Red alder	33,974	20,989	9,166	53,009	22,100	66,262	50,397	23,920	33,119	137,380	67,009	108,548
Western paper birch	0	0	0	420	317	624	554	273	0	974	589	624
Total hardwoods	47,054	32,576	14,367	69,373	28,378	73,207	71,947	34,123	43,233	188,374	95,076	130,807
All species	366,748	123,299	96,376	596,099	102,164	722,297	243,722	66,958	213,946	1,206,569	292,420	1,032,619
SE for total (%)	6	8	39	5	8	11	8	10	25	3	5	10

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 23b—Estimated gross annual growth, average annual mortality, and average annual removals of growing stock on nonnational forest timberland, by species and owner class, Puget Sound, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand cubic feet											
Softwoods:												
Douglas-fir	55,481	18,218	44,435	52,290	8,677	36,835	29,423	8,414	33,170	137,193	35,309	114,440
Engelmann spruce	187	1	0	0	0	0	0	0	0	187	1	0
Grand fir	241	26	0	757	46	0	1,135	103	0	2,133	175	0
Lodgepole pine	0	0	0	72	27	0	865	78	0	937	105	0
Noble fir	568	232	0	1,783	87	0	0	0	0	2,350	320	0
Pacific silver fir	10,936	1,124	265	7,906	598	10,710	73	7	0	18,916	1,729	10,975
Sitka spruce	134	2	0	789	130	0	0	0	790	924	131	790
Western hemlock	30,121	9,286	6,754	40,140	9,063	62,721	7,841	1,860	1,775	78,102	20,209	71,250
Western redcedar	10,877	1,613	0	7,076	954	7,343	14,344	1,034	476	32,296	3,602	7,819
Western white pine	0	0	0	138	11	0	2,500	241	1,611	2,637	252	1,611
Total softwoods	108,544	30,503	51,454	110,951	19,593	117,608	56,181	11,737	37,823	275,676	61,832	206,886
Hardwoods:												
Bigleaf maple	6,331	8,064	0	1,045	161	3,591	9,084	3,867	461	16,460	12,093	4,052
Black cottonwood	581	193	2,184	3,695	1,617	558	3,217	1,378	698	7,493	3,188	3,441
Cherry	261	86	0	1,221	179	216	419	284	561	1,901	550	777
Oregon ash	610	238	0	0	0	0	544	497	0	1,154	734	0
Pacific madrone	89	94	780	65	621	0	54	191	0	207	905	780
Red alder	12,452	6,384	1,749	11,407	5,852	25,462	31,047	14,925	19,052	54,906	27,161	46,263
Western paper birch	0	0	0	420	317	624	554	273	0	974	589	624
Total hardwoods	20,322	15,060	4,714	17,853	8,747	30,450	44,920	21,414	20,772	83,095	45,221	55,936
All species	128,867	45,562	56,168	128,804	28,340	148,059	101,100	33,151	58,595	358,771	107,053	262,822
SE for total (%)	10	13	62	10	15	23	12	14	28	6	8	19

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 23c—Estimated gross annual growth, average annual mortality, and average annual removals of growing stock on nonnational forest timberland, by species and owner class, Olympic Peninsula, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand cubic feet											
Softwoods:												
Douglas-fir	73,264	15,378	17,466	81,040	10,657	140,867	22,560	4,978	19,470	176,864	31,014	177,803
Grand fir	0	0	0	223	24	0	1,374	95	968	1,597	119	968
Lodgepole pine	269	124	0	0	0	2,433	427	143	0	696	267	2,433
Pacific silver fir	2,575	495	0	1,197	58	10,640	3,160	524	0	6,932	1,078	10,640
Sitka spruce	1,799	284	0	14,259	1,945	8,342	2,316	220	20,022	18,375	2,449	28,364
Western hemlock	44,559	20,659	6,896	62,121	13,792	128,473	22,786	5,708	30,734	129,466	40,159	166,104
Western redcedar	2,908	243	0	9,794	650	11,236	8,985	804	27,760	21,686	1,697	38,996
Western white pine	0	0	0	0	0	0	135	22	0	135	22	0
Total softwoods	125,374	37,184	24,362	168,634	27,127	301,991	61,743	12,495	98,954	355,751	76,806	425,308
Hardwoods:												
Bigleaf maple	1,565	826	1,580	4,129	1,468	697	2,631	1,320	2,467	8,326	3,614	4,744
Black cottonwood	0	0	0	2,221	856	0	18	15	0	2,239	871	0
Cherry	907	448	656	149	46	0	0	0	658	1,056	493	1,314
Oregon ash	66	74	0	977	498	0	162	65	0	1,204	638	0
Oregon white oak	0	0	0	0	0	0	974	356	0	974	356	0
Pacific madrone	0	0	0	0	0	0	283	91	0	283	91	0
Red alder	9,371	5,992	1,568	13,290	7,075	19,332	10,347	5,666	8,506	33,007	18,732	29,406
Total hardwoods	11,909	7,340	3,804	20,766	9,943	20,029	14,416	7,512	11,630	47,091	24,795	35,464
All species	137,283	44,524	28,167	189,401	37,070	322,021	76,159	20,007	110,584	402,842	101,601	460,771
SE for total (%)	11	14	47	9	15	18	14	19	44	6	9	16

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 23d—Estimated gross annual growth, average annual mortality, and average annual removals of growing stock on nonnational forest timberland, by species and owner class, southwest Washington, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand cubic feet											
Softwoods:												
Douglas-fir	61,181	13,797	3,785	146,542	14,258	127,619	45,611	6,482	23,294	253,335	34,536	154,699
Grand fir	0	0	0	811	107	0	1,018	193	741	1,828	300	741
Lodgepole pine	0	0	0	0	0	0	48	74	0	48	74	0
Noble fir	0	0	0	3,977	132	663	0	0	0	3,977	132	663
Pacific silver fir	986	188	0	3,631	326	11,553	0	0	0	4,617	514	11,553
Sitka spruce	118	17	392	4,605	357	1,043	0	0	557	4,723	373	1,992
Western hemlock	22,209	8,918	2,016	85,855	11,658	82,724	3,576	1,487	5,911	111,639	22,063	90,651
Western redcedar	1,282	116	0	1,720	230	5,888	3,598	369	3,432	6,600	715	9,320
Total softwoods	85,776	23,036	6,192	247,140	27,066	229,490	53,851	8,604	33,936	386,768	58,707	269,619
Hardwoods:												
Bigleaf maple	1,494	1,069	0	1,783	308	1,259	3,082	1,314	2,846	6,359	2,691	4,105
Black cottonwood	1,005	382	0	71	31	0	0	0	1,701	1,076	413	1,701
Cherry	172	112	0	587	175	0	0	0	723	760	288	723
Oregon ash	0	0	0	0	0	0	527	553	0	527	553	0
Red alder	12,151	8,613	5,849	28,312	9,173	21,468	9,003	3,330	5,562	49,467	21,116	32,879
Total hardwoods	14,822	10,176	5,849	30,754	9,688	22,727	12,612	5,196	10,831	58,189	25,060	39,408
All species	100,598	33,212	12,042	277,894	36,754	252,218	66,463	13,800	44,767	444,956	83,767	309,026
SE for total (%)	10	18	67	7	12	19	17	19	34	6	9	16

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger.

Table 24a—Estimated gross annual growth, average annual mortality, and average annual removals of sawtimber on nonnational forest timberland, by species and owner class, western Washington, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand board feet, Scribner rule											
Softwoods:												
Douglas-fir	919,285	192,547	328,446	1,041,849	116,746	1,420,978	411,208	78,793	338,017	2,372,342	388,085	2,087,442
Engelmann spruce	963	3	0	0	0	0	0	0	0	963	3	0
Grand fir	1,431	120	0	11,189	923	0	18,317	1,479	8,346	30,936	2,521	8,346
Lodgepole pine	1,285	387	0	239	75	11,014	5,632	980	0	7,156	1,442	11,014
Noble fir	2,899	851	0	7,357	244	3,445	0	0	0	10,255	1,094	3,445
Pacific silver fir	58,439	7,066	0	60,543	2,625	170,104	14,108	2,044	0	133,089	11,735	170,104
Sitka spruce	10,593	1,131	885	99,546	9,777	42,821	10,198	710	130,566	120,337	11,618	174,272
Western hemlock	453,904	154,214	48,775	878,992	115,761	1,171,318	160,001	34,162	189,882	1,492,898	304,137	1,409,975
Western redcedar	59,770	5,201	0	66,568	4,697	83,954	103,504	5,489	125,332	229,842	15,387	209,286
Western white pine	0	0	0	623	39	0	13,466	1,003	6,940	14,089	1,042	6,940
Total softwoods	1,508,569	361,520	378,107	2,166,905	250,886	2,903,635	736,434	124,659	799,083	4,411,908	737,065	4,080,825
Hardwoods:												
Bigleaf maple	49,672	34,534	3,894	20,407	7,627	17,690	86,205	25,646	30,149	156,284	67,807	51,733
Black cottonwood	10,739	3,445	13,318	38,399	13,618	3,290	20,864	7,561	14,624	70,002	24,624	31,232
Cherry	1,532	333	0	2,534	624	0	2,089	989	1,947	6,155	1,946	1,947
Oregon ash	3,347	1,298	0	938	858	0	6,158	4,772	0	10,444	6,928	0
Oregon white oak	0	0	0	0	0	0	953	416	0	953	416	0
Pacific madrone	120	148	0	478	2,742	0	468	118	0	1,067	3,007	0
Red alder	112,976	68,318	31,529	158,818	58,526	260,221	293,379	72,730	118,169	565,173	199,574	409,919
Western paper birch	0	0	0	10,962	950	0	1,910	643	0	12,873	1,593	0
Total hardwoods	178,386	108,077	48,741	232,538	84,944	281,201	412,026	112,874	164,889	822,949	305,895	494,831
All species	1,686,956	469,596	426,848	2,399,443	335,830	3,184,836	1,148,459	237,534	963,972	5,234,857	1,042,960	4,575,656
SE for total (%)	6	10	43	6	10	12	10	11	28	4	6	11

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 24b—Estimated gross annual growth, average annual mortality, and average annual removals of sawtimber on nonnational forest timberland, by species and owner class, Puget Sound, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand board feet, Scribner rule											
Softwoods:												
Douglas-fir	293,228	75,898	224,367	204,190	33,293	164,169	144,573	34,259	129,404	641,990	143,450	517,940
Engelmann spruce	963	3	0	0	0	0	0	0	0	963	3	0
Grand fir	1,431	120	0	4,530	225	0	6,657	523	0	12,618	868	0
Lodgepole pine	0	0	0	239	75	0	3,624	253	0	3,863	328	0
Noble fir	2,899	851	0	2,589	107	0	0	0	0	5,487	958	0
Pacific silver fir	39,200	3,572	0	32,675	1,395	57,571	254	17	0	72,129	4,984	57,571
Sitka spruce	776	9	0	3,725	509	0	0	0	3,365	4,501	518	3,365
Western hemlock	150,724	28,419	18,932	154,938	26,292	235,886	37,138	7,504	7,642	342,801	62,214	262,460
Western redcedar	48,981	4,176	0	30,890	2,650	22,394	61,043	3,173	2,177	140,914	9,999	24,572
Western white pine	0	0	0	623	39	0	12,925	922	6,940	13,548	961	6,940
Total softwoods	538,203	113,048	243,299	434,398	64,585	480,020	266,213	46,652	149,529	1,238,814	224,284	872,847
Hardwoods:												
Bigleaf maple	32,601	30,023	0	1,500	283	10,636	56,578	16,083	2,527	90,679	46,389	13,163
Black cottonwood	3,786	1,103	13,318	23,828	8,858	3,290	20,864	7,561	4,183	48,478	17,523	20,792
Cherry	1,532	333	0	0	0	0	2,089	989	0	3,621	1,322	0
Oregon ash	2,958	943	0	0	0	0	2,958	2,214	0	5,916	3,157	0
Pacific madrone	120	148	0	478	2,742	0	0	0	0	599	2,889	0
Red alder	34,282	16,542	9,074	26,024	12,634	101,086	189,380	49,184	58,700	249,686	78,360	168,861
Western paper birch	0	0	0	10,962	950	0	1,910	643	0	12,873	1,593	0
Total hardwoods	75,280	49,092	22,393	62,792	25,468	115,012	273,779	76,674	65,410	411,851	151,234	202,815
All species	613,483	162,140	265,692	497,190	90,052	595,032	539,992	123,326	214,939	1,650,666	375,518	1,075,663
SE for total (%)	11	17	64	12	18	25	15	15	28	7	10	22

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 24c—Estimated gross annual growth, average annual mortality, and average annual removals of sawtimber on nonnational forest timberland, by species and owner class, Olympic Peninsula, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand board feet, Scribner rule											
Softwoods:												
Douglas-fir	344,734	59,985	86,155	238,511	37,465	666,587	102,422	18,294	92,247	685,667	115,744	844,988
Grand fir	0	0	0	1,446	128	0	6,918	352	5,708	8,364	480	5,708
Lodgepole pine	1,285	387	0	0	0	11,014	1,780	501	0	3,066	888	11,014
Pacific silver fir	12,862	2,529	0	13,275	223	53,144	13,854	2,027	0	39,991	4,779	53,144
Sitka spruce	9,138	1,047	0	72,866	7,775	38,239	10,198	710	125,022	92,202	9,532	163,261
Western hemlock	195,306	91,875	20,907	336,108	51,361	574,320	101,813	19,518	153,201	633,226	162,754	748,427
Western redcedar	6,745	769	0	28,884	1,320	38,402	32,018	1,533	108,983	67,647	3,622	147,385
Western white pine	0	0	0	0	0	0	541	80	0	541	80	0
Total softwoods	570,071	156,592	107,061	691,089	98,271	1,381,705	269,544	43,015	485,160	1,530,704	297,879	1,973,926
Hardwoods:												
Bigleaf maple	9,042	719	3,894	13,492	6,003	3,747	18,505	5,046	12,872	41,039	11,768	20,513
Black cottonwood	0	0	0	14,317	4,669	0	0	0	0	14,317	4,669	0
Cherry	0	0	0	780	138	0	0	0	1,947	780	138	1,947
Oregon ash	389	355	0	938	858	0	907	308	0	2,234	1,521	0
Oregon white oak	0	0	0	0	0	0	953	416	0	953	416	0
Pacific madrone	0	0	0	0	0	0	468	118	0	468	118	0
Red alder	25,561	17,730	0	67,557	21,985	79,232	66,025	15,405	32,233	159,143	55,120	111,465
Total hardwoods	34,992	18,805	3,894	97,084	33,652	82,978	86,857	21,293	47,053	218,934	73,749	133,925
All species	605,063	175,397	110,955	788,173	131,924	1,464,683	356,401	64,308	532,213	1,749,637	371,629	2,107,851
SE for total (%)	11	16	54	12	18	18	17	24	48	7	10	18

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.
0 = less than 500 board feet found.
Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 24d—Estimated gross annual growth, average annual mortality, and average annual removals of sawtimber on nonnational forest timberland, by species and owner class, southwest Washington, January 1, 2001

Species	Other public			Forest industry			Other private			All owners		
	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals	Current gross annual growth	Average annual mortality	Average annual removals
	Thousand board feet, Scribner rule											
Softwoods:												
Douglas-fir	281,323	56,664	17,925	599,148	45,988	590,223	164,214	26,239	116,366	1,044,685	128,891	724,514
Grand fir	0	0	0	5,213	569	0	4,742	604	2,638	9,955	1,173	2,638
Lodgepole pine	0	0	0	0	0	0	227	226	0	227	226	0
Noble fir	0	0	0	4,768	137	3,445	0	0	0	4,768	137	3,445
Pacific silver fir	6,376	964	0	14,594	1,007	59,389	0	0	0	20,969	1,971	59,389
Sitka spruce	678	75	885	22,955	1,493	4,581	0	0	2,179	23,634	1,568	7,646
Western hemlock	107,873	33,921	8,937	387,946	38,108	361,113	21,051	7,140	29,039	516,870	79,169	399,089
Western redcedar	4,045	256	0	6,794	727	23,158	10,443	783	14,171	21,282	1,766	37,329
Total softwoods	400,295	91,880	27,747	1,041,418	88,030	1,041,910	200,677	34,992	164,394	1,642,390	214,902	1,234,051
Hardwoods:												
Bigleaf maple	8,029	3,792	0	5,415	1,341	3,307	11,122	4,517	14,750	24,566	9,649	18,057
Black cottonwood	6,953	2,342	0	255	91	0	0	0	10,441	7,208	2,432	10,441
Cherry	0	0	0	1,754	486	0	0	0	0	1,754	486	0
Oregon ash	0	0	0	0	0	0	2,293	2,250	0	2,293	2,250	0
Red alder	53,132	34,046	22,455	65,238	23,907	79,903	37,974	8,141	27,236	156,344	66,093	129,593
Total hardwoods	68,114	40,180	22,455	72,661	25,824	83,210	51,389	14,908	52,426	192,164	80,911	158,091
All species	468,409	132,059	50,202	1,114,079	113,854	1,125,120	252,066	49,900	216,821	1,834,554	295,813	1,392,142
SE for total (%)	11	20	66	9	16	19	20	23	34	7	11	17

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

0 = less than 500 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 25a—Estimated changes in area of nonnational forest timberland by owner class, western Washington, 1988-89 to 2001

Description of change	Other public	Forest industry	Other private	All owners Total	All owners SE
	Thousand acres				*%*
Timberland area published in 1988-89	1,669	3,755	2,020	7,443	
New estimate of timberland area for 1988-89, based on remeasured plots only	1,662	3,833	1,901	7,397	
Changes in inventory area:					
To national forest	0	-45	-12	-56	9
From national forest	7	20	0	27	25
To reserved	-54	-6	0	-60	
Net change	-48	-31	-12	-90	
Area change owing to:					
Changes in land class—					
Timberland to rights-of-way	0	-50	-51	-100	35
Timberland to urban	0	-23	-123	-146	28
Timberland to agriculture	0	0	-24	-24	71
Net change	0	-72	-198	-270	
Changes in ownership—					
From other public	-95	95	0	0	36
From forest industry	155	-456	300	0	16
From other private	88	19	-107	0	35
Net change	148	-341	193	0	
Timberland area in 2001	1,763	3,389	1,885	7,037	
SE for total (%)	3	2	5	1	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

SE for ownership was calculated for the negative values.

0 = fewer than 500 acres found.

Negative values are losses of timberland, and positive values are gains of timberland.

Values in this table were derived from a survey-unit-level stratification and differ slightly from values in other tables in this report.

Table 25b—Estimated changes in area of nonnational forest timberland by owner class, Puget Sound, 1988-89 to 2001

Description of change	Other public	Forest industry	Other private	All owners Total	All owners SE
	Thousand acres				*%*
Timberland area published in 1988-89	626	942	869	2,438	
New estimate of timberland area for 1988-89, based on remeasured plots only	654	962	852	2,467	
Changes in inventory area:					
To national forest	0	-45	0	-45	10
From national forest	7	20	0	27	25
To reserved	-45	-3	0	-48	
Net change	-39	-28	0	-66	
Area change due to:					
Changes in land class—					
Timberland to rights-of-way	0	-9	-41	-50	51
Timberland to urban	0	0	-79	-79	37
Timberland to agriculture	0	0	-12	-12	100
Net change	0	-9	-131	-140	
Changes in ownership—					
From other public	-55	55	0	0	45
From forest industry	59	-169	111	0	27
From other private	71	0	-71	0	46
Net change	74	-114	40	0	
Timberland area in 2001	690	811	760	2,261	
SE for total (%)	6	5	8	3	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

SE for ownership was calculated for the negative values.

0 = fewer than 500 acres found.

Negative values are losses of timberland, and positive values are gains of timberland.

Values in this table were derived from a survey-unit-level stratification and differ slightly from values in other tables in this report.

Table 25c—Estimated changes in area of nonnational forest timberland by owner class, Olympic Peninsula, 1988-89 to 2001

Description of change	Other public	Forest industry	Other private	All owners Total	All owners SE
	Thousand acres				*%*
Timberland area published in 1988-89	606	1,283	646	2,535	
New estimate of timberland area for 1988-89, based on remeasured plots only	612	1,310	591	2,514	
Changes in inventory area:					
To national forest	0	0	0	0	0
From national forest	0	0	0	0	0
To reserved	-9	0	0	-9	
Net change	-9	0	0	-9	
Area change due to:					
Changes in land class—					
Timberland to rights-of-way	0	-26	-10	-36	53
Timberland to urban	0	-15	-32	-47	50
Timberland to agriculture	0	0	0	0	0
Net change	0	-41	-42	-83	
Changes in ownership—					
From other public	-15	15	0	0	100
From forest industry	17	-98	81	0	36
From other private	7	19	-26	0	59
Net change	9	-64	55	0	
Timberland area in 2001	612	1,205	604	2,422	
SE for total (%)	4	4	8	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

SE for ownership was calculated for the negative values.

0 = fewer than 500 acres found.

Negative values are losses of timberland, and positive values are gains of timberland.

Values in this table were derived from a survey-unit-level stratification and differ slightly from values in other tables in this report.

Table 25d—Estimated changes in area of nonnational forest timberland by owner class, southwest Washington, 1988-89 to 2001

Description of change	Other public	Forest industry	Other private	All owners Total	SE
		Thousand acres			%
Timberland area published in 1988-89	437	1,530	504	2,471	
New estimate of timberland area for 1988-89, based on remeasured plots only	396	1,561	458	2,415	
Changes in inventory area:					
To national forest	0	0	-12	-12	20
From national forest	0	0	0	0	0
To reserved	0	-3	0	-3	
Net change	0	-3	-12	-15	
Area change due to:					
Changes in land class—					
Timberland to rights-of-way	0	-15	0	-15	100
Timberland to urban	0	-8	-12	-20	73
Timberland to agriculture	0	0	-12	-12	100
Net change	0	-22	-24	-46	
Changes in ownership—					
From other public	-25	25	0	0	72
From forest industry	79	-188	109	0	25
From other private	11	0	-11	0	100
Net change	65	-163	98	0	
Timberland area in 2001	462	1,372	521	2,355	
SE for total (%)	5	4	9	2	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error.

SE for ownership was calculated for the negative values.

0 = fewer than 500 acres found.

Negative values are losses of timberland, and positive values are gains of timberland.

Values in this table were derived from a survey-unit-level stratification and differ slightly from values in other tables in this report.

Table 26a—Estimated changes in net volume of growing stock on nonnational forest timberland by species group and owner class, western Washington, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million cubic feet									%
Volume published in 1988-89	7,825	11,117	4,579	23,521	1,295	2,417	3,594	6,307	29,828	
Estimate of 1988-89 volume, based on remeasured plots only	7,387	11,380	4,676	23,443	1,143	2,175	2,342	5,661	29,104	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	-73	-12	-85	0	0	-10	-10	-94	28
From national forest	62	190	0	252	0	0	0	0	252	28
To reserved	-245	-18	0	-263	0	-12	0	-12	-276	
Net change	-183	99	-12	-96	0	-12	-10	-22	-118	
Changes in land class—										
Timberland to rights-of-way	0	-221	-182	-403	0	-53	-9	-61	-464	37
Timberland to urban	0	-229	-75	-304	0	0	-183	-183	-488	51
Timberland to agriculture	0	0	-15	-15	0	0	-98	-98	-113	75
Net change	0	-451	-272	-723	0	-53	-290	-342	-1,065	
Changes in ownership—										
From other public	-430	430	0	0	-179	179	0	0	0	41
From forest industry	286	-1,060	774	0	64	-400	337	0	0	24
From other private	111	13	-124	0	153	8	-162	0	0	47
Net change	-33	-617	650	0	38	-213	175	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	3,361	7,119	2,255	12,734	493	779	920	2,192	14,927	3
Periodic mortality	-512	-300	-228	-1,040	-210	-253	-312	-774	-1,815	9
Periodic removals	-962	-8,126	-2,392	-11,479	-168	-892	-836	-1,896	-13,375	9
Net change	1,887	-1,308	-365	214	116	-366	-227	-478	-264	
Total volume in 2001	9,058	9,103	4,678	22,839	1,297	1,531	1,990	4,818	27,657	
SE for total (%)	6	7	11	4	18	15	11	8	4	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger; negative values result from loss of timberland, mortality, or removals.

Table 26b—Estimated changes in net volume of growing stock on nonnational forest timberland by species group and owner class, Puget Sound, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million cubic feet									%
Volume published in 1988-89	2,886	2,598	2,116	7,600	503	589	1,417	2,509	10,109	
Estimate of 1988-89 volume, based on remeasured plots only	2,993	2,528	1,813	7,335	609	683	1,411	2,704	10,038	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	-73	0	-73	0	0	0	0	-73	35
From national forest	62	190	0	252	0	0	0	0	252	28
To reserved	-125	-7	0	-133	0	-3	0	-3	-136	
Net change	-63	110	0	46	0	-3	0	-3	43	
Changes in land class—										
Timberland to rights-of-way	0	-32	-123	-154	0	-20	-9	-29	-184	56
Timberland to urban	0	0	-45	-45	0	0	-152	-152	-197	43
Timberland to agriculture	0	0	0	0	0	0	-38	-38	-38	100
Net change	0	-32	-167	-199	0	-20	-199	-219	-418	
Changes in ownership—										
From other public	-179	179	0	0	-131	131	0	0	0	47
From forest industry	166	-365	199	0	29	-217	188	0	0	38
From other private	81	0	-81	0	117	0	-117	0	0	58
Net change	67	-186	119	0	15	-86	71	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	1,190	1,329	663	3,183	191	198	528	917	4,100	5
Periodic mortality	-173	-79	-128	-380	-137	-42	-233	-412	-792	13
Periodic removals	-595	-1,328	-459	-2,382	-52	-348	-313	-713	-3,095	19
Net change	423	-78	76	421	2	-192	-18	-208	213	
Total volume in 2001	3,420	2,342	1,841	7,602	626	382	1,265	2,273	9,876	
SE for total (%)	11	15	18	8	25	30	15	12	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger; negative values result from loss of timberland, mortality, or removals.

Table 26c—Estimated changes in net volume of growing stock on nonnational forest timberland by species group and owner class, Olympic Peninsula, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million cubic feet									%
Volume published in 1988-89	3,033	4,346	1,423	8,802	450	991	542	1,982	10,784	
Estimate of 1988-89 volume, based on remeasured plots only	2,896	4,981	1,771	9,648	188	821	446	1,455	11,103	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	0	0	0	0	0	0	0	0	0
From national forest	0	0	0	0	0	0	0	0	0	0
To reserved	-120	0	0	-120	0	0	0	0	-120	
Net change	-120	0	0	-120	0	0	0	0	-120	
Changes in land class—										
Timberland to rights-of-way	0	-102	-59	-161	0	-25	0	-25	-187	53
Timberland to urban	0	-229	-30	-260	0	0	-13	-13	-273	85
Timberland to agriculture	0	0	0	0	0	0	0	0	0	0
Net change	0	-331	-90	-421	0	-25	-13	-38	-459	
Changes in ownership—										
From other public	-58	58	0	0	0	0	0	0	0	100
From forest industry	21	-304	284	0	16	-58	42	0	0	55
From other private	0	13	-13	0	2	8	-10	0	0	78
Net change	-38	-233	271	0	17	-50	32	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	1,264	2,491	875	4,630	126	250	175	550	5,180	5
Periodic mortality	-250	-124	-58	-433	-25	-134	-72	-230	-663	15
Periodic removals	-290	-3,863	-1,210	-5,363	-46	-250	-143	-439	-5,802	16
Net change	724	-1,496	-394	-1,166	55	-134	-40	-119	-1,285	
Total volume in 2001	3,463	2,920	1,558	7,942	261	611	425	1,298	9,239	
SE for total (%)	10	15	20	8	32	23	23	14	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger; negative values result from loss of timberland, mortality, or removals.

Table 26d—Estimated changes in net volume of growing stock on nonnational forest timberland by species group and owner class, southwest Washington, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million cubic feet									%
Volume published in 1988-89	1,906	4,173	1,040	7,119	342	837	636	1,815	8,934	
Estimate of 1988-89 volume, based on remeasured plots only	1,498	3,871	1,092	6,461	346	672	485	1,502	7,963	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	0	-12	-12	0	0	-10	-10	-22	20
From national forest	0	0	0	0	0	0	0	0	0	0
To reserved	0	-11	0	-11	0	-9	0	-9	-20	
Net change	0	-11	-12	-23	0	-9	-10	-19	-42	
Changes in land class—										
Timberland to rights-of-way	0	-87	0	-87	0	-7	0	-7	-94	100
Timberland to urban	0	0	0	0	0	0	-18	-18	-18	100
Timberland to agriculture	0	0	-15	-15	0	0	-60	-60	-75	100
Net change	0	-87	-15	-102	0	-7	-78	-85	-187	
Changes in ownership—										
From other public	-193	193	0	0	-48	48	0	0	0	82
From forest industry	99	-391	292	0	19	-125	107	0	0	34
From other private	31	0	-31	0	35	0	-35	0	0	100
Net change	-63	-198	261	0	6	-78	72	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	906	3,298	717	4,922	176	331	218	725	5,647	5
Periodic mortality	-89	-97	-42	-228	-48	-77	-7	-132	-360	19
Periodic removals	-77	-2,935	-723	-3,734	-70	-294	-381	-745	-4,479	14
Net change	740	267	-47	960	58	-40	-170	-151	808	
Total volume in 2001	2,175	3,841	1,279	7,295	410	538	300	1,247	8,542	
SE for total (%)	13	10	21	7	37	28	26	18	6	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 cubic feet found.

Includes growing-stock trees (noncull trees of commercial species) 5.0 inches in d.b.h. and larger; negative values result from loss of timberland, mortality, or removals.

Table 27a—Estimated changes in net volume of sawtimber on nonnational forest timberland by species group and owner class, western Washington, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million board feet, Scribner rule									%
Volume published in 1988-89	32,058	41,491	17,130	90,679	4,354	7,847	9,002	21,204	111,883	
Estimate of 1988-89 volume, based on remeasured plots only	29,399	43,498	18,669	91,566	3,621	7,017	7,877	18,515	110,081	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	-155	-40	-195	0	0	-29	-29	-224	19
From national forest	240	783	0	1,023	0	0	0	0	1,023	27
To reserved	-955	-73	0	-1,028	0	-45	0	-45	-1,073	
Net change	-715	555	-40	-200	0	-45	-29	-74	-273	
Changes in land class—										
Timberland to rights-of-way	0	-819	-582	-1,401	0	-53	-32	-85	-1,486	39
Timberland to urban	0	-1,210	-241	-1,450	0	0	-663	-663	-2,113	60
Timberland to agriculture	0	0	-58	-58	0	0	-454	-454	-512	75
Net change	0	-2,029	-881	-2,910	0	-53	-1,149	-1,201	-4,111	
Changes in ownership—										
From other public	-1,628	1,628	0	0	-474	474	0	0	0	46
From forest industry	837	-4,176	3,340	0	154	-1,378	1,224	0	0	26
From other private	385	36	-420	0	435	21	-455	0	0	48
Net change	-407	-2,512	2,919	0	114	-883	769	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	15,017	30,473	9,996	55,487	2,008	3,188	4,200	9,396	64,882	4
Periodic mortality	-1,513	-998	-790	-3,301	-502	-524	-802	-1,829	-5,130	12
Periodic removals	-4,435	-36,889	-11,388	-52,712	-563	-3,478	-3,409	-7,449	-60,162	10
Net change	9,069	-7,414	-2,182	-527	944	-815	-11	118	-409	
Total volume in 2001	37,346	32,098	18,485	87,930	4,679	5,221	7,457	17,358	105,288	
SE for total (%)	7	9	13	5	22	19	13	10	5	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 27b—Estimated changes in net volume of sawtimber on nonnational forest timberland by species group and owner class, Puget Sound, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million board feet, Scribner rule									%
Volume published in 1988-89	11,360	8,715	7,638	27,714	1,843	1,933	5,146	8,922	36,636	
Estimate of 1988-89 volume, based on remeasured plots only	11,476	8,289	6,723	26,489	2,126	2,219	4,926	9,271	35,760	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	-155	0	-155	0	0	0	0	-155	26
From national forest	240	783	0	1,023	0	0	0	0	1,023	27
To reserved	-362	-26	0	-389	0	-9	0	-9	-397	
Net change	-122	602	0	479	0	-9	0	-9	471	
Changes in land class—										
Timberland to rights-of-way	0	-81	-434	-515	0	-53	-32	-85	-599	57
Timberland to urban	0	0	-134	-134	0	0	-556	-556	-691	46
Timberland to agriculture	0	0	0	0	0	0	-169	-169	-169	100
Net change	0	-81	-568	-649	0	-53	-757	-810	-1,459	
Changes in ownership—										
From other public	-632	632	0	0	-357	357	0	0	0	53
From forest industry	422	-1,268	846	0	38	-769	731	0	0	41
From other private	261	0	-261	0	311	0	-311	0	0	59
Net change	51	-636	585	0	-7	-413	420	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	5,485	5,493	3,115	14,094	746	874	2,375	3,995	18,089	7
Periodic mortality	-380	-192	-469	-1,041	-374	-17	-655	-1,046	-2,087	17
Periodic removals	-2,818	-5,466	-1,879	-10,163	-246	-1,345	-1,172	-2,763	-12,927	21
Net change	2,286	-164	767	2,889	125	-488	548	185	3,075	
Total volume in 2001	13,692	8,010	7,507	29,209	2,244	1,257	5,137	8,638	37,847	
SE for total (%)	12	18	19	9	31	32	16	13	7	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 27c—Estimated changes in net volume of sawtimber on nonnational forest timberland by species group and owner class, Olympic Peninsula, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million board feet, Scribner rule									%
Volume published in 1988-89	13,023	17,073	5,085	35,182	1,312	3,172	1,676	6,161	41,343	
Estimate of 1988-89 volume, based on remeasured plots only	12,121	20,581	7,079	39,781	407	2,626	1,136	4,168	43,949	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	0	0	0	0	0	0	0	0	0
From national forest	0	0	0	0	0	0	0	0	0	0
To reserved	-592	0	0	-592	0	0	0	0	-592	
Net change	-592	0	0	-592	0	0	0	0	-592	
Changes in land class—										
Timberland to rights-of-way	0	-364	-148	-513	0	0	0	0	-513	55
Timberland to urban	0	-1,210	-107	-1,316	0	0	-59	-59	-1,376	88
Timberland to agriculture	0	0	0	0	0	0	0	0	0	0
Net change	0	-1,574	-255	-1,829	0	0	-59	-59	-1,888	
Changes in ownership—										
From other public	-200	200	0	0	0	0	0	0	0	100
From forest industry	61	-1,315	1,255	0	20	-182	163	0	0	62
From other private	0	36	-36	0	0	21	-21	0	0	80
Net change	-139	-1,079	1,219	0	20	-162	142	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	5,411	11,252	3,665	20,329	333	1,090	784	2,207	22,536	6
Periodic mortality	-890	-477	-159	-1,525	-34	-318	-130	-482	-2,008	21
Periodic removals	-1,270	-18,011	-5,925	-25,206	-47	-1,034	-583	-1,664	-26,870	17
Net change	3,251	-7,235	-2,419	-6,403	252	-263	71	60	-6,342	
Total volume in 2001	14,640	10,693	5,624	30,957	678	2,202	1,289	4,169	35,126	
SE for total (%)	12	19	26	10	38	28	27	18	9	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 27d—Estimated changes in net volume of sawtimber on nonnational forest timberland by species group and owner class, southwest Washington, 1988-89 to 2001

Description	Softwood species				Hardwood species				All species	
	Other public	Forest industry	Other private	All owners	Other public	Forest industry	Other private	All owners	Total	SE
	Million board feet, Scribner rule									%
Volume published in 1988-89	7,674	15,703	4,406	27,783	1,199	2,742	2,180	6,121	33,904	
Estimate of 1988-89 volume, based on remeasured plots only	5,802	14,628	4,866	25,296	1,089	2,171	1,816	5,076	30,371	
Volume changes due to:										
Changes in inventory area—										
To national forest	0	0	-40	-40	0	0	-29	-29	-68	20
From national forest	0	0	0	0	0	0	0	0	0	0
To reserved	0	-47	0	-47	0	-36	0	-36	-83	
Net change	0	-47	-40	-87	0	-36	-29	-65	-152	
Changes in land class—										
Timberland to rights-of-way	0	-374	0	-374	0	0	0	0	-374	100
Timberland to urban	0	0	0	0	0	0	-47	-47	-47	100
Timberland to agriculture	0	0	-58	-58	0	0	-285	-285	-343	100
Net change	0	-374	-58	-432	0	0	-332	-332	-764	
Changes in ownership—										
From other public	-796	796	0	0	-118	118	0	0	0	87
From forest industry	354	-1,593	1,239	0	96	-426	330	0	0	38
From other private	124	0	-124	0	123	0	-123	0	0	100
Net change	-319	-797	1,116	0	101	-308	207	0	0	
Growth, mortality, and harvest—										
Periodic gross growth	4,121	13,728	3,216	21,064	930	1,223	1,041	3,194	24,258	6
Periodic mortality	-243	-330	-162	-735	-94	-189	-17	-300	-1,035	26
Periodic removals	-346	-13,413	-3,584	-17,343	-269	-1,098	-1,654	-3,021	-20,364	15
Net change	3,531	-15	-530	2,986	566	-64	-630	-128	2,859	
Total volume in 2001	9,014	13,395	5,354	27,764	1,756	1,763	1,031	4,551	32,315	
SE for total (%)	14	12	24	9	39	36	32	22	8	

Note: totals may be off because of rounding; data subject to sampling error; SE = sampling error; for ownership, SE was calculated for the sum of the negative values.

0 = less than 500,000 board feet found.

Includes softwood sawtimber trees 9.0 inches in d.b.h. and larger, and hardwood sawtimber trees 11.0 inches in d.b.h. and larger.

Table 28a—Estimated sawtimber harvest volume by year and owner class, western Washington, 1955-2001

Year	National forest	Other public	Private	All owners
		Thousand board feet, Scribner rule		
1955	689,672	424,744	2,777,915	3,892,331
1956	727,200	502,135	3,038,207	4,267,542
1957	672,190	387,006	2,237,635	3,296,831
1958	776,080	293,581	2,038,037	3,107,698
1959	1,107,261	273,932	2,585,248	3,966,441
1960	908,243	260,626	2,719,803	3,888,672
1961	891,646	289,318	2,457,226	3,638,190
1962	1,096,100	296,781	2,766,816	4,159,697
1963	1,171,400	529,806	2,782,133	4,483,339
1964	1,274,200	550,482	3,379,857	5,204,539
1965	1,287,000	675,081	3,520,101	5,482,182
1966	1,144,649	536,100	3,363,753	5,044,502
1967	1,150,800	475,640	3,244,896	4,871,336
1968	1,318,600	689,598	3,782,017	5,790,215
1969	1,092,275	716,294	4,127,107	5,935,676
1970	1,045,406	601,215	3,922,566	5,569,187
1971	875,470	716,634	3,788,314	5,380,418
1972	1,005,802	996,613	3,887,790	5,890,205
1973	1,173,961	909,711	4,506,856	6,590,528
1974	906,694	720,640	4,106,312	5,733,646
1975	758,498	539,034	3,874,626	5,172,158
1976	850,548	746,988	4,241,215	5,838,751
1977	848,754	758,894	3,814,114	5,421,762
1978	921,270	916,669	3,725,151	5,563,090
1979	984,246	1,062,315	3,702,750	5,749,311
1980	771,896	732,046	3,157,035	4,660,977
1981	577,876	438,361	2,940,940	3,957,177
1982	549,537	435,222	3,366,713	4,351,472
1983	840,858	491,990	3,629,260	4,962,108
1984	860,919	739,755	3,153,539	4,754,213
1985	803,518	964,710	3,091,271	4,859,499
1986	835,706	991,020	3,505,069	5,331,795
1987	960,512	863,687	3,873,048	5,697,247
1988	1,059,327	761,460	3,928,027	5,748,814
1989	708,431	745,019	4,038,385	5,491,835
1990	503,952	600,234	3,569,249	4,673,435
1991	419,446	509,706	3,084,358	4,013,510
1992	255,866	469,076	3,229,759	3,954,701
1993	161,026	426,323	2,719,989	3,307,338
1994	113,863	288,210	2,831,932	3,234,005
1995	78,904	425,986	2,912,197	3,417,087
1996	34,088	533,288	2,720,811	3,288,187
1997	60,888	592,073	2,604,718	3,257,679
1998	51,961	514,323	2,563,040	3,129,324
1999	46,070	596,758	2,732,020	3,374,848
2000	21,605	498,501	2,703,669	3,223,775
2001	6,700	458,777	2,376,351	2,841,828

Source: Washington timber harvest reports, Washington Department of Natural Resources.

Table 28b—Estimated sawtimber harvest volume by year and owner class, Puget Sound, 1955-2001

Year	National forest	Other public	Private	All owners
		Thousand board feet, Scribner rule		
1955	202,126	126,266	709,648	1,038,040
1956	207,000	161,273	797,281	1,165,554
1957	237,605	83,414	580,268	901,287
1958	232,436	18,254	532,893	783,583
1959	337,381	86,355	696,161	1,119,897
1960	272,794	61,343	804,257	1,138,394
1961	277,886	56,560	647,240	981,686
1962	342,200	79,608	710,599	1,132,407
1963	345,800	185,940	676,995	1,208,735
1964	402,800	135,401	824,866	1,363,067
1965	393,500	141,332	838,497	1,373,329
1966	318,750	147,859	776,793	1,243,402
1967	332,800	122,021	834,730	1,289,551
1968	323,100	174,294	856,445	1,353,839
1969	313,407	151,110	1,236,835	1,701,352
1970	315,100	132,299	1,074,215	1,521,614
1971	242,655	187,490	1,010,579	1,440,724
1972	326,944	206,641	1,058,422	1,592,007
1973	380,232	133,810	1,146,151	1,660,193
1974	241,709	185,996	1,096,971	1,524,676
1975	168,989	159,475	958,205	1,286,669
1976	233,581	153,556	970,550	1,357,687
1977	217,298	177,824	841,727	1,236,849
1978	254,653	262,141	714,029	1,230,823
1979	274,115	193,727	746,679	1,214,521
1980	217,039	143,255	680,189	1,040,483
1981	150,896	81,940	652,111	884,947
1982	124,181	92,465	759,444	976,090
1983	226,368	117,925	758,777	1,103,070
1984	232,555	177,595	705,107	1,115,257
1985	224,599	240,665	736,076	1,201,340
1986	250,754	236,955	856,258	1,343,967
1987	299,704	253,028	844,860	1,397,592
1988	248,957	221,704	837,457	1,308,118
1989	163,177	221,078	934,936	1,319,191
1990	135,367	162,217	1,050,587	1,348,171
1991	106,913	151,255	950,509	1,208,677
1992	71,156	151,185	911,793	1,134,134
1993	15,897	181,543	758,949	956,389
1994	25,725	77,712	778,360	881,797
1995	17,490	103,649	784,831	905,970
1996	2,938	147,986	719,080	870,004
1997	10,329	170,519	616,407	797,255
1998	6,161	117,159	652,876	776,196
1999	6,974	195,190	664,332	866,496
2000	6,715	152,332	682,579	841,626
2001	1,354	157,296	546,992	705,642

Source: Washington timber harvest reports, Washington Department of Natural Resources.

Table 28c—Estimated sawtimber harvest volume by year and owner class, Olympic Peninsula, 1955-2001

Year	National forest	Other public	Private	All owners
		Thousand board feet, Scribner rule		
1955	250,179	154,022	752,784	1,156,985
1956	267,300	141,597	772,290	1,181,187
1957	249,964	78,021	604,311	932,296
1958	268,928	84,039	527,598	880,565
1959	322,299	81,817	773,286	1,177,402
1960	250,929	95,319	802,742	1,148,990
1961	219,890	101,070	728,326	1,049,286
1962	273,300	117,172	687,754	1,078,226
1963	361,400	156,940	779,922	1,298,262
1964	403,800	174,171	966,062	1,544,033
1965	369,800	269,276	900,160	1,539,236
1966	300,214	198,568	998,121	1,496,903
1967	291,500	243,218	905,368	1,440,086
1968	347,800	339,096	1,013,645	1,700,541
1969	248,311	361,924	1,162,721	1,772,956
1970	253,947	326,409	977,677	1,558,033
1971	274,459	373,141	844,728	1,492,328
1972	275,794	546,140	978,623	1,800,557
1973	296,838	506,836	1,301,694	2,105,368
1974	273,389	422,827	1,182,611	1,878,827
1975	242,217	303,647	1,002,195	1,548,059
1976	296,075	446,595	1,120,676	1,863,346
1977	332,446	419,760	984,194	1,736,400
1978	303,283	468,974	1,044,006	1,816,263
1979	307,734	693,650	1,072,461	2,073,845
1980	276,674	506,707	798,198	1,581,579
1981	182,258	252,436	643,299	1,077,993
1982	149,064	219,369	983,039	1,351,472
1983	278,798	274,773	1,333,999	1,887,570
1984	270,469	415,054	1,122,834	1,808,357
1985	249,563	565,177	1,222,615	2,037,355
1986	247,345	512,124	1,279,820	2,039,289
1987	232,237	422,595	1,596,290	2,251,122
1988	274,755	335,848	1,632,509	2,243,112
1989	154,239	307,942	1,564,409	2,026,590
1990	102,839	278,592	1,223,931	1,605,362
1991	74,516	244,997	998,471	1,317,984
1992	51,892	211,334	1,117,504	1,380,730
1993	17,369	138,977	911,934	1,068,280
1994	5,297	90,563	953,079	1,048,939
1995	10,429	163,017	1,060,401	1,233,847
1996	14,493	202,632	983,603	1,200,728
1997	12,149	210,399	1,029,526	1,252,074
1998	13,061	200,423	931,581	1,145,065
1999	11,440	187,277	1,009,668	1,208,385
2000	3,425	186,155	953,907	1,143,487
2001	1,407	154,745	831,612	987,764

Source: Washington timber harvest reports, Washington Department of Natural Resources.

Table 28d—Estimated sawtimber harvest volume by year and owner class, southwest Washington, 1955-2001

Year	National forest	Other public	Private	All owners
		Thousand board feet, Scribner rule		
1955	237,367	144,456	1,315,483	1,697,306
1956	252,900	199,265	1,468,636	1,920,801
1957	184,621	225,571	1,053,056	1,463,248
1958	274,716	191,288	977,546	1,443,550
1959	447,581	105,760	1,115,801	1,669,142
1960	384,520	103,964	1,112,804	1,601,288
1961	393,870	131,688	1,081,660	1,607,218
1962	480,600	100,001	1,368,463	1,949,064
1963	464,200	186,926	1,325,216	1,976,342
1964	467,600	240,910	1,588,929	2,297,439
1965	523,700	264,473	1,781,444	2,569,617
1966	525,685	189,673	1,588,839	2,304,197
1967	526,500	110,401	1,504,798	2,141,699
1968	647,700	176,208	1,911,927	2,735,835
1969	530,557	203,260	1,727,551	2,461,368
1970	476,359	142,507	1,870,674	2,489,540
1971	358,356	156,003	1,933,007	2,447,366
1972	403,064	243,832	1,850,745	2,497,641
1973	496,891	269,065	2,059,011	2,824,967
1974	391,596	111,817	1,826,730	2,330,143
1975	347,292	75,912	1,914,226	2,337,430
1976	320,892	146,837	2,149,989	2,617,718
1977	299,010	161,310	1,988,193	2,448,513
1978	363,334	185,554	1,967,116	2,516,004
1979	402,397	174,938	1,883,610	2,460,945
1980	278,183	82,084	1,678,648	2,038,915
1981	244,722	103,985	1,645,530	1,994,237
1982	276,292	123,388	1,624,230	2,023,910
1983	335,692	99,292	1,536,484	1,971,468
1984	357,895	147,106	1,325,598	1,830,599
1985	329,356	158,868	1,132,580	1,620,804
1986	337,607	241,941	1,368,991	1,948,539
1987	428,571	188,064	1,431,898	2,048,533
1988	535,615	203,908	1,458,061	2,197,584
1989	391,015	215,999	1,539,040	2,146,054
1990	265,746	159,425	1,294,731	1,719,902
1991	238,017	113,454	1,135,378	1,486,849
1992	132,818	106,557	1,200,462	1,439,837
1993	127,760	105,803	1,049,106	1,282,669
1994	82,841	119,935	1,100,493	1,303,269
1995	50,985	159,320	1,066,965	1,277,270
1996	16,657	182,670	1,018,128	1,217,455
1997	38,410	211,155	958,785	1,208,350
1998	32,739	196,741	978,583	1,208,063
1999	27,656	214,291	1,058,020	1,299,967
2000	11,465	160,014	1,067,183	1,238,662
2001	3,939	146,736	997,747	1,148,422

Source: Washington timber harvest reports, Washington Department of Natural Resources.

This page has been left blank intentionally.
Document continues on next page.

This page has been left blank intentionally.
Document continues on next page.

This page has been left blank intentionally.
Document continues on next page.

Pacific Northwest Research Station

Web site	http://www.fs.fed.us/pnw
Telephone	(503) 808-2592
Publication requests	(503) 808-2138
FAX	(503) 808-2130
E-mail	pnw_pnwpubs@fs.fed.us
Mailing address	Publications Distribution Pacific Northwest Research Station P.O. Box 3890 Portland, OR 97208-3890

U.S. Department of Agriculture
Pacific Northwest Research Station
333 S.W. First Avenue
P.O. Box 3890
Portland, OR 97208-3890