

# Forest Resources of the United States, 2007

A Technical Document Supporting  
the Forest Service 2010 RPA Assessment

W. Brad Smith, Patrick D. Miles,  
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## In Memoriam Victor Rudis

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This assessment of the Nation's forest resources is dedicated to the memory of VICTOR AUGUSTINE RUDIS, age 57, a Research Forester with the Forest Service, Southern Research Station, Forest Inventory and Analysis (FIA) Unit and contributing author of this report who passed away in November 2007. Victor received his B.S. in Biology from Boston College, the M.S. in Ecology from Rutgers University, and the M.S. in Forestry from the University of Wisconsin.

He began his career in 1980 with the Forest Service in New Orleans, LA, and, for the past 27 years, Victor worked as a research forester analyzing and interpreting FIA data. He was one of the pioneers in efforts to incorporate and study the nonforest issues in forest resource assessments across the Southern United States. His accomplishments were far-reaching and included substantial contributions in the areas of landscape ecology, fragmentation, invasive species, and human impacts on forest systems. Other interests included estimation of regional accessibility, aesthetics, forest community types, old growth, recreation opportunities, and wildlife habitats. His publications included contributions in more than 50 Government reports, books, proceedings, and scientific journals. He demonstrated genuine curiosity for and love of forest resources in the Southern United States, and sought to better the program for which he worked through a spirit of enthusiasm, cooperation, and collaboration that will be sorely missed.

He was a member of the Society of American Foresters, the Ecological Society of America, The Nature Conservancy, the Sierra Club, and Sigma XI Scientific Research Society. He was a former member and President of the Mississippi Native Plant Society. He was a former member of the World Neighbor's Association at Mississippi State University, Starkville, MS, where he and his family served as a host family for numerous international students for a number of years. Victor leaves wife Mary, two sons, Jeffrey and Jonathan, and many friends with FIA and throughout the Forest Service.

## Abstract

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Forest resource statistics from the 2000 Resources Planning Act (RPA) Assessment were updated to provide current information on the Nation's forests. Resource tables present estimates of forest area, volume, mortality, growth, removals, and timber products output in various ways, such as by ownership, region, or State. Current resource data and trends are analyzed and placed within the context of changes since 1953. Additional analyses look at the resource from an ecological, health, and productivity perspective. A mini-atlas of map plates includes national displays of forest type, ownership, biomass, fragmentation, and other key spatial elements. An interactive RPA Data Wiz CD is also included to provide user access to the resource data.

Keywords: RPA, assessment, inventory, forest statistics, area, volume, productivity, health, maps

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# Introduction

The Congress of the United States called for an assessment of the Nation's renewable resources in 1974 because the lawmakers believed that reliable information was necessary to properly manage those resources and make informed policy decisions. This mandate is embodied in the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, P.L. 93-378, 88 Stat. 475, as amended. The need for reliable information on the status and trends of the Nation's resources continues today; however, the emphasis has broadened from a solely economic concern with supply and demand to a concern about resource conditions, ecosystem health, and sustainability.

The RPA requires the Secretary of the U.S. Department of Agriculture to conduct an assessment of the Nation's renewable resources every 10 years. The original act had four requirements for the assessment:

- (1) an analysis of present and anticipated uses, demand for, and supply of the renewable resources, with consideration of the international resource situation, and an emphasis of pertinent supply and demand and price relationship trends;
- (2) an inventory...of present and potential renewable resources, and an evaluation of opportunities for improving their yield of tangible and intangible services...;
- (3) a description of Forest Service programs and responsibilities...; and
- (4) a discussion of important policy considerations, laws, regulations, and other factors expected to influence and affect significantly the use, ownership, and management of forest, range, and other associated lands.

Subsequent amendments to the RPA added two requirements:

- (5) an analysis of the potential effects of global climate change on the condition of renewable resources on the forests and rangelands of the United States, and
- (6) an analysis of the rural and urban forestry opportunities to mitigate the buildup of atmospheric carbon dioxide and reduce the risk of global climate change.

These amendments also added specific reporting requirements for forest products, including the following three:

- (1) the additional fiber potential in the National Forest System...,
- (2) the potential for increased utilization of forest and wood product wastes..., and
- (3) the milling and other wood fiber product fabrication facilities and their location in the United States....

The assessment-related language of the RPA is focused primarily on resource availability; however, "resource condition" is mentioned in the original legislation and in the amendment on global change. Further, the act specifically states that the assessment is not limited to the requirements in the act, which allows for flexibility in developing the assessment framework.

This report focuses on the first two requirements of the act, reporting on the status, condition, and trends in the Nation's forest resources, and is limited to the physical attributes of forests. Although a large portion of the tabular data is presented at the State level, most of the analysis is presented by region. The major regions and subregions for this report are shown in figure 1.

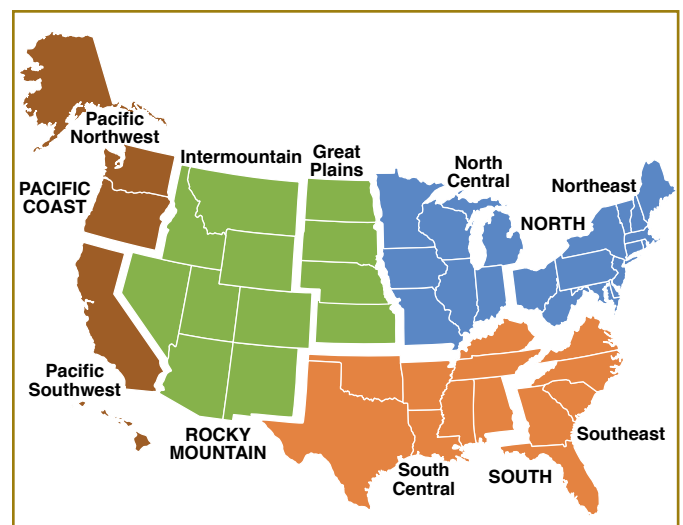


Figure 1. Major assessment regions and subregions of the United States.

## Geographic Context of the United States and Associated Islands

The main landmass of the United States, situated in mid-North America (fig. 2), has a central plain with hills and low mountains to the east and rugged mountains and wide valleys to the west. Alaska, on Canada's western border, is dominated by Pacific and Arctic mountains, a central plateau, and the Arctic slope.

The U.S. Caribbean Islands are composed of Puerto Rico and the U.S. Virgin Islands. In general, the Caribbean Islands are a 2,500-mile arc of islands, tectonically uplifted from the sea floor separating the Atlantic Ocean from the Caribbean Sea. Low-lying islands often are capped with limestone from ancient coral reefs, and other islands exhibit volcanic activity that has pushed up steep peaks that divert the moisture-laden northeasterly trade winds upward, greatly increasing rainfall.

The U.S. Pacific Islands are composed of American Samoa, Guam, Hawaii, the Republic of the Marshall Islands, the Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau. These islands span a vast and diverse area, beginning with Hawaii, 2,500 miles west of the U.S. mainland, and extending to Southeast Asia. Land masses vary widely and include small coral atolls, small sand islands, moderate-sized islands of mixed limestone and volcanic substrates, and large, high-elevation, volcanic islands.



**Figure 2.** Geographic location of the United States and associated islands.

## Important Notes for This Report

The following discussion gives the reader some general guidance for the information provided in this report, particularly the context of the term “forest” as it is used here.

### What Is a Forest?

This question may seem simple, but the answer can get complex. In general, the basic elements of what is a tree and how many (or what percent cover) are required within a specified minimum area are critical to the delineation. The primary use of the land also plays a role in defining a forest. In this regard, we must distinguish between forest cover and forest use. Many areas of forest cover are not considered forest use for purposes of this report. These areas are primarily, but not exclusively, in and around urban areas where, on remote sensing, they meet the criteria of forest (minimum tree cover and area), but field sampling indicates they have primary nonforest use. It is estimated that the area of such lands may be as much as 20 to 30 million acres in the United States, but the area is excluded from the tables presented in appendix C on the basis of use. Other studies connected to this national assessment look more specifically at these areas.

Another issue critical to defining a forest also figures into the data presented in this report and affects both current and historic data. In the Great Plains, some lands traditionally not classified as forest (predominantly wide windbreaks and strips) do, in fact, function as forest and are internationally recognized as forest. We have added these areas and, to the extent possible, have adjusted historic data. Conversely, in the West, some areas historically did not meet the current minimum standards but were classified as forest because of important management issues (chaparral with regard to fire and sparse juniper and scrub oak lands with regard to range and fire). We have removed these areas from the forest classification for this report. They may continue to be measured but will fall into a special nonforest class called “other wooded land.” To the extent possible, we have adjusted historic data in this report to make trend analysis of forest use data conform to current classification standards. Thus, we advise the reader to exercise caution when using data from earlier reports regarding these lands or total forest area. It is important to note that the timberland classification is unaffected by this change. Tables presented in appendix C that have been adjusted carry footnotes with this caution as well.

It is also important to note that forest area estimates for western Texas, western Oklahoma, and interior Alaska in this assessment and in all previous national assessments have been based on remote sensing without field inventory verification. As Forest Inventory and Analysis (FIA) proceeds with implementation of new field inventories in these areas, historic data may be further adjusted to allow for reliable trend analysis. The western Texas inventory is currently in progress and western Oklahoma and interior Alaska will likely have new data before the next national assessment.

## Sidebars

FIA takes pride in providing its resource data to the scientific community. Throughout this document text inserts, or sidebars, identify other key users of FIA data that support analysis of the Nation's forest resources. We encourage the reader to visit the Web sites listed to learn more about how FIA's scientifically reliable data are used throughout the resource community.

## Need More?

*The National Report on Sustainable Forests—2003* provides the most comprehensive account of available data on the current condition of the Nation's forest resources. The report is based on 67 indicators for the conservation and sustainable management of forests. The indicators were endorsed by the United States and 11 other countries that house 90 percent of the world's temperate and boreal forests and 60 percent of all forests. This report is posted on the Web at <http://www.fs.fed.us/research/sustain/>. Most of this report is based on data from the last national assessment. A new report based in part on the data provided in this assessment is scheduled for publication in 2010.

*The Interim Update of the 2000 Renewable Resources Planning Act Assessment* provides a snapshot of current U.S. forest and rangeland conditions (all ownerships), identifies drivers of change for natural resource conditions, and projects the effects of those drivers on resource conditions 50 years into the future. The 2000 RPA Assessment report was organized around the Montreal Process Criteria and Indicators for sustainable forests. More information is available at <http://www.fs.fed.us/research/rpa/pubs-supporting-interim-update-of-2000-rpa-assessment.shtml>.

# The State of the Nation's Ecosystems

The H. John Heinz III Center for Science, Economics and the Environment

The core premise of the State of the Nation's Ecosystems report is that American citizens should have access to high-quality information on the state of their lands, waters, and living resources. Given that land use and other policy decisions as well as a changing climate are likely to drive significant change in the Nation's ecosystems over the coming decades, the need for periodic, science-based, nonpartisan reporting to guide the Nation's response to these challenges is paramount.

For over 10 years, the Forest Service has been an important partner in the development of indicators of ecosystem condition and use cited in the State of the Nation's Ecosystems report. The FIA program and other partners within the Forest Service provided the data used in the report's indicators of forest area and ownership, types, management categories, landscape pattern, carbon storage, age, disturbance, and timber growth and harvest. More information about the report may be found at <http://www.heinzctr.org/ecosystems/index.shtml>.

"Without the support of the Forest Service, the State of the Nation's Ecosystems report would not have been possible. The extensive and high-quality information and superb partnership philosophy provide a model for information collection in support of decisionmaking. We are grateful for the Forest Service's extensive involvement in supporting our work." —Robin O'Malley, Program Director





# CHAPTER 1

## Ecological Overview of U.S. Forests

# Ecological Overview of U.S. Forests Robert G. Bailey and W. Brad Smith

**F**orests in the United States have developed in response to multiple influences, including climate, physiography, geology, soils, water, and human intervention.

Subcontinental divisions of broad climatic similarity that are affected by latitude and continental position (continental versus oceanic) are called domains. Four domains or major ecoclimatic zones found in the United States (Bailey 1996) are polar, temperate humid, arid, and tropical humid. Further subdivisions of these zones may be made based on seasonality of precipitation and degree of dryness or cold. Other physiographic characteristics that may further define these subzones and their vegetation include whether an area is montane versus lowland.

The following discussion frames the 2007 resource data in the context of Bailey ecoregions and describes the forest cover types (Eyre 1980) of the conterminous United States both by Resources Planning Act geographic region and major ecoclimatic zones. Alaska and Hawaii are discussed separately.

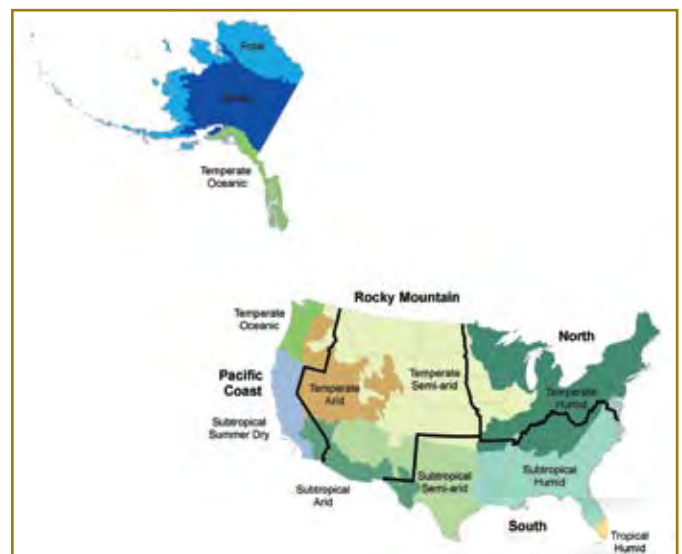
## Eastern Forests

Eastern U.S. forests stretch from the Atlantic Ocean west to the Great Plains. The following sections will highlight features of the predominantly temperate forests of the North and the predominantly subtropical forests of the South.

## North Region

The North region is predominantly in a temperate humid ecoclimatic zone. The climate of the temperate humid zone is significantly influenced by both tropical and polar air masses. The mid-latitudes contain a belt subject to cyclonic winds; much of the precipitation in this belt comes from the lifting of moist air along fronts within those cyclones. Strong climatic seasons are characteristic of this zone—seasons in which temperatures and precipitation show strong annual cycles. Forests of this zone comprise both broadleaf deciduous and needleleaf evergreen trees. Softwood forests and mixed softwood and hardwood forests extend along the entire length of the northern parts of this zone, where summers are cool and winters cold. In the middle and southern reaches of this zone, forests are dominated by tall hardwood species that provide a continuous dense canopy in summer but shed their leaves completely in winter. Here, winters are cool and summers hot.

The northernmost forests of the temperate humid zone (fig. 1.1) are heavily forested with second- and third-growth forests. The area is dominated by northern oak-hickory and maple-beech-birch forests on the uplands and by elm-ash-cottonwood forests in the bottomlands. The southernmost reaches of these forests run down the crest of the Appalachian Mountains. Red maple is a common early-to-mid-successional transition species to the north, giving way to yellow-poplar in the southern portion of this zone. Introduced pathogens have forever changed the diversity of northern forests. For example, chestnut blight nearly eliminated American chestnut, and Dutch elm disease severely diminished American elm populations. Before the accidental introduction of Dutch elm disease, American elm was the most planted urban street tree in the United States. More recent introductions, such as beech bark disease, emerald ash borer, Sudden Oak Death disease, and dogwood anthracnose, are also substantially influencing the composition of North American forests. Common mammals in the northern temperate forest include white-tailed deer, black bear, porcupine, raccoon, and squirrel. Although agriculture was attempted throughout this region, many of the lands were not well suited and reverted to forest after abandonment. Large portions of the current national forests in this region were carved from lands that were unsuitable for agriculture.



**Figure 1.1.** Major ecoclimatic zones and assessment regions of the United States.



Spruce-fir forests, found along the northeastern border of the United States from Minnesota to Maine, account for 54 percent of the northern softwood forests. The spruce-fir forests of the Northeast subregion are an important source of pulpwood. Recent budworm outbreaks and natural successional change of remote spruce-fir forests have caused spruce-fir acreage to decline in the North region by 15 percent since 1987 and by 26 percent since 1953 (see appendix C, table 16).

White-red-jack pine forests total 9 million acres and are scattered throughout the northern reaches of the northern forest associated with the cooler summers. The current acreage is only a shadow of the vast pineries that existed until the late 19th century. The replacement forests in areas not converted to permanent farmlands are mostly hardwood species. The species composition of the white-red-jack pine forest type varies; white pine predominates in the Northeast subregion, and red and jack pines are the common pines of the North Central subregion. Most of the planted softwood stands in the North region are red and white pines.

Aspen-birch is a pioneer ecosystem generally owing its origins to major disturbances. Historically, this disturbance was fire or agriculture but, in recent decades, clearcut harvesting has been the dominant method of disturbance promoting regeneration. Most of the 16 million acres of aspen-birch forests are in the North Central subregion (76 percent). These forests support a variety of northern wildlife species such as white-tailed deer and ruffed grouse. Aspen forests are major sources of fiber for the pulpwood and oriented strandboard industries in the North region. Fire suppression and natural succession have reduced the area of aspen by 33 percent since 1953. Maple-beech-birch forests are the major forest type in the North region. As the northern forest continues to age, acreage in this type has more than doubled since 1953. These forests currently are found on 50 million acres in the North region. They make up 30 percent of all northern forests and contain a number of valuable hardwood species, including sugar maple and the birches, for wood products. This forest type is also famous for its fall color.

Oak-hickory is the dominant forest cover in the central and southern portions of the North region. It occurs in expansive areas in portions of Indiana, Pennsylvania, and West Virginia. Also, small forest patches of this type occur in farm woodlots throughout the region. Although agriculture is a dominant land use in areas where oak-hickory is present, only the very marginal farmlands have been abandoned to revert to forest. Yellow-poplar is a common transition species that precedes the dominance of oak-hickory in forest stands in this region. Oak-hickory stands in the North region tend to be very diverse and heavily influenced by species other than oaks and hickories, with ash, basswood, and sugar maple being prevalent. With time, oak-hickory makes

the transition to maple-beech on the milder northern and eastern exposures. At the western edges of this region, where the general climate makes the transition to semiarid, bur oak, hackberry, and cottonwood are major components of this type, where it is generally found in moist riparian areas.

Elm-ash-cottonwood forests, dominant bottomland forests of the North region, are found mostly along moist river and stream bottoms. In the North region, they account for 11 million acres, which often are wetland areas common in this region. Dutch elm disease has had a major impact on this forest type, seriously reducing the elm component. To the west, species such as red maple, green ash, and cottonwood have rapidly filled in behind elms in these forests. White ash, the most commercially valuable species in this type, is used for a number of specialty wood products, such as baseball bats and tool handles. Lowland forests are highly susceptible to encroachment of other land uses and, since 1953, this forest type has declined in area by 43 percent in the North region.

### South Region

The South region is predominantly in a subtropical humid climatic zone (fig. 1.1) except for an area that covers most of Kentucky and Tennessee, which is in a temperate humid zone, and a small area in southern Florida, which is in a tropical humid zone. The subtropical humid zone in general is characterized by the absence of very cold winters. High humidity, especially in summer, prevails throughout the southern Atlantic and gulf coast States. Forest is the natural vegetation of large areas here, with much of the sandy coastal region of the Southeastern United States covered by a second-growth forest. Large areas of pine in plantation and natural stands occur throughout the coastal plain and piedmont regions, along with southern oak-hickory on upland hardwood sites and oak-gum-cypress in the bottomlands. Oak-pine mixtures are common at the northern and western fringes of the southern forest. Agriculture is prominent in the coastal plain and in the bottomlands along the rivers, where the productivity of rich bottomland soils historically have led to considerable forest clearing. The forests of the South region account for 30 percent of the unreserved forest area of the United States and 27 percent of all forest land.

Loblolly-shortleaf pine forests are among the most prevalent in the South region, covering 55 million acres or nearly one-fourth of all southern forests. These forests can consist of pure loblolly or shortleaf pine as well as mixtures intermingled with other southern pine species. Loblolly pine is most common in the piedmont and coastal plain areas; shortleaf pine has a wider distribution and ranges farther into the interior South and lower portions of the North region. Loblolly-shortleaf pine forests account for more than one-half of the 95 million acres of softwood forests in the Eastern United States.

Longleaf-slash pine forests, whose 13 million acres account for 19 percent of the southern pine acreage, are found in States bordering the south Atlantic and gulf coasts, but most of the acreage in this type is concentrated in Florida and Georgia (see chapter 10, mini-atlas, plate 1). These forests continue to decline and now cover less than half the acreage that they had in 1953. Major factors in this change have been loss of fire (through suppression), and conversion of longleaf-slash sites to faster growing loblolly pine. Oak-pine forests cover 23 million acres in the South region, which has nearly all of this forest type. These forests frequently originated from cutover natural pine sites with poor pine regeneration. The acreage classed in the oak-pine type has been declining in recent years as demand for the pine component has increased. These forests generally occupy drier upland sites. The oak-gum-cypress forests total 20 million acres in the South region. Much of this forest type has been lost through conversion of bottomlands to agriculture, and it continues to decline.

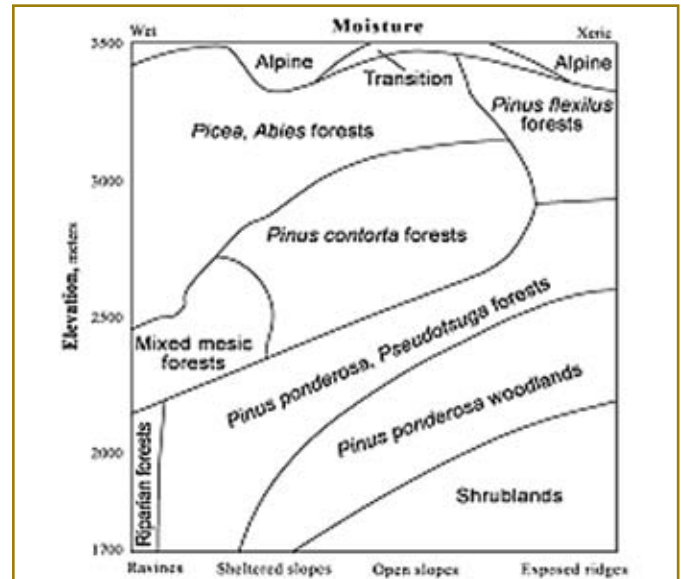
## Western Forests

Forests of the western coterminous States stretch from the Great Plains west to the Pacific Ocean. The following sections will highlight features of the predominantly arid forests of the Rocky Mountain region and the predominantly temperate oceanic and Mediterranean-like forests of the Pacific Coast.

## Rocky Mountain Region

The Rocky Mountain region predominantly spans the temperate arid, subtropical arid, subtropical semiarid, and temperate semiarid climatic zones (fig 1.1). This region stretches from prairies in the east to extensive mountains and plateaus separated by wide valleys in the west and dry deserts in the southwest. Soils range from shallow and poor on the mountains and slopes to rich and suitable for agriculture or grasslands in the valleys of the northern areas to desert arid soils in the southwest. Forests of the region cover about 20 percent of the land area and are diverse and variable depending on elevation and moisture availability. The higher elevations support subalpine fir, lodgepole pine, and Engelmann spruce. The middle elevations and slopes include interior ponderosa pine, Douglas-fir, lodgepole pine, western redcedar, western hemlock, and aspen. Within this forest cover, the main environmental contrasts in the types of vegetation are not simply related to elevation but to a combination of elevation and topography. We may locate the main forest types on an elevation-topographic gradient (fig. 1.2). Although spruce dominates the lower plateaus to the north, shrub vegetation is more common in the drier south. In the eastern prairie areas, trees and shrubs are scarce, but a few may grow as woodland patches in low, moist areas and along streams. In the southwest deserts, vegetation is generally composed of xerophytic plants (plants that can survive in areas with very

little moisture), which are widely dispersed and provide almost negligible ground cover. Commercial forestry is more common in the north region, and agricultural activities such as orchards, vineyards, and grazing are more common in the south region.



**Figure 1.2.** Boundaries between vegetation types in the Front Range, CO. These boundaries are related to two environmental gradients: elevation and exposure.

Source: Peet (1988) and Bailey (1996)

The higher elevations of this region contain forests of Interior Douglas-fir, ponderosa pine, lodgepole pine, and aspen. The lower elevations are dominated by sagebrush and juniper, and low desert areas contain a variety of cacti and shrubs. The northern prairie wetlands are key habitat for migratory waterfowl. Other animals of this region include bison, elk, mule deer, and coyote. Urbanization has affected this area significantly, and many valleys are becoming densely populated. Interior ponderosa pine forests are found to some extent throughout the Rocky Mountain region (fig 1.1). Most ponderosa pine is found in Arizona, Colorado, Idaho, Montana, New Mexico, Wyoming, and the Black Hills of South Dakota. In general, it is the first type encountered above the valley floors of the region. Common associates are Douglas-fir and larch.

Douglas-fir forests generally occur at elevations directly above the ponderosa pine. Predominant areas of Douglas-fir in the interior West are in Idaho and Montana, where three-fourths of the region's volume of these trees is found.

Lodgepole pine forests typically are found in pure stands and often are very dense. Three-fourths of the

total volume of lodgepole pine is located in Colorado, Idaho, Montana, and Wyoming. In natural fire regimes, lodgepole is generally replaced by other softwoods, such as Douglas-fir, grand fir, or subalpine fir.

Most of the other softwood forests of the Rocky Mountain region are confined to Idaho and Montana and include western white pine, hemlock-Sitka spruce, western redcedar, and larch forest types. Combined, these types make up only 2 percent of all the forest of the region. Hardwood forests cover 10 million acres in the Rocky Mountain region, or about 7 percent of all the region's forest land. Generally found in small patches or groups and along streams, quaking aspen and cottonwood are prominent hardwood species in the western part of the region. On the eastern prairie, hardwood forests are predominantly elm-ash or cottonwood-willow stringers along rivers and streams. Scattered bur oak and hackberry, as well as hickories, may be found on the upland sites in eastern Kansas.

### Pacific Coast Region (Excluding Alaska and Hawaii)

The climate zones of the Pacific Coast region are a mix of temperate oceanic in coastal Oregon and Washington (fig. 1.1), subtropical summer dry in western California, and temperate arid, subtropical arid, and temperate semiarid in the eastern portions of the region.

The temperate oceanic climatic zone is situated on the Pacific coast and comprises roughly the western half of Oregon and Washington. This coastal zone receives abundant rainfall from maritime polar air masses and has a rather narrow range of temperature because it fronts on the ocean. Natural vegetation of the temperate oceanic climate of North America is needleleaf forest. In the coast ranges of the Pacific Northwest subregion, Douglas-fir, western redcedar, and spruce grow in magnificent forests. The high snowcapped mountains have a well-marked subalpine belt. Important trees here are mountain hemlock, subalpine fir, whitebark pine, and Alaska-cedar. The alpine zone has a rich flora of shrubs and herbs. North Pacific coast forests are dominated by mountainous topography bordered by coastal plains along the ocean. Altitude is critical to forest composition, ranging from mild, humid coastal rain forests to cool boreal forests at higher elevations. Coastal forests include western redcedar, western hemlock, Douglas-fir, Sitka spruce, redwood, and red alder. Higher elevations have mountain hemlock and fir. Highly productive forests are conducive to forest industry, and agriculture is important in the highly productive lowland areas.

The forests of the three conterminous States of the Pacific Coast region account for 12 percent of the forest area of the United States. The Mediterranean climate zone is situated on the Pacific coast between latitudes 30 and 45° N. Subject to alternate wet

and dry seasons, it is in the transition zone between the dry west coast desert and the wet west coast forests. The occurrence of a wet winter followed by a dry summer is unique among climate types and produces a distinctive natural vegetation of hardleaved evergreen trees and shrubs called sclerophyll forest. Various forms of sclerophyll woodland and scrub are also typical.

Forests of the Pacific Southwest subregion are characterized by evergreen shrubs, patchy oak woodlands, and pine forests on the upper slopes. Most of the Nation's chaparral is also found in this region. Urbanization has affected this area significantly, and many valleys are densely populated.

### Alaska

The boreal climatic zone (fig. 1.1) is situated in Alaska where continental polar air masses are south of the tundra zone between latitude 50 and 70° N. This climate type shows very great seasonal range in temperature; winters are severe and the small annual precipitation is concentrated in the three warm months. This zone coincides with a great belt of needleleaf forest, referred to as boreal forest, and open lichen woodland, called the taiga. The Nation's boreal forests generally consist of close stands of conifers (mostly spruce and tamarack) interspersed with white birch and aspen. Soils in general are shallow and rocky. The boreal zone dominates 85 percent of Alaska's landscape. The polar climatic zone lies north of the boreal zone and includes a tundra region, which has a very short, cool summer and a long, severe winter. Temperature efficiency rather than effectiveness of precipitation becomes critical in influencing plant distribution and soil development. Vegetation on the tundra portion of this zone consists of grasses, sedges, and lichens, with willow shrubs.

The temperate oceanic climatic zone occupies the southeast coast of Alaska, making up roughly 9 percent of the State's forests. This zone receives abundant rainfall from maritime polar air masses and has a rather narrow range of temperature because it fronts on the ocean and is dominated by mountainous topography, and the natural vegetation is predominantly needleleaf forest. Altitude is critical to forest composition ranging from mild, humid coastal rain forests to cool boreal forests at higher elevations. Coastal forests include western hemlock, Alaska-cedar, western redcedar, Sitka spruce, red alder, and black cottonwood. Higher elevations have lodgepole pine, mountain hemlock, and subalpine fir. This zone also has a rich flora of shrubs and herbs.

The forests of Alaska account for 17 percent of all forest area of the United States. Of Alaska's unreserved forest, 9 percent is timber land (11.9 million acres) and accounts for 2 percent of all U.S. timber land.

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Of Alaska's unreserved forest land, 93 percent is covered with softwood stands, 6 percent has hardwood stands, and 1 percent is currently nonstocked. The most extensive forest-type group is other softwoods. The other softwoods group is primarily spruce stands in interior Alaska. These forests account for 58 million acres—nearly half of all forests in Alaska—and provide important values that include watershed and soil protection, wildlife habitat, and aesthetic enjoyment.

Hemlock-Sitka spruce and fir-spruce forests are found primarily in coastal Alaska. These forests account for about 10 million acres and are made up of important commercial timber species that provide raw material for lumber products, pulping, and log exports on the Pacific coast and abroad. In Alaska, about 9 million acres are of the western hardwoods forest-type group. Paper birch, aspen, and black cottonwood are the most abundant hardwood species.

### Hawaii

The small area of tropical humid climate in the United States is at low latitudes and is controlled largely by equatorial and tropical air masses. This climate has no winter season. Although average annual rainfall is heavy and exceeds annual evaporation, it varies in amount and in seasonal and areal distribution. Hawaii and extreme southern Florida support this regime. Although southern Florida is dominated by wet savanna, Hawaii has evergreen and semideciduous forests of great diversity. Other islands held in trust or free association with the United States are discussed in Chapter 7.

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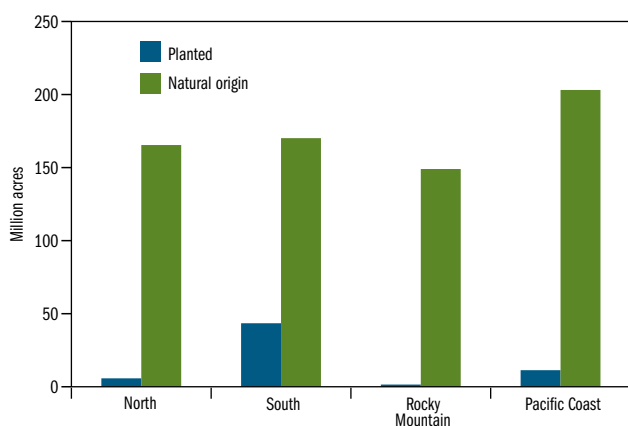
# CHAPTER 2

## Forest Area, Ownership, and Setting

## Forest Area W. Brad Smith

As shown in the forest-type map (see chapter 10, map plate 2), forest land in the United States is widely, yet unevenly, distributed. Areas vary from sparse scrub forests of the arid interior West to highly productive forests along the Pacific coast and in the South, and from pure hardwood forests to multispecies mixtures and coniferous forest. Land east of the Great Plains that is not in agriculture or other developed uses is usually in various phases of forest cover. The high elevation areas of the West that receive ample precipitation and the humid portions of the Pacific coast are also forested. North Dakota currently has the lowest percentage of forest cover (2 percent) and Maine has the highest (89 percent) (see chapter 10, map plate 6).

Most of the Nation's forests are of natural origin (fig. 2a.1); that is, they have regenerated naturally through seeding, root suckers, or stump sprouts from existing trees. Most planted forests are in the South region, where timber production is dominant. Of the southern forests, 20 percent are of planted origin; nationally, only 8 percent of all forests are planted. Where stands are planted, the new stock, in general, is of native provenance with limited areas of nonnative species.



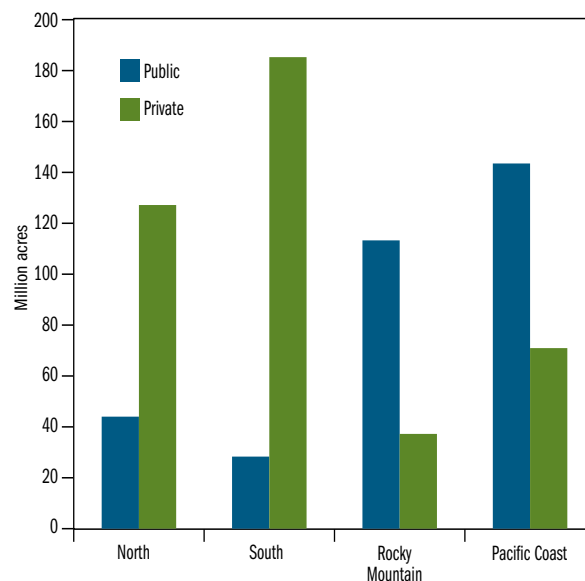
**Figure 2a.1.** Origin of forests in the United States by major region.

About two-thirds (514 million acres) of the Nation's forests are classed as timber land—forests capable of producing 20 cubic feet per acre of industrial wood annually and not legally reserved from timber harvest (see appendix C, table 1). An additional 75 million acres of forest reserved for nontimber uses

are managed by public agencies as parks or wilderness areas. The remaining 162 million acres of forest are classified as not capable of producing 20 cubic feet per acre annually but are of major importance for watershed protection, wildlife habitat, domestic livestock grazing, recreation, biodiversity maintenance, and other uses. Almost all of these remaining forests—87 percent—are in the interior West and interior Alaska.

More than half of the Nation's forest land is in private ownership. In 2007, 423 million acres—56 percent of the total—were owned by private individuals, Native Americans, or corporate entities (see appendix C, table 2). Of the Nation's forests, 44 percent are in public ownership. The Forest Service, U.S. Department of Agriculture, administers the largest segment of public forest land—147 million acres or 45 percent of the total public forest land. This proportion of public ownership to other forest ownerships has remained relatively stable for at least the past 50 years.

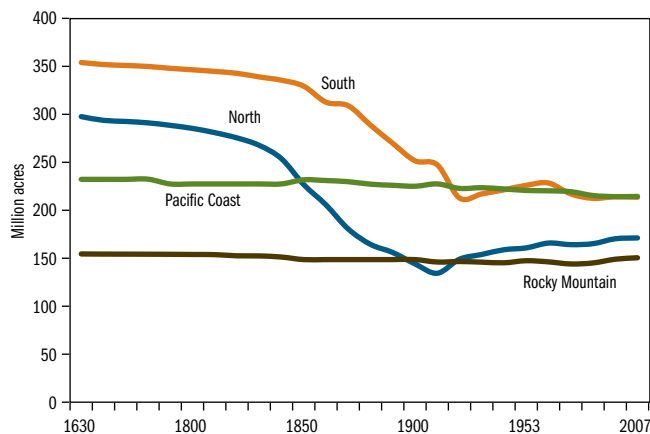
In the East, private ownership of forest land predominates with more than 75 percent of ownership in both the North and South regions. In the Rocky Mountain region, 25 percent is privately owned; in the Pacific Coast region, 33 percent is in private ownership (fig. 2a.2).



**Figure 2a.2.** Ownership of forests in the United States by major region, 2007.

## Historical Trends

When the first European immigrants arrived on the North American continent around 1630, the total area of forest land was an estimated 1,037 million acres (Clawson 1979, Kellogg 1909). This acreage of forest land represented about 46 percent of the total land area. The area of forest land declined steadily as settlement proceeded. Most of the post-settlement loss of forest land was in the Eastern United States, comprising the North and South regions (fig. 2a.3). In the North region, forests occupied an estimated 72 percent of the land in 1630 (Kellogg 1909) (see appendix C, table 3). By 1907, forests covered only 32 percent of the land in the region, a proportion that rebounded to 42 percent by 2007. Likewise, significant reductions in forest area occurred in the South region before the 20th century, with the forested proportion dropping from 66 percent in 1630 to 46 percent by 1907. Forested area fluctuated during the past century in the South region as land cycled between agricultural, forest, and other uses. By 2007, forests covered 40 percent of the land in the South region. In contrast to the Eastern United States, forest land in the Western United States has been more stable. The forested portion of the Rocky Mountain region showed a modest decline from an estimated 28 percent of the landscape in 1630 to 26 percent in 2007. Similar trends are evident for the Pacific Coast region, where the portion of land in forest dropped from 40 percent in 1630 to 37 percent in 2007.



**Figure 2a.3.** Forest area trends in the United States by major region, 1630–2007.

## Timber Projections/Forest Area

Dave Wear, John Mills, and Ralph Alig

FIA data collected in the field are the core of RPA timber projections. The data provide a detailed wall-to-wall snapshot of forest resource conditions across all U.S. regions. The compiled data become the baseline for projecting the timber resource situation in the future. Information collected on FIA plots is used to calibrate many growth and yield parameters of the projection models. In addition, historical plot data are used to discern trends in forest cover type changes and changing ownership patterns. These trends are linked to regional- or county-specific economic data to develop models to project future changes in the forest base. The detail available in FIA data also allows for linkages to other models that project changes in forest growth due to climate change or to changes in forest cover due to fire or management. The linkages allow for alternative simulations that examine impacts from potential future events and provide information for examining various forest policy scenarios, e.g., impacts of global change on forests or tree-planting incentives for carbon sequestration. To learn more about these applications, visit <http://www.srs.fs.usda.gov/staff/636>.

## Current Status and Recent Changes

Today's forest land area amounts to about 72 percent of the area that was forested in 1630. About 300 million acres of forest land have been converted to other uses since 1630—mainly to agricultural uses. More than 75 percent of the net conversion to other uses occurred in the 19th century. Between 1850 and 1910, American farmers cleared more forest than the total amount cleared in the previous 250 years of settlement—about 190 million acres (Fedkiw 1989).

Although the total area of forest land has been relatively stable nationally since the early 1900s, stability does not mean that the forest has not changed. Shifts continue from agriculture to forests and vice versa, although not at historic rates. Some forest lands have been converted to more intensive uses, such as urban areas. In areas where forest land area has remained stable, forests have changed in composition, structure, and

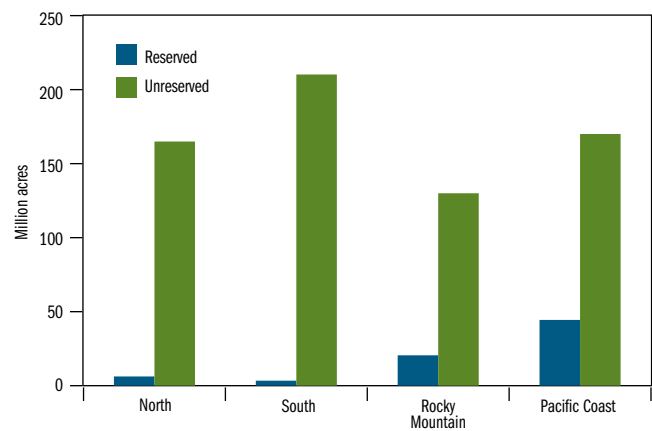
health as they respond to human manipulation and to the natural processes of regeneration, succession, and mortality.

Forest land across the Nation has increased by 4 percent since 1987 and decreased 3 percent between 1953 and 1987. Forest area increased in most regions and subregions of the country in the past decade. In the North region, forest area has increased by nearly 7 percent since 1953 in spite of the demands of an increasing population for living space and associated amenities. Since 1953, most of the net increase in forest land occurred in the Northeast subregion where the major source of new forest land was former pasture and other agricultural lands that have reverted to forest. In the South region, forest land has declined by 5 percent since 1953. The pressure of increased urbanization in the sunbelt has been steady with significant losses occurring in the 1970s and 1980s. The decline could have been greater, but millions of acres have been planted under various Federal- and State-sponsored incentive programs that encourage tree planting. Increases in forest area since 1953 were also noted in the Rocky Mountain region where forest acreage rose by 6 percent. Forested acreage in the Pacific Coast region (including Alaska) declined by 4 percent between 1953 and 2007. Most of the decline occurred in California, Oregon, and Washington where, as in the South region, urbanization and development are the major cause. A lesser part of the decline—about 1 percent—resulted from the reclassification of land in Alaska.

### Reserved Forest Land

Worldwide interest abounds in protecting sufficient representative ecosystems to maintain a pool of biodiversity for future generations. In 2007, some 75 million acres of forest land were classified as reserved and include Federal and State wilderness areas and State and national parks (see appendix C, table 1; fig. 2a.4). This estimate does not include tens of millions of acres of public lands that are managed for biodiversity and other nontimber uses under existing land management plans. Nor does it include large acreages of private lands that are held by nongovernmental organizations, such as The Nature Conservancy, other private conservation trusts, or lands protected by conservation easements under various State and local authorities. The legally reserved forest land area in 2007 amounted to 10 percent of the total forest land area and was nearly triple the area classified as reserved in 1953. And, currently, tens of millions of acres of unreserved forest land are on Federal lands that may never be available for commercial harvest on roadless public lands (32 million forest acres) or other administrative designations that may preclude harvesting.

The various ways of classifying the degree of protection given to an area are discussed more fully in next section of this chapter.



**Figure 2a.4.** Forest area by reserved status in the United States by major region, 2007.

### Unreserved Forest Land

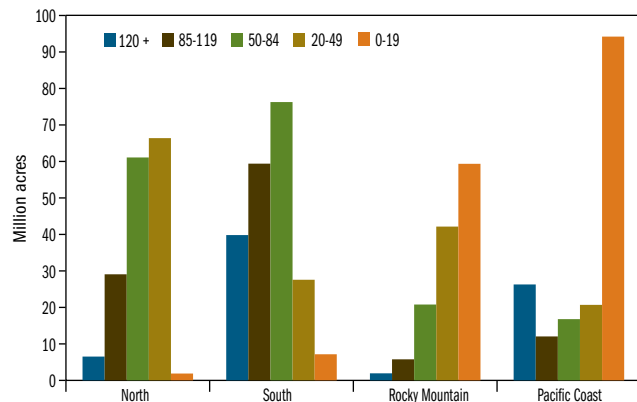
Forest inventories traditionally focused on forests with potential for harvesting because of their commercial value and the legislative mandate to provide information on current and prospective timber supplies to meet the Nation's needs. As demand for more ecologically based inventories increased, resource inventory objectives changed. As new inventories are initiated, all forest land will be monitored and a complete inventory will be available within 10 years. The following discussion of productivity and forest-type groups is limited to the 677 million acres of unreserved forest land, which includes timber land and other forest land.

Productivity of forest land is defined here as the amount of wood per acre that potentially can be produced in fully stocked natural stands. The natural growth potential has been used because such measures are available for most regions of the United States, and they provide a uniform means of describing productivity of forest land for timber production in the country. Chief among the factors that influence productivity are soil, climate, and topography.

In the West, the largest areas in the high-productivity class are in the coastal Douglas-fir, hemlock-Sitka spruce, and oak-hickory types. In the East, the highly productive sites are found in the loblolly-shortleaf pine and oak-gum-cypress ecosystems of the lower Mississippi drainage and the Atlantic coastal plain.



Most of the Nation's highly productive forest lands (lands capable of producing more than 120 cubic feet per acre per year) are located west of the Cascade Mountains in the Pacific Northwest subregion of the Pacific Coast region and in the South region (fig. 2a.5). These two regions have 18 and 39 million acres, respectively, of high-productivity forest lands (see appendix C, table 4).



**Figure 2a.5.** Unreserved forest in the United States by major region and productivity class (cubic feet per acre per year), 2007.

Most of the other forest that is less productive for timber production is located in the West—in high-elevation, or northern latitude (e.g., Alaska), fir-spruce stands or in the dry, open-grown pinyon-juniper lands of the interior West. These forest lands, sometimes called woodlands, are of major importance for watershed protection, wildlife habitat, domestic stock grazing, and other uses. Although these forest lands produce little industrial roundwood, they do produce other wood and tree products that are often important for local use. Fuelwood is a primary commercial use in many areas having woodlands, such as the oak woodlands of California and the pinyon-juniper areas of the Southwest. Although Alaska has the greatest area of low-productivity lands in terms of timber, the Intermountain subregion also has large areas that are relatively unproductive for timber. Of the forest land in the Intermountain subregion, 41 percent has the potential to produce no more than 20 cubic feet per acre per year, and 68 percent can produce no more than 50 cubic feet per year. Although a large percentage of the forests in the Pacific Coast region are classed as low productivity (0-19 cubic feet per acre per year), most of this area is found in interior Alaska.



## Reserved and Roadless Forests David Azuma, James Menlove, and Andrew Gray

Some 74 million acres of forest land, or 10 percent of all U.S. forest land, are permanently reserved from wood product utilization through statute or administrative designation. A large part of these lands is in wilderness areas, national parks, and national monuments. Although the primary reason for protecting many of the areas is not preservation of forest characteristics, the forest land they contain may be different from those of forest land in general, either regionally or nationally. For instance, national forest wilderness areas in the West are often at the highest elevations in the national forests. Because reserved forests are less intensively managed than other forests, at least through timber removal, differences in stand age and fuels accumulation would be expected.

Reserved forest land is defined as those forested areas that are withdrawn from wood production by legal statute. The majority holders of these areas include national parks, National Forest System wilderness areas, and State parks. Many of these reserved lands in the West are remote and thus serve as irreplaceable habitat for species that do not coexist well with humans, such as the grey wolf (*Canis lupus* and *Canis lupus baileyi*) or the grizzly bear (*Ursus arctos horribilis*). Some of these areas contain the elevation fringe of forest/nonforest where species may tend to be most sensitive to environmental change. Effects of pollution or global climate change would tend to show in these high elevation types before other types in more hospitable environs.

Beginning with the second Roadless Area Review and Evaluation (RARE II) in 1979, the Forest Service has inventoried roadless areas within their boundaries. These areas were categorized in forest management plans as (1) areas where road construction or reconstruction were permitted, (2) areas where road construction or reconstruction were prohibited, or (3) recommended for wilderness area designation. The 2001 Roadless Area Conservation Rule prohibits, with specific exceptions, both road construction and wood production in all three categories of inventoried roadless areas. Currently, after several judicial decisions and rule modifications, the Roadless Rule allows for Governors to petition to establish management requirements for inventoried roadless areas within their States.

Fifty-eight million acres (32 million acres forested), or 8 percent of all U.S. national forest land, are inventoried roadless areas protected under the Roadless Rule. This represents about 31 percent of the National Forest System land base (USDA 2007). Because roadless areas are established administratively rather than legislatively, inventoried roadless areas were placed in a separate category from available and reserved forest lands in the following descriptions to provide a better understanding of the forest resources in this specific designation.

### Area and Distribution

Excluding Alaska, there are about 41.5 million acres of reserved forest land in the United States (fig. 2b.1), with nearly 80 percent of this area—31.7 million acres—located in the West. The North region has more than 6 million acres of reserved forest land and the South region has about 3.4 million acres. In the West the largest portion of reserved forest exists (more than 66 percent) on national forests, mostly in wilderness areas, but also exists in national parks, such as Yosemite, Yellowstone, and Olympic. The National Park Service has a substantial holding of reserved forest land, with 17 percent of the total in the West. In the North region, States have the majority holdings with 62 percent of the reserved forest land, including New York's Adirondack State Park and Catskill Reserves, and the Forest Service has the Boundary Waters Canoe Area Wilderness in Minnesota. In the South region, the majority holder is the National Park Service, with 39 percent, including the Great Smoky Mountains National Park, followed by the Forest Service, with 21 percent. Although World Conservation Union (IUCN) protected area categories (Table 2b.1) do not match perfectly with “reserved forests” and the ownership/management of those forests, we can use IUCN category assignments (WDPA Consortium 2006) to estimate how much reserved forest land falls into IUCN categories. Category assignment varies across and between States for State-owned protected areas, and forest inventory records lack the information detail to sort them. But Federal land management agencies have a more consistent category assignment, and forest land information can be assigned to major agencies, if not to different designations within an agency (for example,

national park vs. national monument), to sort them. The major land management agencies, their most common management designations with reserved forest land, and the most common or “typical” IUCN category designation appear in table 2b.1.

Federal agency	Major area designations (typical IUCN category)
Forest Service	Wilderness areas (Ib) Nonreserved roadless (VI)
National Park Service	Wilderness areas, mostly within national parks (Ib) National parks (II) National monuments (III) National recreation areas (V) National preserves (IV, V) Various historic designations (V)
Bureau of Land Management	Wilderness areas (Ib) National monuments (III)
Fish and Wildlife Service	Wilderness areas (Ib) National wildlife refuges (IV)

**Table 2b.1.** Major land management agencies by management designation and IUCN category designation.

At least two-thirds of the Nation’s reserved forest land, outside interior Alaska, is in IUCN category Ib, identified as wilderness areas managed by each of the four agencies within the National Wilderness Preservation System. More than 10 percent of the reserved forest land is in category II, mostly identified as the nonwilderness portions of national parks. Between 5 and 10 percent are in categories III, IV, and V, identified as national monuments managed by the National Park Service and the Bureau of Land Management, national wildlife refuges and national preserves, and national recreation areas and various other areas managed by the National Park Service, respectively.

Roadless areas on national forest lands (IUCN category VI, along with most nonwilderness Forest Service land) exist mainly in the West, with about 42 million acres of combined forest and nonforest land outside of Alaska, about 15 million acres in Alaska, and about 2 million acres in the Northern and Southern United States. Aside from Alaska, Idaho and Montana have the greatest amount of roadless area, with 9.3 and 6.3 million acres, respectively.

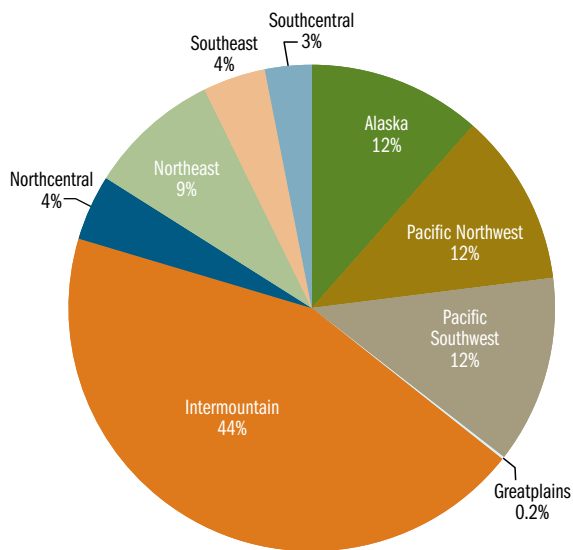
## Character

Reserved lands can be a haven for rare forest types. More than 80 percent of the red spruce type in the South region is in reserved lands. In the Pacific Northwest subregion, more than 60 percent of the whitebark pine and more than 80 percent of the Alaska yellow-cedar types exist as remnant stands in reserved areas. The Intermountain region has 44 percent of its whitebark pine in reserved areas. In California, more than 60 percent of the lodgepole pine and foxtail/bristlecone pine types exist in reserved areas. With the exception of Alaska yellow-cedar, all of the above examples are correlated with higher elevation forests within the individual regions. The Intermountain region has more than 50 percent of the Engelmann spruce, subalpine fir, lodgepole pine, and whitebark pine types in the reserved or roadless classifications. Including the roadless areas, the Pacific Northwest subregion, including California, has more than 50 percent of the pinyon-juniper, western white pine, red fir, subalpine fir, mountain hemlock, whitebark pine, Alaska yellow-cedar, foxtail/bristlecone pine, and limber pine types in either roadless or reserved areas.

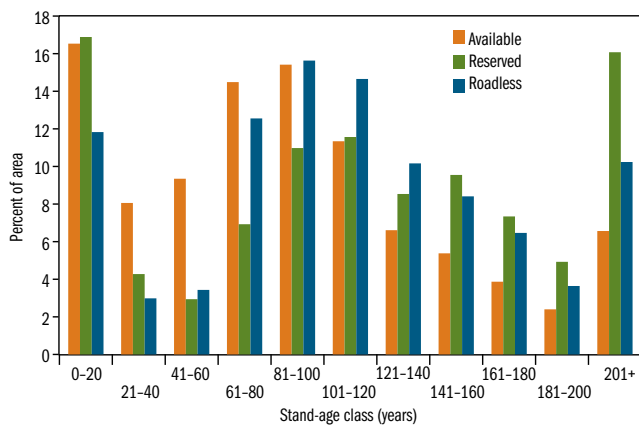
Roadless areas are often adjacent to designated reserved areas in the West and, thus, they share some of the same characteristics, including age, species, and elevation distribution.

Nationwide, stand ages on reserved forest land are in older classes than on nonreserved forest land, with 48 percent of reserved forests more than 100 years old, as compared with 16 percent for nonreserved forests. In the East (North and South regions), most stands (reserved and nonreserved) are less than 100 years old, and more nonreserved stands are used for wood products than in the West. In the East the sorting of the proportion of reserved and nonreserved forest land into 20-year age classes creates distinct distributions for reserved and nonreserved forests. In the West, trees mature more slowly, and a larger proportion of the stands (reserved and nonreserved) are more than 100 years old, but stands 100 years old are relatively more common in reserved forests than in nonreserved forests (figs. 2b.2a and 2b.2b). Another apparent anomaly in the West is the higher proportion of stands 20 years old or less, in both reserved and nonreserved areas. Many of these young forests are regenerating from large wildfires that occurred over the past few decades. Reserved areas in which fires occurred include Yellowstone National Park and surrounding wilderness areas, Glacier National Park and nearby wilderness areas, and the large wilderness areas in central Idaho.

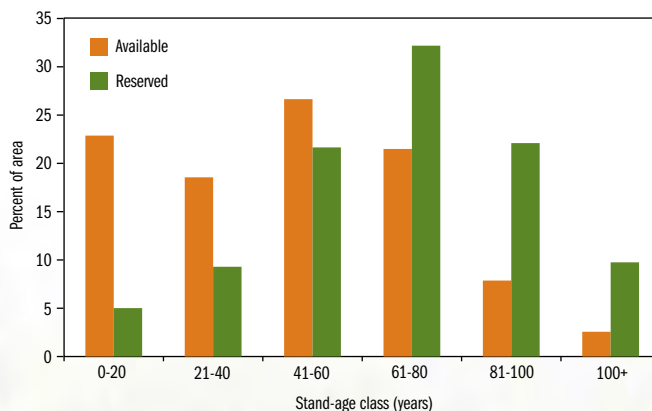
Stand ages in the roadless areas of the West follow a similar distribution as the reserved areas (fig. 2b.2a). In the West, more than 58 percent of the forest land in reserved areas and more than 53 percent of the forest land in roadless areas are in the age class of 100+ years. The roadless areas also mirror the reserved lands in the younger age classes, owing to recent large fires.



**Figure 2b.1.** Proportion of forest in reserved status by subregion, 2007.



**Figure 2b.2a.** Proportion of available, roadless, and reserved forest in the Western United States by age-class, 2007.



**Figure 2b.2b.** Proportion of available and reserved forest in the Eastern United States by age-class, 2007.

## Forest Ownership Brett J. Butler

The fate of the Nation's forests lies primarily in the hands of the people who own and manage (or do not manage) the land. Any report that purports to analyze forest resources must consider not only the biophysical characteristics of the forests but also the social context in which the forests exist. It is ultimately the landowners, within the social constraints imposed by society, who make the decisions that lead to parcellation, fragmentation (see the fragmentation section in this chapter), timber harvesting, and recreational opportunities, to name just a few of the outcomes they control and/or influence.

### Broad Ownership Patterns

Of the 751 million acres of forest land in the United States, 56 percent (423 million acres) is owned by private individuals, corporations, and other private groups and 44 percent (328 million acres) is controlled by public agencies (fig. 2c.1). The Federal Government controls 76 percent of the public forest land (33 percent of all forest land). State agencies control 21 percent of the public land (9 percent of all forest land), and county and municipal governments control 3 percent of the public land (1 percent of all forest land).

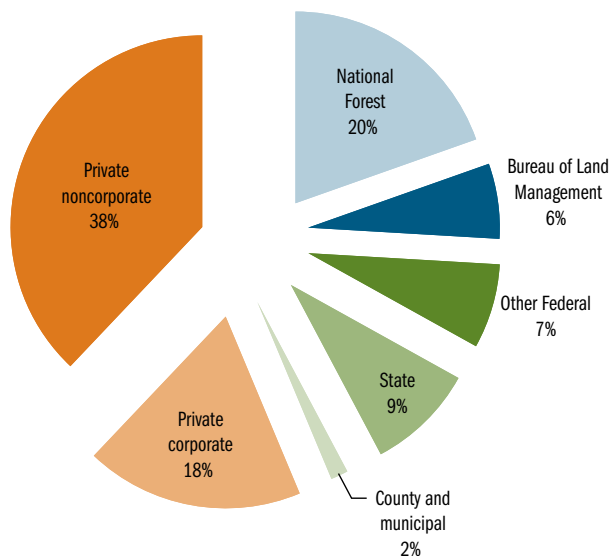


Figure 2c.1. Forest land in the United States by ownership category, 2007.

Noncorporate private owners own two-thirds of the private forest land (285 million acres or 38 percent of all forest land). These owners include individuals, couples, estates, trusts, nongovernmental organizations, clubs, associations, and other unincorporated groups. Corporate owners own the other third of the private forest land (138 million acres or 18 percent of all forest land). These owners include forest industry and forest management companies, timber investment management organizations, and other companies that may or may not have forest management as a primary ownership objective.

Due to various historical factors, forest ownership patterns vary considerably across the country (fig. 2c.2). In general, public ownership dominates in the Rocky Mountain and Pacific Coast regions and private ownership dominates in the North and South regions.

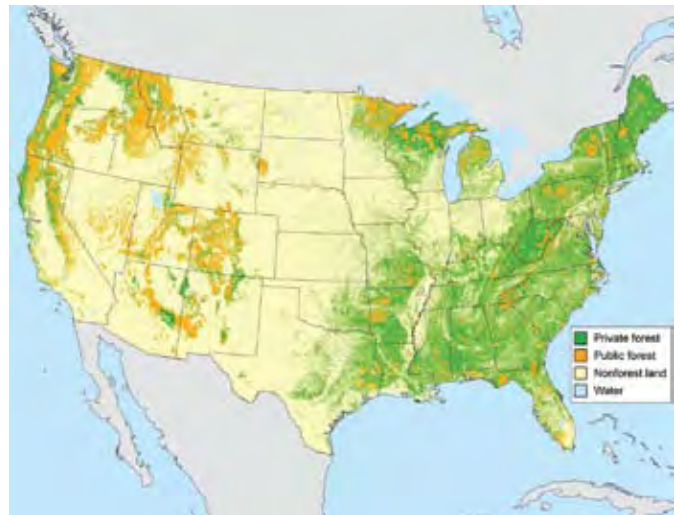


Figure 2c.2. Public and private forest ownership in the conterminous United States.

Sources: Forest area, U.S. Geological Survey, National Land Cover Database, 2001; Public ownership, Conservation Biology Institute, Protected Areas Database, Version 4.0; State boundaries, Environmental Systems Research Institute Inc. (ESRI) Data & Maps, 2006.

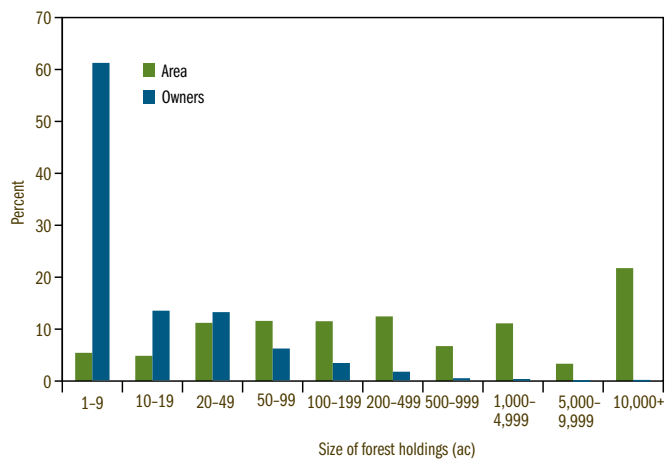
## Public Ownership

The Forest Service controls more forest land (147 million acres) than any other public agency in the United States. The Bureau of Land Management and other Federal agencies also control significant acreages. The significance of State and county/municipal forest ownership varies widely. More than 20 percent of the forest land in Alaska, Hawaii, Michigan, Minnesota, New Jersey, and Pennsylvania is controlled by State agencies. The highest percentages of county and municipal ownership are found in Wisconsin and Minnesota. In some States, less than 1 percent of the forest land is controlled by State, county, and municipal agencies.

## Private Ownership

In previous reports, we categorized private owners as forest industry or nonindustrial private. Due to the large-scale divestiture of forest industry lands (discussed below), we are not able to report these categories without divulging sensitive information and have switched to the current corporate/noncorporate categorization system.

The 423 million acres of private forest land in the United States is owned by nearly 11 million forest owners (appendix C, table 60). Although most (61 percent) of the forest owners have between 1 and 9 acres of forest land, most (67 percent) of the forest land is owned by people or organizations with 100 or more acres (fig. 2c.3). Owners with parcels of 10,000 or more acres, including many corporate owners, account for 22 percent of the private forest land.



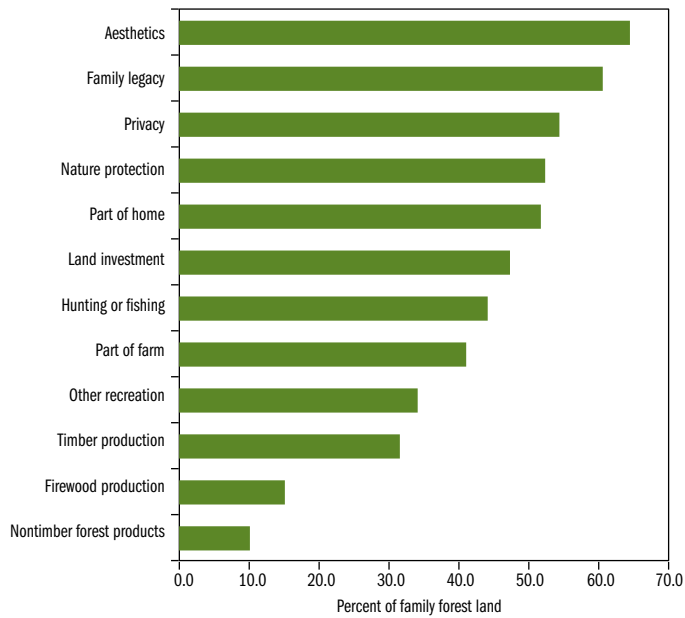
**Figure 2c.3.** Area and numbers of private of forests in the United States by size of forest holdings, 2006 (excluding interior Alaska, Hawaii, Nevada, western Texas, and western Oklahoma, due to lack of data).

## The National Woodland Owner Survey

To better understand who owns the forests of the United States, why they own them, and what they intend to do with them, the Forest Service, Forest Inventory and Analysis program implements the National Woodland Owner Survey (NWOS). The NWOS is the social complement to FIA's biophysical resource inventory. On an annual basis, self-administered surveys are mailed to approximately 6,000 randomly selected forest owners across the Nation. Information is collected about their forest land, ownership objectives, forest usage and management, communications and outreach, concerns, future plans, and general demographic information. The full set of results from the 2006 NWOS are available in Butler (2008) and descriptions of the design, implementation, and analysis of the NWOS are in Butler et al. (2005). These reports, additional information, and the latest results from the NWOS are available on-line at [www.fia.fs.fed.us/nwos](http://www.fia.fs.fed.us/nwos).

A further refinement of the ownership categorization scheme used above (in figure 2c.1) allows for family forests to be examined separately. Family and individual-owned forests, hereafter referred to as family forests, include forest land owned by individuals, couples, estates, trusts, or other groups of unincorporated individuals. These people represent 92 percent of the private forest owners in the United States and 62 percent of the private forest land (264 million acres or 35 percent of all forest land).

Data from the Forest Service's National Woodland Owner Survey (NWOS) show that the dominant reasons for family forest owners to own land are related to aesthetics, family legacy, and privacy (fig. 2c.4). A lot of activity is occurring on these lands, but indicators of sustainable forest management are weak; for example, 58 percent of the family forest land is owned by people who reported commercially harvesting trees from their land, but only 19 percent of the family forest land is owned by people who reported having a written forest management plan. The NWOS also shows that nearly 1 in 4 acres (22 percent) of the land is owned by people who plan to sell or transfer land in the near future. This trend is further supported by the fact that 20 percent of the family forest land is owned by people who are 75 years of age or older. The transfer of these lands will provide opportunities for changes in the ownership objectives, management practices, and, potentially, land use.



**Figure 2c.4.** Percentage of family forest land in the United States by reasons for owning, 2006.

### Trends: Past and Future

Forest ownership is far from static. Agencies and owners react to ever-changing internal and external factors, and the owners themselves are often changing. Changes in forest policies, divestiture of forest industry lands, and the selling of family forest lands will potentially have significant impacts on the Nation's forest resources.

Over the past decade, significant changes in forest ownership have occurred in the United States. The large-scale divestiture of landholdings by vertically integrated forest industry has resulted in the shift of millions of acres of forest land from the forest industry to timber investment management organizations (TIMOs), real estate investment trusts (REITs), families, and others.

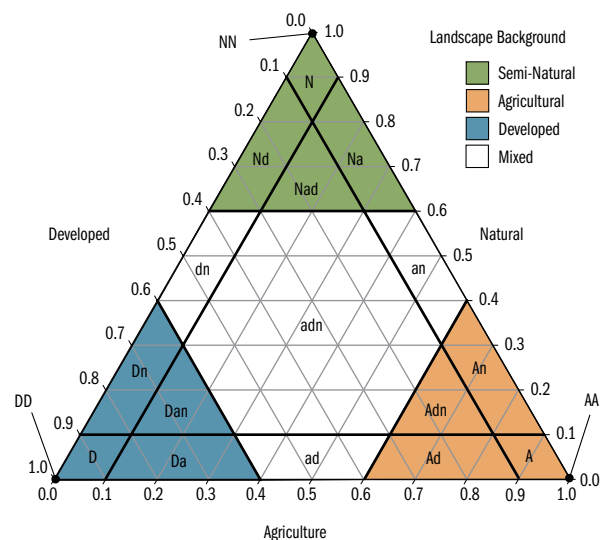
Many of the family forest lands will soon be changing hands. It is important that effective and efficient policies, outreach, and services be provided to help the current owners achieve their goals, the new owners meet their objectives, and society to continue to receive the goods and services we have come to expect and rely on.



## Fragmentation Kurt Riitters

Effective resource management takes into account the administrative and biophysical settings within which natural resources occur. A setting may be described in many ways; for example, by forest land ownership, by reserved and roadless designation, or by the distribution of human populations in relation to forest (chapter 3). The physical arrangement of forest in a landscape—popularly referred as “forest fragmentation”—is another aspect of setting. The Forest Service (2004) used high-resolution satellite imagery to answer the question of how much forest land experiences different types and degrees of fragmentation. This section summarizes an assessment of landscape “context”—an aspect of setting that describes the proximate causes of fragmentation and thus indicates the types of risk associated with fragmentation.

As defined here, the landscape context of a parcel of land refers generally to the relative proportions of different types of land cover in its surrounding neighborhood. This definition is a logical extension of the “forest-urban interface” concept to other types of interfaces such as the “forest-agriculture interface.” The landscape context classification model (fig. 2d.1) is analogous to the familiar “soil triangle” that is used to classify soil texture based on the proportions of sand, silt, and clay in a soil sample. The “landscape context triangle” classifies a parcel of land according to the proportions of three generalized land cover types—agriculture, developed, and natural—in its surrounding neighborhood. The acronyms in figure 2d.1 refer to landscape “mosaic” as explained in the caption. Landscape “background,” a condensed version of landscape mosaics, indicated by the colors in the figure, is called agricultural, seminatural, developed, or mixed, depending on which types of land cover dominate the neighborhood.



**Figure 2d.1.** The landscape context triangle classifies landscape mosaic and landscape background according to land cover composition in a neighborhood. The axes of the triangle show the proportions of natural (forest, grassland, shrubland, water, wetland), agricultural (cultivated crops, pastures), and developed (urban, road) land cover types in the neighborhood. The colors and legend indicate the landscape background, and the acronyms indicate the landscape mosaic. In a mosaic acronym, the letters ‘N’ and ‘n’ refer to natural land cover, ‘A’ and ‘a’ refer to agriculture land cover, and ‘D’ and ‘d’ refer to developed land cover. A letter is uppercase if that land cover occupies more than 60 percent of a neighborhood and lowercase if it occupies from 10 to 60 percent of a neighborhood. A letter does not appear if that land cover occupies less than 10 percent of a neighborhood. The three corners of the triangle, indicated by double uppercase letters, correspond to neighborhoods that contain only that one land cover type.



Region	Landscape Background			
	Agricultural	Developed	Seminatural	Mixed
<b>(a) Any land cover</b>		Percent of all land cover in region		
North	38.0	4.2	45.1	12.8
Pacific Coast	10.4	2.8	83.8	3.1
Rocky Mountain	16.0	0.6	79.4	4.1
South	18.0	3.2	66.0	12.8
<b>All regions</b>	<b>20.8</b>	<b>2.3</b>	<b>68.5</b>	<b>8.4</b>
<b>(b) Grassland only</b>		Percent of all grassland in region		
North	14.9	0.8	62.0	22.3
Pacific Coast	0.9	0.6	94.7	3.8
Rocky Mountain	1.8	0.0	93.8	4.4
South	2.5	0.3	87.2	10.0
<b>All regions</b>	<b>2.3</b>	<b>0.1</b>	<b>91.6</b>	<b>6.0</b>
<b>(c) Forest land only</b>		Percent of all forest land in region		
North	3.1	0.4	86.5	9.9
Pacific Coast	0.1	0.2	98.8	0.9
Rocky Mountain	0.8	0.0	97.9	1.3
South	1.6	0.4	90.0	8.0
<b>All regions</b>	<b>1.7</b>	<b>0.3</b>	<b>91.6</b>	<b>6.4</b>

**Table 2d.1.** Regional and national summary of landscape background (shaded regions in figure 2d.1) within a 37.6-acre neighborhood surrounding a 0.22-acre parcel of (a) any land cover, (b) grassland only, and (c) forest only. Each row shows the percentages of the total area in a region classified as each of four types of landscape background.

The landscape context triangle model was implemented using the 2001 high-resolution national land cover map (Homer et al. 2007) with a detailed road map (ESRI 2005) superimposed. Approximately 8.6 billion pixels (0.22 acres each) are on the land cover map, including approximately 2.6 and 1.3 billion pixels of forest and grassland, respectively. The landscape mosaic was evaluated separately for each land cover pixel, using the landscape context triangle within a 37.6-acre neighborhood (169 pixels) around each. The result was a map of landscape mosaics at the same spatial resolution of 0.22 acres per pixel. Subsets of forest and grassland, defined by the original land cover map, were extracted to provide resource-specific assessments.

About two-thirds of the total area of the conterminous States exists in a neighborhood characterized as having a seminatural background, with regional percentages ranging from 45 percent to 84 percent (table 2d.1a). More than 90 percent of both grassland (table 2d.1b) and forest (table 2d.1c) appear in a seminatural background. Although the developed and agricultural backgrounds apply to 2.3 and 20.8 percent, respectively, of all land (table 2d.1a), much smaller

## Fragmentation

Kurt Riitters

Modern forest inventory uses information from satellite imagery in many innovative ways. The Center for Landscape Pattern Analysis, an informal interagency research consortium, adds value to national land cover maps from satellite imagery by measuring, mapping, and interpreting forest fragmentation and other land cover patterns at regional to global scales. Within the United States, the results are linked to inventory data in a geographic information system to expand the scope of forest sector reporting for the RPA and Montreal Process Assessments. Related products were selected for the U.S. Geological Survey's National Atlas (<http://www.nationalatlas.gov/index.html>), and other results have appeared in a variety of reports, including the Millennium Ecosystem Assessment (<http://www.millenniumassessment.org/en/index.aspx>), the State of the Nation's Ecosystems (<http://www.heinzctr.org/ecosystems/index.shtml>), and the Report on the Environment (<http://www.epa.gov/indicators/>).

Region	Landscape Mosaic				
	All natural (NN) <sup>a</sup>	Natural (N)	Natural-developed (Nd)	Natural-agricultural (Na)	Natural-agricultural-developed (Nad)
(a) grassland only		Percent of all grassland in region			
North	14.1	13.7	15.0	14.3	4.9
Pacific Coast	52.4	18.6	20.0	2.9	0.9
Rocky Mountain	58.9	17.2	10.1	6.5	1.2
South	33.5	21.9	18.0	10.7	3.1
<b>All regions</b>	<b>52.1</b>	<b>18.1</b>	<b>12.5</b>	<b>7.4</b>	<b>1.6</b>
(b) forest only		Percent of all forest land in region			
North	39.2	18.7	14.5	11.2	3.0
Pacific Coast	57.8	19.5	20.7	0.6	0.2
Rocky Mountain	74.3	12.9	8.9	1.5	0.3
South	37.4	22.9	15.1	11.5	3.1
<b>All regions</b>	<b>48.0</b>	<b>19.1</b>	<b>14.2</b>	<b>8.1</b>	<b>2.1</b>

**Table 2d.2.** Regional and national summary of selected landscape mosaics in landscapes with seminatural background within a 37.6-acre neighborhood surrounding a 0.22-acre parcel of (a) grassland only and (b) forest only. Each row shows the percentages of the total forest or grassland area in a region in each of five landscape mosaic types.

<sup>a</sup> Refer to figure 2d.1 for definition of acronyms.

**Note:** The row sums equal the corresponding table entry in the “seminatural” column in table 2d.1.

percentages of grassland (table 2d.1b: 0.1 percent, 2.3 percent) and forest (table 2d.1c: 0.3 percent, 1.7 percent) appear in developed and agricultural backgrounds. Although the risk of degraded forest and grassland condition may be very high in predominantly agricultural or developed landscapes, the overall percentage of grassland and forest exposed to that risk is relatively small. On the other hand, those same small percentages suggest that the risk of direct loss of grassland and forest is of much more concern in those types of landscapes.

In table 2d.2, the grassland and forest areas in seminatural backgrounds are described in more detail in terms of their landscape mosaic (see caption of fig. 2d.1). Overall, approximately half of all grassland and forest is found in neighborhoods that contain only natural land cover types (mosaic class NN), but substantial variation exists among regions. Typically, 15 to 20 percent of all grassland and forest is found in neighborhoods that contain at least some,

but less than 10 percent of developed and agriculture land cover (N), and an additional 10 to 20 percent is found in neighborhoods that also contain at least 10 percent developed land (Nd). In the North and South regions, 10 to 15 percent of grassland and forest is found in neighborhoods that also contain at least 10 percent agriculture land (Na). These results generally indicate that about half of all grassland and forest is exposed to risk associated with proximity to (in a 37.6-acre neighborhood) at least some developed and agriculture land cover. Potentially, a high risk of degradation of grassland and forest condition exists in seminatural landscapes containing 10 to 40 percent developed land cover, and such landscapes are also likely to shift to developed landscape backgrounds over time as a result of urban sprawl. Approximately 20 percent of all grassland and forest exists in these high-risk landscapes in the North, Pacific Coast, and South regions, and the national percentage is approximately 15 percent.

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# CHAPTER 3

## Forests and People

Photo by Larry Korhnak. <http://www.interfacesouth.usda.gov>

## Our Forest Legacy

Doug MacCleery and Vic Rudis

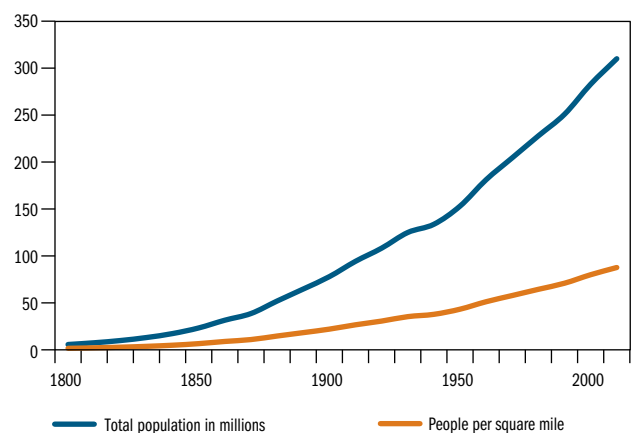
Historically, attitudes toward U.S. forests have changed dramatically over time in response to the demands people have placed on them, increasing scientific knowledge about forests, and the inherent capacity of forests to respond to evolving uses and provide essential ecological services and resource demands. The evolution of U.S. forest resource uses and policy provides perspectives on how forests came to be the way they are today. This section draws on a variety of sources, with illustrations of long-term land use changes in selected regional landscapes.

Native Americans used and managed forests to serve their own needs. They employed managed use of fire, horticulture, and agriculture to shape the landscape. Europeans, when they arrived in the Americas, often viewed forests either as an impediment to agriculture or as inexhaustible resources to



be mined for wildlife and wood products. They used wood for fuel, to build homes and cities, and as a feedstock for the industrial infrastructure of a growing Nation (image at left). About 28 percent of the land estimated to have been occupied by forests in 1630 has been converted to other uses, mostly to agricultural uses (Appendix C, table 3).

The Nation's population stood at 5.3 million in 1800, but increased rapidly, with decadal increases of 20 to 35 percent until 1900. Since 1950, the decadal increase (to 2000) has been 10 to 15 percent. Population density has more than tripled since 1900, from 21.5 to 79.6 people per square mile (fig. 3a.1).



**Figure 3a.1.** Population in millions and number of people per square mile in the United States, 1800–2000.

Source: U.S. Census Bureau (2004).

After the close of the American frontier in the late 1880s, American attitudes toward forests began to shift toward viewing forests and wildlife as resources that could be managed over the long term on a scientific basis for both products and environmental services. This view was reinforced by people of the time, including George Perkins Marsh; Bernard E. Fernow, a German forester; Gifford Pinchot, the first Chief of the Forest Service; John Muir; George Bird Grinnell; and others. Theodore Roosevelt, who became President in 1901, was to have a profound effect on the conservation history of the Nation.

Other people built upon the actions of these leaders, and by the 1930s, a forest policy framework had emerged that emphasized protection of forests from wildfire and their management under scientific principles. Specific actions focused on the following:

- Halting the transfer of Federal public domain lands to private uses and emphasizing the management of the remaining public domain lands for conservation, watershed protection, recreation, and resource uses (e.g., national forests, national parks).
- Suppressing and preventing wildfires and educating the public to protect the forest.
- Establishing and enhancing the forestry profession and, later, other natural resource disciplines, through the establishment of accredited natural resource schools, professional societies, and the like.
- Improving the art and science of forest culture and management through research at Federal, State, and university institutions.
- Improving the efficiency of harvesting operations, wood utilization at the mill, and in end-product applications.
- Improving the quality of forest management on private lands with improved economic incentives and technical and financial assistance to forest landowners.
- Enacting Federal and State wildlife conservation laws and establishing the institutional capacity to enforce them.

A key element of the public policy framework was strong cooperation among Federal, State, and private-sector interests to achieve common goals (Steen 1976).

Several technological and nonpolicy changes after 1900 substantially affected the demand for wood and the clearing of land for agriculture. These changes included the following:

- Substitution of fossil fuels for wood fuels.
- Substitution of metal and concrete for wood in structural applications.
- Substitution of chemicals derived from fossil fuels for those derived from animals and vegetation.
- Replacement of draft animals with internal combustion engines.

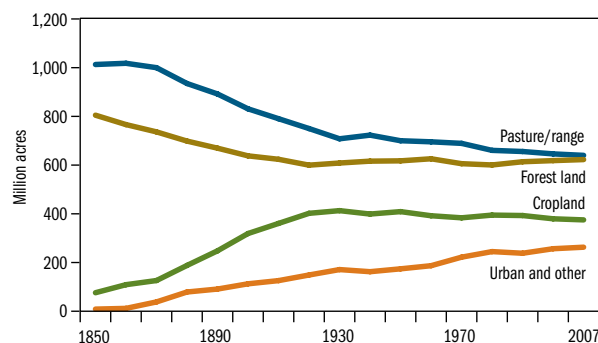
Many of these changes decreased the demand for wood while increasing agricultural productivity per land area, thereby reducing the need to clear forests for agriculture. Half of farm woodlands were grazed in 1900, but that acreage declined following the introduction of barbed wire fences

## Forests on the Edge

Susan Stein

The Forests on the Edge project is sponsored by the Forest Service, State and Private Forestry Deputy Area, Cooperative Forestry Staff. It identifies areas across the country where ecosystem services from public and private forests might be affected by housing development or other threats. A key component of the project is the intersection of geographic information system data on forest contributions, such as timber supply, at-risk species habitat, and water quality, with data on threats, such as housing development, insect pests and disease, and fire. Many of these data layers have been created by combining FIA data with data from other sources. The private timber supply layer, for example, identifies areas across the country where private forests provide substantial contributions to national timber supply and is based on FIA data on timber volume, growth, and area. An intersection of this data with data on housing density projections can lead to the identification of areas where timber supply might change due to development on private forests. Forests on the Edge reports and products can be found at <http://www.fs.fed.us/openspace/fote>.

and programs of landowner education. Between 1950 and 2002, cropland area, pasture/range, and forest land each declined by more than 5 percent; in contrast, urban and other land increased by more than 60 percent (fig. 3a.2).



**Figure 3a.2.** U.S. land area (exclusive of Alaska and Hawaii) by land use class, 1850–2007.

Source: Fedkiw (1989), Economic Research Service (2002), FIA (2007).



Central Massachusetts image above, 1880s (left) and the same scene in 2000 (right).

Photo courtesy of Harvard Forest.

Freed from dependence on close proximity to sources of agricultural products by improved transportation systems (railroads after 1850 and roads after 1920), human population in the United States became mostly urban—73 percent in 2000, according to the U.S. Census Bureau (2004).

## Forest Conditions

Forest conditions over much of the United States have changed since 1900, as highlighted in the following examples:

- Forest fire protection improved and eventually reduced destructive wildfire by 80 to 90 percent—from 20 to 50 million acres per year to 2 to 10 million acres today (MacCleery 2002). This reduction created an environment in which millions of acres of forest could regenerate naturally and set the stage for improving forest conditions and increasing investment in tree planting and management on both private and public lands (Williams 1989). In recent years, due to a multiyear drought in the West and a multidecade increase in forest density, the area burned by wildfire has increased.



- The 50 to 80 million acres of “cutovers” or “stumplands” (image at right) that existed in 1900, due largely to repeated wildfires after harvest, have long since been reforested (Williams 1989). Today, many of these areas contain commercially mature forests. Others have been harvested a second time and regenerated to young forests. Some areas have had three or more harvests.
- In 1900, the growth of U.S. forests was a fraction of harvest. Today, net annual forest growth exceeds removals by more than 70 percent. Because of this favorable growth/harvest situation, which has existed since about the 1940s (Frederick and Sedjo 1991), biomass in U.S. forests today is 50 percent greater per acre than it was in 1953. In the Eastern United States, biomass per acre has almost doubled since 1953. Today, annual forest growth is estimated to be more than four times what it was in 1920 (Fedkiw 1989).
- Improving wood utilization technology, combined with increasing real prices for wood, has substantially improved the efficiency with which wood is produced. Much less material is being left in the woods, and many sawmills produce two or three times as much usable lumber and other products per log input as they did in 1900. Engineering standards and designs have reduced the volume of wood used per square foot or meter of building space, and preservative treatments have substantially extended the service life of wood. All of these factors have reduced the area of annual harvest that otherwise would have occurred (MacCleery 2002).
- Tree planting on all forest land ownerships has increased dramatically since World War II. Many private forest lands are now actively managed for recreation and other environmental services and for tree growing (Frederick and Sedjo 1991), particularly in pine-growing areas of the South region.



## Shifts Between Forests and Other Land Uses

The shifts between forests and other land uses have differed considerably from region to region in the United States. These shifts, which have altered both the supply of selected forest conditions and the nature of services derived from forests, are summarized below.

### Eastern United States

Forest land declined precipitously, particularly after 1800, then slowly increased after 1850 in some areas of the East (fig 3a.3), while continuing to decline in other regions of the United States. This was due largely to a stabilization in cropland acreage resulting from (1) shifting of agriculture to more productive lands in the Midwest, (2) replacement of draft animals with internal combustion engines after 1910 (in 1900, feeding draft animals was taking about one-third of the U.S. farmland base), and (3) increasing farm productivity after 1930 (Frederick and Sedjo 1991). The graph in figure 3a.3 shows the decline and partial recovery of the forest area in the Chesapeake Bay watershed (Sprague et al., eds. 2006).

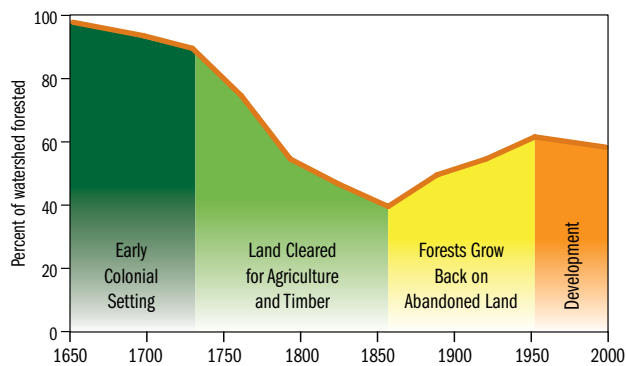


Figure 3a.3. Historic Chesapeake Bay watershed forest cover.

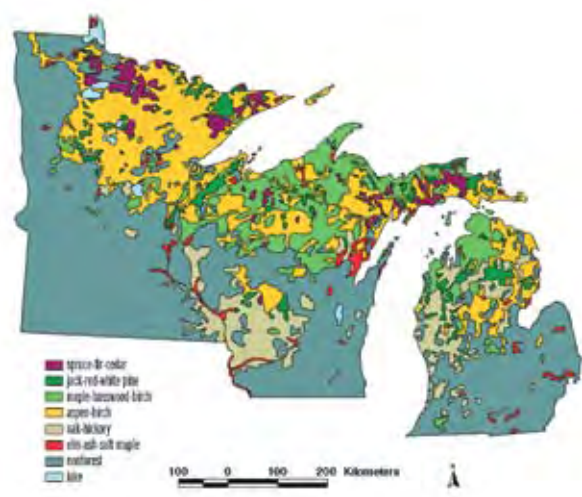
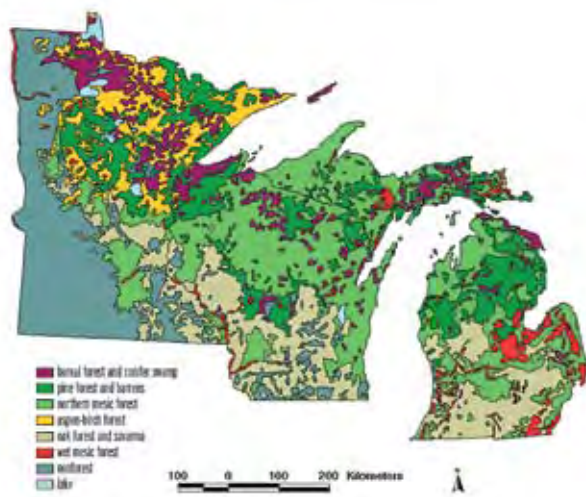
Progressively over time and space, agricultural clearing reduced forests in much of the Eastern United States. By the 1850s, this trend began to give way in some places to natural succession and reversion back to forest land in areas less suited to mechanized farming (Foster et al. 1998).

Forest cover had increased, but its characteristics differed from the older stands of the past. In addition, forests tended to be more fragmented as land was transferred from one generation to the next and broken up by the infrastructure associated with modern uses (e.g., roads, powerline rights-of-way). Near Wilmington, DE, for example, forest cover rose from 5 percent to 22 percent between 1890 and 1990, but most stands were less than 60 years old, more than half of the parcels were within 125 feet of a residence, and the few 100-year-or-older stands were those on steep slopes or rocky soils and likely were abandoned agricultural areas (Matlack 1997).

### Middle United States

Forest lands converted to other uses between the turn of the 20th century and more recent times were those most suited to agricultural production. Many of the areas that remained in forest cover were affected by logging, so the more recent mix of forest types differed from historic times. For example, in the Great Lakes, differences between presettlement times (below, left) and the late 1980s (below, right) illustrate vast areas of oak savanna and northern mesic forests converted to nonforest uses, while remaining forest land was more likely of the early successional aspen-birch forest type (Cole et al. 1998).

Similarly, in the lower Mississippi Valley, more than 75 percent of the original area of bottomland hardwood forests had been removed, with clearing primarily of the higher and drier sites. By the 1930s, the original 12 million acres of bottomland



Similarly in the Great Lakes, differences between pre-settlement times (left) and the late 1980s (right).



Further inland, the Black Hills of South Dakota experienced a similar shift from grasslands with scattered trees to a greatly increased volume and density of ponderosa pines.

hardwood forests was reduced to 4 million acres and, by the 1990s, was 2 million acres (Rudis 2001). The bottomland forests that existed in the 1990s were more likely early successional or permanently wet forest types and were more fragmented by nonforest land than in the past (Rudis 2001).

### Western United States

Compared with the Eastern United States, where agricultural clearing was a significant factor in the loss of forests, in the West it was not. Instead, changes in the western landscape have resulted from elimination of Native American burning and other cultural practices; introduction of livestock grazing in the late 19th century; systematic control of wildfires after 1930; harvesting of large, valuable conifers; and changes in groundwater removed for urban and agricultural uses, although regional climate change cannot be ruled out. Some striking examples appear in the following paragraphs.

In the Klamath Mountains of northern California, what once were large areas of oak savanna maintained by frequent burning by native peoples have become extensive areas of Douglas-fir forest since 1860 (Keter 1995).

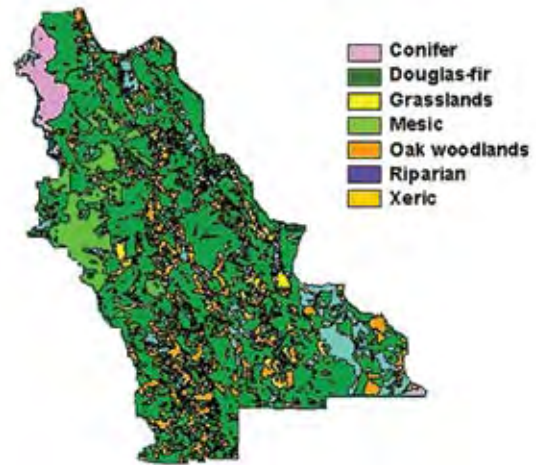
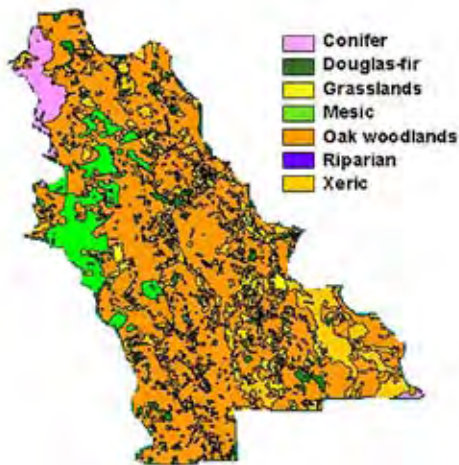
The Black Hills of South Dakota and many areas of the interior West experienced a similar shift from open grasslands with scattered trees, which existed before western settlement, to an increased area, volume, and density of conifers (Progulske 1974).

In more arid landscapes of the southwest, what once were vast prairie landscapes at the turn of the 20th century have become pinyon-juniper woodland landscapes today in many parts of Arizona, New Mexico, and western Texas. An example of this change is below, showing Acoma Pueblo, near Albuquerque, NM, in 1899 (below left) and 1977 (below, right) (Allen et al. 1998, rev, 1999).



Acoma Pueblo, near Albuquerque, New Mexico in 1899 (left), and 1977 (right).

Source: Allen, Betancourt, and Swetnam 2003.



Klamath Mountains in 1865 (left) and in 1995 (right).

In the West, the major ecological changes resulting from fire exclusion have been an increased area and density of forests and shrublands and their increasing susceptibility to more intense wildfire and to insects and disease. This threat is compounded by the increasing residential development, because it both increases the incidence of wildfire and complicates fighting the fires that do occur.

### Changes in the Management and Use of Both Public and Private Forests

Over the past two decades, a number of significant changes have been set in motion. These include (1) a significant shift in timber harvest from Federal and other public forests to private lands in the United States and to forests in other countries, especially Canada; (2) an intensification in the management of many private forests for timber production, especially in the South and Pacific Coast regions of the United States; (3) a significant increase in the third-party certification of public and private forests as meeting independent standards

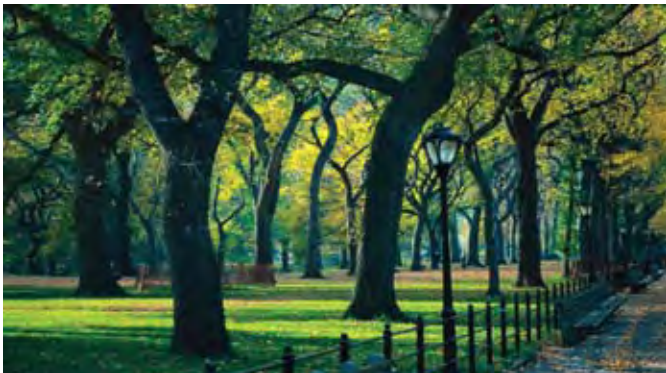
for “well-managed” or “sustainably managed” forests; (4) a significant devolution of the industrial ownership of private forests to timber investment management organizations and real estate investment trusts; (5) an expansion of residential development into forests and a loss of forests to urbanization; and (6) a shift in policies related to controlling wildfire to allow more flexibility in the “suppress all fires” policy of the past, especially on public lands, and to encourage more use of thinning and prescribed use of fire to reduce wildfire risk.

### Major Challenges Affecting Forests Today

Although U.S. forests are generally in good shape, in many areas, forests face a variety of challenges, not the least of which include (1) the rising loss and fragmentation of private forest land caused by urban expansion and (2) the increasing threats to forests from the effects of (a) introduced exotic species, (b) global climate change, (c) the increased risk of wildfire, insects, and disease, and (d) air pollution (in some areas). Of particular concern are rare and unique ecosystem types and species with specialized habitat requirements that are associated with them.

## Urbanization and Forests David J. Nowak

Urbanization affects the forest resource and its management in many ways. Not only does urban development directly eliminate some trees and forests, it also increases population density, human activities, and urban infrastructure, which can affect forests and their management. As urban landscapes increase across the Nation, rural forest and agricultural landscapes are often converted to developed lands where multiple ecosystem services from vegetation become increasingly important. The amount of urban growth and types of consequent land conversion vary across the United States, as does the forest resource within urban areas and its associated ecosystem services and values. With greater than 80 percent of the U.S. population living in urban areas, ecosystem services provided by urban trees and forests are significant and valued in the billions of dollars annually. Forest management at the regional scale needs to develop an optimal mix of forest products and ecosystem services to meet the needs of growing urban and rural populations.

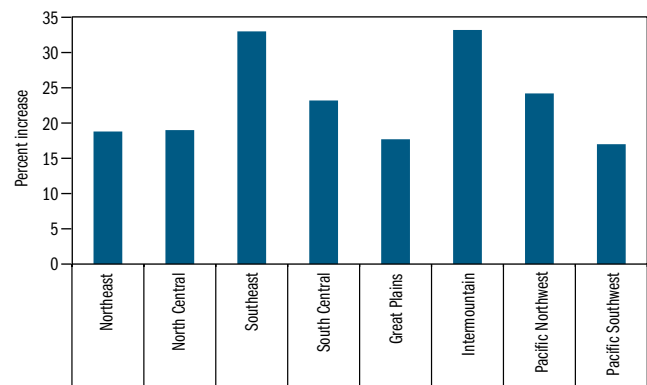


Urban forest scene.

### Urban Land Growth

Urban land in the conterminous United States increased from 2.5 percent of total land area in 1990 to 3.1 percent in 2000, an area about the size of Vermont and New Hampshire combined (fig. 3b.1). The most urbanized areas of the United States are the Northeast (9.7 percent) and Southeast (7.5 percent) subregions; these subregions also exhibit the greatest increase in percent of urban land between 1990 and 2000

(appendix C, table 48). Between 1990 and 2000, most of the urban expansion across the United States occurred in forested (33.4 percent of the expansion) or agricultural (32.7 percent) land. Forests near urban communities face a special set of challenges that will only intensify as these communities grow in area, population, and complexity (Nowak et al. 2005).



**Figure 3b.1.** Percent increase in urban land (1990-2000).

Source: Nowak et al. 2005.

Besides the direct loss of forest land due to development, urbanization threatens forest sustainability through an increased risk from fire at the wildland-urban interface, exotic pest infestations, unmanaged outdoor recreation, and forest fragmentation. At the same time, urbanization increases the area of urban forests and enhances their importance in terms of the critical ecosystem services they provide to sustain health and environmental quality in and around urban areas (Nowak and Walton 2005).

### Urban Tree and Forest Cover

Nationally, urban areas have an average tree cover of 27 percent, with the number of trees within urban areas of the United States estimated at 3.8 billion (2.4 to 5.7 billion). States with the highest average percent tree cover in urban areas are Georgia, Montana, and New Hampshire. States with the lowest average urban tree cover are Wyoming, New Mexico, and North

Dakota. States with the highest proportion of their total tree cover across the State occurring in urban areas include New Jersey, Massachusetts, and Connecticut (Nowak et al. 2002).

Three factors help to explain variation in percentage of tree cover among urban areas across the United States: ecoregion type, population density, and land use. Urban tree cover tends to be highest in urban areas that developed in forested ecoregions (34.4 percent), followed by grasslands (17.8 percent) and deserts (9.3 percent). The percentage of tree cover in urban areas tends to decrease as population density increases and can vary within a city based on the distribution of land use types and ecoregion (e.g., vacant land in forested regions often supports tree cover, but vacant lands in deserts are often devoid of trees) (Nowak et al. 1996, 2001).

## National Urban Forest Benefits

Trees in urban areas provide many benefits and values to society based on their current composition and annual functions. The value of the 3.8 billion urban trees in the United States is estimated at \$2.4 trillion (Nowak et al. 2002). In addition to providing the current value of the forest structure, urban trees provide numerous annual benefits. Two urban tree benefits that have been estimated nationally are air pollution removal and carbon storage and sequestration. Annual pollution removal ( $O_3$ , PM10,  $NO_2$ ,  $SO_2$ , CO) by U.S. urban trees is estimated at 783,000 tons (\$3.8 billion value) (Nowak et al. 2006). U.S. urban trees also are estimated to store 776 million tons of carbon (\$14,300 million value) with a gross carbon sequestration rate of 25.2 million tC/yr (\$460 million/yr). Subregions with the greatest proportion of urban land are the Northeast (8.5 percent) and Southeast (7.1 percent). Urban forests in the North Central, Northeast, South Central, and Southeast subregions of the United States store and sequester the most carbon, with average carbon storage per hectare greatest in the Southeast, North Central, Northeast, and Pacific Northwest subregions, respectively (appendix C, table 49) (Nowak and Crane 2002).

## Urban Forest

David Nowak

The key to assessing long-term change in the urban forest is to establish baseline urban tree and forest data that can be monitored over time. Long-term monitoring can help determine rates and factors of change related to population totals, tree mortality, tree planting and natural regeneration, tree health, species changes, and ecosystem services. To help establish this baseline data in urban areas, pilot tests of FIA plots have been established in several States as part of an urban forest health monitoring program (<http://fhm.fs.fed.us/>). In addition, tools have been developed to enable users to measure, monitor, and assess the structure, health, and ecosystem services of their local urban forest (<http://www.itreetools.org>).

## Trends

Urban forests are a significant resource nationally and are likely to increase in significance in the coming decades. Urban growth in the United States is going to have an increasingly important impact on forest management, environmental quality, and human well-being. As urbanization increases so will the value of urban forests and surrounding rural forests in providing ecosystem services required by urban residents. Significant amounts of U.S. forest land are projected to be transformed by urbanization, particularly in the Northeastern and Southern United States. Future regional resource planning and management activities need to understand, adapt to, and direct the changing landscape to sustain forest health and productivity, as well human health and well-being, in an urbanizing landscape (Nowak and Walton 2005). These projected changes to the American landscape and environment due to urbanization are particularly critical in areas where forests are on the edge of the urbanization front.

## Forests on the Edge

Susan M. Stein, Ronald E. McRoberts, Ralph J. Alig, and Mary Carr

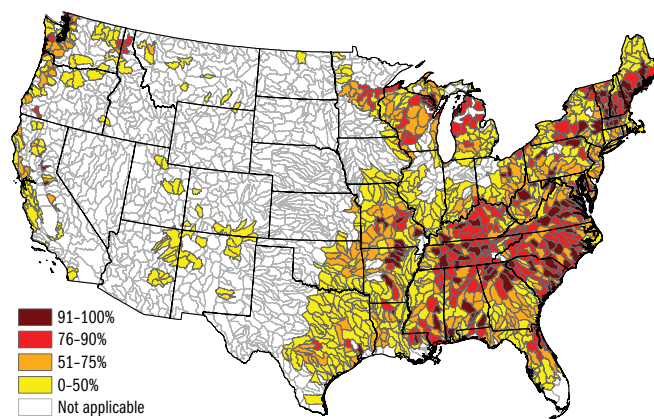
America's 423 million acres of private forest represent more than half of all forests nationwide and provide critical benefits to the American public. These benefits include goods, such as food and wood fiber, and critical services, such as air and water purification, flood and climate regulation, forest carbon storage, wildlife habitat, open space, and opportunities for outdoor recreation. In certain areas of the country, ecosystem service flows and ecosystem functions of private forests are affected by increasing levels of housing development. There is great variability in development trends across the United States. For example, the largest increases in developed area between 1982 and 1997 were in the South, along with the most forest land converted to developed uses; coastal areas experience a disproportionate level of development (Alig, 2006). Urban and developed areas in the United States are projected to continue to expand substantially, in line with the projected U.S. population increase of more than 120 million people over the next 50 years and higher average levels of personal income (Alig and Plantinga 2004, Alig et al. 2004). Development on forest land can further exacerbate impacts from other pressures such as insect pests and disease, air pollution, and fire.

The Forests on the Edge project uses geographic information systems (GIS) techniques to highlight areas across the country where private forest ecosystem goods and services, such as timber, wildlife habitat, and water quality, might be affected by increased housing development and other factors (Stein et al. 2005, Stein et al. 2004). The project has also identified areas where increases in housing density on private lands adjacent to national forests and grasslands might affect recreation, wildlife, water resources, and other important public benefits (Stein et al. 2007). The project is sponsored by the Forest Service State and Private Forestry Deputy Area as a joint project with the Research and Development Deputy Area.

### Impacts of Housing Development on Ecosystem Services From Private Forests

Increases in housing density and associated development on rural forest lands can be linked to numerous changes to private forest services across watersheds, including decreases in native wildlife; changes in forest health; and reduced water quality, forest carbon storage, timber production,

and recreational benefits (Stein et al. 2005). Watersheds where future housing development (from 2000 to 2030) on rural lands is most likely to affect private forest cover are concentrated in southern Maine and the Southeast, including Virginia, North Carolina, South Carolina, Tennessee, and Kentucky (fig. 3c.1) (Stein et al. In Press).



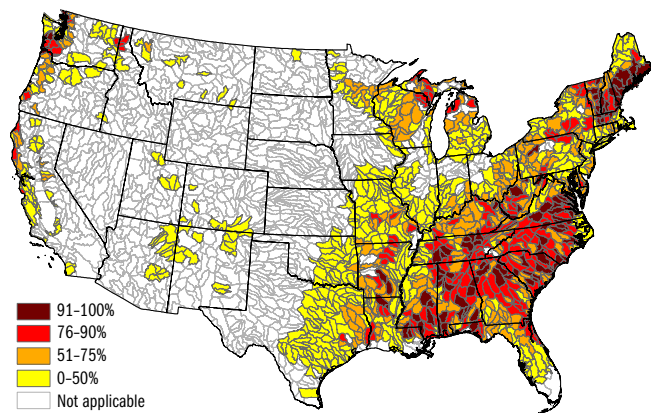
**Figure 3c.1.** Percentile rankings of watersheds with respect to percent of private forest land predicted to experience increased housing density by 2030.

### Timber Production

Private forest lands make a substantial contribution to America's timber resources, accounting for 92 percent of all timber harvested on timber land in the United States in 2006 (appendix C, table 35). Increased housing density on private forests can contribute to lower rates of timber harvesting, decreases in regional timber supply over the longer term, reduced private forest management and investment, and reduced commercial forestry (Kline et al. 2004, Munn et al. 2002, Wear et al. 1999). In some places, a variety of interacting factors, in addition to housing development, may contribute to declines in forest management and harvest, including inherent site productivity, national and international markets, stumpage prices, and regulation (Egan et al. 2007, Kline and Alig 2005).

As displayed in Figure 3c.2, watersheds where private forest timber production could be most affected by future housing development are located in New England and throughout the Southeast. This concentration is not surprising given

that the Southeast has been described as having the highest rate of urban development in the country (Alig and Plantinga 2004, Alig et al. 2004, Macie and Hermansen 2003) and that private forests in the South provide the bulk of our Nation's timber supplies (Haynes 2007).



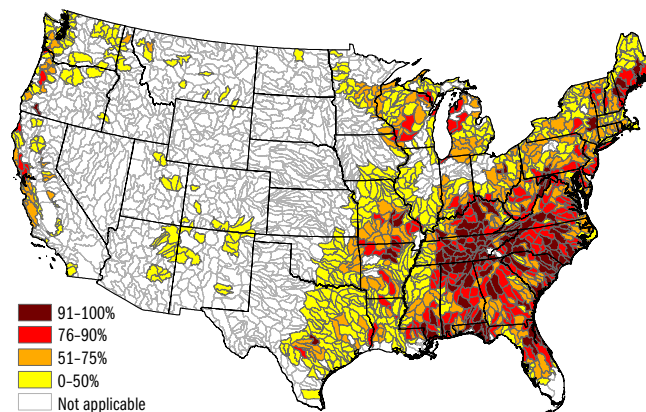
**Figure 3c.2.** Percentile rankings of watersheds with respect to predicted threat to timber supply of increased housing density on private rural forest lands by 2030.

### At-Risk Species Habitat

Private forests provide critical habitat for many species. Increased housing development on rural private forests can have many implications for at-risk species<sup>1</sup>. Populations of at-risk species may disappear, decline, or become more vulnerable with changes in the presence and distribution of private forest habitats (Robles et al., in press). Loss of habitat is highly associated with at-risk species that have declining populations, and it presents the primary obstacle for their recovery (Donovan and Flather 2002, Kerr and Deguise 2004). Decreases in habitat quality associated with housing development and roads can lead to declines in biodiversity (Houlahan et al. 2006), creation of barriers to movement (Jacobson 2006), and increases in predation (Kurki et al. 2000, Woods et al. 2003). Habitat degradation can also contribute to declines in fish numbers (Ratner et al. 1997).

As displayed in Figure 3c.3, watersheds where housing development on private forests is projected to affect the habitat of the greatest numbers of at-risk species are located primarily in the Southeast, and, in particular, in North Carolina, South Carolina, Kentucky, Tennessee, and Arkansas.

<sup>1</sup> At-risk species are defined as species that have been observed by an authoritative source within at least the past 50 years and are either (1) federally designated under the Endangered Species Act (endangered, threatened, candidate, proposed) or (2) designated as critically imperiled, imperiled, or vulnerable according to the NatureServe Conservation Status Ranking system (G1/T1- G3/T3).



**Figure 3c.3.** Percentile rankings of watersheds with respect to predicted threat to at-risk species from increased housing density on private rural forest lands by 2030.

### Additional Forests on the Edge Assessments of Private Forests

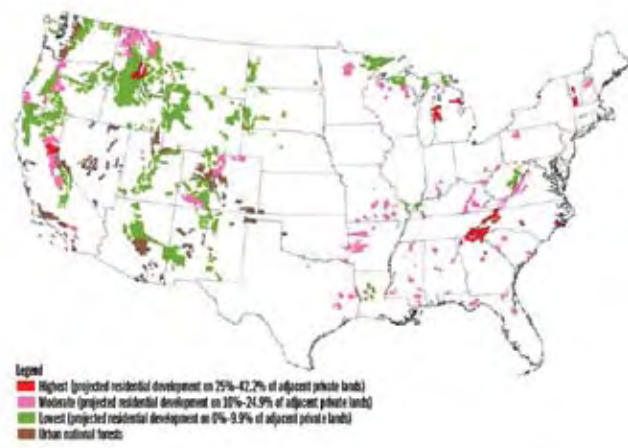
Detailed descriptions of the assessments explained here and additional private forest assessments will be available in upcoming publications and on the Forests on the Edge Web site (<http://www.fs.fed.us/openspace/FOTE/>) in 2009.

### Assessment of Development Adjacent to National Forests and Grasslands

Encompassing about 192 million acres (147 million forest acres), the national forests and grasslands managed by the Forest Service account for about 8.5 percent of total U.S. land area and provide critical social, ecological, and economic benefits to the Nation. Many of America's national forests and grasslands—collectively called the National Forest System (NFS)—face increased risks and alterations from escalating housing development on private rural lands along their boundaries. For example, many wildlife species that inhabit NFS lands also depend on adjacent private lands and can be affected by degradation of private land habitat. Increased housing development can impact the public's access to NFS lands, increase wildfire ignitions and management costs, reduce water quality, and introduce insects and diseases. A more detailed discussion of these implications can be found in Stein et al. (2007).

The Forests on the Edge study projects housing density increases from 2000 to 2030 on private rural lands adjacent to the external boundaries of all national forests and grasslands across the conterminous United States. Some 21.7 million acres (about 8 percent) of rural lands located within 10 miles of the NFS boundaries are projected to undergo increases in housing development by 2030 (Stein et al. 2007).

As depicted in Figure 3c.4, national forests and grasslands with the greatest percentages of surrounding private lands projected to experience increased housing density are scattered throughout the United States but are found primarily in the East. National forests and grasslands in red are those for which at least 25 percent of private lands within 10 miles are projected to experience increased housing density. Note that areas shown in brown are designated “urban national forests” that were not identified in this study as likely to experience significant increases in rural residential development. Housing densities near the borders of these forests may already be higher than the rural densities that are the focus of this study.



**Figure 3c.4.** National Forest System lands with boundaries within 10 miles of rural private lands that are projected to experience increased housing density by 2030.

Each of 13 national forests and grasslands is projected to have more than one-half million acres of adjacent private rural lands experience increased housing density (table 3c.1). Such development and accompanying landscape fragmentation pose substantial challenges for the management and conservation of the ecosystem services provided by NFS lands and the critical ecosystem goods and services they provide.

National forest or grassland <sup>a</sup>	Main State	Adjacent rural private land projected to experience housing density increases (thousand acres)
George Washington-Jefferson	Virginia	1,424
Mark Twain	Missouri	1,326
Chattahoochee-Oconee	Georgia	1,176
National forests in North Carolina <sup>b</sup>	North Carolina	1,073
National forests in Mississippi <sup>c</sup>	Mississippi	1,071
National forests in Alabama <sup>d</sup>	Alabama	963
Huron-Manistee	Michigan	834
Francis Marion-Sumter	South Carolina	720
Ozark-St. Francis	Arkansas	702
Daniel Boone	Kentucky	650
National forests in Texas <sup>e</sup>	Texas	596
Green Mountain and Finger Lakes	Vermont, New York	590
Cherokee	Tennessee	544

**Table 3c.1.** National Forest System lands with more than 500,000 acres of adjacent rural private land (within 10 miles) projected to experience increased housing by 2030.

<sup>a</sup> Figures reported for individual national forests in this table should not be combined because of the potential for double counting of residential development around national forests that are close to each other.

<sup>b</sup> Croatan, Uwharrie, Pisgah, and Nantahala National Forests.

<sup>c</sup> Bienville, Chickasawhay, Delta, Desoto, Holly Springs, Homochitto, and Tombigbee National Forests.

<sup>d</sup> Bankhead, Conecuh, Talladega and Tuskegee National Forests.

<sup>e</sup> Angelina, Davy Crockett, Sabine, and Sam Houston National Forests.



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# CHAPTER 4

## Forest Productivity and Health

## Forest Soils Charles H. (Hobie) Perry and Michael C. Amacher

**P**roductive soils are the foundation of sustainable forests throughout the United States. Forest soils are generally subjected to fewer disturbances than agricultural soils, particularly those that are tilled, so forest soils tend to have better preserved A-horizons than agricultural soils. Another major contrast between forest and agricultural soils is the addition of external inputs (e.g., fertilizer, manure, herbicides, insecticides, fungicides) to agricultural soils, whereas forest plant communities rely on their inherent soil nutrient cycling to support plant nutritional needs. The forest floor is a unique feature of forest soils.

Disturbances to forest soils tend to be related to fire and timber harvesting. As with other components of the forest, soils may show the effects of disturbances for many years. Land use change, wildfire, drainage, timber harvest, nitrogen deposition, and site preparation can greatly affect soil characteristics, which in turn will affect forest productivity and health, including quality and quantity of water. The reversion of cropland to forest land increases the amount of carbon (C) sequestered in the forest floor and the soil (U.S. EPA 2007).

This assessment focuses on soil quality, which refers to the capacity of a soil to function within ecosystem and land use boundaries, sustain biological productivity, maintain environmental quality, and promote plant and animal health (Doran and Parkin 1994). Important properties include physical and chemical characteristics, as well as components that are a synthesis of characteristics, such as soil quality index and soil carbon. The inventory and assessment of the forest soil resource provide critical baseline information on forest health and productivity, especially in the face of continued natural and human disturbance.

### Physical Properties of Forest Soils

Measurements of water content, coarse fragment content, and bulk density (weight per unit volume of soil) are made on samples processed in a laboratory. In general, bulk density decreases with soil organic matter content (O'Neill et al. 2005). Coarse fragments and bulk density are integrated into a soil-quality index discussed below.

### Chemical Properties of Forest Soils

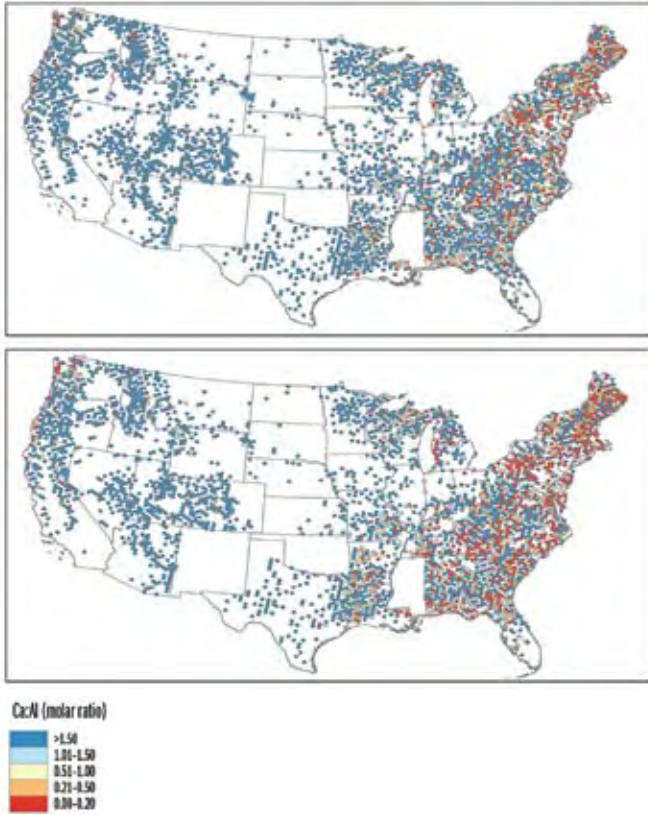
A review by Cronan and Grigal (1995) identified the molar ratio of Calcium (Ca) to Aluminum (Al) in the soil as an indicator of forest ecosystem stress resulting from acidic deposition, harvesting, or other processes contributing to acid soil infertility. Their work identified several important thresholds (table 4a.1) for measurements taken in the soil solution. The measurements reported here were made in the mineral fraction of the soil, but the thresholds offer a starting point for assessment. Adverse impacts on forest ecosystems include Ca or Mg deficiencies and inhibited root growth.

Ca:Al molar ratio	Risk of adverse impacts (percent)
1.0	50
0.5	75
0.2	Nearly 100

**Table 4a.1.** Linkages between the molar ratio of Ca:Al and adverse impacts on forest ecosystems.

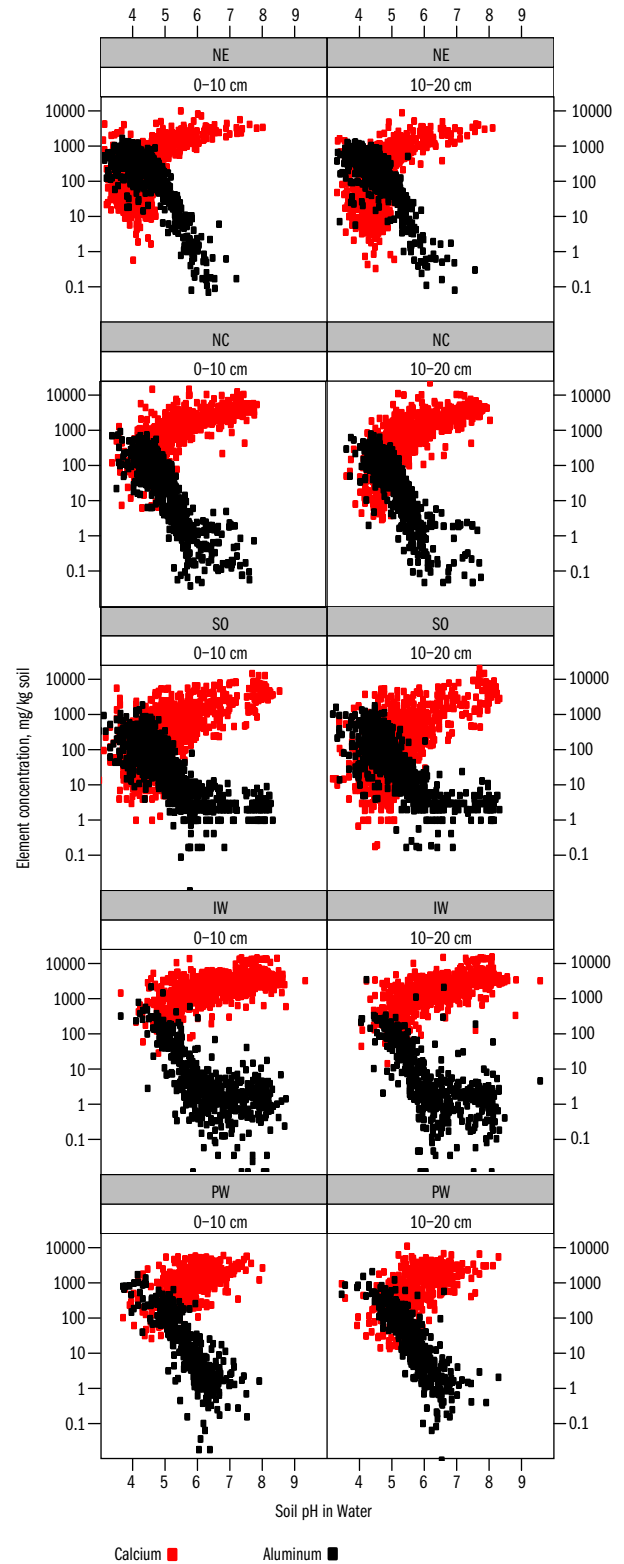
Source: Adapted from Cronan and Grigal 1995.

Ca:Al molar ratios in soil cores range from 0 to greater than 1.50 (fig. 4a.1). Very low ratios (0 to 0.20) are concentrated in several key forested areas of the Eastern United States, including large areas in the Northeast subregion, portions of the southern Appalachians, and the southern coastal plains. Low Ca:Al ratio soils are also found in other geographic areas, including western and northern Mississippi, the Ozark highlands, portions of Arkansas, the Florida panhandle, and the western Cascades in the Pacific coast States, although the extent of these low Ca:Al ratio areas is not as great as in the East. It is in these areas of low Ca:Al ratios that Ca depletion in forested soil profiles needs to be carefully monitored. Loss of topsoil could cause this problem to grow more acute because Ca:Al ratios tend to be lower in the 10-20 cm layer than the 0-10 cm layer (fig. 4a.1).



**Figure 4a.1.** Spatial distribution of Ca:Al ratios for 0-10 and 10-20 cm.

Further insight into Ca:Al ratios in forest soils can be gained by examining the effect of soil pH on exchangeable Ca and Al (fig. 4a.2). In general, as soil pH decreases, exchangeable Ca also decreases and exchangeable Al increases. The highest exchangeable Al, lowest exchangeable Ca, and lowest pH soils are found in the Northeast subregion and South region (fig. 4a.2; see also appendix C, table 50). Because of Al solubility relationships in soils, exchangeable Al is generally detrimental to plants only when the soil pH is below 5.2; western soils—having naturally higher pH—are less likely to exhibit problems. High soil organic matter levels can also ameliorate potentially toxic levels of Al by complexing (binding or sequestering) excess Al.



**Figure 4a.2.** Relationship between exchangeable Ca or Al and soil pH by Forest Inventory and Analysis region.

## Soil Quality Index

To facilitate data analysis and interpretation, we integrated 19 physical and chemical soil properties into a soil quality index (SQI) that can be used as an overall measure of soil quality (Amacher et al. 2007). Lower SQI numbers (< 50) within a given area indicate the potential for an increased risk of soil-related forest health decline. Because of increased soil weathering (high rainfall and temperatures), soils in the Southeast subregion tend to have lower SQI values than the relatively unweathered soils of the West (fig. 4a.3). The 10-20 cm layer tends to have lower SQI values than the 0-10 cm layer because of lower soil pH, lower organic C, lower nutrient levels, and higher bulk densities. Although forest plant species in regions with lower SQI levels tend to be more adapted to those soil conditions, they may also be susceptible to increased risk of decline with added environmental stressors (e.g., increase in Ca depletion).

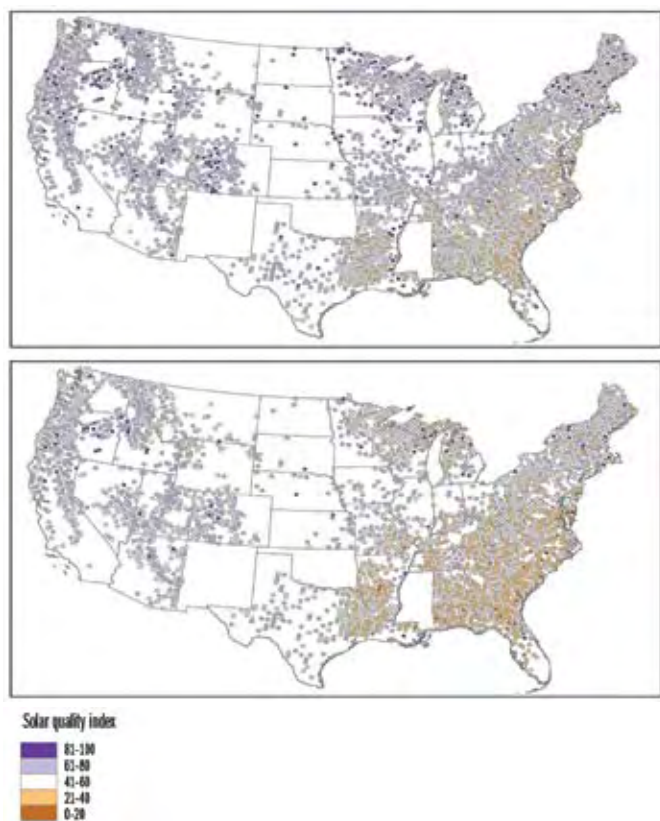


Figure 4a.3. Spatial distribution of the soil quality index by soil layer.

## Soil Carbon

Soil carbon is significant for several reasons. First, carbon is the primary component of soil organic matter, which has a number of important functions. These functions include increasing water-holding capacity, retaining some nutrients by cation exchange (e.g.,  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{K}^+$ ), releasing other nutrients as organic matter decays (e.g., N, P, and S), and capturing potential toxic agents (e.g., Hg) (McBride 1994). Nationally and internationally, carbon is also inventoried to track the sequestration of certain greenhouse gases. Although the Forest Inventory and Analysis program samples both mineral and organic soils, we do not report on organic soils here because of our inability to calculate bulk density on these samples.

Carbon stocks in the soil are strongly influenced by the addition and decomposition of organic matter. Carbon stocks are generally greater at higher latitudes and elevations. In general, the northern tier of the United States has greater carbon stocks than the Southern United States, although a distinct area of higher carbon storage extends from north to south in both the Appalachian and Rocky Mountains, as well as the Cascades and Sierras (fig. 4a.4).

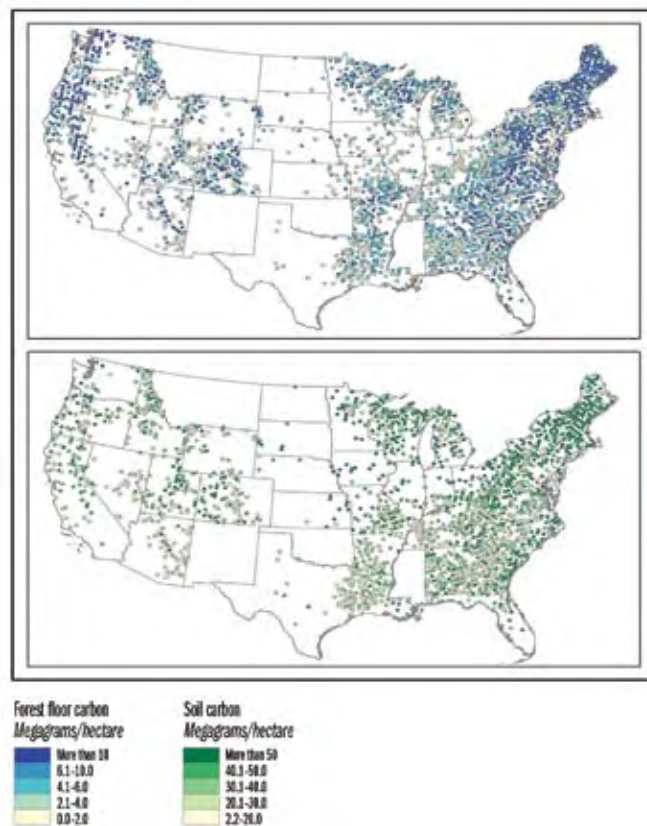


Figure 4a.4. Spatial distribution of soil carbon by sample location.

## Forest Biomass and Carbon Will McWilliams, Linda Heath, Vicente Monleon, and Jim Smith

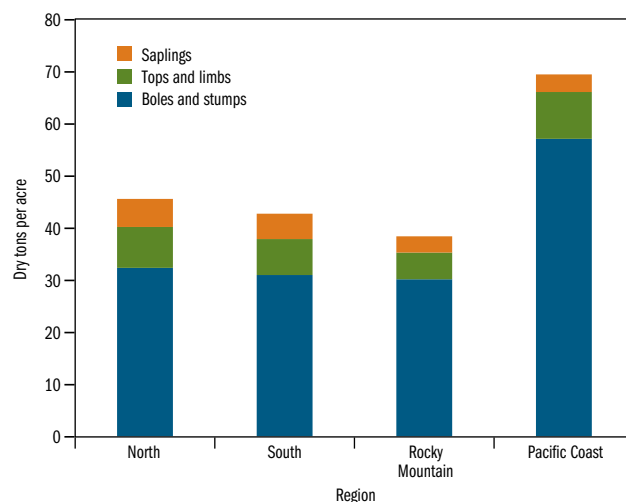
**B**iomass is a fundamental measure of organic material on forest land. The aboveground biomass of trees includes woody material contained in tree boles, forks, limbs, branches, and tops, but excludes foliage and roots. Biomass can be useful as a measure of all wood, including standing dead trees or only live trees, depending on the resource question. For example, wood biomass is converted to carbon (C) to evaluate sequestration using live and dead trees. Tree biomass estimates can be expressed as “fresh,” or green weight, or dry weight, which is used in this report. Dry weight can be converted to green weight, which is fast becoming the industry standard for expressing overall fiber availability. In general, dry weight is used for assessing ecological importance for major forest-type groups and species.

Biomass estimates are also used to evaluate fire and fuels, or the amount of combustible material on forest land (see BioSum sidebar). Estimates of biomass in down woody material (DWM) are an important part of fire evaluation (Woodall et al. 2005). This information is critical for assessing the potential for fuel-reduction treatments and other management within the context of resource sustainability.

An important recent use of biomass estimates is for conversion to C content. Carbon sequestration is a function of the continuous exchange of carbon dioxide (CO<sub>2</sub>) between ecosystems and the atmosphere. Estimates of C are used for reporting C storage and flux. This information is the basis for research on C sequestration and its impacts on global climate change. Carbon is estimated by converting from biomass units, allowing for analysis of the distribution and character of the tree biomass resources equivalent to tree C. This section of chapter 4 begins with a discussion of biomass and then covers the more holistic estimates of C that include soil, litter, DWM, other vegetation, wood products, and storage in landfills.

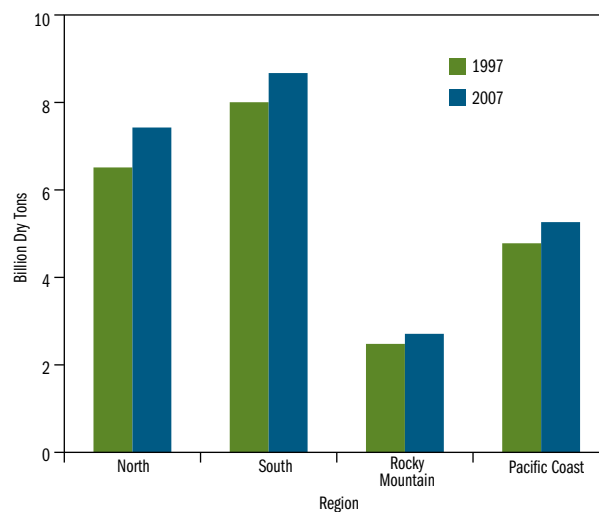
### Status, Trends, and Distribution of Tree Biomass

The Nation’s timber land currently supports 24.4 billion tons of aboveground biomass (see appendix C, table 38). Of the biomass, 74 percent is in the main bole portion (including stumps), followed by 15 percent in tops and branches, 10 percent in sapling-size trees, and 1 percent in sound dead trees (fig. 4b.1).



**Figure 4b.1.** Live-tree biomass per acre of timber land in the United States by region and tree component, 2007.

The biomass of live trees totals 24.1 billion tons, an increase of 11 percent since the previous Resources Planning Act estimate of 21.8 billion tons for 1997 (appendix C, table 38b) (fig. 4b.2). Increases averaged 10 percent in both East and West regions.



**Figure 4b.2.** Live-tree biomass on timber land in the United States by region, 1997 and 2007.

# FIA BioSum: Evaluating Economic Feasibility of Landscape-Scale Fuel Treatments

Jeremy Fried and Jamie Barbour

Responding to requests from clients, the Pacific Northwest FIA program has developed FIA BioSum, an analysis tool for addressing many questions concerning the effectiveness and feasibility of fuel treatments at the broad (multimillion acre) forested landscape scale. This tool exploits the statistically representative sample of stand structure that is the FIA inventory, a spatially explicit geoprocessing framework that relies on geographic information system road networks to automatically estimate haul costs, off-the-shelf models such as the Forest Vegetation Simulator Fire and Fuels Extension and the Fuel Reduction Cost Simulator, and expert-opinion based estimates of cost parameters and specifications of fuel reduction-driven silvicultural prescriptions. These inputs are processed via an analyst-friendly, menu-driven, interactive analysis package known as the FIA BioSum Manager to answer questions such as the following:

1. Where are the best places to site new processing capacity, such as a bioenergy generation facility or a wood products mill, and would there likely be sufficient supply to justify such investment?
2. On how many acres of forest land would treatment X, Y, or Z be effective? On how many acres could a treatment be implemented without subsidy?
3. How much would a policy change (e.g., relaxation of rules concerning maximum harvest tree size or offering subsidies for removing non-merchantable woody material) change the area treated?
4. How much woody material in merchantable and nonmerchantable size and species classes could be generated by a given investment in fuel treatment?

The analysis is driven by eight, default, plot-wise heuristic objective functions but can also be customized by the user. Outputs from this simulation are extensive and results can be examined from the plot to the landscape scale and can be aggregated in almost any way (e.g., to focus on a particular land-ownership class, to focus on acres above a specific hazard threshold, or by existing or potential processing site). For further details, including the software, users manual, and writeups of analyses conducted to date, please see <http://www.biosum.info> on the Web.

About two-thirds of the live-tree biomass is in the Eastern United States. The Nation's biomass is distributed across the landscape following patterns of forest distribution (Blackard et al. in press) (chapter 10, map plate 14). The amount and character of the biomass resource depends on the composition and structure endemic to the ecoregions and on climate and geophysical features. The highest biomass per unit of land area is found in Pacific coast forests. The lowest abundance is found in the arid regions of the West. Douglas-fir, fir-spruce, hemlock-Sitka spruce, and other hardwood forest-type groups account for most of the biomass in the Western United States. Eastern forests have more uniform biomass abundance, with higher levels of biomass in the mountainous regions. The most abundant groups are oak-hickory, maple-beech-birch, and loblolly-shortleaf pine. Tree biomass is split roughly in half between counties that are predominantly urban and those that are rural (see appendix C, table 37).

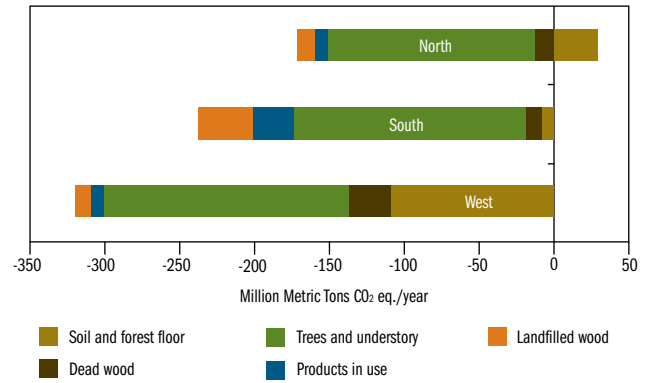
## Carbon Sequestration and Flux

The consequences of increasing greenhouse-gas concentrations in the atmosphere have led to a national system to estimate greenhouse gas sources and sinks. Interest has heightened with the prospect of trading C credits on the open market. Increased C sequestration is generally associated with forest ecosystems under improved forest management practices, afforestation, and long-term storage of C in wood in products or landfills. Since 1990, the U.S. Environmental Protection Agency has been preparing the official inventory for all greenhouse gas sources and sinks to comply with the United Nations Framework Convention on Climate Change (U.S. EPA 2007). The Forest Service is responsible for providing estimates for the forest sector, which includes forest ecosystems and harvested wood. The primary source of information for forests comes from the Forest Inventory and Analysis program that conducts annual inventories across all land in the United States using a systematic sample of grid plots. The Forest Inventory and Analysis data are converted using the FORCARB2 model (Smith et al., 2007; U.S. EPA 2007). Carbon estimates are divided among major pools that include aboveground and belowground biomass (which includes leaves and roots), dead wood, litter, and soil organic carbon. Carbon remaining sequestered in harvested wood is in products and landfills.

The most current estimates of C are for 2005. Net annual flux of CO<sub>2</sub> from the atmosphere to forest ecosystems and harvested wood products in 2005 was estimated at 699 Tg CO<sub>2</sub> equivalents for the conterminous United States



(U.S. EPA 2007). The CO<sub>2</sub> equivalents are calculated as C mass times the mass ratio of CO<sub>2</sub> to C. Current trends of increased forest sequestration are due to increasing C density (C per unit area) and increasing area of forest land (fig. 4b.3). In general, aboveground biomass and soil C are the largest stocks, and aboveground biomass and harvested wood are the largest fluxes. Recent trends indicate continued carbon sequestration in all major C pools.



**Figure 4b.3.** Net forest carbon stock change during 2005.  
 Note: Negative values correspond to storage by forests.



## Forest Health Sonja N. Oswalt and Sally Campbell

**F**orests in the United States provide a multitude of services: clean drinking water, clean air, forest products, economic stability, wildlife habitat, recreation, and aesthetic value. Regardless of the type of forest, a healthy forest is able to provide unique services in a sustainable manner. Factors influencing forest health and productivity in the United States include nonnative invasive species, insects and pathogens, forest fuels and wildfire, and air pollution. This section of chapter 4 reports on forest health data collected by the following Forest Service organizations: the Forest Inventory and Analysis (FIA) program, Forest Health Monitoring, Forest Health Protection, the Remote Sensing Application Center, and the National Interagency Coordination Center.

### Invasive Species

Invasive species have the potential to severely affect the health of the Nation's forests. Many of the most aggressive insects and pathogens infesting trees in the United States are nonnative species that have become invasive. Nonnative invasive plant species have tremendous potential to negatively alter forest ecosystems.

### Invasive Plants

Nonnative invasive-plant species data collection is currently optional on FIA plots. Each FIA region collects data on nonnative invasive plants using slightly different methods. Therefore, data are not directly comparable between States or FIA regions. Efforts are underway to standardize invasive-plant data-collection protocols, much like the plot design that is now standard nationwide. In this report, nonnative invasive-plant data are reported by FIA region, where available. Degree of infestation by nonnative species differed by State in the North region. More than 80 percent of sampled forest plots in Iowa and more than 60 percent of sampled plots in Indiana and Illinois contained at least one invasive species, and less than 10 percent of the plots in Minnesota contained one or more invasive plants (fig. 4c.1). Agriculture and development, combined with forest fragmentation, help to account for the differences between States (Moser et al. 2008). At the regional

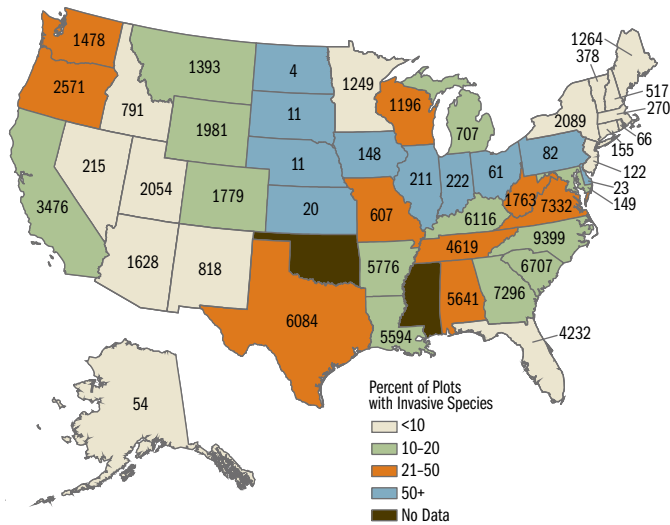
level, the percent of all forest plots sampled is similar between the North region and the Pacific Coast region. There appears to be much less variation in the degree of infestation among States on the Pacific coast (Washington, Oregon, and California); however, these States detected at least one invasive plant on between 15 and 25 percent of forest plots sampled. In the South region more than 20 percent of sampled plots in Tennessee, Kentucky, Virginia, and east Texas contained at least one invasive species. The remainder of the South region detected invasive plants on less than 20 percent of sampled plots.



Japanese Stilt Grass (*Microstegium vimineum*) in Tennessee.

Photo courtesy of Chris Oswalt.

States in the Great Plains region collected invasive species information only on a subset of forest plots. This phase-3 sample is 1/16th of the total FIA plot sample. Therefore, sample sizes are much smaller for the States in the Great Plains region. At the regional level, at least one nonnative invasive plant was found on 98 percent of forest health (phase-3) plots sampled. Extensive agricultural areas may account for some of the occurrence.



**Figure 4c.1.** Percent of forested plots containing at least one invasive species. Note: Total sample size is indicated on each State.

Source: Forest Inventory and Analysis plot data.

### Insects and Diseases

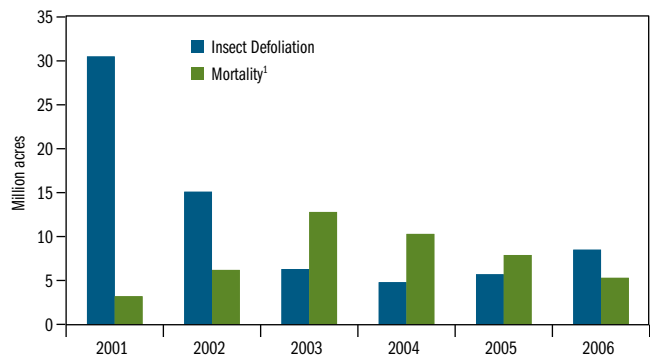
Insects and diseases can have beneficial, neutral, or detrimental effects on forest ecosystems, depending on their geographic extent and severity and on the desired forest condition. Impacts range from defoliation, decay, reduced growth, increased susceptibility to other stressors, or outright mortality. As such, insects and diseases have great potential to affect ecosystem structure, composition, and function.

Mortality and defoliation from insects and diseases are detected on millions of acres annually in the United States (fig. 4c.2; Forest Service 2007a). In 2006, 5.3 million acres had mortality detected by aerial survey. (Note: Not all forested lands are surveyed; in 2006, about 400 million acres were surveyed.) Mountain pine beetle alone caused 50 percent of the mortality that was detected. Insect-caused defoliation occurred on 8.5 million acres, with forest tent caterpillar, budworms (western spruce, spruce, and jack pine), aspen leaf miner, and gypsy moth accounting for most of the defoliation (more than 90 percent) (Krist 2007). Diseases caused by dwarf mistletoes, root pathogens, and canker fungi are not easily detected by aerial survey but are present on millions of acres as well, causing growth loss and mortality, and contributing to mortality by other agents, such as bark beetles.

## Potential Climate Change Impacts on Forests and Birds

Louis Iverson, Anantha Prasad, Stephen Matthews, Matthew Peters

This group has been using FIA data from the Eastern United States for 14 years to better understand how environmental factors relate to the ecology of today's forests and to model the potential impacts of climate change on 134 individual tree species. With more than 100,000 FIA plots and nearly 3 million trees of data, the FIA data were used to create importance values for each species, which form the basis of their statistical models. By relating current climate, soil, landscape, and elevation variables with the FIA data, they have ranked the species drivers and created models that match the FIA data mapped at 20x20 km. Then they changed the climate variables according to various general circulation models and emission scenarios to assess potential changes in suitable habitat for each species. The outputs from the tree models, plus climate and elevation data, were also used as inputs for similar kinds of models generated for 150 bird species (via Breeding Bird Survey data). More than 20 peer-reviewed publications have resulted from this work. A recently created Web site provides detailed analyses for each species: <http://nrs.fs.fed.us/atlas>.



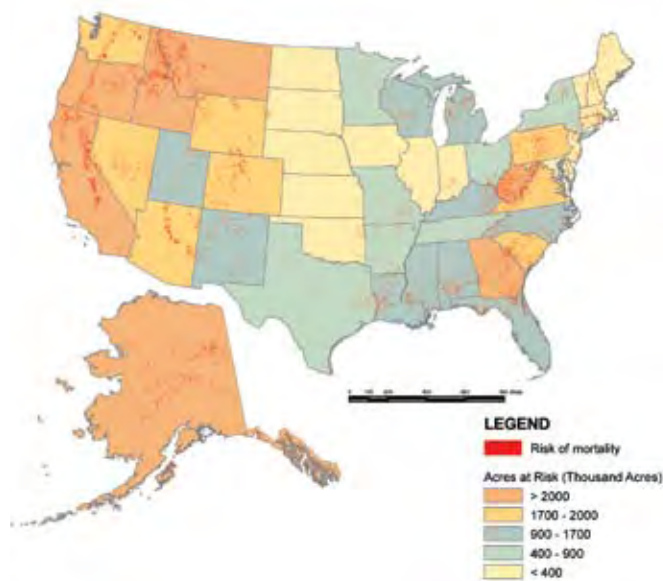
**Figure 4c.2.** Acres with insect and disease defoliation and mortality detected by aerial survey, 2001-06.

<sup>1</sup>Mortality acres do not include areas with sparse mortality.

Source: Forest Health Protection, Forest Health Technology Enterprise Team.

In some FIA regions, specific damaging agent information is collected on FIA ground plots so that estimates can be made of the affected number of trees, acres, and volume for

specific tree species or owner groups caused by each recorded damaging agent. Risk of future mortality or growth losses from insects and diseases can also be evaluated and displayed spatially using vegetation data from FIA plots along with site and host susceptibility factors (Forest Service 2007b). In 2006, it was estimated that more than 58 million acres will have more than 25 percent of the standing live volume at risk of mortality within the next 15 years (fig. 4c.3).



**Figure 4c.3.** The expectation that 25 percent or more of the standing live volume of trees greater than 1 inch in diameter will die over the next 15 years. Total acres at risk: Approximately 58 million

Sources: Forest Health Protection, Forest Health Technology Enterprise Team. Risk map Web site: <http://www.fs.fed.us/foresthealth/technology/nidrm.shtml>.

## Forest Fuels and Wildfire

Dead wood—standing and down—is an important component of forested systems. Dead wood affects soil nutrient content and wildlife habitat availability, influences global carbon stores, and affects forest fire behavior. The ecological benefits of down woody material (DWM) are recognized along with its contribution to fire risk. Establishing a balance between the dead wood necessary to sustain a healthy, productive forest while addressing growing concerns over wildfire in our Nation's forests is one of many essential elements in maintaining healthy forest systems.

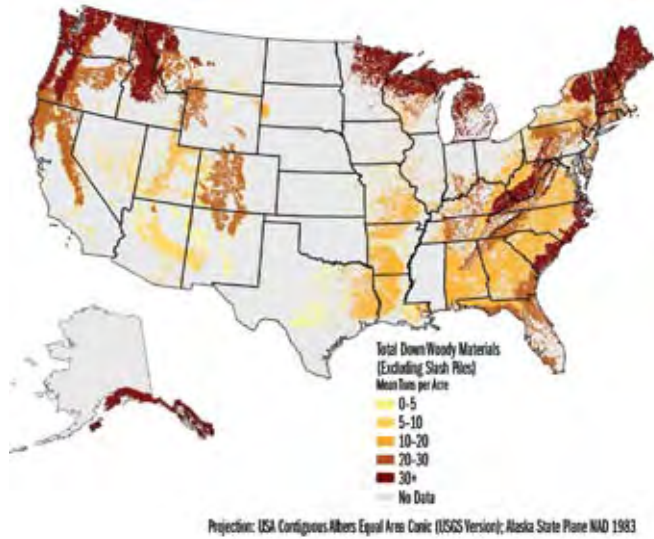


Warner Mountains, Fremont National Forest.

Photo courtesy Tom Iraci.

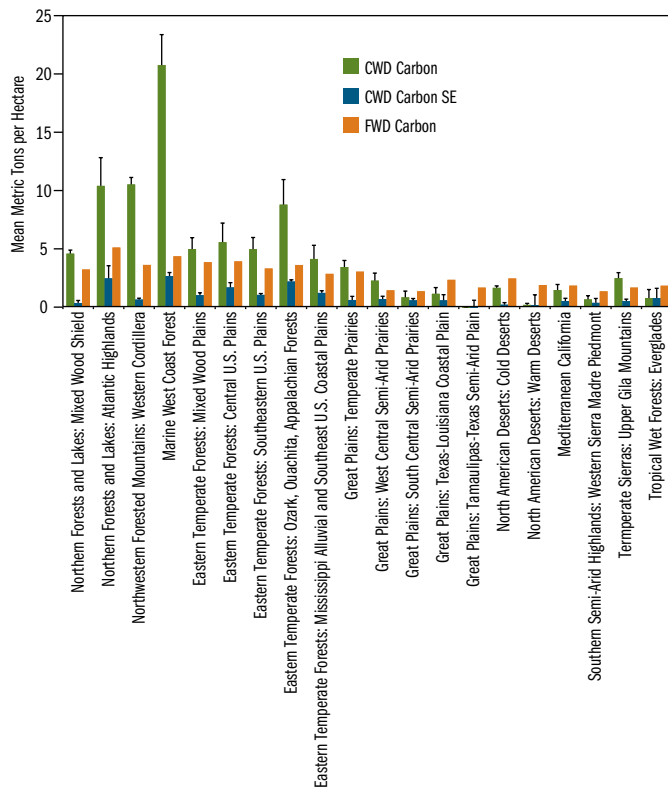
## Forest Fuels: Down Woody Materials

Down woody material data from 5,505 plots spanning the years 2001 to 2006 indicate that total DWM tons per acre is highest along the west coast, in the northeast, along the Atlantic seaboard, in the Appalachian Mountains, and in the Northern Great Lakes ecological regions. Not surprisingly, fuel levels are lowest in the arid regions of Texas, southern California, and throughout the Plains States (fig. 4c.4). Carbon sequestered in DWM follows similar trends, with coarse woody material (CWM) carbon levels highest along the marine west coast and lowest in the North American desert, paralleling differences in tree sizes (fig. 4c.5). Carbon sequestered in fine woody material (FWM) is highest in the Atlantic highlands, the eastern temperate forests, and along the west coast, where deciduous trees and storms contribute to higher levels of small material on the forest floor. The Great Plains region had some of the lowest levels of carbon contained in FWM, as did the arid and semiarid desert regions, although, in most cases, carbon from FWM was still greater than carbon from CWM in those dry zones where trees may not reach their full growth potential.



**Figure 4c.4.** Down woody material (tons per acre) averaged within U.S. Environmental Protection Agency ecological regions.

Source: Forest Inventory and Analysis plot data.



**Figure 4c.5.** Means and standard errors of carbon in fine and coarse woody materials by U.S. Environmental Protection Agency ecological region.

Source: Forest Inventory and Analysis plot data.

## Impacts of Wildfire

For 10 years (1997 through 2006), the area of wildfire on wildlands averaged almost 6 million acres across the United States. In the 3 years after that (2004 through 2006), yearly acres have exceeded 8 million (NIFC 2008) (fig. 4c.6). Using remote sensing to delineate fire perimeters, information about forest characteristics can be summarized within burned areas. For example, for 2004 fires, the most prevalent forest-type groups within the burned areas were pinyon-juniper and oak-hickory (fig. 4c.7), and 10 percent of the forest fires on forest land were classified as moderate or high intensity in the East and 30 percent were classified as such in the West. The volume and value of wood also can be estimated from FIA plots within wildfire areas. For example, in Georgia and Florida, where more than 400,000 wildland acres burned in 2007, the wood volume and value, as shown in table 4c.1, were estimated for the burned area (Harper et al. 2007):

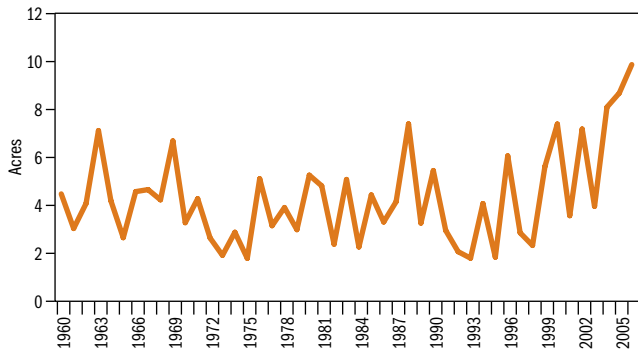
Product	Volume <sup>1</sup>	Value <sup>2</sup>	Assessed Mortality Value <sup>3</sup>
Total pulpwood	5,888,738 cords	\$114,631,863	\$65,787,411
Total sawtimber	974,668,000 board feet (International log rule)	\$228,120,103	\$133,372,705
Precommercial area	—	\$19,176,000	\$10,161,401
<b>Total</b>	<b>551,194,974 cubic feet</b>	<b>\$342,751,966</b>	<b>\$209,321,517</b>

**Table 4c.1.** Estimated volume and value of wood within wildfire areas in Georgia and Florida, 2007

<sup>1</sup>Total volume within the burn area. Precommercial timber land area estimated at 76,704 acres with no commercial volume; reestablishment per acre value was estimated and applied to precommercial area to assess a total value.

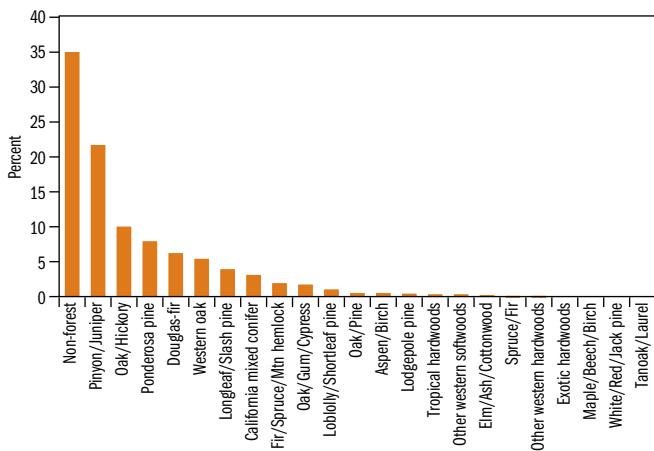
<sup>2</sup>Timber Mart-South, average price, 1st quarter 2007 for Georgia, Region 2, and Florida, Region 1 for value of pulpwood and sawtimber.

<sup>3</sup>Georgia assessment was 65 percent mortality; Florida assessment was 25 percent mortality. These values are for demonstration and do not reflect the final assessed values by Georgia and Florida.



**Figure 4c.6.** Acres of Wildland Fire in the United States, 1960–2006.

Source: National Interagency Fire Center, 2008.



**Figure 4c.7.** Estimated percentage of acres within 2004 wildfire areas by forest-type group, United States.

Source: Forest Service Remote Sensing Applications Center, Salt Lake City, UT, May 2007.

## Air Pollution

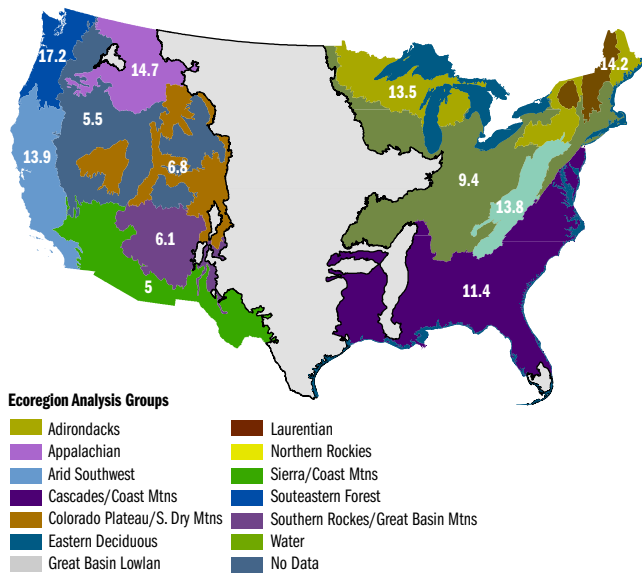
Poor air quality affects the health of all living organisms, including trees. FIA measures two indicators of air quality—lichen communities and ozone ( $O_3$ ) injury to forest plants. Lichens are highly sensitive to pollutants such as acid rain, sulfur dioxide, and nitrogen and, as such, are excellent air quality bioindicators. Using multivariate models, lichen community data are used to assess air quality at each FIA

plot and to identify risks to forest health. Ozone is a chemical compound that occurs naturally in the Earth's atmosphere but is also formed in the troposphere by reaction of vehicle and manufacturing emissions with sunlight. Ozone directly damages forest vegetation and has a variety of ecological effects on forested landscapes, with the potential to alter species composition, soil moisture, and fire regimes and to influence pest interactions (Coulston et al. 2004; Lefohn 1997).

### Air Pollution—Lichen Community Diversity

With 12 years of data from 2,486 FIA and Forest Health Monitoring plots spanning the 48 contiguous States, we have found that lichen species diversity is correlated with air quality. Species richness, defined as the number of lichen species found on a FIA lichen plot, is the simplest of the Lichen Indicator metrics and the only metric available for all sampled plots. Species richness reflects many influences on lichens at a plot, including climate, stand structure, and air quality. These influences on eastern forests are different than on western forests, so we look at lichen diversity patterns in the two halves of the country separately (fig. 4c.8).

In the East, lichen species richness tends to be lower in areas of higher nitrate ( $NO_3$ ) and ammonium ( $NH_4$ ) pollution, as determined in a recent study by Will-Wolf et al. (N.d.). These two pollutants, together with elevation, are important predictors of large-scale lichen diversity patterns in eastern forests. Pollution peaks in the Central Midwest, extending to the Ohio Valley and Boston-Washington, DC, urban/industrial corridors, where high-diversity plots are conspicuously lacking (Will-Wolf et al., N.d.). This region is part of the Eastern Deciduous ecoregion analysis group, which has the lowest average species richness. By contrast, lichen diversity across the western half of the contiguous United States is not so closely associated with  $NO_3$  and  $NH_4$ , which occur at far lower concentrations than in the East. Pollution in the West is more closely linked to scattered hot spots of agriculture and urbanization as dictated by the various mountain ranges (Jovan and McCune 2006). Lichen species richness is instead intimately tied to elevation, especially when considered at the large geographic scale presented in figure 4c.8. Smaller-scale investigations of lichen communities, however, have indeed documented more localized air quality impacts in which  $NO_3$  and especially  $NH_4$  both are believed to play an important role (Geiser and Neitlich 2007, Jovan and McCune 2005).



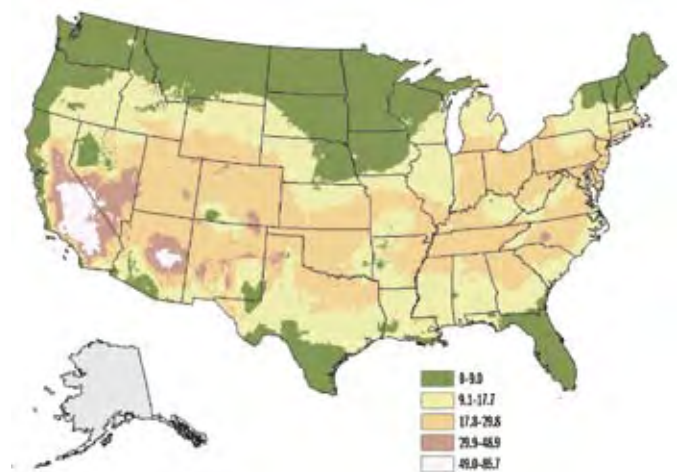
**Figure 4c.8.** Average lichen species richness by ecoregion group.

Sources: Bailey (1983, 1989), Cleland et al. (2005), Forest Inventory and Analysis plot data.

### Air Pollution—Ozone Concentrations

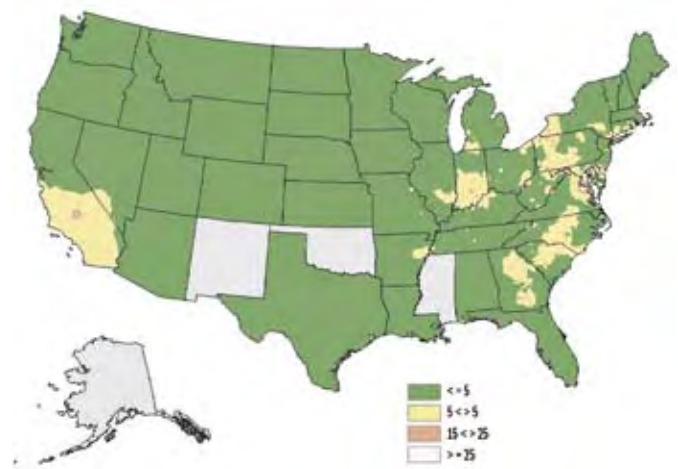
The U.S. Environmental Protection Agency (EPA) provides information on the ozone concentration at points across the United States. Combined with FIA data collected on plots designed to detect ozone damage on sensitive species, this information can be used to locate sites for further research regarding air quality impacts on forest species.

U.S. EPA data show ambient ozone concentrations to be highest at points in the Sierra Nevada, some areas of the semiarid Western States, and scattered points along the Southern Appalachian piedmont, northeast coast, and Great Lakes ecological regions, where major cities and travel corridors occur (fig. 4c.9). Plot data from FIA show similar trends with more damage detected on sensitive plant species in the following areas than anywhere else in the United States: the Sierra Nevada; the area east of Los Angeles; the travel corridor of Interstate 85 across the Southern States of Georgia, South Carolina, and North Carolina; the urban hotspots of Atlanta, GA, Cincinnati, OH, and Buffalo, NY; and the greater Washington, DC, area (fig 4c.10) (Campbell et al. 2007). The Midwestern and Northwestern States, along with Maine, Vermont, and New Hampshire, appear to have the lowest levels of ozone concentration and damage to forest species in the entire United States (Appendix C, table 51).



**Figure 4c.9.** Mean SUM06 values for 2000-2004. SUM06 is “a measure of vegetation exposure to ozone during the growing season.”

Source: EPA (2007). Modeled map by Teague Pritchard, Wisconsin Department of Natural Resources, Madison, WI.



**Figure 4c.10.** Mean biosite index estimates and risk to forests of injury from ozone exposure, 2000-06: (<5 = little foliar injury; 5<=15 = light foliar injury; 15<=25 = moderate injury; ≥ 25 = severe foliar injury).

Source: FIA ozone plot data. Modeled map by John Coulston, FIA, Knoxville, TN.

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# CHAPTER 5

## Timberland Resources

# Timberland Area W. Brad Smith

## Trends in Timberland Area

For the entire United States, timberland area has risen since 1953, with a gain of 5 million acres or about 1 percent (see appendix C, table 10). Although reversion and afforestation were dominant factors for the rise in the East, reclassification of marginal wooded lands was the dominant cause for increases in forest land area in the West. Since 1953, net gains were reported in the North (6 percent) and Rocky Mountain (7 percent) regions (fig. 5a.1). The South declined 0.3 percent and in the Pacific Coast region, timberland area declined by nearly 10 percent from 1953 to 2007. An increase in the Pacific Southwest subregion (9 percent) was offset by declines in the Pacific Northwest subregion (excludes Alaska) (3 percent) and Alaska (42 percent), where some areas were reclassified as nonforest and other areas were reclassified as wilderness.

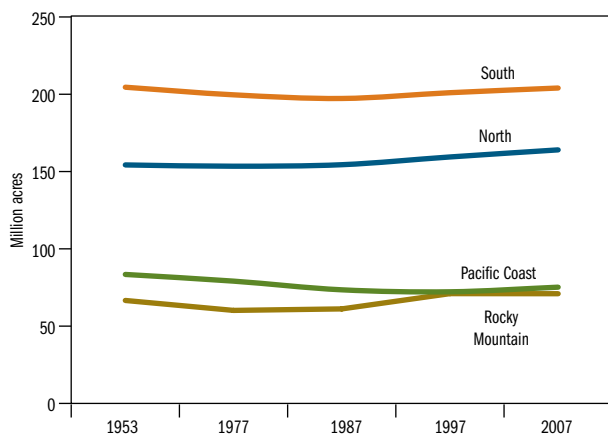


Figure 5a.1. Trends in timberland area by major region, 1953–2007.

These shifts in timberland area are the result of a complex combination of timber land being withdrawn for reserved uses such as parks and wilderness and other influences. A major influence was the reclassification of other forest lands to timber land as a result of reevaluation of site productivity. Additional gains can be attributed to abandoned marginal farmlands in the East reverting to productive forest lands. The net effect of these changes was a slight increase in overall timber land.

Of the Nation's timber land, 72 percent is in the Eastern United States. In the West, timber land is a smaller segment of the total forest area than in the East, although timber land does constitute more than half of all forest land in the Great Plains and Pacific Northwest subregions and in Colorado, Idaho, and Montana in the Intermountain subregion.

## Timberland Ownership

Timberland ownership patterns vary throughout the United States. Timberland ownership is divided into four broad classes: national forest (public), other public, private corporate, and private noncorporate. These four classes indicate a change in ownership classes from previous reports. The large-scale divestiture of forest industry lands has made reporting this category subject to disclosure concerns. The balance between public and private has not appreciably changed since 1953 (see appendix C, table 10). Private timber lands are concentrated in the eastern part of the country and public lands are mainly in the West (fig. 5a.2). For the United States as a whole, private individuals and firms own 69 percent of all timber land; Federal, State, and other public owners account for the remaining 31 percent (see appendix C, table 10).

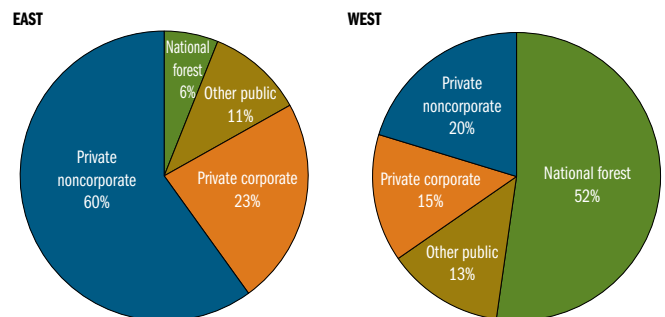


Figure 5a.2. Timber land by major ownership class and region, 2007.

## National Forest

National forest timber land in the United States totals 99 million acres or 19 percent of all timber land. Because most national forests were created from unclaimed public lands in the West around 1900, most (77 percent) of the current national forest timber land is in the West. When the national forest lands were created, much of the more accessible, highly productive forested area was no longer in the public domain. As a consequence, national forest timber land is, on average, less productive and on steeper, higher elevation terrain than are private timber lands. Their terrain makes national forests especially important in managing waterflows and in protecting and maintaining watershed condition.

## Other Public

The other public category includes all lands managed by public agencies other than the Forest Service. Included are lands administered by the Bureau of Land Management (BLM) and other Federal agencies and by State, county, and municipal authorities. Timber land in this category accounts for 11 percent of the total timberland acreage. State-owned timber land, which every State has, constitutes more than half of the timberland area in the other public category. The National Park Service and the Fish and Wildlife Service in this ownership group also have significant forest areas, but these areas generally are not classed as timber land.

The largest concentration of non-Federal public timber land is in the North region (56 percent of the nationwide total), where it is made up primarily of State and county forests. Pennsylvania in the Northeast subregion and in the Lake States of Michigan, Minnesota, and Wisconsin in the North Central subregion all have extensive State and local governmental management of timber lands. Timber land in State, county, and municipal ownership amounts to nearly one-fourth of the total in these three Lake States. In this subregion, timber land that reverted to the States through tax delinquency during the Great Depression accounts for much of the other public ownership. Oregon, Washington, and Alaska also have large acreages of other public timber land—mostly State land in Alaska and Washington and BLM land in Oregon.

## Private Corporate

Private corporate timberland holdings in the United States totaled 106 million acres in 2007. These acres are owned by organizations that are legally incorporated. Most of the private corporate timber land is in the Eastern United States; 54 percent of all such lands are in the South region and 27 percent are in the North region. The Pacific Coast region has 16 percent of all private corporate timber lands, and the Rocky Mountain region has only 4 percent. The declaration of this new owner classification is due in part to the creation of Timber Investment Management Organizations (TIMOs) and Real Estate

Investment Trusts (REITs). TIMOs and REITs are the result of sell-offs or conversion of timberland holdings by many firms in the forest industry. Forest industry historically had been treated as an identifiable owner group because—unlike many other private owners—they were thought to have somewhat common objectives for ownership and management of timber land (Birch 1996). But, because no timber processing plants are associated with TIMOs and REITs, although they are incorporated entities, these lands are now classed in the private corporate ownership category along with other corporate ownerships. The acreage in these new organizations has continued to increase and by 2006 nearly 80 percent of previous forest industry land was classified in these categories. In general, much of the timber lands in TIMOs are managed in much the same way as in the previous forest industry group through long-term arrangements to provide commercial timber for harvest.

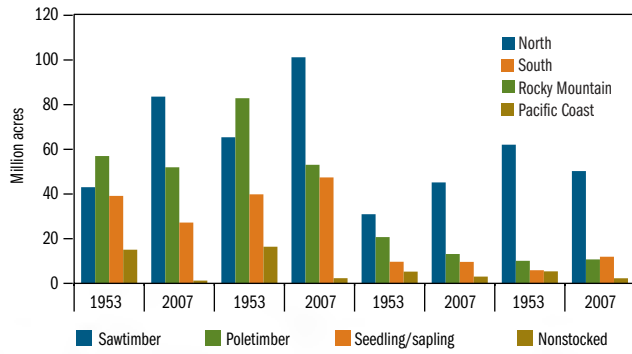
## Private Noncorporate

Timber land in this owner group includes land owned by individuals, partnerships, clubs, and Native Americans. This owner group accounts for 49 percent of the timberland area in the United States. Private noncorporate timber land is concentrated in the eastern sections of the country; 88 percent of all such land is found in the North and South regions, accounting for about 60 percent of all timber land in both areas. In contrast, in the Rocky Mountain and Pacific Coast regions, this owner group accounts for about 21 percent of all timber land in those regions. Because the owners in this group hold many different management objectives at any given time, some of the area is not available for the production and harvesting of timber. But ownership of timber land can be as transitory in this group as are individual owners' objectives; changes in ownership and objectives often bring formerly unavailable resources onto the market (Birch 1996).

## Timberland stand-size class distribution

Stand-size class distribution can be used to describe forest structure and age and also distribution of stands suitable for various timber products (see appendix C, tables 14 and 15). Four classes generally are recognized: (1) nonstocked, (2) seedling-sapling, (3) poletimber, and (4) sawtimber (see glossary for definitions).

On eastern timber land, very few acres (less than 1 percent) are nonstocked. With generally favorable climates and seed sources, few harvested areas remain nonstocked for long. Seedling-sapling and poletimber stands are about evenly distributed in the East (21 and 28 percent, respectively) (fig. 5a.3). These stands form the core of the merchantable forests of the mid-21st century. Sawtimber stands represented 50 percent of the timber land in the East in 2007, compared with 30 percent in 1953. The bulk of current timber harvesting is focused on poletimber and sawtimber stands.



**Figure 5a.3.** Timber land by stand-size class and region, 1953 and 2007.

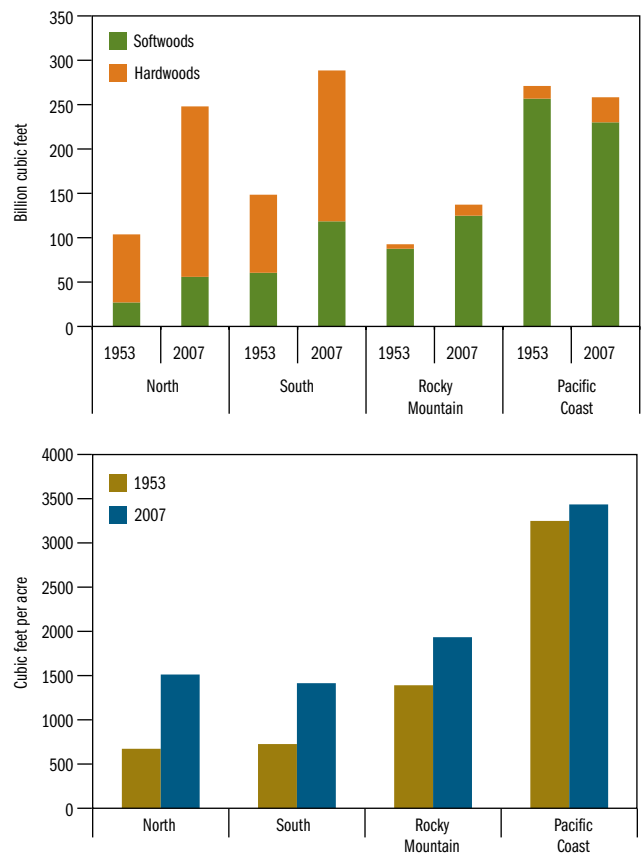
In the West, nonstocked stands make up 4 percent of the total area of timber land. The distribution of seedling-sapling and poletimber stands is 15 and 16 percent, respectively, and the balance (65 percent) is in sawtimber stands. In the West, the share of sawtimber-size stands ranges from about 50 percent in Alaska, 68 percent in the Pacific Northwest subregion (excluding Alaska), and 74 percent in the Pacific Southwest subregion.

## Timberland Volume W. Brad Smith

The Nation's timber land contains an estimated one trillion cubic feet of timber, of which 92 percent is in growing stock—live, sound trees suited for roundwood products (see appendix C, table 17). About 6 percent of all timber volume is in live cull trees that generally are not suited for commercial roundwood products because of poor form or rot. Only 2 percent of the volume of all timber is in dead trees that are sound enough to have value for some commercial product uses. Softwood species have a higher proportion (98 percent) of all live timber volume in growing stock than hardwood species do (89 percent). The remainder of this discussion of timber volume focuses on growing-stock volume.

The South region, which had a 13-percent increase in total volume between 1997 and 2007, experienced an 11-percent gain in volume on a per acre basis. In the North region, total timber volume increased by 16 percent compared with a 13-percent increase in volume per acre. Volume in the Pacific Coast region registered an 8-percent increase in total volume; per-acre volume increased by 3 percent. The Rocky Mountain region saw a 10-percent gain in both total volume and per-acre volume.

Because growth has exceeded harvest since the 1950s, volume on U.S. timber land has increased since that time (see appendix C, tables 18 and 19, and fig. 5b.1). Net volume per acre increased between 1953 and 2007 in all major regions. In the North region, average net volume per acre increased by 125 percent between 1953 and 2007. In the South region, net volume per acre rose by 95 percent, and, in the Rocky Mountain region, it increased by 39 percent (fig. 5b.1). In the Pacific Coast region, average net volume per acre increased by only 6 percent. This small gain was due in part to losses of productive timber land to reserved and other non-timber-land status and in part to slower growth of mature timber in the region.



**Figure 5b.1.** Growing-stock volume and volume per acre by region, 1953 and 2007.

The Nation's softwood growing-stock volume totals 529 million cubic feet, or 57 percent of all growing stock. Total softwood volume is up 9 percent since 1997. The South region increased 13 percent, the North region 13 percent, the Rocky Mountain region 9 percent, and the Pacific Coast 7 percent.

Softwood growing stock is concentrated in the West; the Pacific Coast region alone accounts for 43 percent of all softwood growing stock, despite its relatively small timberland base. The West contains stands that have high per-acre volumes. Many of the younger, mature forests in the Pacific Coast region have higher per-acre volumes due to the higher productivity of their sites. Most of the remainder of softwood timber is evenly distributed between the South and Rocky Mountain regions. The North region has 10 percent of the total.

Some 403 billion cubic feet of hardwood growing-stock volume were on timber land in 2007, up almost 15 percent since 1997 (see appendix C, table 19). Hardwoods account for 43 percent of all growing-stock volume in the United States. Of all hardwood timber volume, 90 percent is in the Eastern United States, fairly evenly distributed between the North and South regions. Most of the remaining hardwood volume is in the Pacific Coast region.

### Volume by Ownership

Because of many factors, including history of use, land productivity, and degree of management, the timber volumes are distributed unevenly among owners (see appendix C, table 25). National forests, which account for only 19 percent of the Nation's timber land, have 30 percent of all growing-stock volume and 46 percent of all softwood growing-stock volume. The national forests, however, have proportionately less hardwood volume than the other owner groups.

Other public owners—States, Federal agencies other than the Forest Service, counties, and municipalities—account for about 12 percent of all growing stock, about 57 percent of which is softwoods. The hardwood volume in this category is concentrated in the North region, and the softwood volume is mostly in the Pacific Coast region, with the largest share in Oregon and Washington.

Private timber land, corporate and noncorporate, accounts for 58 percent of all growing-stock volume in the United States. These owners control 41 percent of all softwood growing stock and 78 percent of all hardwood growing stock. Most softwood and hardwood timber volume in this owner group is concentrated in the Eastern United States—57 percent of softwoods and 74 percent of hardwoods.

### Volume by Species

Douglas-fir is the most abundant softwood species; it totals 125 billion cubic feet or more than one-fifth of all softwood growing-stock volume in the United States (see appendix C, tables 20, and 22). In fact, 61 percent of all Douglas-fir volume is in the Pacific Northwest subregion. The other top 10 softwood species, in order of volume abundance, are loblolly and shortleaf pines (84 billion cubic feet), true firs (53 billion cubic feet), ponderosa and Jeffrey pines (42 billion cubic feet),

western hemlock (34 billion cubic feet), lodgepole pine (27 billion cubic feet), Engelmann and other western spruces (25 billion cubic feet), eastern white and red pines (21 billion cubic feet), longleaf and slash pines (17 billion cubic feet), and eastern spruces and balsam fir (14 billion cubic feet).

Of the top 10 hardwood species, all are found mainly in the East with the exception of cottonwood and aspen, which span the continent. Oak is by far the most common genus, accounting for 125 billion cubic feet, or 31 percent, of all hardwood volume. The maples, next in abundance, are one of the fastest growing components of the hardwood resource. Soft and hard maples together account for 63 billion cubic feet, or 16 percent, of all hardwoods. Soft maple volume has more than tripled since 1963.

As eastern forests continue to age, species with intermediate tolerance, such as yellow-poplar, are increasing rapidly. Yellow-poplar volume has increased by 133 percent since 1963.

The use of western hardwoods is growing as softwoods become more limited in supply. Red alder, with an inventory of nearly 7 billion cubic feet, has had a substantial increase in use in recent years as stocks have declined slightly (13 percent since 1997). It is located almost entirely in western Oregon and Washington. The aspens in Colorado and other States in the Rocky Mountain region are also locally important for the manufacture of timber products and for the enjoyment of tourists when foliage colors change in the fall.

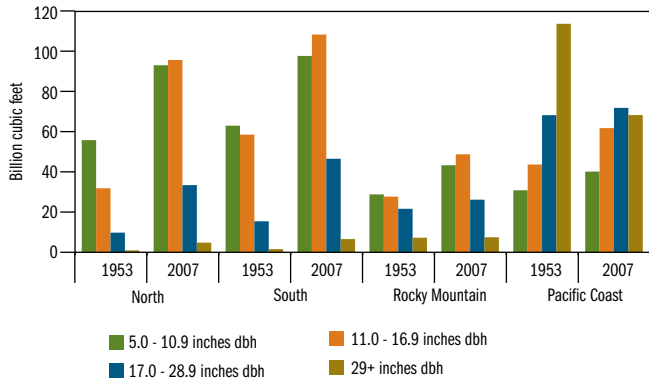
### Volume by Diameter

The distribution of growing-stock volume by diameter classes provides information on forest structure that has value to those interested in timber, wildlife, and aesthetic resources.

Since 1953, the net volume of U.S. hardwoods increased by 119 percent, and the volume of hardwoods in diameter classes 19 inches or greater has tripled—from 26 to 81 billion cubic feet. For softwoods, the net volume increased by 22 percent between 1953 and 2007, and the volume of softwoods in diameter classes 19 inches or greater declined by 12 percent.

For trees ranging from 5.0 inches to 20.9 inches in diameter, the patterns are similar for hardwoods and softwoods (fig. 5b.2)—volume rises quickly to a peak in the 11- to 17-inch range and then declines with increasing size (see appendix C, tables 29, and 30). Hardwoods continue this trend with little volume in very large trees, although the largest class of 29 inches or more has tripled in volume since 1953. Softwood volume, in contrast, rises after 21 inches to another peak. The pattern in diameter distribution varied little between 1987 and 2007. In 2007, 35 percent of softwood volume and 20 percent of hardwood volume were in trees 21 inches in diameter and larger, compared with 49 percent for softwoods and 14 percent for hardwoods in 1953.

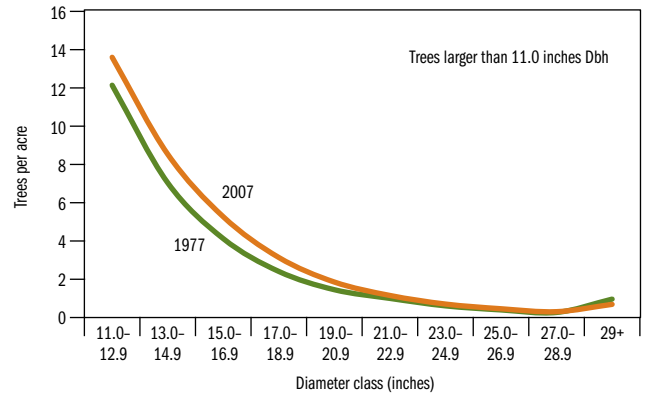
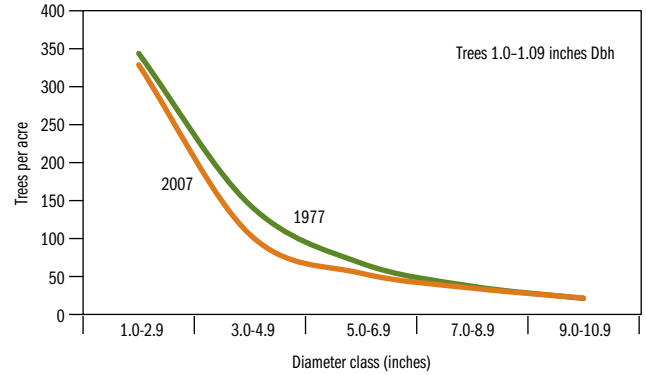




**Figure 5b.2.** Growing-stock volume by diameter class and region, 1953 and 2007.

### Trends in the Number of Trees by Diameter

How many trees are in our forests? This question is frequently asked because many people think that the number of trees over time is indicative of how well the forest is doing and is an indicator of vitality. But as forests age and competition for light and resources intensify, many trees die, allowing the stronger ones to survive. And while some trees are lost to harvesting, most are replaced by many more trees through planting or natural regeneration. Thus, the average number of trees per acre in a healthy, older stand is significantly less than in a younger stand. Over very large landscapes one can expect the distribution of trees to be a J-shaped curve, with more trees in the smaller diameters and fewer trees in the larger diameters. In 2007, roughly 297 billion trees of at least 1 inch in diameter are on timber land, averaging 578 trees per acre (fig. 5b.3). This number compares with 317 billion trees in 1977, an average of 644 trees per acre. The data in the graphs are normalized to a per-acre basis to remove the effects of area change.



**Figure 5b.3.** Average number of trees per acre on timber land in the United States, 1977 and 2007.

The graphs show that, although the number of smaller trees per acre is declining, the number of larger trees is increasing. This change is indicative of an overall forest that is getting older.



# Timber Growth, Mortality, and Change

Roger C. Conner and Michael T. Thompson

The previous section discussed trends in timber volume. Changes in volume often result from land-use change; that is, land entering or removed from the timber base. On those acres remaining forested, tree growth and mortality are the primary factors for volume change. Annual rates of growth and mortality often differ by species group, ownership, and geographic region. This section of chapter 5 focuses on these two elements of change and their net effect on timber volume at a given point in time.

Net annual growth, commonly used as a measure of timber productivity, is defined as the average annual growth in tree volume less the volume lost through mortality. Mortality is the average annual net volume of timber dying over a given time period due to natural causes. Most often, tree mortality occurs at low and predictable rates due to insects and disease, suppression by overstory trees, or advanced tree age. Occasionally, highly concentrated and localized losses occur due to insect and disease epidemics, wildfire, or severe weather events.

## Mortality

Total mortality for trees in the United States amounted to nearly 7.8 billion cubic feet in 2006 (see appendix C, table 33), marking the highest level of volume loss recorded to date. Although mortality has been increasing steadily over time, the current mortality rate (mortality as a percent of growing-stock volume) averaged just 0.81 percent for the United States as a whole. At the regional level, about 2.9 billion cubic feet (37 percent) of the current mortality occurred in the South region, indicating a 0.95-percent rate of loss from growing stock. In the North region losses amounted to 2.0 billion cubic feet, and in the Pacific Coast region they totaled 1.6 billion. Mortality on private timber lands was almost 4.3 billion cubic feet, or 56 percent of the 2006 estimate. National forest timber land lost 2.4 billion cubic feet to mortality, and other public lands lost about 1.1 billion. Although the volume lost to tree mortality is substantial, the rate of loss remains less than 1 percent of the growing-stock volume for any region or owner group (figs. 5c.1 and 5c.2).

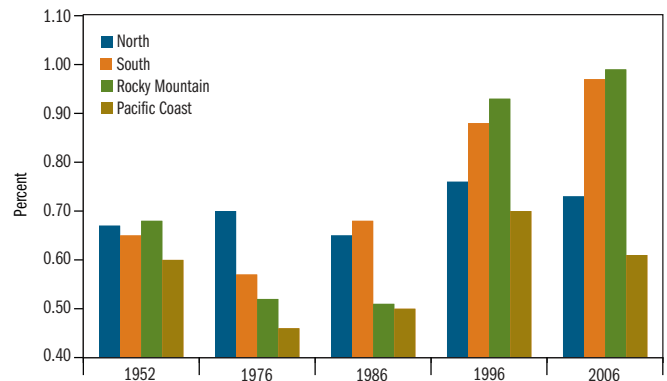


Figure 5c.1. Annual growing-stock mortality as a percent of growing-stock volume by region and inventory year.

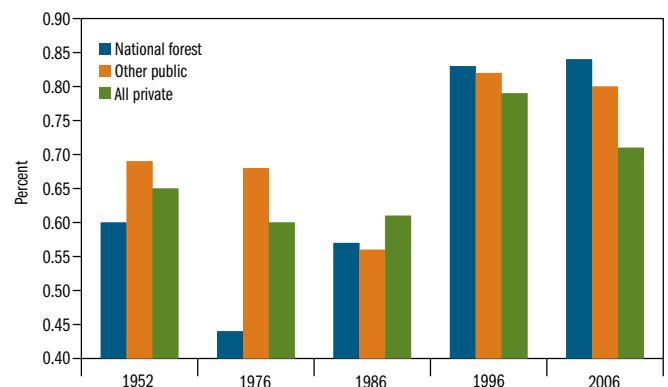


Figure 5c.2. Annual growing-stock mortality as a percent of growing-stock volume by owner group and inventory year.

Nationally, growing-stock mortality averaged less than 15 cubic feet per acre annually as of 2006. Regional per-acre losses remained consistent with the 1996 estimates. Mortality loss was highest in the Pacific Coast region, averaging about 21 cubic feet per acre annually, and lowest in the North region, averaging nearly 12 cubic feet per acre per year. Softwoods accounted for about 4.5 billion cubic feet of the total mortality, and almost 2.1 billion cubic feet of that loss occurred on national forest timber land.

## Net Growth

Net annual growth totaled nearly 26.7 billion cubic feet in 2006, up from the nearly 23.9 billion cubic feet in 1996 (see appendix C, table 34). As with the increase in mortality, growth has been steadily increasing; the 2006 net growth estimate represents the historical high mark for the United States as a whole. Only the Rocky Mountain region showed a decline in net growth since 1996. The annual rate of growth (net growth as a percent of growing-stock volume) averaged about 2.8 percent per year since 1996, which is about three-and-one-half times the rate of mortality. Half of the net growth, or 13.3 billion cubic feet, occurred in the South, meaning that growing-stock volume in southern forests is increasing at a rate of 4.6 percent annually. Net annual growth in northern forests averaged 6.6 billion cubic feet since 1996, a 2.4-percent annual rate of increase, and growth in the forests of the Pacific Coast region was about 5.2 billion cubic feet, increasing 2.0 percent annually. Growth has more than doubled on both national forest and other public timber land since 1952 and has increased 13 percent on private timber land since that year (see appendix C, table 34).

On a per-acre basis, total net growth averaged 52 cubic feet annually for all timber land. At the regional level, the Pacific Coast region had the highest average annual growth, at 69 cubic feet per acre, followed by the South region, at 65 cubic feet per acre (fig. 5c.3). The North and Rocky Mountain regions have the lowest per-acre growth rates of about 40 and 25 cubic feet per acre per year, respectively. Among owner groups, net annual growth on national forest timber land averaged almost 41 cubic feet per acre in 2006, and volume growth on other public timber land occurred at a rate of about 50 cubic feet per acre annually.

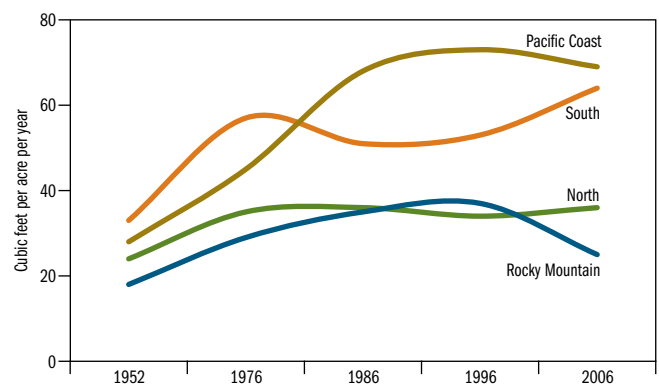
Private timber land has the highest net annual growth per acre, averaging nearly 55 cubic feet in 2006. Historically, millions of intensively managed and highly productive forest industry timberland acres, concentrated in the South, have been the primary reason for the higher average productivity on private timber land. Whether these acres will continue to contribute as much to future growth on private timber land is unknown. The relatively recent divestiture of landholdings by forest industry in the South has resulted in the shift of much of industry land to Timber Investment Management Organizations (TIMOs), Real Estate Investment Trusts (REITs), and nonindustrial-private owners (see chapter 2, Forest Area, Ownership, and Setting). Long-term ownership and management of these acres will be ascertained only by future ownership and timber resource surveys.

## Indicators of Forest Sustainability for State Forest Planning

Sherri Wormstead

Across the 20 States of the Northeast and Midwest, a common set of 18 forest sustainability indicators and associated metrics are monitored at State and regional levels. The indicators provide specific measurements following the framework of the Montreal Process criteria that are tracked at a national level. The Northeastern Area State and Private Forestry, a unit of the Forest Service, has worked collaboratively with the Northeastern Area Association of State Foresters on this effort. They want to use these common measures to reveal trends in forest resources and to convey critical and complex information on forests to decisionmakers and the public.

An online indicator information system tracks trends in the ecological, economic, and social aspects of forests, providing dynamic graphs, maps, and other resources for the 18 indicators and associated metrics. Among the wealth of information compiled from a variety of sources, FIA provides a significant source of data. The Northeastern Area has used the indicators for strategic planning and in various communication products. Several States, including Delaware, Maryland, New Hampshire, and Wisconsin, are using the indicators as a base set, adjusting as needed, to organize State forest assessments, which in turn are used in the State forest planning process.

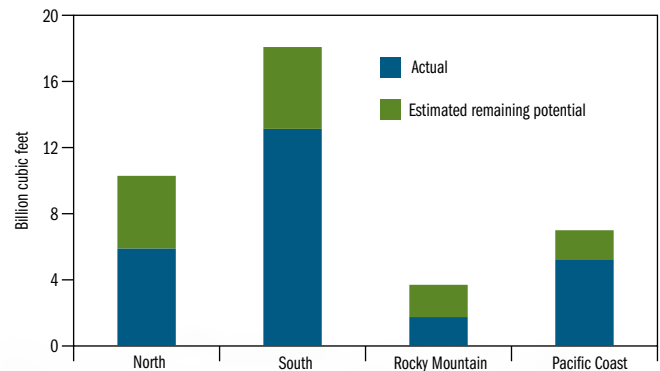


**Figure 5c.3.** Average net annual growing-stock growth per acre by region and inventory year.

Of the net growth reported in 2006, 73 percent (19.7 billion cubic feet) occurred on private timber land, including 67 percent (10.3 billion cubic feet) of the total softwood net growth. The South region accounts for half of the softwood growth, due in large part to the extensive area of highly productive pine plantations in this region (see Planted Forests and Plantations section in chapter 5). In contrast, the Rocky Mountain and Pacific Coast regions combined have 41 percent of all softwood growth despite having 68 percent of all softwood volume. These regions have a higher concentration of older, slower growing softwood stands. Softwood net growth in the North region increased to 1.5 billion cubic feet in 2006, marking the first increase in softwood growth in this region since 1952. The South region had 49 percent of the hardwood net growth in 2006, followed by the North region with 44 percent. Of the hardwood net growth, 82 percent is on private timber land.

Figure 5c.4 illustrates the relationship between potential growth and actual net growth on timber land by region. Potential growth is the maximum mean annual increment of a stand at a given age. It provides a measure of potential productivity or yield of a forest stand. Actual net growth will always be less than potential growth because of site-specific conditions such as soil type, management objectives,

owner objectives, and capability of the site to support tree growth. Overall, the ratio of actual net growth to potential net growth averaged 66 percent for the United States. By region, the Pacific Coast had the highest ratio of 74 percent, the South averaged 73 percent, the North averaged 57 percent, and the Rocky Mountain averaged 47 percent.



**Figure 5c.4.** Comparison of potential net annual growing-stock growth against actual net annual growing-stock growth by region.

## Planted Forests and Plantations Ray Sheffield

Forests established through planting of tree species are becoming more prevalent in the United States. These forests make up more than 63 million acres, or 8 percent of all forests (see appendix C, table 8). This total includes those stands where planting was undertaken to augment existing stocking; this practice occurred primarily in the Western United States. Nearly all planted stands are established with native species. Because most (99 percent) planted forests are classed as timber land (see appendix C, table 1), the following discussion of plantation forests focuses on timber land.

### Planted Timberland Area and Distribution

Concentrations of planted timber land are highest in the South region, followed by the Pacific Coast region and the North and Rocky Mountain regions (fig. 5d.1). Planted stands total 45 million acres in the South region, which is 22 percent of the timber land in that region. In the Pacific Coast region, planted timberland area exceeds 11 million acres, which is about 15 percent of the timberland total in that region. Less than 4 percent of the timber land in the North region is planted; planted area there totals nearly 6 million acres. Less than 1 percent of the timber land in the Rocky Mountain region originated through planting.

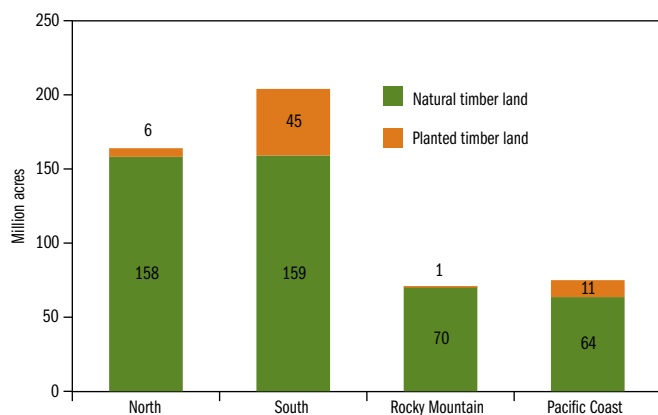


Figure 5 d.1. Area of natural and planted timber land by region, 2007.

Because the trees actually planted are usually softwood species, it is informative to describe plantation frequency based on softwood forest types rather than on all timber land. The forest-type groups with the highest concentrations of planting include loblolly-shortleaf pine (30 million acres), longleaf-slash pine (8 million acres), Douglas-fir (7 million acres), and white-red-jack pine (3 million acres) (fig. 5d.2). Planting accounts for 54 percent of all loblolly-shortleaf pine timber land, 59 percent of all longleaf-slash pine, 18 percent of all Douglas-fir, and 28 percent of all white-red-jack pine stands. The forest-type groups, listed in appendix C, table 8, reflect the plurality of stocking for all trees in the stand, not just the planted species. Therefore, a substantial number of planted stands will show up under a forest-type group not reflective of the species planted on the site. For example, in the East, oak-hickory forests account for 3 million planted acres; most of these stands were planted with pine trees, but hardwood species dominate the stocking.

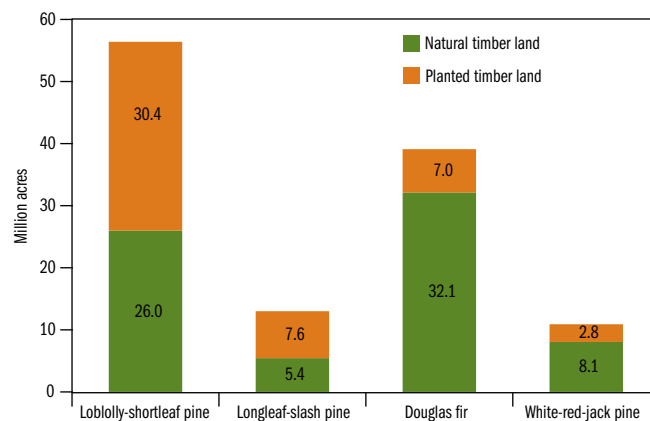
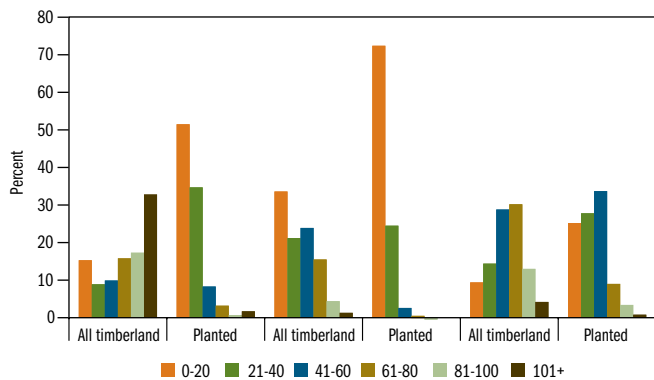


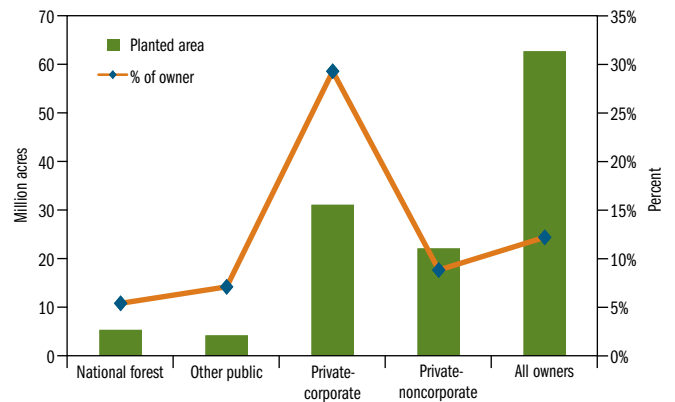
Figure 5d.2. Area of natural and planted timber land by forest-type group, 2007.

The age structure of planted stands is markedly skewed toward the youngest age class (fig. 5d.3). In the South region, the 1-to-20-year class accounts for almost three-fourths of all planted stands, with only 3 percent in age classes greater than 40 years. In the West, planted stands are also relatively young, with more than one-half residing in the 1-to-20-year class; only 6 percent are greater than 60 years of age. Natural forests are much older on average, a characteristic reflected in the age profile for all timber land in the West.



**Figure 5d.3.** Age class distribution of planted stands and all timber land by region, 2007.

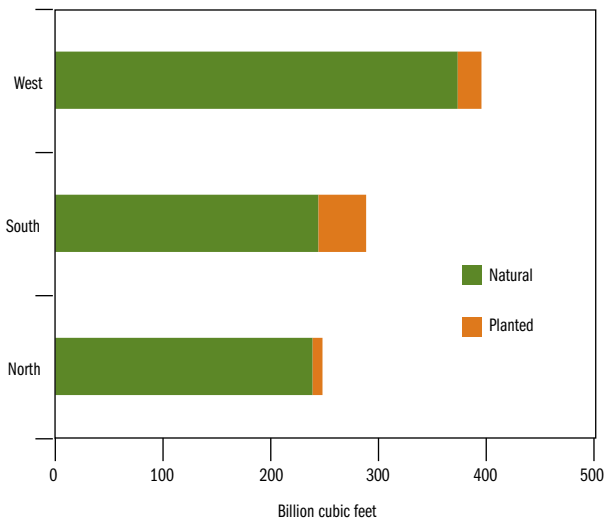
The distribution of planted stands varies by ownership class (fig. 5d.4). Planting is less prevalent on public timber land, with national forests accounting for 5 million acres and other public ownerships 4 million acres. Planted acreage totals 22 million acres on private noncorporate holdings; this total represents about 9 percent of all timber land in this owner class. For several decades, forest planting activity was concentrated on corporate ownerships in the South and Pacific Coast regions. Private corporate owners currently account for 31 million acres of plantations, which is 23 percent of all timber land held by these owners.



**Figure 5d.4.** Area and proportion of planted timber land by ownership class, 2007.

### Volume, Productivity, and Utilization

Nationwide, about 75 billion cubic feet of growing-stock inventory are contained in planted stands, about 8 percent of total growing-stock inventory (fig. 5d.5; see also appendix C, table 32). This seemingly low contribution to inventory relative to percentage of all timber land planted (12 percent) is due to the young age-class structure of the planted resource as noted earlier. Because most stands are planted with a softwood species, a more revealing metric is found in the contribution of planted stands to total inventory of longleaf-slash pine, loblolly-shortleaf pine, and Douglas-fir forest types. Planted stands account for only 13 percent of the growing-stock inventory of Douglas-fir timber land but contribute 46 percent of the inventory of longleaf-slash and 43 percent of the loblolly-shortleaf inventory. These statistics indicate that planted stands are making significant contributions to timber inventory volumes in the South region, even with a very young age-class structure.

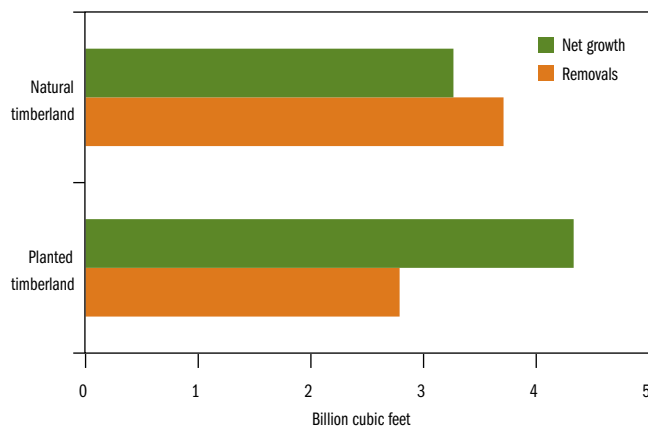


**Figure 5d.5.** Volume of natural and planted growing stock by region, 2007.

Reasons for establishing forest plantations in a timber management regime include control of species composition, stocking, and genetic improvement for various traits. Therefore, it is useful to evaluate the overall impact of planted stands on forest productivity. Due to lack of remeasurement information, an evaluation of productivity for planted stands is possible only for the South region in this assessment—more complete data will be available in subsequent national assessments. In the South region, 57 percent of the net annual growth of softwood species is accruing in planted stands based on recent remeasurement data (fig. 5d.6).

Planted stands are also supplying an increasing amount of the Nation’s timber supplies. As noted above, remeasurement data needed to evaluate timber removals from plantation forests are currently available only for the South region. In that region, planted stands are providing 43 percent of the softwood removals—a percentage that will rise as the relatively young stands increase in age. A previous Forest

Service assessment of the South region’s forests (Forest Service 1988) predicted that plantations in the region would supply more than one-half of the softwood removals coming from all forests there by 2010, a forecast that appears to be on track.



**Figure 5d.6.** Net growth and removals of softwood growing stock by planted and natural stand origin in the South region, 2007.

### Future Changes in Planted Forests

The rate at which forest plantation acreage has increased over the past several decades is not likely to continue. Although some increases will probably occur, the rate of increase will moderate for two reasons. First, the number of acres planted in the past decade has dropped compared with planting rates for the 1980s and early 1990s. Rates of planting in the South region during this earlier period were elevated due to incentive programs that encouraged the planting of certain agricultural lands with trees. Changes in ownership of forests are another possible factor in reduced planting rates. The second reason for moderation in the rate of increase in forest plantations is that an increasing number of planted stands are being harvested as they mature. A high percentage of these stands may be reestablished as a plantation with no impact on net area in plantations.

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# CHAPTER 6

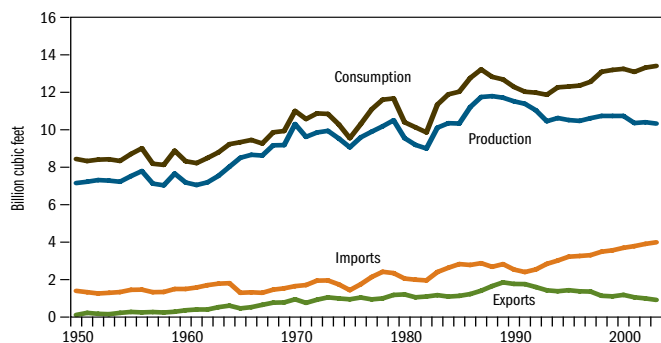
## Forest and Timber Products

# Removals, Timber Products, and Residues

Todd A. Morgan, Tony Johnson, and Ron Piva

Our Nation's forests are an essential source of raw materials for goods and services used every day by the country's 300 million residents. Forest products is a multibillion dollar industry that makes important contributions to the environment and economy by sequestering carbon, managing vegetation, and supplying wood products, employment, income, and tax revenue. This section examines the forest inventory impacts of harvesting and manufacturing timber products; it also discusses volume and uses of wood residue generated by the forest products industry.

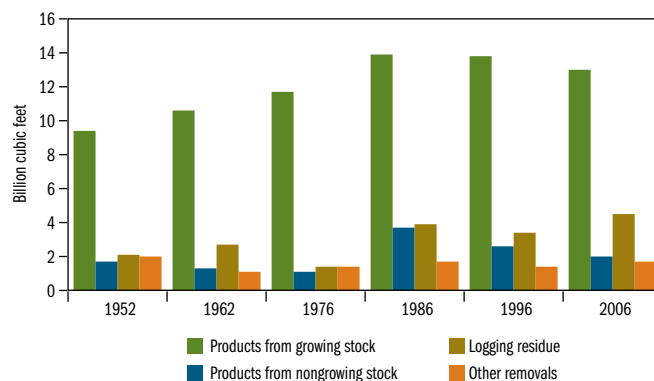
To place this section in perspective, we first look at the overall pattern of timber use in the United States. This pattern of use is reflected in overall timber products consumption, which is supplied by domestic timber production and imports and offset by exports (fig. 6a.1). In general, domestic timber production has been declining since the early 1990s, while consumption has been relatively stable. The gap between production and consumption has been filled with rising imports. The remaining discussion focuses on timber removals for domestic production and exports.



**Figure 6a.1.** Total roundwood consumption, production, imports, and exports, 1950-2005.

Volume removed from forest inventory during timber harvesting or other cultural treatments is known as “removals.” Removals are an important indicator of timber harvest sustainability. Removals that exceed net growth could indicate over-harvesting and declining forest inventory, while growth greatly exceeding removals could signal the need for vegetation management to regulate density and species mix, inhibit insect and disease outbreaks, or reduce wildfire risk.

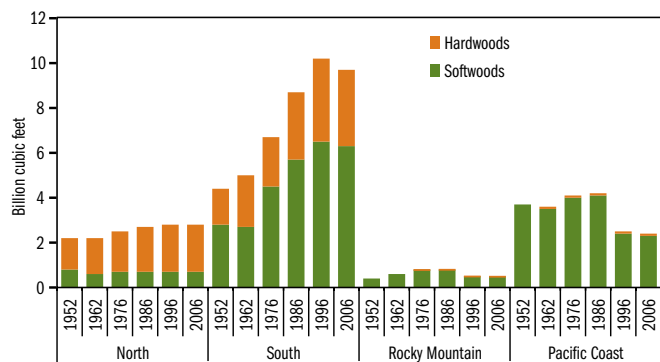
Removals can come from two sources: (1) growing stock (i.e., portions of live trees of commercial species meeting specified standards of quality or vigor) and (2) nongrowing stock (i.e., rough, rotten, or dead trees and tops and stumps of growing stock trees) (fig. 6a.2). The three general types of removals in order of magnitude are timber products harvested for processing by mills, logging residue (i.e., volume cut or killed but not utilized), and other removals (e.g., precommercial thinning and land-use conversion).



**Figure 6a.2.** Forest products by source, logging residues, and other removals, 1952-2006.

## Growing-Stock Removals

At the national level, growing-stock removals have been fairly stable over the past two decades (fig. 6a.3). During 2006, they totaled 15.5 billion cubic feet (see appendix C, table 35). This amount represents a decline of nearly 3 percent from 1996 and 1986 but a 9-percent increase from 1976. Softwoods accounted for 63 percent, or 9.9 billion cubic feet, of growing-stock removals in 2006, and hardwoods accounted for 5.7 billion cubic feet, or 37 percent. Both species groups showed declines in removals from 1996, with hardwoods down by 5 percent and softwoods down by 2 percent.



**Figure 6a.3.** Growing-stock removals by species group, region, and year, 1952-2006.

The South region led growing-stock removals in 2006, with 9.7 billion cubic feet, accounting for 62 percent of the Nation's total growing-stock removals. The North and Pacific Coast regions had 2.8 and 2.5 billion cubic feet of removals, respectively, but the Rocky Mountain region had just 0.5 billion cubic feet of growing-stock removals. The South region experienced the greatest change in growing-stock removals, with 2006 removals 5 percent below 1996 levels. The Pacific Coast region experienced a 2-percent decline in removals, but the North and Rocky Mountain regions showed 2-percent increases from 1996 to 2006. By ownership category, private owners, which includes nonindustrial private forest and forest industry owners, accounted for 14.2 billion cubic feet, or 92 percent, of growing-stock removals. These figures were essentially unchanged from 1996 to 2006. National forests, however, experienced a 54-percent (450 million cubic feet) drop over the period, while other public timber lands showed only a 1-percent decline in growing-stock removals. Combined, public owners accounted for 8 percent of growing-stock removals.

It is important for the reader to keep in mind that, although 15.5 billion cubic feet of growing-stock removals is a substantial volume, nationwide this volume amounts to only 1 percent of total growing-stock inventory. Softwood removal rates amounted to 1.9 percent of the total inventory, but hardwood removal rates were just 0.6 percent of hardwood inventory. Even in the heavily harvested South region, softwood growing-stock removals amounted to 5.5 percent of softwood inventory, and hardwood growing-stock removals were only 1.2 percent of the hardwood growing-stock inventory. The North, Pacific Coast, and Rocky Mountain regions had removal rates as a percent of inventory of 0.9, 0.5, and 0.2 percent, respectively.

## Net Growth and Removals Balance

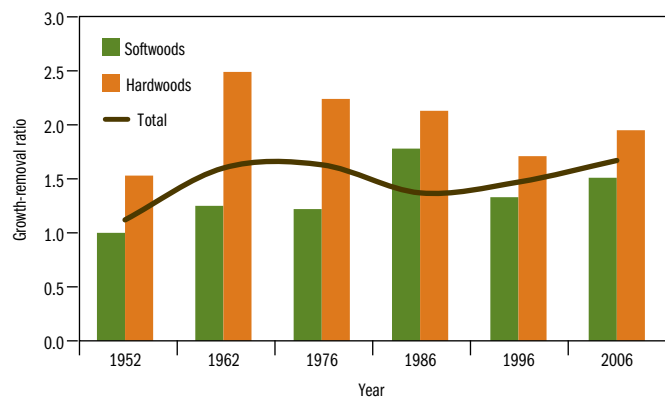
As mentioned earlier, the balance between net growth and removals is important because it provides an estimate of sustainability of timber harvest volume. The growth-to-removals ratio ( $G:R = \text{net growth} \div \text{growing-stock removals}$ ) quantifies the balance between net growth and removals. During 2006, net growth was about 26.7 billion cubic feet and growing-stock removals were about 15.5 billion cubic feet (see appendix C, table 36). Thus,  $G:R$  in the United States was 1.72, indicating that growth exceeded removals by 72 percent during 2006. In 1996,  $G:R$  was 1.49 and, in 2002,  $G:R$  was 1.50 (Smith et al. 2004, table 36). This trend of increasing growth relative to removals suggests that, at the national level, our forests are producing increasingly more wood each year than is being harvested.

The national level trend of increasing net growth relative to growing-stock removals does not necessarily reflect the trend for each geographic region, species group, or ownership class, as illustrated in the following examples:

- The Rocky Mountain region has experienced a 24-percent decline in the growth-to-removals ratio since 1996. Although growth relative to removals has remained very high ( $G:R \geq 3.2$ ) in the Rocky Mountain region between 1996 and 2006, growing-stock removals have increased slightly (2 percent), but net growth has declined 23 percent during the period—due in large part to increasing mortality in the region. Mortality in the Rocky Mountain region increased 16 percent between 1996 and 2006.
- The South region's growth-to-removal ratio has experienced a substantial increase, rising 21 percent from 1.12 in 1996 to 1.35 in 2006. Net growth in the South region increased 15 percent over the period, but removals from growing stock declined 5 percent. This trend suggests that forest inventory volume in the South region has begun to respond to increased management and harvesting during the 1990s, when more of the harvest shifted to private lands in the South region from public lands in the Rocky Mountain and Pacific Coast regions.

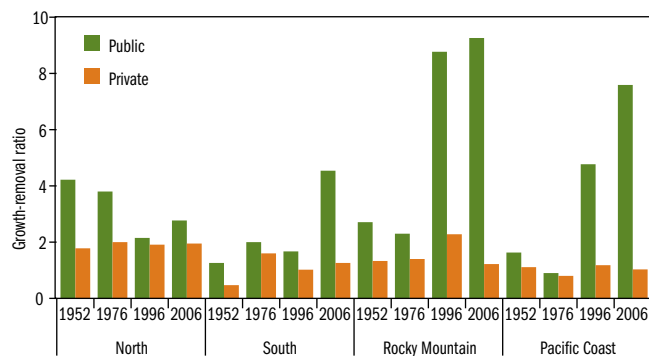
In 2006, hardwood  $G:R$  (2.00) was 29 percent higher than softwood (1.56) nationwide (fig. 6a.4). Since 1996 both species groups have undergone increases in growth relative to removals; however, hardwood net growth increased by 10 percent but growing-stock removals declined by 5 percent; softwood growth increased 8 percent and removals were down just 2 percent over the 1996-to-2006 period. Sizeable

declines in hardwood pulpwood and fuelwood harvests in the North and South regions contributed to the more pronounced decline in hardwood growing-stock removals over the period.



**Figure 6a.4.** Growth-removal ratios by softwoods and hardwoods, 1952-2006.

G:R increased for each ownership class between 1996 and 2006 (fig. 6a.5). National forest timber lands experienced the largest increase (127 percent) in growth relative to removals, with G:R rising to 11.23 in 2006 versus 4.96 in 1996. Other public owners witnessed a 30-percent increase, with G:R rising from 2.27 to 2.94. Private timberlands experienced the smallest increase, with G:R rising just 7 percent, from 1.24 in 1996 to 1.33 in 2006. The substantial change in national forest G:R was due to the 54-percent decline in removals, because net growth increased just 3 percent.



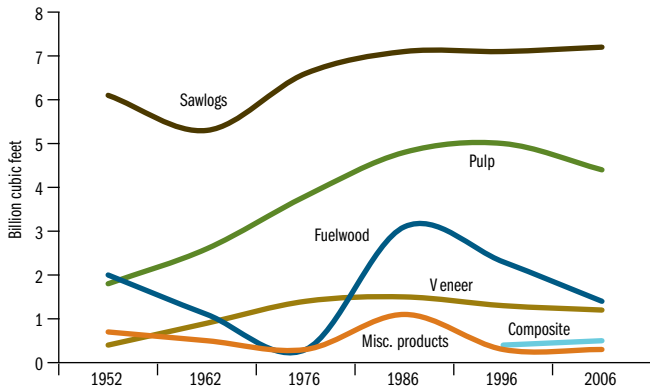
**Figure 6a.5.** Growth-removal ratio by owner and region, 1952-2006.

## Timber Products

Timber harvested for industrial products and domestic fuelwood totaled 15 billion cubic feet in 2006 (see appendix C, table 39). More than 13 billion cubic feet came from growing-stock sources, and 2 billion cubic feet came from nongrowing-stock sources. At 13.7 billion cubic feet, private lands supplied the majority (91 percent) of timber product output (TPO). National forests supplied 0.4 billion cubic feet (3 percent) and other public owners provided 0.9 billion cubic feet (6 percent) of removals during 2006.

Since 1996, total TPO has declined nearly 9 percent at the national level, with the largest declines in the North and South regions at 13 and 9 percent, respectively. The Rocky Mountain region had a 1-percent decline in product output, while the Pacific Coast region was the only region to realize a slight increase of 2 percent in product output. Each ownership class experienced declines in TPO. National forests had the largest proportional decline, with a 57-percent reduction in TPO between 1996 and 2006. Total TPO from other public owners declined by 13 percent, and the private ownership category declined by 5 percent over the period. Rapidly declining TPO is the major factor contributing to the increasingly high growth-to-removals ratio on national forest timber lands.

Hardwood TPO declined 21 percent between 1996 and 2006, and softwood output was down by 1 percent over the period. A major cause of hardwood product output decline was regional reduction in harvesting hardwoods for fuelwood in the South and North regions. Over the period, product output declined for all products except saw logs and composite products. At 7.7 billion cubic feet, saw log production was up 1 percent and accounted for 48 percent of the Nation's total TPO (fig. 6a.6). Pulpwood output declined 13 percent to 4.4 billion cubic feet but still accounted for 29 percent of total TPO. Both softwood and hardwood pulpwood production was down, 8 and 13 percent, respectively. Veneer production, at 1.2 billion cubic feet, ranked third among industrial products, accounting for 8 percent of product output for the Nation. Composite panel production experienced the most dramatic increase for industrial products, up 50 percent to 543 million cubic feet, and accounted for 4 percent of total TPO. Volume used for other industrial products such as poles, posts, mulch, and other miscellaneous products totaled 254 million cubic feet, down more than 25 percent from the volume in 1996. Domestic fuelwood dropped from 2.3 to 1.4 billion cubic feet, or 38 percent. Hardwood fuelwood declined by 230 million cubic feet (30 percent) in the North region and by 506 million cubic feet (60 percent) in the South region.



**Figure 6a.6.** Trends in production by primary product, 1952–2006.

## Logging Residue

Nationwide in 2006, more than 4.5 billion cubic feet of logging residue was created and left in the forest as “slash” in the process of harvesting timber (see appendix C, table 40). About 28 percent, or 1.3 billion cubic feet, of this logging residue came from growing-stock sources, and 72 percent, or 3.3 billion cubic feet, came from tree tops, limbs, stumps, and other nongrowing-stock sources.

Softwood volume accounted for 2.2 billion cubic feet, or 50 percent, of the logging residue, even though softwood harvest accounted for 78 percent of total product output and 60 percent of total removal volume. The uniformity of softwood trees and less volume in tops and forks allow for greater utilization of the main stem portion of the trees for products. At 552 million cubic feet, softwood growing-stock logging residue accounted for 5.6 percent of total growing-stock removals in 2006 compared with 6.1 percent in 1996 and 9.2 percent in 1986, suggesting increases in softwood harvesting efficiency and utilization of softwood stems. Hardwoods accounted for the remaining 2.3 billion cubic feet of logging residues. Of this volume, 31 percent, or 701 million cubic feet, came from the growing-stock portion of trees. This volume accounted for 12 percent of total hardwood growing-stock removals. Hardwood utilization is not as complete as with softwoods due to the variability in hardwood stems and fewer markets for hardwood volume.

## Other Removals

(Note: Due to the implementation of the annual inventory, the Pacific Coast region and Intermountain subregion do not have sufficient remeasurement data available to calculate other removals. The data presented here include the North and South regions and the Great Plains subregion.)

Other removals include volume removed from forest inventory by precommercial thinning, land clearing, and changes in land use from a forest use to a nonforest or developed use. When timber land is converted to nonforest use, some wood may be processed as timber products; this volume is captured in the timber products section. Approximately 1.7 billion cubic feet of other removals were generated in 2006. About 77 percent, or 1.3 billion cubic feet, of other removals came from growing-stock sources, and the remaining 23 percent, or 0.4 billion cubic feet, came from nongrowing-stock sources. Hardwoods accounted for 1.2 billion cubic feet of other removal volume, and softwood accounted for 0.5 billion cubic feet.

## Mill Residue Volume and Use

Timber-processing facilities generate substantial quantities of wood residue when manufacturing wood products such as lumber, plywood, oriented strandboard (OSB), and log homes. Most of this residue volume is utilized to produce other products. These “reconstituted” wood products include fiber products, such as pulp, paper, particle board, and medium density fiberboard (MDF); biomass energy, including steam and electricity; energy products, such as fuel pellets and firewood; and other miscellaneous products, such as animal bedding, mulch, and decorative bark.

During 2006, timber-processing facilities in the United States produced nearly 86.8 million dry tons of wood residues, with just 1.3 million tons (1.5 percent) of that residue not utilized for a product (see appendix C, table 42). About 36.7 million tons (42.3 percent) of wood residue were used for fuel, 35.4 million tons (40.8 percent) for fiber products, and 13.3 million tons (15.3 percent) for other products. The South region produced 61 percent of the wood residue, the Pacific Coast region produced 19 percent, the North region produced 15 percent, and the Rocky Mountain region produced just 5 percent. Softwoods accounted for 72 percent of mill residue.

Since 1996, mill residue production declined 5 percent from about 91.6 million dry tons. The decline in mill residue production can be attributed to two causes: (1) less timber being processed by mills and (2) increased efficiency and recovery of products from the volume of timber processed. The volume of mill residue going to fiber and energy uses declined between 1996 and 2006, as did the volume of residue not used for products. Other uses of mill residue (e.g., animal bedding, mulch, and decorative bark) experienced a 5-percent increase in volume.

## Nontimber Forest Products Mark H. Hansen, Jim Chamberlain, and W. Keith Moser

Hundreds of plant and fungi species are harvested from U.S. forests. Collectively referred to as nontimber forest products<sup>2</sup> (NTFPs; see glossary for definition), they are commonly classified in five product categories—edible and culinary, arts and crafts, medicinal and dietary supplements, floral and decorative, and landscape products—and have important social, cultural, and economic values. NTFPs are also referred to as nontraditional, secondary, minor, nonwood, and special or specialty forest products. These products involve a much larger number of species than the timber products discussed in the previous section of this chapter. In this section, we summarize salient points from the available data, provide information about a few representative species, and recommend actions to improve understanding and reporting of this important component of our Nation's forests.

Surveys suggest that nearly one-quarter of the U.S. population may participate in at least casual gathering of NTFPs (Cordell and Tarrant 2002). Most NTFPs are harvested for personal use, gifts, and small-scale commodity production. A lesser but important number of NTFPs enter large-scale commodity markets. A small body of law addresses questions of access to and management of NTFPs. The Pilot Program of Charges and Fees for Harvest of Forest Botanical Products (P.L. 106-113, sec. 339(a)) directs the Secretary of Agriculture to implement a program of charges and fees for commercial harvest of NTFPs on national forests while monitoring these species and providing for their personal use. U.S. treaty law, the Alaska National Interest Land Conservation Act, and Hawaii's State constitution guarantee access to NTFPs to Native Americans (Emery et al. 2004). In spite of these legal mandates and the importance of these products to individuals, communities, and regional economies, they have received little coverage in past assessments and their values remain underdocumented.

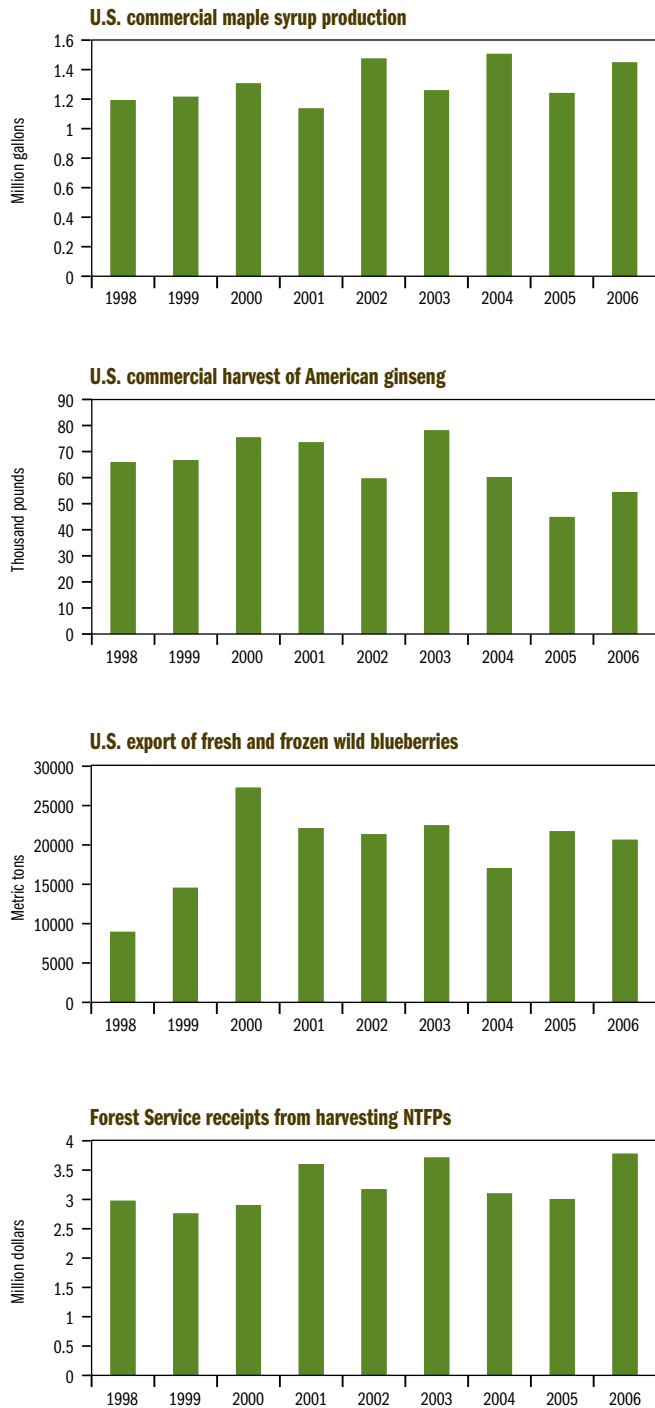
<sup>2</sup> The definition of NTFPs used in this report excludes some resources other reports have included. The 2003 National Report on Sustainable Forests (Emery et al. 2004) includes fur bearers and game in its definition. In this report fur bearers and game are considered a wildlife resource. The text "Nontimber Forest Products in the United States" (Jones et al., 2002) uses a definition similar to the one used here but includes discussions of agroforestry, honey production, and wild-rice harvesting while acknowledging inconsistency with the definition.

<sup>3</sup> Wild ginseng (*Panax quinquefolium*) is defined as ginseng that is not grown or nurtured by a person, including all wild, simulated ginseng from wild or cultivated seeds planted in a wild forest habitat and not tended in any way before harvest.

Table 55 in appendix C lists a few important NTFP species and their product categories for each region of the country. Conducting a complete analysis of the status and trends in harvesting of all NTFPs is not possible due to the variety of the resources involved and a lack of information. In this section we present trend information on the harvesting of three commercial NTFPs (maple syrup, wild blueberries, and American ginseng) and all NTFP harvesting on Forest Service lands to illustrate the continuing importance of these products and the potential impact of this harvest on the resource. The resource distribution of several products (fir boughs, pine straw, and maple syrup) across the United States is shown through the analysis of Forest Inventory and Analysis (FIA) data. The distribution maps illustrate how these data can be used to locate NTFP resources, especially if they can be directly related to attributes measured by FIA; however, they do not provide information on the harvest of these products. We also present information on the harvesting of NTFPs on family-owned forest lands that make up approximately one-third of the total forest land in the United States.

### Recent Trends in Harvesting Selected Products

No single NTFP harvesting data source exists for the Nation or over time. Figure 6b.1 shows trends in the commercial harvest of three products plus fees paid for harvesting NTFPs on Forest Service-administered lands over the time period 1998 to 2006. These data come from four different sources. The U.S. Department of Agriculture National Agricultural Statistics Service produces annual estimates of the production of maple syrup in the United States; the U.S. International Trade Commission tracks the export of wild blueberries; the U.S. Department of the Interior (USDI) Fish and Wildlife Service produces an estimate of the total harvesting of wild ginseng<sup>3</sup>; and the Forest Service maintains records on NTFP harvesting permit sales for the 193 million acres it administers. These data do not include the harvesting of maple syrup, ginseng, and blueberries for personal use; commercial harvesting of wild blueberries for domestic consumption; or harvesting of NTFPs on Forest Service lands where fees are not collected.



**Figure 6b.1.** National trends in selected nontimber forest products, 1998-2006.

<sup>4</sup> Stands where at least 25 sq. ft. of basal area is in sugar and/or black maple trees at least 10 inches in diameter, with these two species making up at least 25 percent of the total basal area.

The production of maple syrup fluctuated between 1.1 and 1.5 million gallons over the past 9 years due to variations in the weather that affect yields. The ideal maple-syrup tree is a 10-to-12-inch-diameter sugar maple (*Acer saccharum*) or black maple (*A. nigrum*) with a well-developed crown (Willits 1965). Figure 6b.2 shows the distribution of land suitable for commercial maple syrup production,<sup>4</sup> given current climate conditions. A total of 8.3 million acres of timber land meeting these criteria are currently found within the 26 States where these two species occur, accounting for 3.7 percent of the total timberland area. More than 80 percent of this suitable area (7.6 million acres) is privately owned and could be managed for syrup production; however, only a very small portion of the available maple resource is currently being tapped for syrup. A well-managed sugar bush yields 10 to 20 gallons of syrup per acre annually. From a national perspective, the maple resource is not currently a limiting factor in syrup production. Limiting factors are primarily economic and relate to the labor and energy needed to extract and refine the product. Forest health issues that affect maples, such as defoliation, frost damage, dieback, and maple decline, are affecting syrup production and are of great concern to syrup producers.



**Figure 6b.2.** Forest land suitable for maple syrup production.

Source: Forest maple distribution: RPA database  
 Nonforest overlay: 250m MODIS derived, Blackard, et. al.  
 State boundaries and water: U.S. Bureau of Census

Wild blueberries (*Vaccinium angustifolium*) are harvested and marketed commercially primarily in northern New England and New York. A fraction of the total harvest is exported; however, data on domestic consumption are not readily available. Other data sources do not distinguish between wild blueberries and cultivated blueberries (*V. corymbosum cultivars*) or cover only specific regions or time periods. The export data demonstrate the continuing importance of this NTFP. For the years 1993 to 1997 (not shown in figure 6b.1), exports range from 7,633 (1993) to 10,466 (1994) metric tons, indicating that large

increases in the export of this product occurred in 1999 and 2000 and that this demand has continued. In addition to harvesting wild blueberries for commercial purposes, many people harvest these and other berries for personal consumption.

American ginseng (*Panax quinquefolius*) is a long-lived perennial found in the understory of cool, well-drained hardwood forests of the Eastern United States and southeastern Canada. For most of the 1800s and into the early 1900s, the United States exported several hundred thousand pounds of wild ginseng root per year, more than five times the current annual harvest. Because of its popularity and intensive harvesting, international trade in ginseng is included in the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Approximately 90 percent of the harvest is exported to Asia, where demand is high and is expected to increase. To ensure that the ginseng resource is not overharvested to a point that is detrimental to the survival of the species, the export of wild and wild-simulated ginseng is limited to roots from plants that are at least 5 years of age at the time of harvest. Cultivated ginseng (ginseng grown on farms under intensive cultivation) does not have many of the properties of wild ginseng and is considered inferior to the wild variety, thus not relieving the pressure on the wild resource. “Wild-simulated” ginseng—where seeds are planted in forest conditions and allowed to mature under natural conditions—is being practiced by many landowners and is expanding to fill the demand for this product. Despite rising prices, exports of ginseng have declined in the past few years (fig. 6b.1). Reasons for the decline include loss of habitat, deer browse (McGraw and Furedi 2005), and extensive harvesting. With the depletion of wild ginseng populations, the potential exists for reduced genetic diversity within the species (Cruse-Sanders and Hamrick 2004).

As stated earlier, the Forest Service regulates the harvesting of NTFPs on the lands it administers through its Special Forest Products (SFP) program. Between 1998 and 2006, revenues from the sale of harvesting permits rose from \$3.0 to \$3.8 million per year. The regulation and management of resources for these products are of increasing importance to Forest Service land managers, especially in areas where private forest landownership rates are low. The Forest Service charges fees for all commercial harvesting and for some personal-use harvesting. The harvest of wild Christmas trees<sup>5</sup> accounts for approximately one-third of the permit dollars collected, and the harvest of boughs and limbs (primarily harvested to

produce wreaths and garlands) accounts for another third. In 2006, permits to harvest more than 264,000 Christmas trees were issued on National Forest System land at a cost of \$2 to \$10 per tree, primarily to individuals for personal use. Collections from NTFP were about 1.5 percent of the total Forest Service collections from timber (\$253 million in 2006).

The SFP program in the Forest Service Pacific Northwest Region 6 (Washington and Oregon) represents approximately half the national program. The regional program includes recreational or personal, commercial, and tribal components. The recreational program aids individuals who collect edibles such as huckleberries and mushrooms for personal use and transplants of native plants for home landscaping. This program does not represent a high-dollar value; however, it is very important to the more than 100,000 forest visitors who obtain permits each year. The commercial program serves primarily the floral and holiday wreath industries. The lush coastal forests west of the Cascades have many high-demand plants used by the floral industry. Several species of ferns, salal, Oregon grape, and other plants, provide full- and part-time employment to many people. During the holiday season, they harvest noble fir, cedar, and Douglas-fir boughs and many cones. Commercial ventures primarily use species such as beargrass and matsutake mushrooms, which are in very high demand. Ever since Pacific yew bark was found to contain a chemical used in the formulation of cancer medicines, interest has increased in other potential new pharmaceutical products that might be discovered. During the past few years the region has issued more than 30 bioprospecting permits to researchers searching for the next cure from forest plants. Several Native American tribes are also important customers; they use NTFPs for traditional and culture purposes.

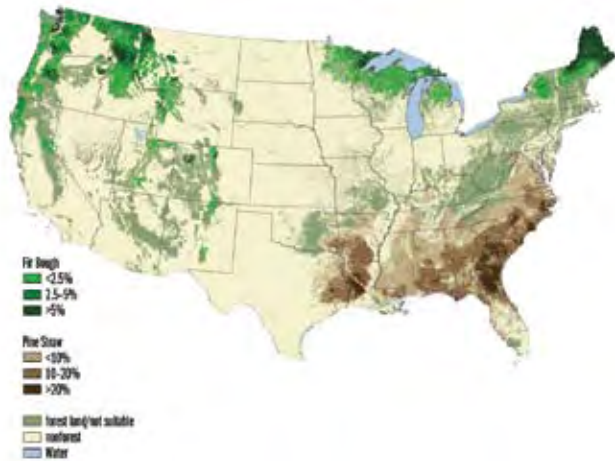
## Examples of Products of National, Regional, and Local Importance

### Boughs and Pine Straw

Two large harvesting industries—the harvesting of fir boughs in New England, the Lake States, and the Pacific Northwest for use in Christmas wreaths and garlands and the harvesting of pine straw for use in landscaping in the South—provide income to forest landowners, seasonal employment to many people, and products used by many consumers (fig. 6b.3).

<sup>5</sup> Does not include trees from lands planted and managed specifically for the production of Christmas trees (commercial Christmas tree farms).





**Figure 6b.3.** Distribution of timber land suitable for harvesting of fir boughs<sup>a</sup> and pine straw<sup>b</sup>.

<sup>a</sup> Stands with at least 250 small-diameter fir (*Abies spp.* and *Pseudotsuga menziesii*) trees (1 to 5 inches) per acre, less than 50 square feet per acre in trees larger than 5 inches in diameter, and small-diameter trees of other species that are less than 50 percent of the small-diameter tree.

<sup>b</sup> Stands in which the basal area of loblolly (*Pinus taeda*), longleaf (*P. palustris*), and slash pine (*P. elliottii*) trees 5 inches in diameter and larger is at least 50 square feet per acre and other species make up less than 25 percent of the total basal area.

Source: Forest, fir bough and pine straw distribution: RPA Database

Nonforest overlay: 250m MODIS derived, Blackard et al.

State boundaries and water: U.S. Bureau of Census

The harvesting of boughs occurs on both public and private forest lands. Many public land management agencies issue permits for the clipping of boughs from the lower branches of live trees. The floral industry relies heavily on fir boughs and greens from other species gathered from the forests. A study of the floral greens and decoratives industry in Washington and Oregon reveals that fir boughs and other greens contributed more than \$128.5 million to the economy (Schlosser et al. 1991). Bough collection for holiday wreaths, primarily balsam fir (*Abies balsamea*), is a major economic activity in the Lake States and New England, with more than \$23 million dollars of wreaths and garlands produced in 2003 from 4,300 tons of boughs in Minnesota alone (Jacobson et al. 2005).

Pine straw is harvested mostly on private lands, providing extra income to landowners before the harvest of commercial timber and to harvesters and forest contractors, providing important contributions to household and local economies. In Georgia, pine straw harvesting has increased the past few years, with an estimated 610,000 acres harvested in 2005 (Boatright and McKissick 2006). The total estimated value of pine straw harvested in Georgia has increased from \$38.5 million in 2005 to more than \$62 million in 2006, representing 9.4 percent of Georgia's total forest products

industry (Boatright and McKissick 2007). During the period 2001 through 2005, the average annual pine straw harvest was valued at \$26.5 million per year (Boatright and McKissick 2003, 2004, 2005, 2006; Doherty et al. 2002).

### Edible and Culinary Forest Products

Edible and culinary forest products include mushrooms, other fungi, fruits, berries, ferns, greens, roots, and tubers. In the southern Appalachian hardwood region, food festivals are organized around the emergence of wild onions (*Allium tricoccum*), known at the regional level as ramps. Maple syrup festivals, such as those in Mt. Rogers (Virginia) and St. Albans (Vermont), are common in many areas. Fiddleheads (the young, tightly coiled fronds of the fern *Matteuccia struthiopteris*), dandelion (*Taraxacum spp.*) greens, and poke salad (*Phytolacca decandra*) are harvested in the spring, as well. Nuts and berries—including black walnuts (*Juglans nigra*); muscadine grapes (*Vitis rotundifolia*); wild blueberries, raspberries, and blackberries (*Rubus spp.*); big huckleberry (*Vaccinium membranaceum*); and persimmons (*Diospyros virginiana*)—are gathered, consumed, and sold throughout the United States. The pawpaw (*Asimina triloba*) is growing in popularity as an edible fruit (Thomas and Schumann 1993) and is harvested well beyond its native range of Kentucky and Ohio. Pinyon pine (*Pinus monophylla*) produces an edible “nut” that has been harvested commercially for generations in the Southwest. In Nevada and Utah, the Forest Service (Nevada only) and the USDI Bureau of Land Management (both States) sold 230 tons of pine nuts in 2004 and 111 tons in 2006. In 2006, the retail value of pine nuts sold from public lands in Utah and Nevada exceeded \$2 million (Frazier 2007).

### Arts and Crafts Products

NTFPs are an important source of raw materials for crafts. Wood-based crafts produced from trees or parts of trees, excluding products made from cut timber, include sassafras (*Sassafras albidum*) stems for walking sticks, willow (*Salix spp.*) branches for furniture, and white oak (*Quercus spp.*) splits for baskets. Products made from vines, such as smokevine (*Aristolochia macrophylla*) and grapevine (*Vitis spp.*), are also included in this category. The number of species used to produce crafts is limited only to the crafter's imagination and the market's acceptance.

Many craft products are important to Native American culture. Many Native American tribes use bark from paper birch (*Betula papyrifera*) for baskets, canoes, shelter, and other products, with different bark characteristics required for each use. For most products, large trees (8 to 15 inches in diameter) with straight, blemish-free, branch-free boles are needed. Black ash (*Fraxinus nigra*) splits are used to construct baskets. The species' ring-porous characteristic makes it easy to split into pieces that can be woven. Similar bole requirements are needed for a tree to make a good ash-basket tree, with the additional requirement

that the tree should have a minimum growth ring width of about 3 mm (0.118 inches). Birch bark artisans are concerned that the resource is declining. This concern is supported by data from FIA inventories, which show a 24-percent decrease in paper birch trees of this size on timber land in the Lake States (Michigan, Minnesota, and Wisconsin) between the early 1990s and the latest inventories. Some artisans have expressed similar concerns about the black ash resource; however, these same inventories show a 24-percent increase in black ash trees of the appropriate size. The exotic pest emerald ash borer (*Agrilus planipennis*) will likely have a devastating effect on the black ash resource of this region in the near future.

### Medicinal and Dietary Supplements

Forest-harvested plants used for their therapeutic value are marketed either as medicines or as herbal remedies. According to Farnsworth and Morris (1976), 25 percent of all prescriptions dispensed in the United States contain active ingredients extracted from higher order plants. The number of plant species harvested from southern forests with medicinal value exceeds 125 (Krochmal et al. 1969, World Wildlife Fund 1999). Of these, approximately 50 are commonly harvested and purchased by herb dealers. The central hardwood region is the principal source of many medicinal plants, including black cohosh (*Actaea racemosa*), American ginseng, and bloodroot (*Sanguinaria canadensis*). More than 80 percent of the forest-harvested ginseng comes from Virginia, Kentucky, Tennessee, and North Carolina. Moore (1995) identifies more than 85 medicinal forest plants of the Pacific West. Some of the more popular of these are devil's club (*Ophlopanax horridum*), hypericum (*Hypericum perforatum*), Oregon grape (*Berberis aquifolia*), uva ursi (*Arctostaphylos uva-ursi*), valerian (*Valeriana dioica*), and yerba santa (*Eriodictyon californicum*).

The findings of medical research help to increase market demand for medicinals (Eisenberg et al. 1993, Le Bars et al. 1997, Stix 1998). The estimated value of the global markets for herbal medicines in 1996 was approximately \$14 billion (Yuan and Grunwald, 1997), of which Europe and Asia represented more than 80 percent of the global trade. In 1998, the total retail market for medicinal herbs in North America was estimated at \$3.97 billion, more than double the estimate just 2 years before (Brevoort 1998, Yuan and Grunwald 1997). St. John's wort (*Hypericum formosum* and *H. perforatum*) and black cohosh are two medicinals that have experienced increased popularity in recent years (Brevoort 1998).

### Landscape, Floral, and Decorative Products

Many of the trees, shrubs, and other plants used in the landscape and floral industries originated in forest ecosystems and now are supplied by nonforest commercial sources such as nurseries, greenhouses, and farms; however, forests continue to be the source of materials for these industries. We have already discussed the importance of fir bough harvesting.

Sprigs and long lengths of grapevine and smokevine are used as complements or backdrops in floral arrangements. Several species of moss and lichen are harvested from Appalachian forests for the European floral industry. Sheet moss, angel hair moss, and antler moss are purchased from harvesters in the Great Lakes area (Thomas and Schumann 1993). Forest plants harvested in the Pacific West for the floral industry include beargrass (*Xerophyllum tenax*), sword fern (*Polystichum munitum*), evergreen huckleberry (*Vaccinium ovatum*), salal (*Gaultheria shallon*), and Scotch broom (*Cytisus scoparius*).

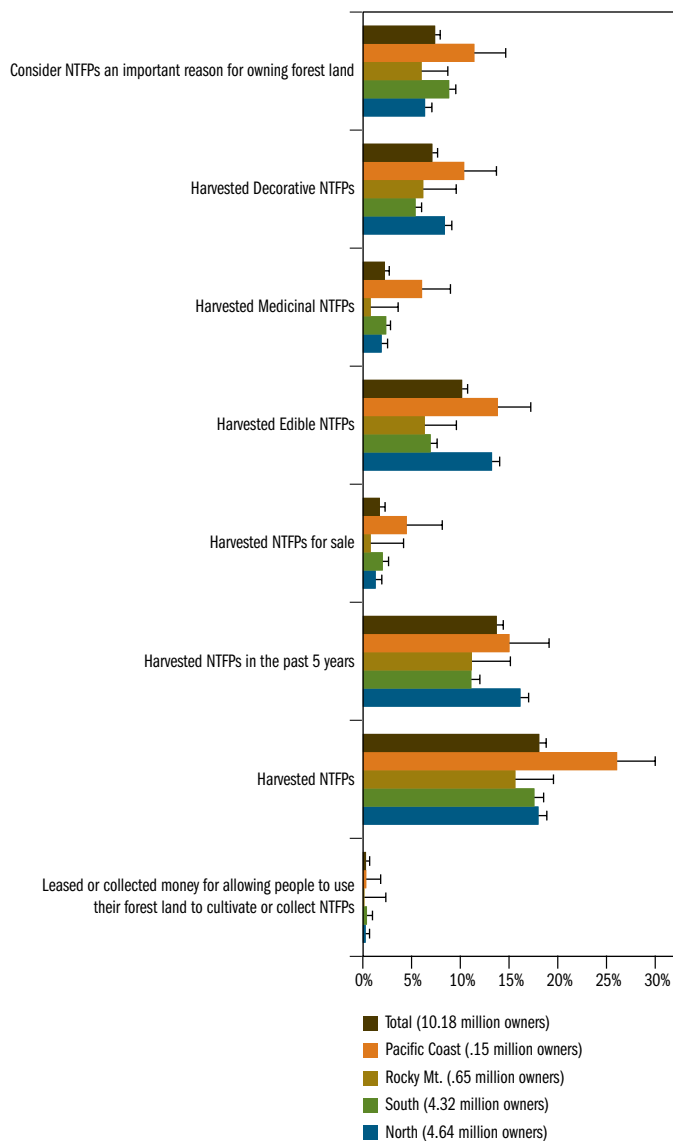
Used historically by the Eastern Band of the Cherokee Indians to alleviate kidney ailments and nervous problems (Hamel and Chiltoskey 1975), galax is used today primarily as a complement in floral arrangements. Although galax grows from Georgia and Alabama north into Maryland and West Virginia and west into Kentucky (NatureServe 2002), the major source of the leaves for the global industry is the mountains of western North Carolina. Within the State, the supply center is a nine-county region in the northwestern corner. Most collection occurs along the escarpment of the Blue Ridge. The average annual harvest, as indicated by the major dealers in the region, ranges from 209.7 million to 323.9 million leaves. Harvesters receive between \$0.01 and \$0.02 per leaf, which suggests that the value of the annual harvest could range from \$2.10 million to \$6.48 million. In a region that is economically challenged, this income has a significant impact on the local economy. In addition, significant changes in the demographics of those harvesting galax have taken place in the past 15 years; these changes are impacting the management of the resource and the local economy (Emery et al. 2006).

Using native plants or plant products for landscaping is growing in popularity. Landscaping enterprises that use native plants may propagate the plants from wild-harvested germplasm or transplant live plants from the wild. A recent phenomenon is rescuing plants that are slated to be destroyed by development projects such as road construction. Moorman et al. (2002) identify more than 200 species of trees, shrubs, herbs, and vines used in landscaping that are native to the Southern United States. Rhododendron and azaleas are commonly transplanted from eastern forests for the landscaping industry. Documented data also show that more than 15 species of forest plants from the Pacific West are used in landscaping (Vance et al. 2001).

### Harvesting and Family Forest Owners

The National Woodland Ownership Survey provides information on the attitudes and activities related to NTFPs of family forest landowners (family-owned and individual-owned forest lands, see Forest Ownership section in chapter 2). Slightly more than 10 million family forest owners combine to own approximately one-third of the total forest land in the United States. Nationally, slightly more than one-eighth of these owners indicated they have gathered

NTFPs from their forests within the past 5 years (figure 6b.4), which indicates that 1.4 million owners harvest from the lands they own. This number does not include the many harvesters who do not own forest land and harvest from public lands or lands owned by other private parties.



**Figure 6b.4.** Family forest owners' attitudes and activities related to nontimber forest products.

Harvesting was more common among owners in the North and Pacific Coast regions (16.2 and 15.0 percent, respectively) than among owners in the South and Rocky Mountain regions (11.1 and 11.2 percent, respectively). Most family forest-landowners harvest products for personal use, with slightly more than 2 percent (234,000) of the owners indicating they have harvested products for sale or obtained payment from others who harvest on their lands. Harvesting for profit was more common in the South and Pacific Coast regions than in the other regions. Those owners who profit from harvesting tend to be owners of larger areas of forest land, with nearly twice as many owning more than 50 acres of forest land when compared with owners who harvested only for personal use.

### Conclusions

Nontimber forest products continue to be an important part of the benefits we receive from forest lands. These products vary widely in their use, in the plants and fungi that produce them, and in the resource issues associated with their harvest and management. Information on the availability and harvesting of these resources is sporadic and difficult to summarize. Better resource information systems are needed if we are to track the harvesting of these products. With some products, such as ginseng, where the resource is limited and demand is high, impacts of harvesting on the resource are significant; management to ensure future supplies is required. For other resources, combinations of low demand or a large resource base provide supplies that meet demand under current levels of management. Besides the obvious economic opportunities, NTFPs are an important component of the forested ecosystems of the United States. Responsible management demands better information that can aid in the understanding of all the components of our forests.

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# CHAPTER 7

## The Island Forests

## The Island Forests Tom Brandeis and Joseph Donnegan

**T**ropical islands serve as the proverbial “canary in the coalmine,” alerting society to the problems inherent to living on a constrained land base. The challenges we face in our mainland forests, such as land use change, altered fire regimes, nonnative species invasions, insect and disease outbreaks, climate change, and other human-caused disturbances, become critical for societies with restricted, more immediately finite resource bases. Island ecosystems are often characterized by their relatively small extent, rapid change along steep environmental gradients, and high levels of species diversity and endemism. As such, they are uniquely vulnerable and often quickly altered by these disturbances.



The forests on tropical islands are intimately linked to the surrounding ocean. The climate of the ocean impacts island vegetation, topography, and soils. Conversely, the islands influence the adjacent ocean. Vegetation, soils, and pollutants eventually make their way from the terrestrial environment to the aquatic. Forests and other vegetation help to filter sediment, keeping it on the islands. Mangrove and coastal strand forests also help buffer the islands against the ocean’s erosive force and storm surges. Forests play a key role in keeping both terrestrial and aquatic resources in good health.

### Biogeographical Context

Forest Inventory and Analysis offers resource monitoring assistance in the tropical Caribbean Islands of Puerto Rico and the U.S. Virgin Islands and in the Pacific Islands of American Samoa, Guam, the Republic of Palau, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of the Marshall Islands, and Hawaii (Appendix C, tables 56 through 59; chapter 10, map plates 3-5). Inventories are conducted on a rotating periodic basis (5 years in the Caribbean Islands, 10 years in the Pacific Islands) across island groups, owing to logistical and cost constraints.



### The Caribbean Islands

A 2,500-mile arc of islands, tectonically uplifted from the sea floor, separates the Atlantic Ocean from the Caribbean Sea. Xeric conditions are found on low-lying islands that are often capped with limestone from ancient coral reefs. On other islands, volcanic activity has created steep peaks that divert the moisture-laden northeasterly trade winds upward, greatly increasing rainfall. Warm seas moderate tropical island temperatures and spawn summer hurricanes that also shape island vegetation. Forests dominate in all but the most



xeric areas. A diverse flora, comprising species shared with continental areas and with numerous endemic species, fills the many niches found along steep environmental gradients.

The Forest Service inventoried the forests of Puerto Rico in 1980, 1990, and 2003 and conducted the first forest inventory of the U.S. Virgin Islands in 2004.

### The Pacific Islands

The Pacific Islands span a vast and diverse area. Land masses range from small coral atolls to small sand islands, to moderate-sized islands of mixed limestone and volcanic substrates, and to large, high-elevation, volcanic islands. Climate also ranges from superhumid tropical to xeric rainshadow and alpine environments, sometimes in very short distances on a single island. The diversity in soils, elevation, climate, disturbance regimes, and land-use history translates into an exceptionally diverse flora across the Pacific Islands. Endemism is high, as is niche specificity; that is, the vegetation is unique and specifically suited to certain habitats. The western Pacific Ocean is further shaped by frequent typhoons and tropical storms. For example, Guam and the Northern Mariana Islands expect annual typhoons. In some years, these island groups experience multiple devastating storms, making reforestation efforts challenging. The high diversity also creates challenges for reliably estimating the status and trends in tropical forests. Sample intensity must be increased and new technology is being used in these tropical systems to provide better estimates of the diversity.

Since 2001, inventory work in the Pacific Islands has been made possible only through the generosity and cooperation of local governments, nongovernmental organizations, and cost-sharing with other Federal agencies for field survey and remotely sensed data and interpretation. We look forward to continued development of the work and to building upon the unique talents among groups as the inventory evolves to meet diverse needs.

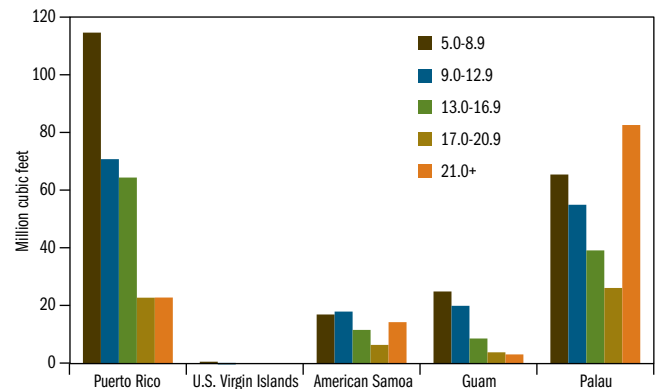
### Current Status and Trends in Island Forests

The percentage of forest cover and the population density vary greatly among the tropical islands (appendix C, table 56). Forest cover is not less than 40 percent on any island group, and those island groups with the lowest forest cover have a long history of human or volcanic disturbance.

### The Caribbean Islands

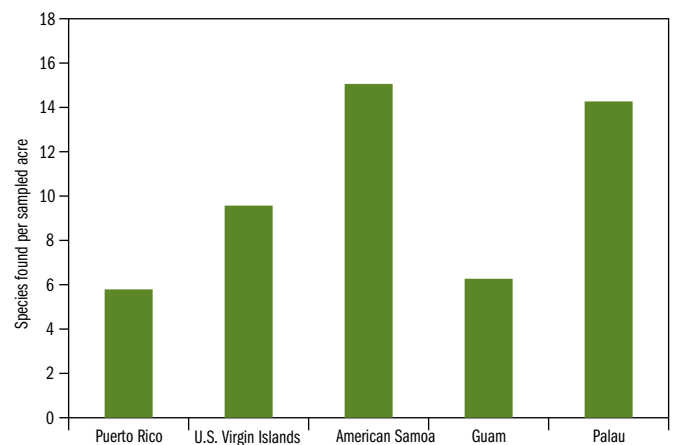
Historical accounts suggest that Puerto Rico and the U.S. Virgin Islands were almost entirely deforested for agriculture by the mid-20th century. Since the 1950s forest cover has steadily increased in Puerto Rico due to social and economics changes that caused a shift in economic activities away from agriculture. Forest inventories that began in 1980 show abandoned agricultural lands being recolonized by forest (Birdsey and

Weaver 1982, Franco et al. 1997). These changes have also occurred, although to a lesser extent, in the U.S. Virgin Islands. As the pace of urbanization increases, however, forest loss near more-heavily developed areas is accelerating. The U.S. Virgin Islands lost 7 percent of its forest cover (4,130 acres) from 1994 to 2004, mostly on the more densely populated island of St. Thomas. These young secondary forests, although fast growing, are composed of mostly smaller trees (appendix C, table 57) with low amounts of merchantable timber (appendix C, table 58, fig. 7.1) and biomass (appendix C, table 59).



**Figure 7.1.** Cubic foot volume by diameter class for tropical islands.

The naturally high species diversity of Caribbean tropical forests has been further augmented by human introduction of tree species from around the world (fig. 7.2), some beneficial and others invasive. This secondary tropical forest consists of a mix of native and introduced species. It is still unknown whether these secondary forests will bear any resemblance to the preceding forests' structure, dynamics, and capacity to function.



**Figure 7.2.** Number of species found on island group relative to the amount of area surveyed.

## The Pacific Islands

Because each Pacific Island group has experienced different levels of human and climatic disturbance, the changes in vegetation through time differ substantially among them. On Guam, pollen analysis from lake sediments (Dixon et al. 1999) suggests the island was nearly 100-percent forested in the past. Current forest cover is less than half, with about 47 percent forest (Donnegan, et al. 2004) (table 7.1). Guam's forests have been heavily impacted by outside forces, starting with conversion of much of the arable land to agriculture by the Japanese before World War II and continuing with the post-war establishment of military bases by the United States. Urban expansion continues with tourism driving the economy. Guam has made significant attempts to reforest and reclaim "badland" barren soils, but further assistance is needed to stem high rates of erosion (Kinvig et al. 2001, Perry 1984) that degrade the surrounding coral reef. High levels of human and typhoon disturbance on Guam have led to forests that are in a relatively young state with small diameter stems, low wood volume, and low biomass.

American Samoa was about 90 percent forested in 2001. Wood volume, on a per-acre basis (a composite measure of tree height, tree diameter, and stem density) appears to have dropped somewhat comparing recent inventories (Donnegan, et al. 2004) to those conducted in 1964 (Nelson 1964) and 1985 (Cole et al. 1988). Human-caused disturbance has been less pervasive and destructive in American Samoa than on Guam. Conversion

to urban uses, however, threatens important remnants of unique native forest, particularly the mangrove forests that are critical in providing buffering effects at the terrestrial-ocean interface.

The forests of Palau have seen important changes through time. The population of Palau was once much higher than it is today; that high population likely led to significant impacts on the forests (table 7.1). In addition, World War II had severe impacts on select islands in Palau. Since the war, some forests in Palau have recovered and some have matured, leading to an overall net increase in wood volume over a 27-year period (Donnegan et al. 2007). Slight increases in forest area were noted for the largest island in Palau, Babeldaob, whereas decreases in forest area over the period 1976 to 2005 were noted for the smaller, more densely populated islands of Koror, Peleliu, and Anguar (Donnegan et al. 2007). On Babeldaob, a new circumnavigating road has opened up previously inaccessible forests, and a new capital is being built in the center of the island on previously forested land. Significant changes in forest land area and erosion are anticipated for Babeldaob.

Additional field inventories have been conducted for the Northern Mariana Islands and the Federated States of Micronesia. These data are currently being processed into usable databases. Inventory work is tentatively scheduled for the Republic of the Marshall Islands (2008) and Hawaii (2009–10) pending funding.

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# CHAPTER 8

## Forests of Interior Alaska

## Forests of Interior Alaska Willem van Hees

Descriptions of Alaska tend toward the extravagant. It is a large State, comprising nearly one-sixth of the entire United States, with geographic and environmental extremes rarely found in the rest of the country. Three broad ecological regions focus resource inventory efforts: the boreal, temperate-oceanic, and polar regions (fig. 8.1). The temperate-oceanic region contains Alaska's most productive forests, but the boreal and polar regions embrace the bulk of forest land area.

The United States purchased Alaska's 365 million acres of land from the Russian Empire in 1867 for \$7 million (about 2 cents per acre). Since then, productive forests of the temperate-oceanic region have been inventoried repeatedly. Infrequently conducted inventories of the vast boreal and polar forests have relied on remote sensing and sporadic and light field sampling for estimates.

Along with extremes of environment and size, additional characteristics of the State combine to produce unique resource inventory challenges. The lowest population density in the United States creates challenges for logistical and emergency support services. In addition, little easy, inexpensive access exists to the forest resource because the State has few major highways and no interconnecting minor roads.

The Sitka spruce (*Picea sitchensis* (Bong.) Carrière) and western hemlock (*Tsuga heterophylla* Sarg.) forests of the temperate-oceanic region have received significant attention throughout Alaska's history. Relatively high volumes per acre and easy, water-based access made these forests attractive to forest product interests. Several tables in appendix C provide forest resource estimates of this region. More recently, the forests of Alaska's boreal and polar regions have begun receiving attention for their role in carbon balance dynamics and as early harbingers of climate change effects. The following discussion focuses on these later components of Alaska's forest lands.



Figure 8.1. Ecoregions of Alaska.

### The Inventory Setting

Alaska's boreal and polar ecoregions include a variety of physiographic conditions ranging from broad, extensive river flood plains to high, rugged mountains. The Alaska Range, roughly traversing the boreal region from east to west includes Mt. McKinley (20,320 feet), the tallest peak in North America. Many other peaks are significantly more than 10,000 feet tall. The forested areas of the regions generally are found below 2,500-foot elevations. All of the boreal ecoregion may have forest in it, but this is not true for all of the polar ecoregion. Subsequent discussions use the phrase "interior Alaska" to identify the portions of the boreal and polar ecoregions where forest inventories have been, and will be, conducted (the green and salmon-colored areas of fig. 8.2).

Interior Alaska's climate is largely continental. This climate regime produces relatively warm summers, with temperatures up to 90°F in summer; cold winters (occasionally -50°F); and low precipitation along with low cloudiness and low humidity. Surface winds generally are light but channeling occurs in mountain valleys producing locally strong winds. Although precipitation is nearly 60 inches on the southern side of the Alaska Range in the Alaska Peninsula and Aleutian Island sections, it decreases rapidly to the north, with an average of 12 inches in the continental zone and less than 6 inches in the Arctic region.

A low population density with little infrastructure produces significant challenges for logistical and emergency services support. Alaska has roughly 670,000 residents statewide; more than 50 percent of that population is in Anchorage and nearby communities. In interior Alaska few population centers are on the road system. Fairbanks is the largest city, with a population of about 31,000. The other significant communities have a combined total population of less than 30,000. Off the road system are a handful of communities with populations between 2,000 and 6,000. The few road-based communities in interior Alaska exist on six major highways.

Lack of road access presents field inventory logistical difficulties and raises costs. Almost all field work for extensive inventories is accomplished from field camps with helicopter transport to plots. Conducting resource inventories of river basins that range from 30 to 60 million acres in size with little to no surface access is challenging. To complete field work in a reasonable time, flight distances cannot be so large as to adversely affect production rates nor plot spacing so wide as to lower sample quality.

Beyond the physical limitations of geography and sparse infrastructure, access to conduct inventories depends on landowners' willingness to participate. Effects of nonparticipation on inventory quality can be dramatic if a given owner controls large areas. In boreal and polar Alaska, ownership of forest resources tends toward large holdings by public (State and Federal) and private corporate entities, with relatively little in the way of small, private acreage.

## Resource Character

Forests cover about 113.2 million acres or one-third of Alaska's interior (fig. 8.2). Although this forest area is nearly an order of magnitude larger than the State's remaining forest area, net cubic-foot volume on timber land is about one-sixth of the State's total. Productive forest regions generally are found near rivers on warm, south-facing slopes where soils drain well and permafrost is rare (Viereck et al. 1983). Lack of processing and transportation infrastructure, combined with low volumes per acre, has restricted development of large-scale forest products industries in the interior. Increasing energy costs may open new avenues, such as bioenergy fuel supply, to allow use of low-productivity forests common to the Interior.



**Figure 8.2.** Forest cover of interior Alaska.

The variety of forest cover types of boreal and polar Alaska is not complex (Viereck and Little 2007). Almost one-fourth of the forest cover is mostly pure stands of relatively low-productivity black spruce (*Picea mariana* (Mill.)). These forests, typically found in muskegs, valley terraces, lake edges, and north-facing slopes, will grow on permafrost soils. Relatively productive stands of white spruce (*Picea glauca* (Moench) Voss) can be found on well-drained soils; south-facing, gentle slopes; and sandy soils along rivers; but they are rarely found where there is permafrost. These stands are often open forests found as pure stands or mixed with Alaska paper birch (*Betula neoalaskana* Sarg.) and Kenai birch (*Betula kenaica* (W.H. Evans)).

In addition to including birches, the deciduous component of Alaska's interior forests also includes quaking aspen (*Populus tremuloides* Michx.), black cottonwood (*Populus trichocarpa* Torr. & Gray), and balsam poplar (*Populus balsamifera* L.). Birches can be found in pure stands, although they mix with white spruce and often are found on bench lands above river bottoms or mesic upland areas. Quaking aspen, however, typically occurs in pure stands (occasionally mixing with white spruce or paper birch) found on well-drained sites such as south-facing slopes. Wet sites along river bottoms, flood plains, and alluvial fans are the preferred sites for balsam poplar and black cottonwood. Commonly, balsam poplar and black cottonwood associate with white spruce, birch, and quaking aspen.

### Climate Change and Large-Scale Disturbance

Ecosystems at environmental extremes are fragile and less resilient to stress than those in more moderate environments. Minor climatic changes, such as small temperature increases, can quickly alter delicate ecological balances. Alaska's boreal and polar forests are subject to short growing seasons, low soil temperatures, and widespread disturbance from fire and insects.

First noticed at environmental extremes common to boreal and polar forest ecosystems are changes in floral species range, distribution, and diversity; permafrost condition; and hydrography. Current noticeable changes in Alaska include permafrost thawing, pond drying, tree line movement, increased magnitude of insect and disease outbreaks, increases in lightning activity, and glacial retreat. Much of boreal and polar Alaska's productive forests grow where small decreases in available moisture can limit productivity. Recent warming has increased the number of days with relatively high temperatures. There are indications that the highest moisture stress and lowest productivity of the 20th century occurred during the past 20 years in substantial portions of the interior forest regions (U.S. Global Change Research Program 2007).

Effects of climate change on insect population dynamics and fire behavior in Alaska are apparent. Increased intensity of spruce beetle (*Dendroctonus rufipennis* Kirby) outbreaks have been linked to a warmer and drier climate, which caused the spruce beetle to shift from a 2-year reproductive cycle to a 1-year cycle (Werner et al. 2006). Werner et al. (2006) also cite recent increases in spruce budworm (*Choristoneura fumiferana* (Clemens)) activity. Figure 8.3 shows cumulative insect and disease impact on boreal and polar forests from 1989 to 2002 (Forest Service 2003).



Figure 8.3. Major insect and disease occurrence in Alaska, 1989–2002.

Kane et al. (2006) note that North American boreal forest regions have experienced greater than doubling of fire frequency over the past four decades as a consequence of climate warming. This fire pattern, in turn, has resulted in faster rates of release of soil organic carbon to the atmosphere. The 2004–05 Alaska wildfire seasons, the largest and third largest on record (11.2 million acres burned; Forest Service 2006), were a direct result of record temperatures and little precipitation. The acres of interior forests burned from 1989 to 2002 are shown in figure 8.4. Also, increasing temperatures have been associated with the loss of wetland habitats and increasing rates of thermokarst topography development, both resulting from permafrost thawing (Osterkamp et al. 2000).



Figure 8.4. Fire occurrence in interior Alaska, 1989–2002.



With expectations of continued climate change, current rates of ecosystem alteration will likely continue and could increase. To understand and prepare for effects of these changes on local and regional economies, insect and wildlife population dynamics, and subsistence lifestyles, inventory and monitoring of the resource is vital.

## Forest Inventory

Most of boreal and polar Alaska's 113.2 million acres of forest are considered unproductive (incapable of producing at least 20 cubic feet of wood per acre per year at culmination of mean annual increment). Roughly 6.8 million acres, about 6 percent of these forests, are currently identified as timber land (productive acres potentially available for harvest). Acres of reserved forest land (productive and nonproductive) total about 28.3 million acres. Most of these reserved acres are unproductive; an estimated 2.3 million acres of reserved forest land acres are productive. The remaining 78.1 million acres are unproductive and unreserved.

Ownership of Alaska's interior forest land tends toward large, continuous holdings by a few owner groups. More than half (54 percent) of the forest land is under Federal stewardship in national wildlife refuges and national parks. The State of Alaska, along with local government entities, also controls relatively large blocks of land (about 34 percent of all interior forests). The remaining 12 percent is in individual and corporate private hands.

Although the total acreage of boreal and polar forest land is substantial, net timber volumes on the 6 percent of it in the timber land component are low. An estimated 5.4 billion cubic feet of net volume are on these timberland acres, or less than 1,000 cubic feet per acre, on average. Although regional and local differences exist in volumes per acre with occasional high volume-per-acre stands, rarely does the volume per acre exceed 2,000 cubic feet.

Overall, the total volume is almost evenly distributed between deciduous and coniferous species. Within the conifer component, more than 95 percent of the volume is in white spruce; the deciduous portion is about 60 percent birch, 20 percent cottonwood, and 20 percent quaking aspen. At the regional level, the central boreal and south-central boreal regions generally support higher volumes per acre. The central boreal region also has higher concentrations of white spruce than does the south-central boreal region (1,600 cubic feet per acre vs. 750 cubic feet per acre), whereas the south-central boreal region has slightly more paper birch volume per acre than does the central boreal region (850 cubic feet per acre vs. 750 cubic feet per acre).

Net growth (gross growth minus mortality) of the interior forests is reflective of a mature, unmanaged forest subject to widespread disturbance. Net growth rates (on timber land) averaged across the entire interior are roughly 1 percent. Again, the central and south-central regions are most productive, with net growth rates between 2 and 3 percent for softwoods, but hardwoods occasionally attain a 4-percent net growth rate.

## Conclusion

Interior Alaska's forests are compositionally uncomplicated in terms of tree species variety and distribution. They represent, though, an important observational platform for effects of climate change on large-scale environments. Data collected by inventory and monitoring efforts are needed to understand, quantify, and adapt to changes already under way. The magnitude of the resource, combined with extreme access difficulties, makes completion of such an effort daunting. At currently planned data-collection rates, a complete inventory of the region will require a 20-year effort.

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# CHAPTER 9

## Resources of the National Forests

## Resources of the National Forests Greg Kujawa, W. Brad Smith, and Renate Bush

The Forest Service provides States, Indian tribes, and private forest landowners with technical and financial assistance; conducts innovative research into sustaining global forest resources for future generations; and manages a unique public land legacy of national forests and grasslands, collectively called the National Forest System (NFS). The natural resources of these lands are some of the Nation's greatest assets and have major economic, ecological, and social significance for all Americans.

### Establishment and Purposes of the National Forests

The founding of the NFS has its roots in the last quarter of the 19th century in the Western United States. The Creative Act (also called the Forest Reserve Act) of 1891 was the legislative origin of the national forests (originally called Forest Reserves); it authorized the President to set aside these lands from the public domain. This act was later superseded by the Sundry Civil Appropriations Act (more commonly known as the Organic Administration Act) of 1897, which repealed the President's authority to set aside land, authorized the Federal Government to regulate occupancy and use and to preserve the forests from destruction, and articulated the original purpose of the forest reserves: "...to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."

Under the Transfer Act of 1905, responsibility and management of the forest reserves were transferred from the U.S. Department of the Interior and its General Land Office to the U.S. Department of Agriculture's Bureau of Forestry, which was renamed the Forest Service several months later. The forest reserves were renamed *national forests* 2 years later.

Establishment of the eastern national forests followed a different track due to pervasive settlement and resultant loss of public-domain lands east of the Great Plains. The Weeks Law of 1911 authorized the Secretary of Agriculture to purchase cutover or denuded lands within the watersheds of navigable streams to protect the flow of these streams or to produce timber. Any purchase of lands required consent by the States within which these lands were located.

The national grasslands comprise about 3.8 million acres of the NFS and are located primarily in the Great Plains States. The Bankhead-Jones Farm Tenant Act of 1937 provided the primary authority for the Secretary of Agriculture to develop a program of land conservation and utilization to correct maladjustments in land use and thus assist in such things as control of soil erosion, reforestation, preservation of natural resources, and protection of fish and wildlife.

In the early years of the Forest Service, the basic mission was articulated quite simply but eloquently by Gifford Pinchot, the Nation's first forester and Chief of the Forest Service (fig.1), to "provide...the greatest good for the greatest number in the long run."



**Figure 9.1.** Gifford Pinchot served as first Chief of the Forest Service, 1905-10.

As mentioned previously, the Organic Administration Act of 1897 first articulated the purpose of the national forests as being focused on water and timber. Numerous other laws followed over the decades, reinforcing those initial purposes and occasionally articulating the public's deep interest in other specific resources, uses, and values. Several of the more notable laws follow:

- Multiple-Use Sustained-Yield Act of 1960 (*Public Law 104-333*)
- Wilderness Act of 1964 (*Public Law 88-577*)
- National Historic Preservation Act of 1966 (*Public Law 102-575*)

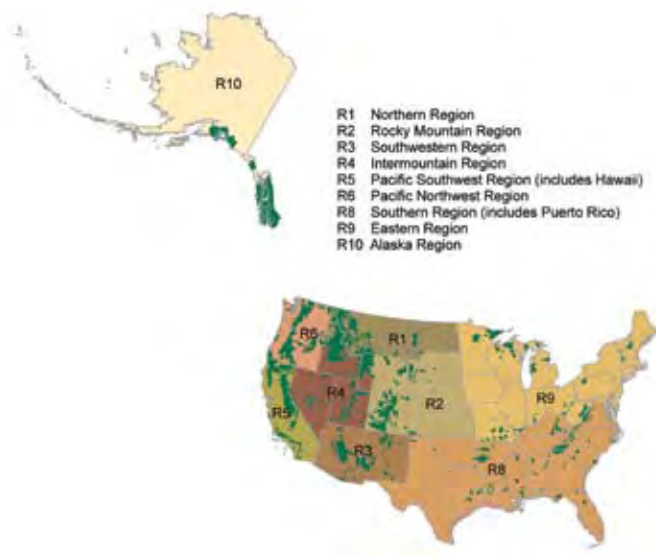
- Wild and Scenic Rivers Act of 1968 (*Public Law 90-542*)
- National Environmental Policy Act of 1970 (*Public Law 91-190*)
- Endangered Species Act of 1973 (*Public Law 93-205*)
- National Forest Management Act of 1976 (*Public Law 94-588*)

Recent additions to this body of law include the Healthy Forests Restoration Act of 2003 (*Public Law 108-148*) and the Tribal Forest Protection Act of 2004 (*Public Law 108-278*).

The current mission of the Forest Service is “to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations.” In achieving this mission, the agency has tried to keep pace with constantly increasing and diverse demands that reflect changes in the public’s needs and values.

### National Forest Land Base

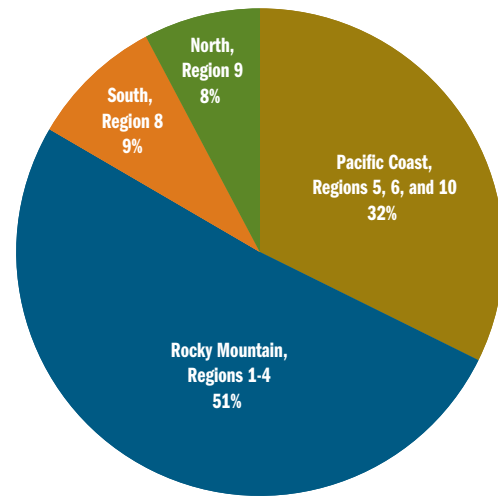
The NFS currently comprises 155 national forests, 20 national grasslands, 222 research and experimental forests, and other special areas across 44 States, Puerto Rico, and the Virgin Islands (fig. 9.2). The system covers 193 million acres, which is about 8.1 percent of the total area of the United States and an area larger than the State of Texas.



**Figure 9.2.** Location of national forests and regions.

The national forests comprise the single-largest ownership of forest land in the United States, with 147 million acres, or 20 percent of all forest land and 45 percent of the 328 million acres of public forest land. Of all national forest lands, 87 percent lie west of the eastern Great Plains (103rd Meridian). These western national forests encompass 167 million acres of total land,

of which 123 million acres are forested. The eastern national forests consist of more than 25 million acres of land and 24 million acres of forest land across 26 Eastern States (fig. 9.3).



**Figure 9.3.** Area of forest land within national forests by region, 2007.

### Current Management Challenges

New challenges for managing the national forests continue to emerge. Uncharacteristically severe wildland fires, insect and disease outbreaks, and invasive plants and insects have increased in extent and severity. Severe regional droughts, extreme weather events, and global climate change are becoming household words.

In its second century of service, the Forest Service faces these diverse challenges while continuing to restore fire-adapted forests to more resilient conditions, provide natural resource products to the American public, sustain outdoor recreation opportunities, mitigate the loss of open space, combat the spread of invasive species, restore watershed health, and more. The agency pursues these objectives during a period of rapid fragmentation and intensive development of landscapes surrounding the national forests.

### Wildland Fire

The number of private residences in the wildland-urban interface adjacent to national forest land is increasing significantly, complicating the agency’s land and resource management, fire suppression, and law enforcement responsibilities. Wildland fire suppression efforts have allowed trees and underbrush to increase in density. Tree mortality caused by large-scale insect and disease outbreaks has also contributed to more fire-prone conditions within the national forests. As a result, Forest Service activities to protect life, property, and natural resources from wildland fire have become more

complex and demanding. This high priority on wildland fire suppression has resulted in a dramatic shift of the agency's budget away from other resource management activities.

During the 2006 fire season, the United States experienced more than 96,000 wildfires. Nearly 9.9 million acres burned, with approximately 4.9 million acres burned on non-Federal lands. Nationwide in 2006, the number of acres burned was 131 percent greater than the number of acres burned in 2000, almost 1 million acres greater than in 2005, and 65 percent greater than the 10-year average number of acres burned. The agency spent \$1.5 billion in suppression costs on more than 2 million acres burned. Nearly \$400 million was spent on 20 of the largest fires. During 2006, the Nation had 14 fires larger than 100,000 acres; 5 of these occurred on national forests (Forest Service 2008).

With wildland fire suppression costs consuming about 40 percent of the agency's entire budget, national forest management programs are striving to become more innovative, integrated, and effective by developing new approaches, policies, and administrative tools to accomplish the agency's goals.

### Forest Products Program

The timber sale component of the Forest Products program is an important tool for accomplishing vegetation management objectives on national forest lands and also provides a supply of forest products to society. Timber sales provide the means to accomplish changes in forest composition and structure that can improve wildlife habitat. They also help accomplish large-scale watershed restoration needs by reducing accumulated ground and ladder fuels that can feed uncharacteristically severe wildfires. Timber sales also provide opportunities for sustaining local communities. The Forest Products program also provides special forest products desired by the public, including fuelwood, Christmas trees, greenery, posts and poles, mushrooms, medicinal plants, and native species for transplanting.

Stewardship contracting, another important tool for accomplishing resource management objectives, such as fuels reduction, provides jobs for communities and products for the consumer. This tool will be important in implementing the Healthy Forests Restoration Act of 2003. The stewardship contracting authority provides some innovative approaches, such as the exchange of goods for services and the application of excess receipts from one contract to other stewardship projects.

### Woody Biomass Utilization

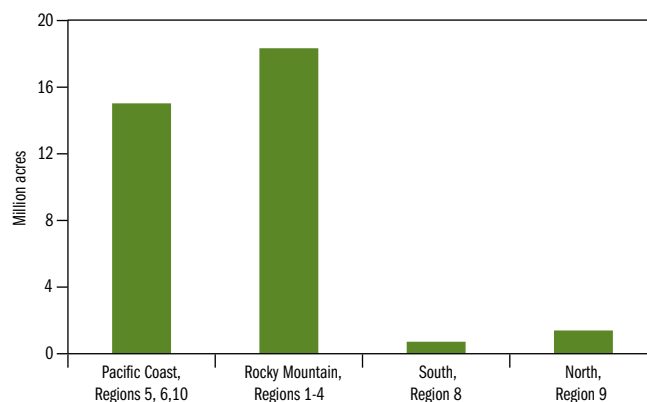
When we focus on restoring and sustaining ecosystems, the mix of excess material (historically referred to as unmerchantable material) that needs to be removed has a much larger portion of low-valued woody biomass. Much of this material is currently piled and burned onsite. The Woody Biomass

Utilization Strategy outlines how the removal and use of this material can provide a variety of critical benefits for the Nation and provide a market mechanism for offsetting costs of treatments. Woody biomass becomes available as a byproduct of achieving other objectives on Federal lands.

Woody biomass utilization can contribute to climate change mitigation actions by providing socially and economically viable options for storing carbon in products and offsetting fossil fuels with a carbon-neutral fuel. Additional climate mitigation measures could involve shifting the conditions under which forest fuels are combusted. Management and utilization of woody biomass can directly influence how carbon sequestration credits are counted from the forestry sector for ecosystem services markets.

### The Timber Resource

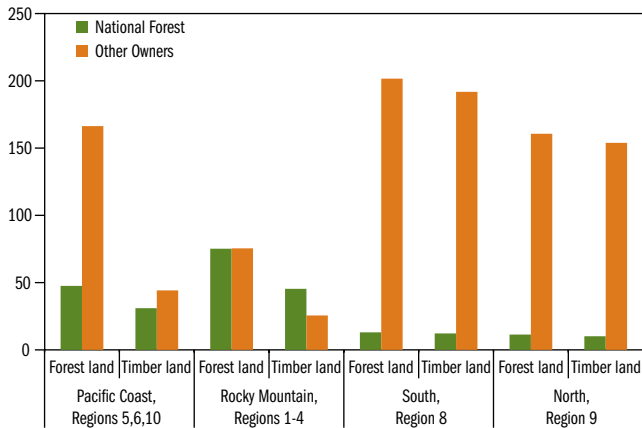
The NFS contains more than 35 million acres of reserved lands, primarily in congressionally designated wilderness areas. More than 26 million acres of these reserved lands are forested, amounting to 36 percent of the Nation's reserved forests. The remainder of reserved forest land is in other public ownerships, primarily national parks. The vast majority of reserved NFS lands are in the western regions (fig. 9.4). An additional 58 million acres of unreserved lands in the national forests are in roadless areas, of which 28 million acres are forested. Although these areas may have characteristics, values, and management restrictions similar to designated wilderness, they are not currently legally reserved as per the definition of reserved forest land.



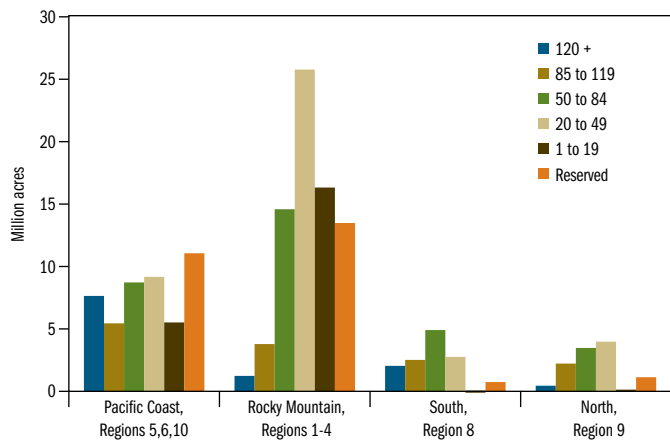
**Figure 9.4.** Total acres of reserved National Forest System lands (designated wilderness) by region.

National forests hold 113 million acres of timber land or over one-fifth of all timber land in the United States. Timber lands are lands not precluded from harvesting by law and are capable of producing at least 20 cubic feet per acre per year of sound

wood. Figure 9.5 shows distribution of forest land in relation to timber land by major ownership and region. Figure 9.6 displays productivity of the national forests. Reserved forest lands are shown as a separate category; productivity data are not available.



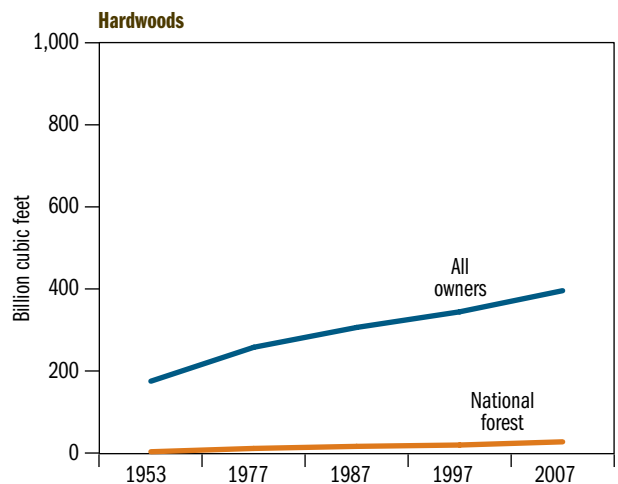
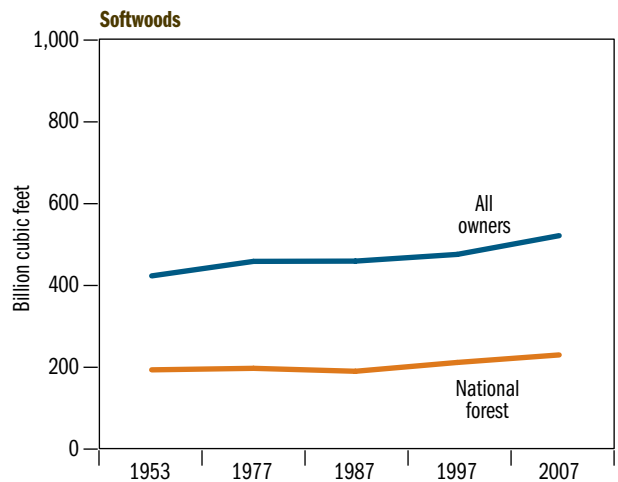
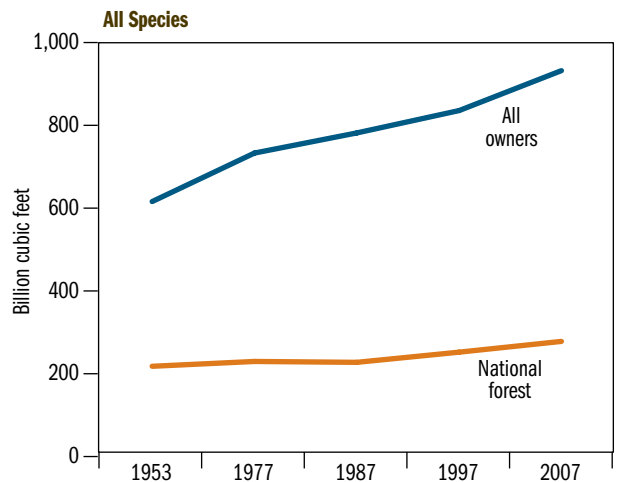
**Figure 9.5.** Area of forest and timber land by owner and region.



**Figure 9.6.** Area of National Forest System forest land by productivity class (cubic feet per acre per year) and region and reserved forest lands (designated wilderness).

The following discussion pertains to the volume, growth, removals, and mortality of the timberland component. A full complement of data on nontimber lands is still in the collection phase and should be available for the next 5-year assessment of the Nation's resources.

Although national forests account for only 22 percent of the Nation's timberland acres, they hold 30 percent of the total growing-stock volume (fig. 9.7), including 46 percent of the Nation's softwood volume and 9 percent of the hardwood volume. Most of this softwood volume (93 percent) is in the West and most of the hardwood volume (73 percent) is on eastern national forests.



**Figure 9.7.** Net volume of softwood and hardwood growing stock on timber land of national forests and all owners, 1953-2007.

# National Forest System, Region 1

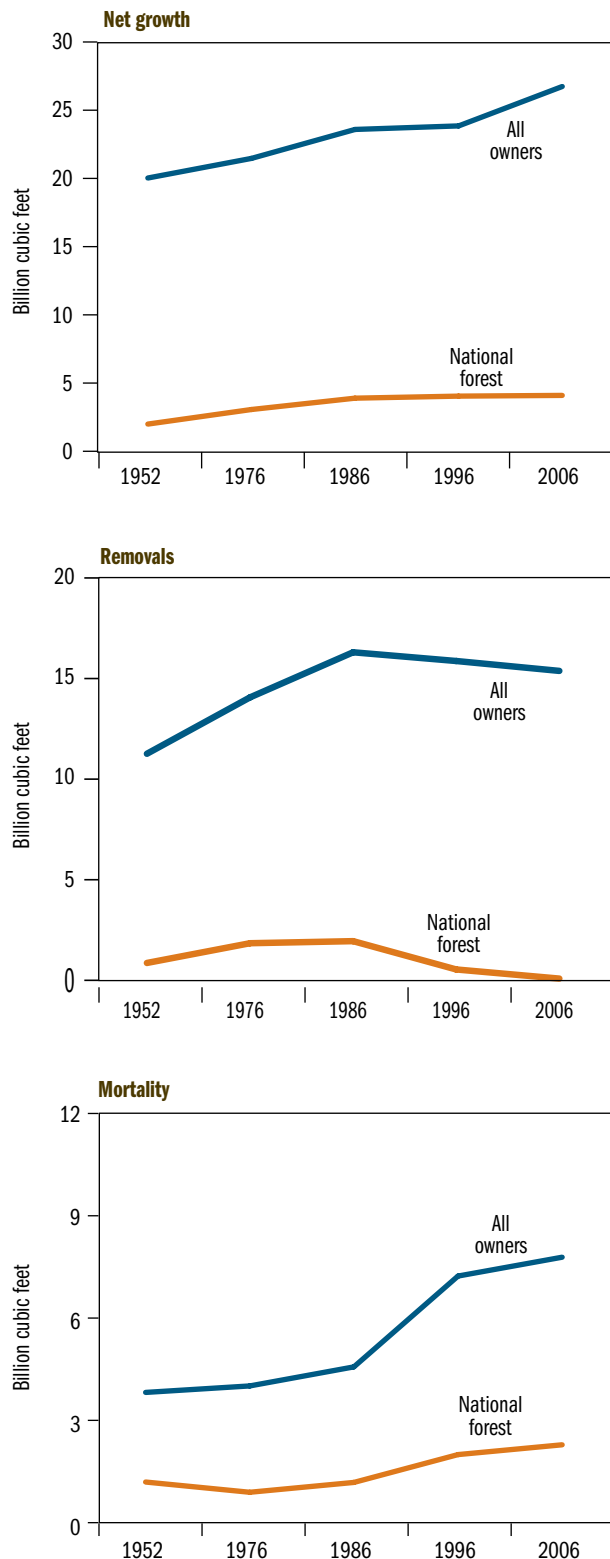
Renate Bush

The Northern Region of the National Forest System (NFS) uses a multilevel management strategy relying on inventory data and linked map products to help develop coherent regional and forest-level vegetation management programs. FIA data are an integral part of this strategy, providing a uniformly distributed, statistically sound sample of vegetation and site attributes on all forested lands across large landscapes, such as national forests.

The Northern Region of the NFS collaborated with the Interior West FIA unit and the Inventory and Monitoring Institute to develop a database using FIA data for broad-level cumulative-effects analysis, planning and monitoring, and various other region-level and forest-level purposes. The database stores field measurements (e.g., slope, aspect, elevation), calculated attributes (e.g., trees per acre, basal area, trees per acre within a specified diameter class of a specific species), classification information (e.g., dominance type, vertical structure, old growth, goshawk habitat), and spatial information. Ancillary data on forest health and wildlife provide additional information in a robust analytical system that can quantify or describe various vegetation attributes, such as the extent of high insect-hazard rating, amounts of wildlife habitat, and amounts of old growth associated with given map units.

FIA data provide context for project planning and decisionmaking by providing critical cumulative effects information on forest plan standards and guidelines. Reporting features of this system provide for standard queries and for users' queries of FIA data to derive estimates of attributes such as old growth, total trees per acre, board-foot volumes, and associated confidence intervals. To learn more about the Northern Region go to <http://www.fs.fed.us/r1/>.

Growth continues to increase on national forests, although at a slower pace compared to other forest ownerships (Figure 9.8). This slower pace is the result of national forest timber being generally older than the overall average. Stands tend to grow rapidly until they reach culmination of mean annual increment and then their growth rate stagnates or declines as competition and age-related mortality increase, thus reducing total net growth.



**Figure 9.8.** Total volume of growth, mortality, and removals on timber land of national forests and all ownerships, 1952-2006.



The removal (harvesting) rate of timber from the national forests continues a trend of decline that began in the 1980s. In 1977, national forests comprised 19 percent of the timberland area of the Nation and provided 17 percent of the Nation's timber harvest. In 2007, national forests provided only 2 percent of the Nation's timber volume harvested. Dramatic shifts in public policy in the 1980s and 1990s sharply curtailed harvesting on the national forests in favor of other primary resource uses and values, such as recreation and maintenance of critical wildlife and fish habitat. This shift resulted in decreased harvesting on public forests in the West and increased harvesting on private forests in the East, primarily in the South.

National forests produce other forest materials called special forest products. These products generate an average revenue of \$3 million per year (table 9.1). Christmas trees are the single-leading product, with sales of more than \$1 million per year, and foliage is one of the fastest growing products. Demand for special forest products is expected to rise in the future.

Product	2006	2004	2002	2000	1998
<i>thousands of dollars</i>					
Christmas trees	1,354	1,300	1,375	1,328	1,324
Limbs/boughs	1,240	664	645	282	173
Mushrooms	245	450	380	225	155
Grass	248	208	213	161	55
Transplants	182	198	191	185	40
Foliage	152	101	122	50	3
Other products	359	182	250	673	1,228
<b>Total value</b>	<b>3,780</b>	<b>3,102</b>	<b>3,175</b>	<b>2,905</b>	<b>2,978</b>

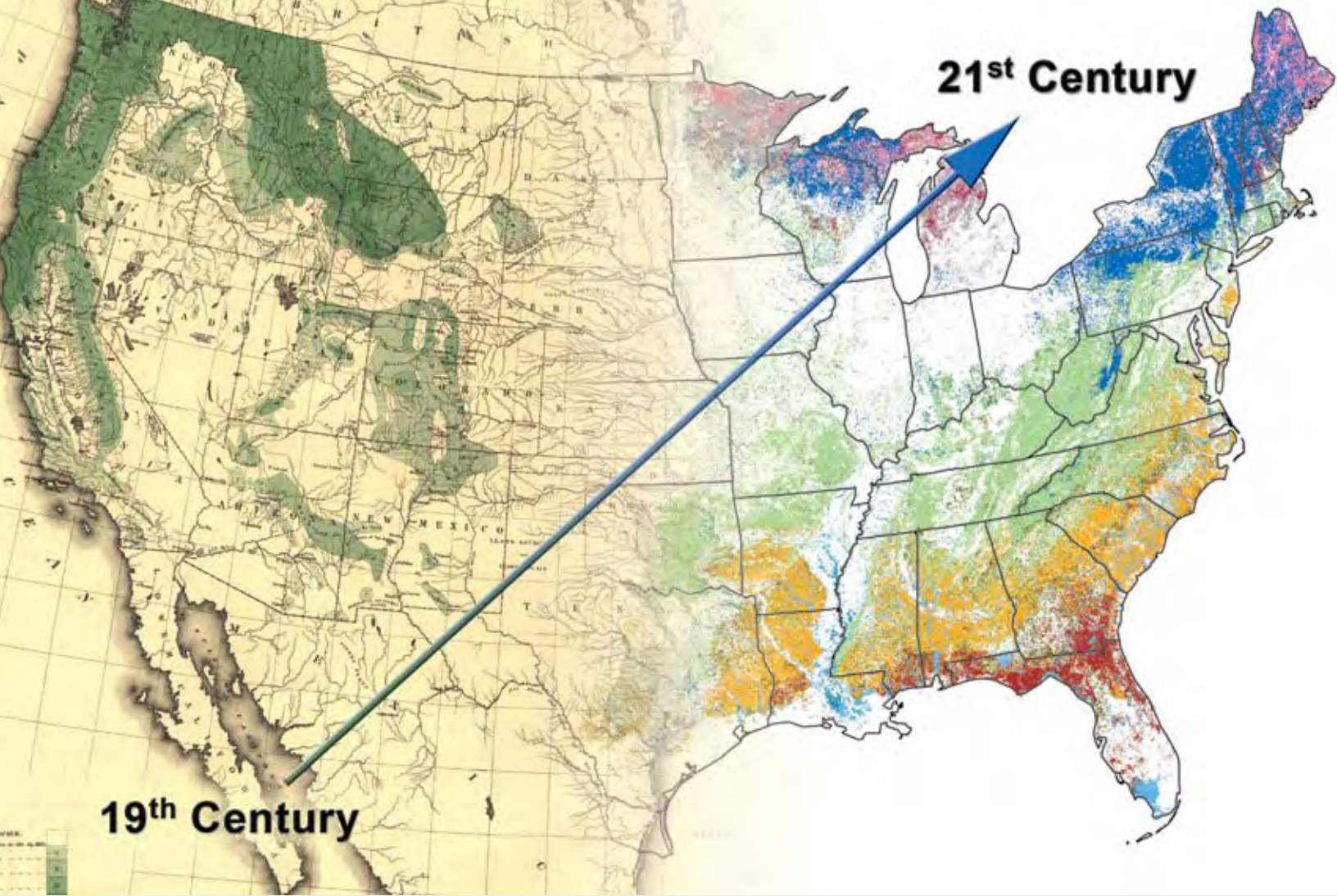
**Table 9.1.** Value of special forest products from national forests by product for selected years, 1998–2006.

Source: Forest Service annual reports.

### Literature Cited

Forest Service. 2008. Fiscal Year 2008 Budget Justification. Washington, DC: U.S. Department of Agriculture, Forest Service.





# CHAPTER 10

## Mapping Forest Resources of the United States

# Mapping Forest Resources of the United States

Charles H. (Hobie) Perry, Mark D. Nelson, J. Christopher Toney, Tracey S. Frescino, and Michael L. Hoppus

In this chapter, we present a collection of maps designed to portray the composition, structure, ownership, utilization, and spatial patterns of forest resources across the United States. This collection is the first comprehensive compilation of national-scale, forestry-related maps. These maps complement the information presented in the preceding chapters, but the maps and chapters are not directly dependent upon one another. Forest and Rangeland Renewable Resources Planning Act (RPA) tables and summaries provide direct sources for many, but not all, of the maps. Descriptions of the maps are provided below.

## Map Types

There are many options for presenting plot-level data at a broader scale, and forest attributes lend themselves naturally to different styles of presentation. These maps strike a balance between the information provided by each attribute, the context available in ancillary data sources, and the protection of landowner privacy.

## Choropleth Maps

A choropleth map is a thematic map that displays patterns proportional to the measurement of the variable being represented. Plot-based summaries are portrayed in choropleth maps using generalized boundaries of counties, States, or some other polygon feature. A sampling array developed by the U.S. Environmental Protection Agency's Environmental Monitoring and Assessment Program (EMAP; White et al. 1992) has been incorporated into the Forest Inventory and Analysis (FIA) database, allowing for hexagon-based choropleth mapping. When the polygons are political units, the map mimics the units used for decisionmaking. The majority of maps we present are of this type (plates 6, 7, 10, 11, 13, and 15–22).

## Raster Maps

Raster maps are based upon a regular grid of measurements across the area of interest. Elevation data in raster format is the basis of the reference maps (plates 1a and 1b). Satellite images serve as the foundation of thematic or continuous maps when spectral information is complemented with training data for assessment. Existing land cover maps generated from satellite imagery were adapted to portray general context for those parts of the country where more detailed information is not available. This includes the commonwealths and territories,

as well as islands, in free association with the United States (plates 3–5). Raster datasets of forest-type groups (plate 2) and forest biomass (plate 14) were produced recently by modeling efforts that combine plot data with satellite imagery and other geospatial data products (plates 2 and 14). The forest-type groups map also serves as the basis in deriving forest/nonforest land in three other maps (plates 8, 9, and 12).

## Hybrid Maps

Hybrid maps are produced by combining various forms of geospatial data in a single cartographic product. We combined raster data from the forest-type groups map with FIA plot-based summaries and polygon data from the Protected Areas Database (PAD; DellaSala et al. 2001) to produce map plates 8, 9, and 12.

## Map Descriptions

A reference for preceding RPA analyses, as well as subsequent maps, plates 1a and 1b delineate State boundaries and show landforms, major water bodies, and a graticule of longitude and latitude. Plate 2 portrays forest composition by forest-type groups, a classification based on the assemblage of tree species present on a plot of forest land. Forest-type groups are defined for the Western and Eastern United States, separated by a sparsely forested swath of the Great Plains. For areas where comprehensive inventory data are insufficient to characterize forest composition, satellite images are classified to portray patterns of forest and other land cover (plates 3–5).

Forest land includes three subcategories of land use: timber land, reserved forest land, and other forest land. Plates 6 and 7 portray relative amounts of forest land and timber land within each county; plate 8 illustrates the spatial patterns of all three subcategories of forest land.

Ownership is a significant determinant of forest composition and structure. Spatial patterns of public forest land and relative amounts of corporate ownership on private forest land are illustrated in plate 9. Area of interior forest—a metric of landscape pattern where a forested location is interior if a surrounding square window is at least 90 percent forested—and the average size of privately owned forest parcels are portrayed in plates 10 and 11. Utilization of timber products and volume of unused residues are portrayed in plates 21 and 22.

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Forest site productivity indicates the inherent capacity for tree growth and is used for defining subcategories of forest land. Spatial patterns of productivity are illustrated in plate 12. Related patterns of mortality—death from natural causes like diseases, old age, and fire—are shown in plate 13. Plate 14 portrays standing above-ground live-tree biomass on forest land. Estimates of forest carbon stocks shown in plate 15 include the tree biomass portrayed in plate 14, plus additional biomass in coarse roots, branches, and foliage.

Traditional economic perspectives of forest resources generally focus on growing stock—a classification of timber inventory that includes live trees of commercial species meeting specified standards of quality or vigor. Total and unit-area volumes of growing stock for timber land, softwoods, and hardwoods are mapped in plates 16–19. The number of trees is presented in plate 20.

The utilization of roundwood—the set of timber products harvested from trees including logs, bolts, or other round sections (as well as chips made from these items) and used to manufacture wood products—and the volume of unused residues are portrayed in plates 21 and 22.

## Summary

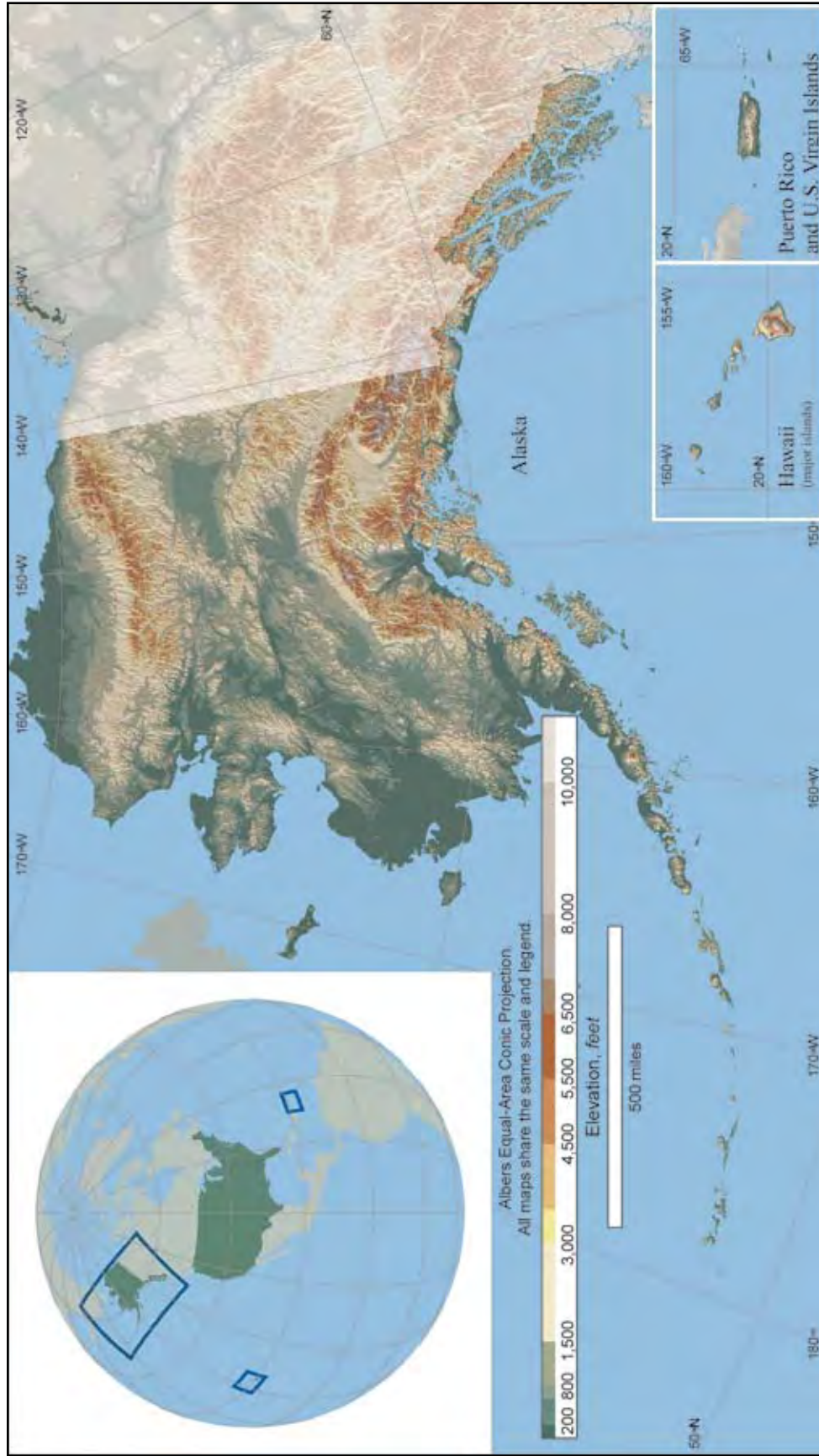
These maps portray a wide variety of forest resources across the entire United States. FIA is expanding its production and distribution of additional geospatial datasets and cartographic products for mapping forest resources. Consult with FIA resource specialists for more information and products at <http://www.fia.fs.fed.us/>. Also, mapping tools and data are available to the public online at <http://fiatools.fs.fed.us>.

## Plate 1a. Landforms of the conterminous United States



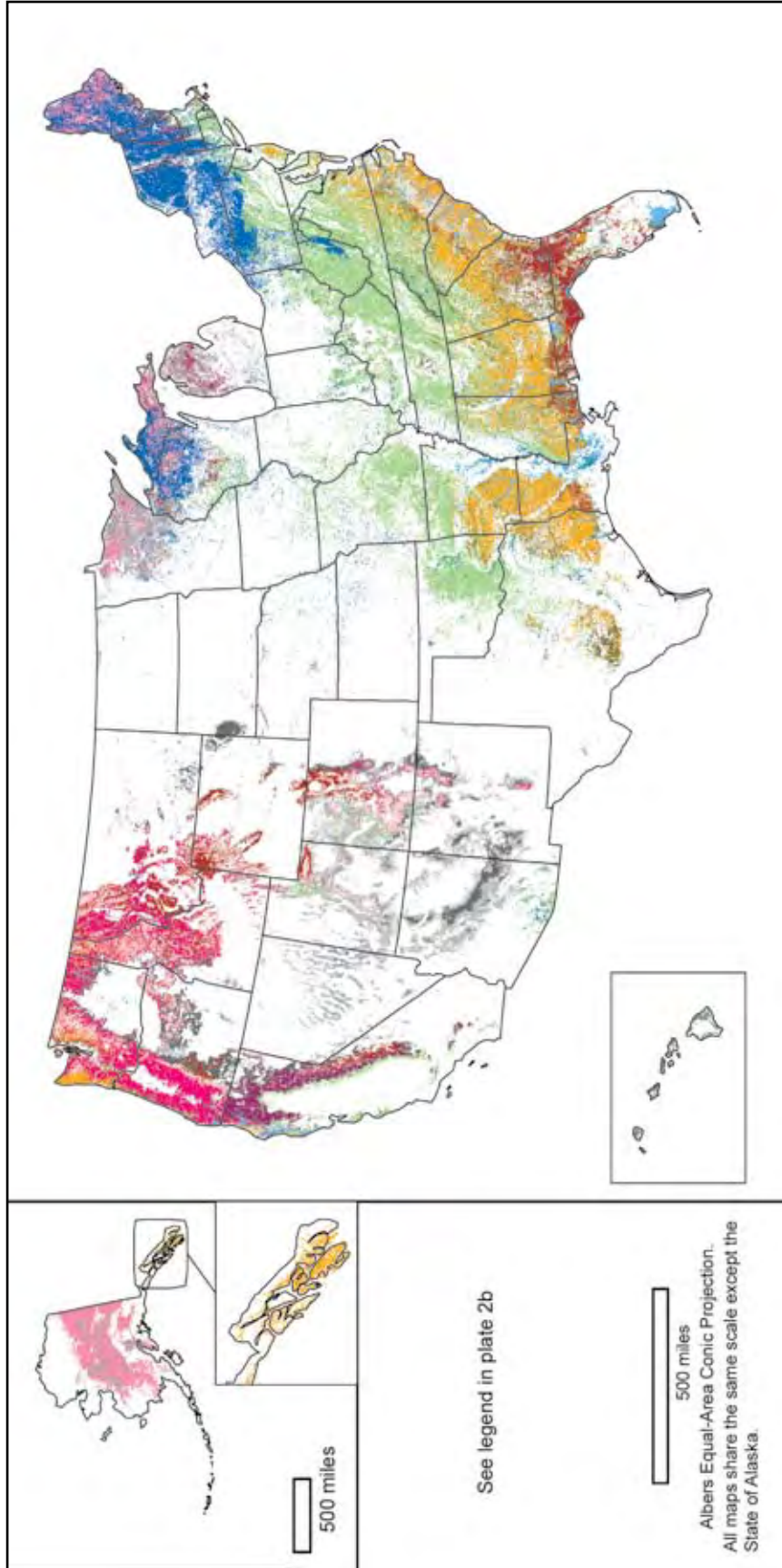
Source: Geographic base data are provided by the USDA National Agricultural Statistics Service, the National Atlas of the United States, the U.S. Geological Survey, and ESRI Data and Maps. FIA data and mapping tools are available online at <http://fiatools.is.fed.us>. Date: March 2009.

**Plate 1b. Landforms of Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands**



Source: Geographic base data are provided by the National Atlas of the United States, U.S. Geological Survey, and ESRI Data and Maps. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

## Plate 2a. FIA forest type groups of the United States



This map portrays the distribution of forest type groups, a classification based on the assemblage of tree species present on a plot of forest land. It was produced through a collaborative effort between three USDA Forest Service units—the Remote Sensing Applications Center, Forest Health Monitoring, and FIA. Forest type groups from FIA plot data were modeled as functions of more than 100 geospatially continuous predictor layers at 250-m pixel resolution, including Moderate Resolution Imaging Spectrometer (MODIS) multi-date composites, topographic variables, climate parameters, and other ancillary variables. More information may be found at <http://www.asprs.org/publications/pers/2007journal/july/>.

Source: Forest type raster data for the lower 48 States and Alaska are available online at [http://fsgedata.fs.fed.us/rastergateway/forest\\_type](http://fsgedata.fs.fed.us/rastergateway/forest_type). Geographic base data are provided by the USDA National Agricultural Statistical Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

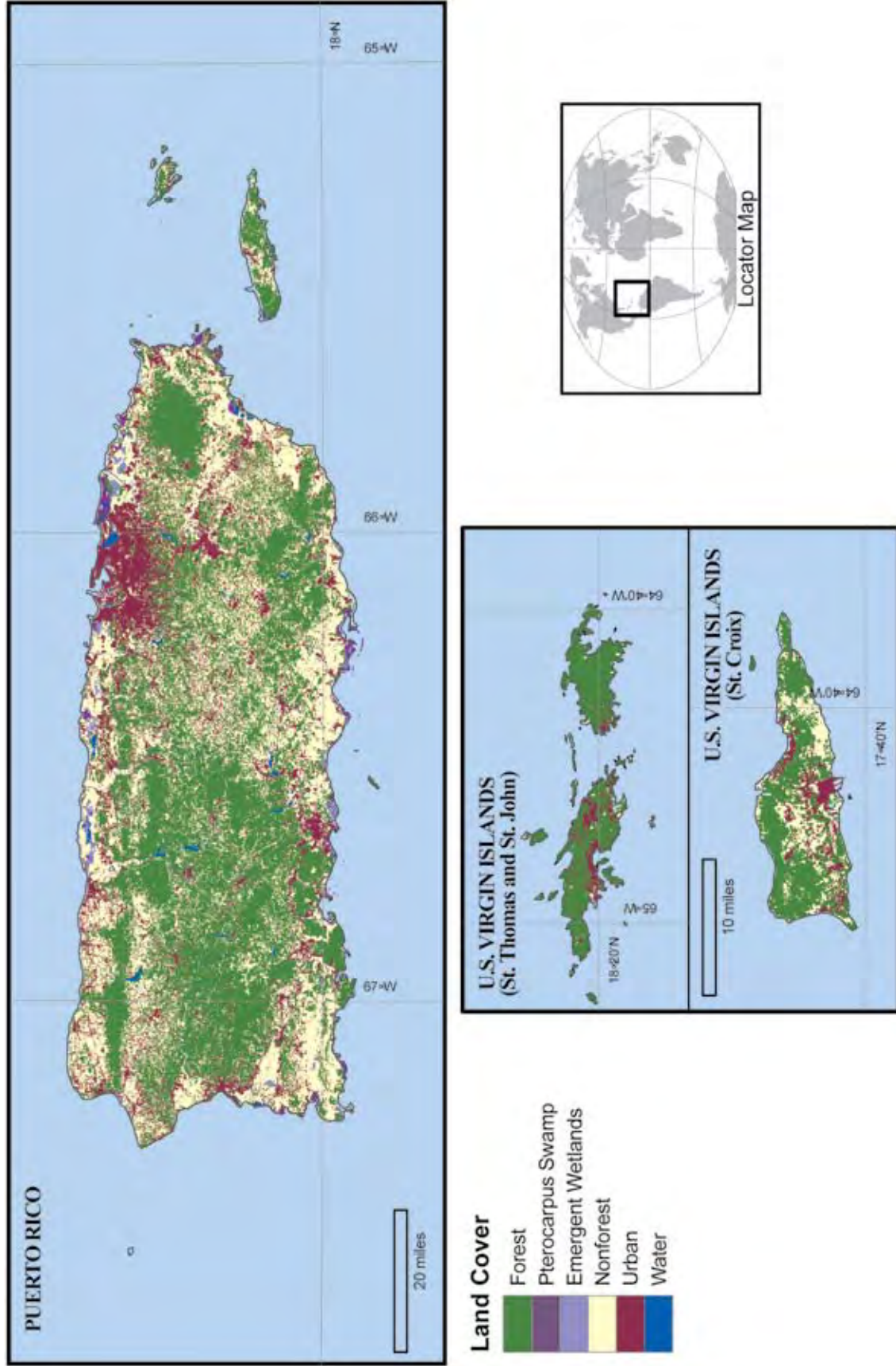


**Plate 2b. Legend for map plate 2a, forest type groups**



\*Hawaii was not included in the 2004 MODIS-based FIA forest map. Data for Hawaii are from Zhu and Evans (1994) based on advanced Very High Resolution Radiometer (AVHRR) composite images recorded during the 1991 growing season. The AVHRR-based forest type data are available on-line at [http://fsgeodata.fs.fed.us/rastergateway/forest\\_type](http://fsgeodata.fs.fed.us/rastergateway/forest_type). Date: March 2009.

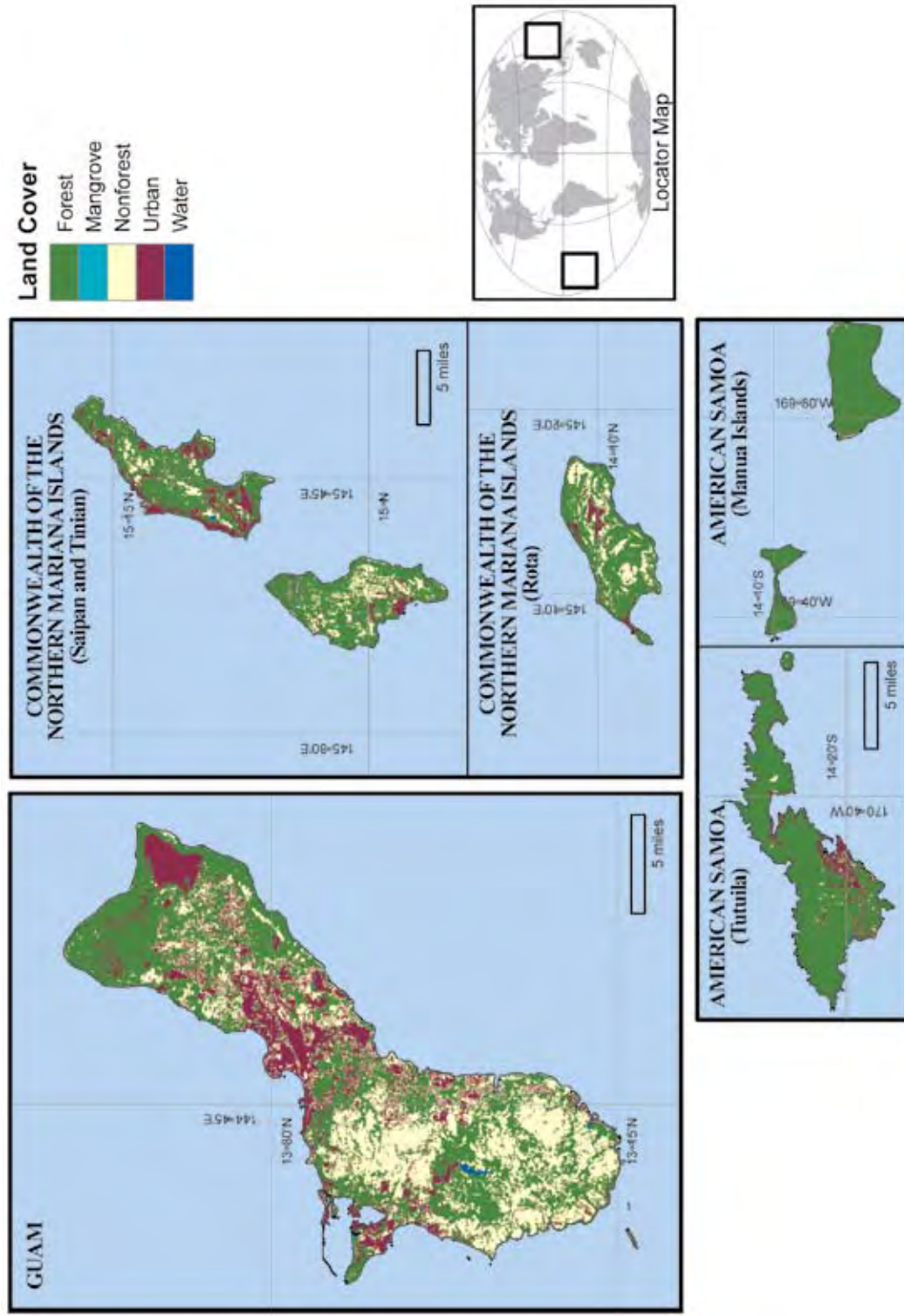
**Plate 3. Major land cover of selected Caribbean commonwealths and territories of the United States**



These maps display major land cover types for Puerto Rico (Kennaway and Helmer 2007) and the U.S. Virgin Islands (Kennaway et al. 2008). The maps were derived from satellite imagery using various mapping and modeling techniques. The cover type classes shown were generalized from the original map products.

Source: Geographic base data are provided by the U.S. Geological Survey, Digital Chart of the World, and ESRI data and maps. FA data and mapping tools are available online at <http://fiatools.is.fed.us>. Date: March 2009.

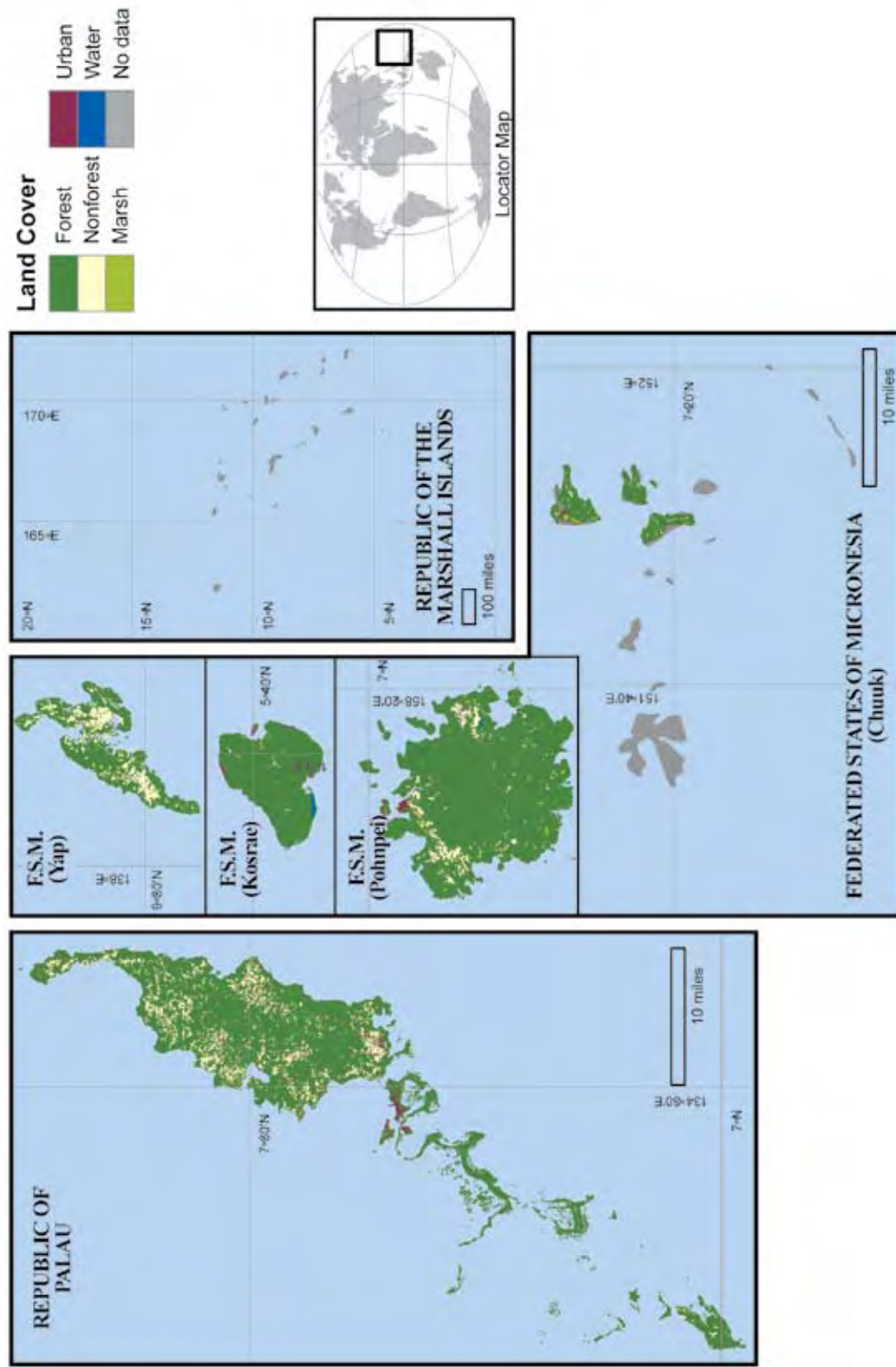
## Plate 4. Major land cover of selected Pacific commonwealths and territories of the United States



These maps display major land cover types for selected Pacific commonwealths and territories of the United States. The maps were developed from a collaborative effort between Forest Service, Forest Health Protection, and Pacific Northwest Research Station, FIA program. The maps were derived from very high-resolution satellite imagery using unsupervised classification mapping techniques. Automated feature extraction tools and field reconnaissance was used for attributing nonforest and forest cover types, respectively (Liu and Fischer 2006). The cover type classes shown were generalized from the original map products.

Source: Geographic base data are provided by the U.S. Geological Survey, Digital Chart of the World, and ESRI data and maps. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

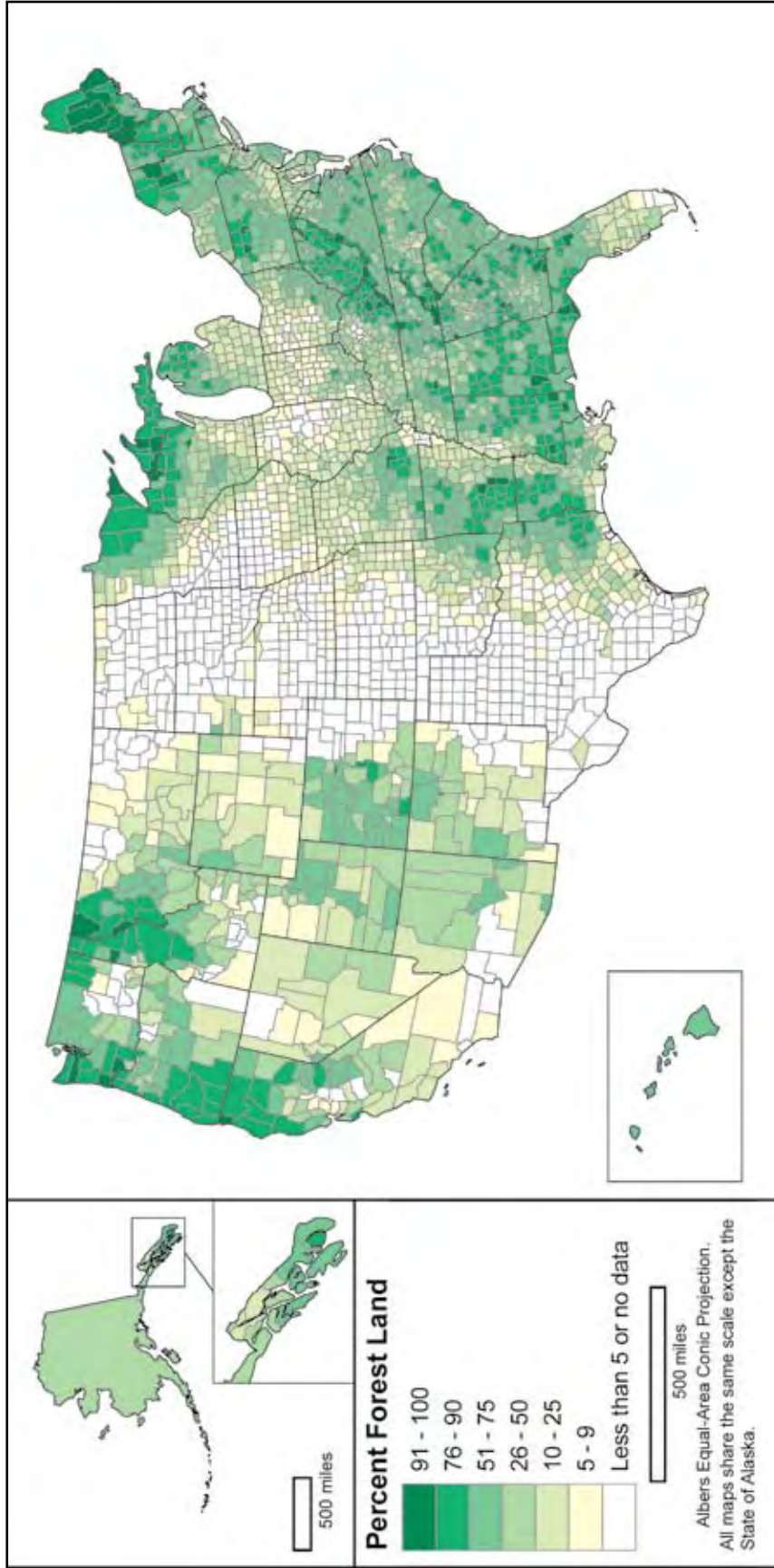
## Plate 5. Major land cover of selected Pacific islands in free association with the United States



These maps display major land cover types for selected Pacific islands in free association with the United States. The map of Palau was derived from high-resolution satellite imagery using unsupervised classification mapping techniques and automated feature extraction and field reconnaissance for cover type attributing (Liu and Fischer 2006). The Federated States of Micronesia maps were produced using photo interpretation techniques (Falanruw et al. 1987a, 1987b, Maclean et al. 1986, Whitesell et al. 1986). The cover type classes shown were generalized from the original map products. Currently there is no data available for the Republic of the Marshall Islands.

Source: Geographic base data are provided by the U.S. Geological Survey, Digital Chart of the World, and ESRI data and maps. FA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

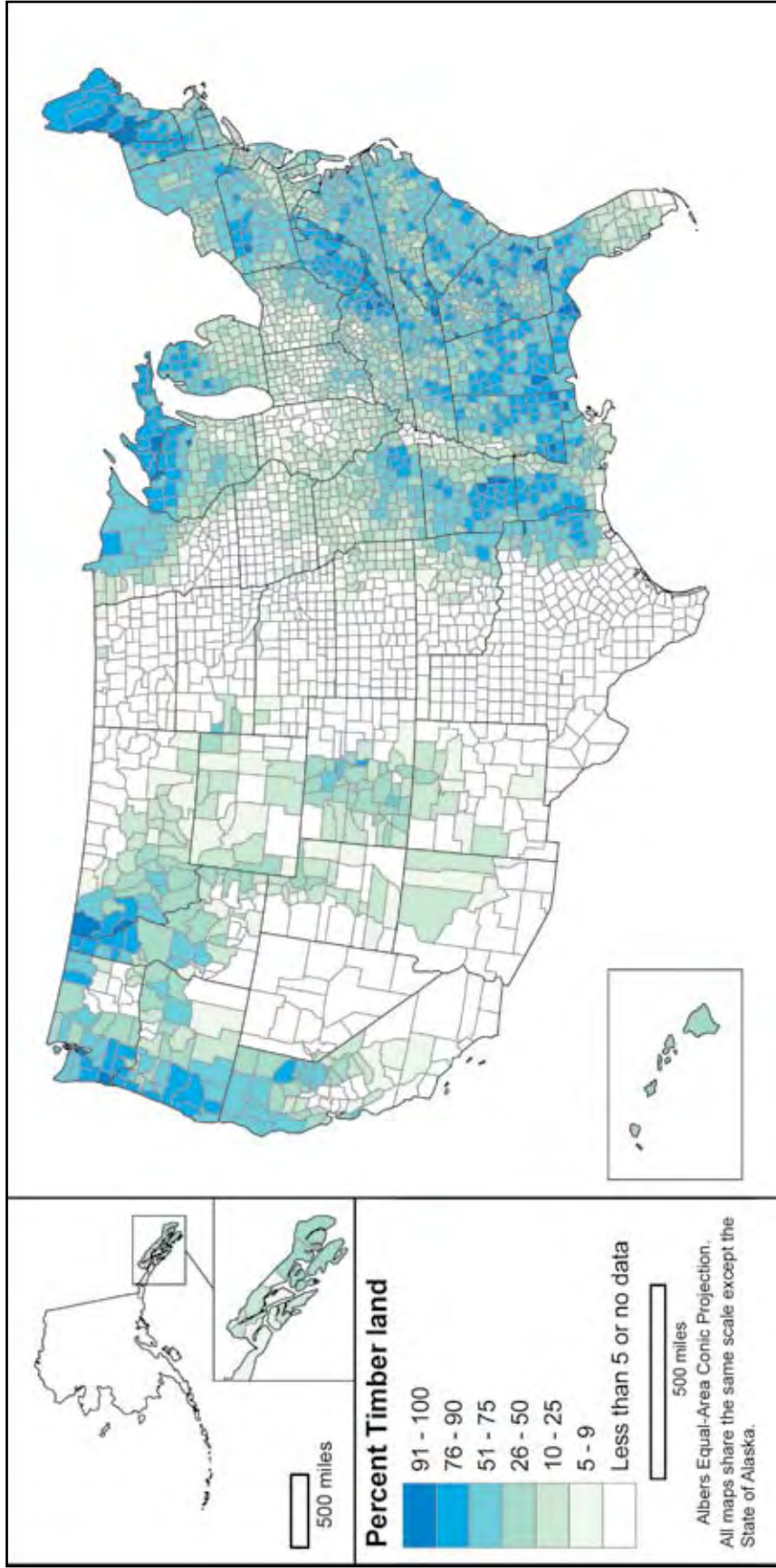
**Plate 6. Percent of land that is forested by county in the United States**



Forest land is land at least 120 feet wide and 1 acre in size with at least 10 percent cover (or equivalent stocking) by live trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if less than 120 feet wide. This map shows the percent of forest land by county across the United States, normalized by the total census land area of each county. Data for the map were derived from compiled FIA plots summarized by county and associated with the 2002 United States County Boundaries shapefile using Federal information processing standards (FIPS) county codes.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

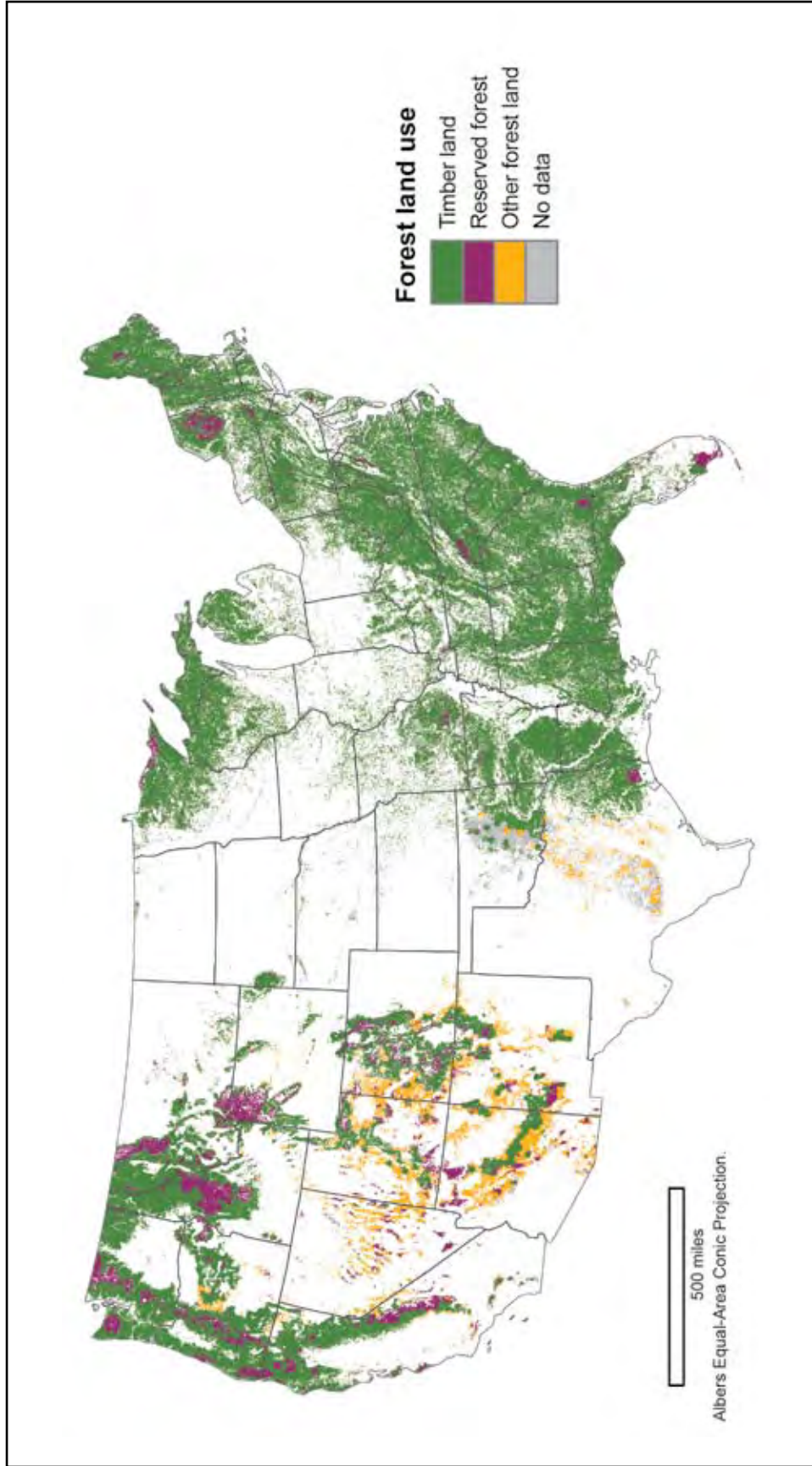
**Plate 7. Percent of land that is timber land by county in the United States**



Timber land is forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. Areas qualifying as timber land are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently, inaccessible and inoperable areas are included. This map shows the percent of timber land by county across the United States, normalized by the total census land area of each county. Data for the map were derived from compiled FIA plots summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, FIA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

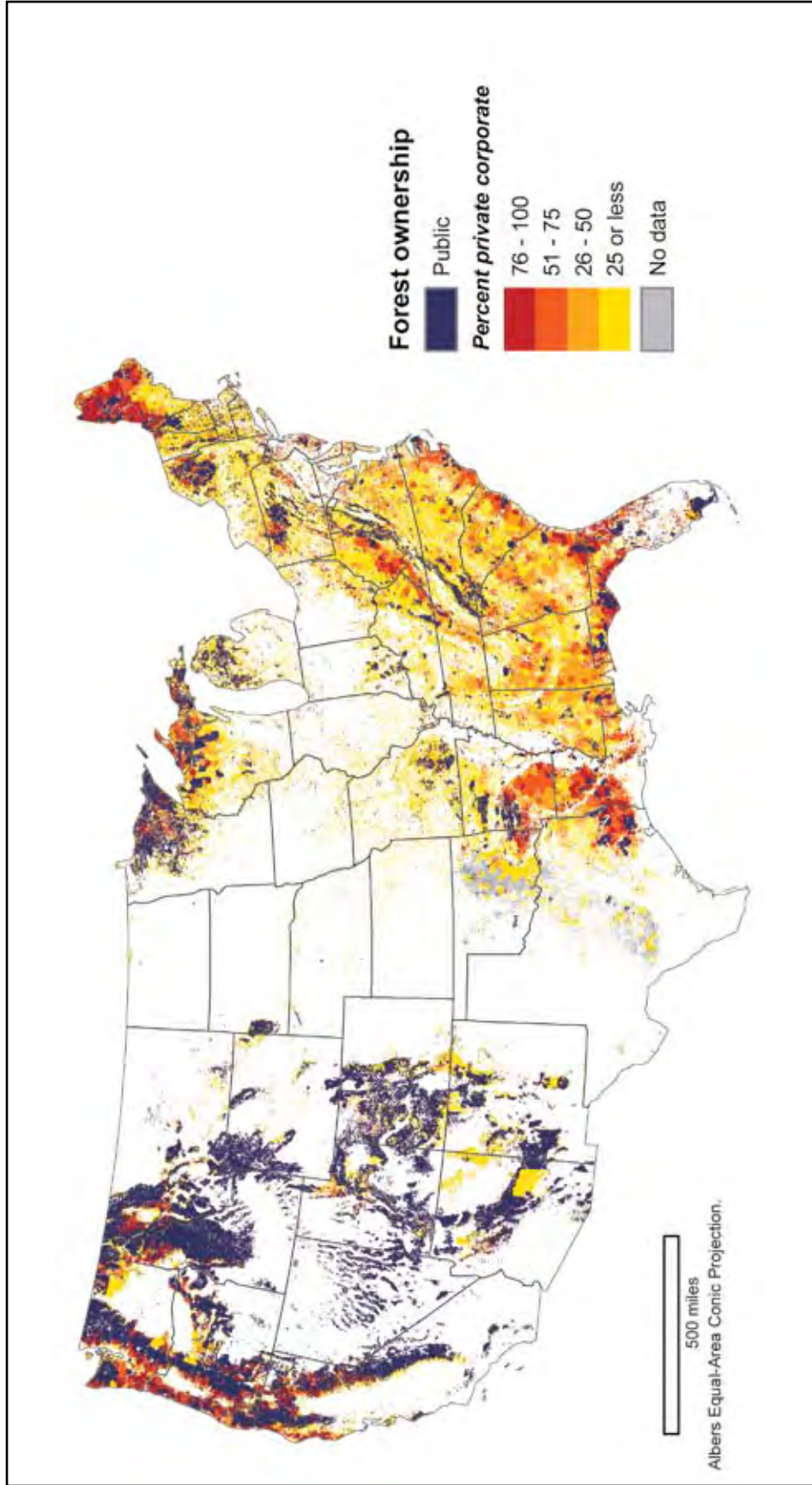
## Plate 8. Timber land, reserved forest and other forest land in the conterminous United States



Forest land use is displayed for forested pixels from the Forest Service map of Forest Type Groups (Ruefenacht et al. 2008). Timber land was derived from RPA plot data; summarized over a hexagon sampling array developed by the U.S. Environmental Protection Agency, Environmental Monitoring and Assessment Program; constrained to forest site productivity equal to or greater than 20 cubic feet/acre/year. Reserved land was derived from the Conservation Biology Institute, Protected Areas Database, version 4.5; constrained to IUCN classes I-V.

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

## Plate 9. Forest land in the conterminous United States by ownership category

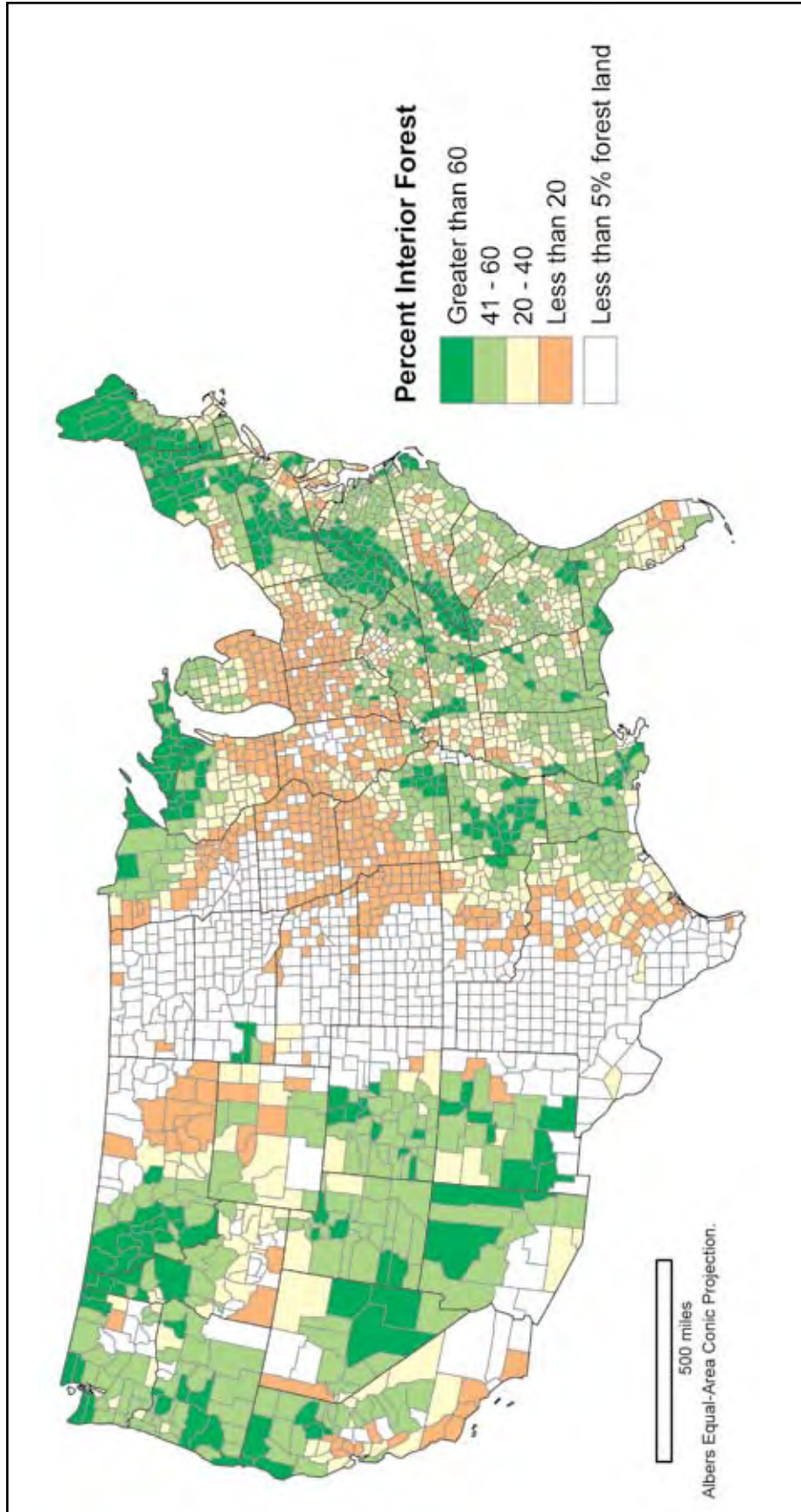


Forest land ownership is displayed for forested pixels from the 2001 Forest Service map of Forest Type Groups (Ruefenacht et al. 2008). Public and private ownership was derived from the Conservation Biology Institute, Protected Areas Database, version 4.6, with revisions. Percent of private forest land in corporate ownership was estimated from RPA plot data, summarized over a hexagon sampling array developed by the U.S. Environmental Protection Agency, Environmental Monitoring and Assessment Program.

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.



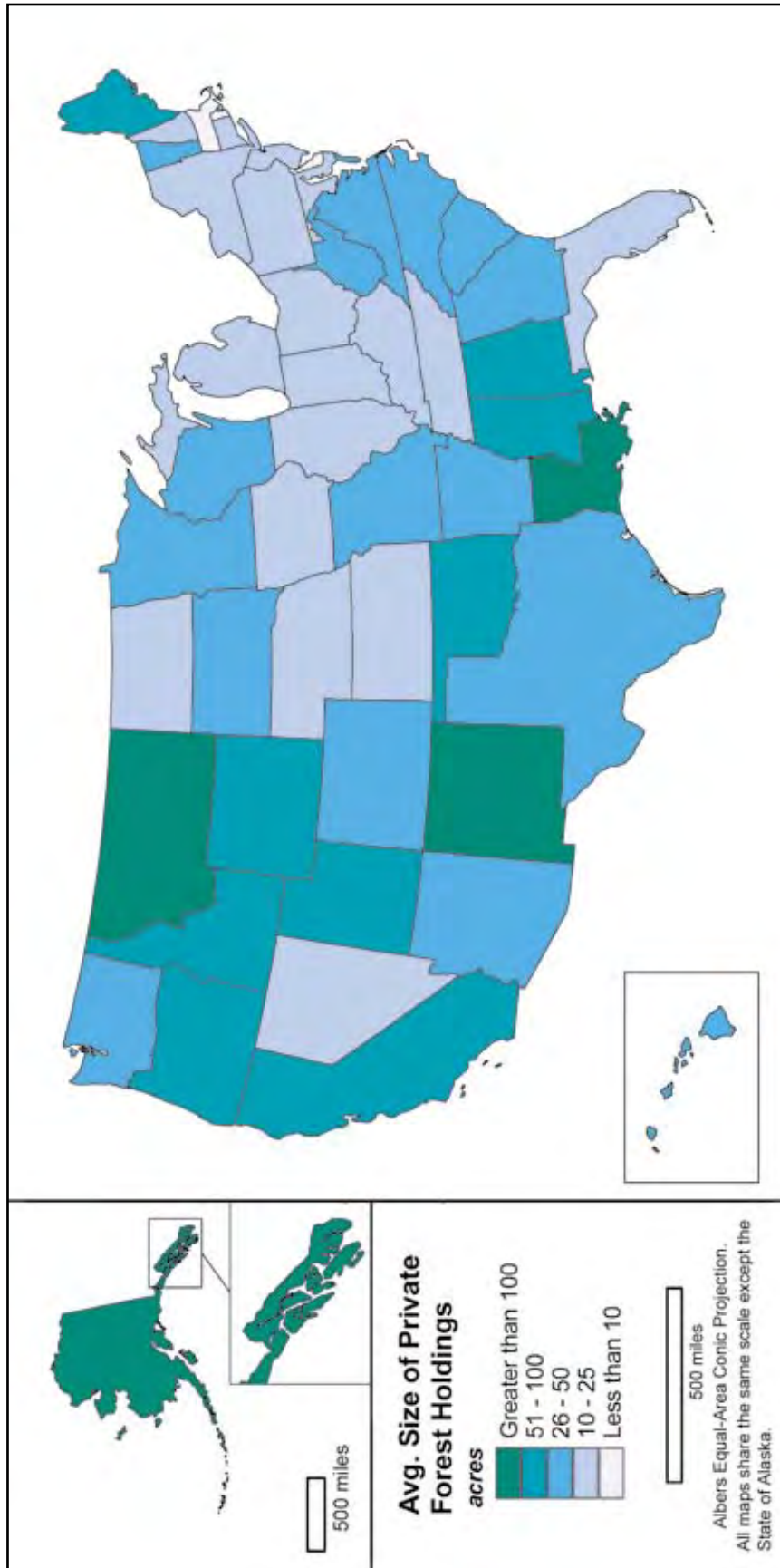
## Plate 10. Percent interior forest by county in the conterminous United States



The spatial arrangement or pattern of forest affects a variety of forest amenities including wildlife, recreation opportunity, and water yield. This map shows the percentage of total forest area in each county that may be called "interior forest." The map was derived from the National Land Cover Database (Homer et al. 2007, see Chapter 2.3), which depicts land cover spatially at 30-m x 30-m pixel resolution. First, each pixel of forest land cover was classified according to the amount of forest in the surrounding 15.21 ha, and a forest pixel was called "interior forest" if the neighborhood was at least 90 percent forested. The percentage that is shown on the map is the percentage of all forest pixels in a county which met that criterion.

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

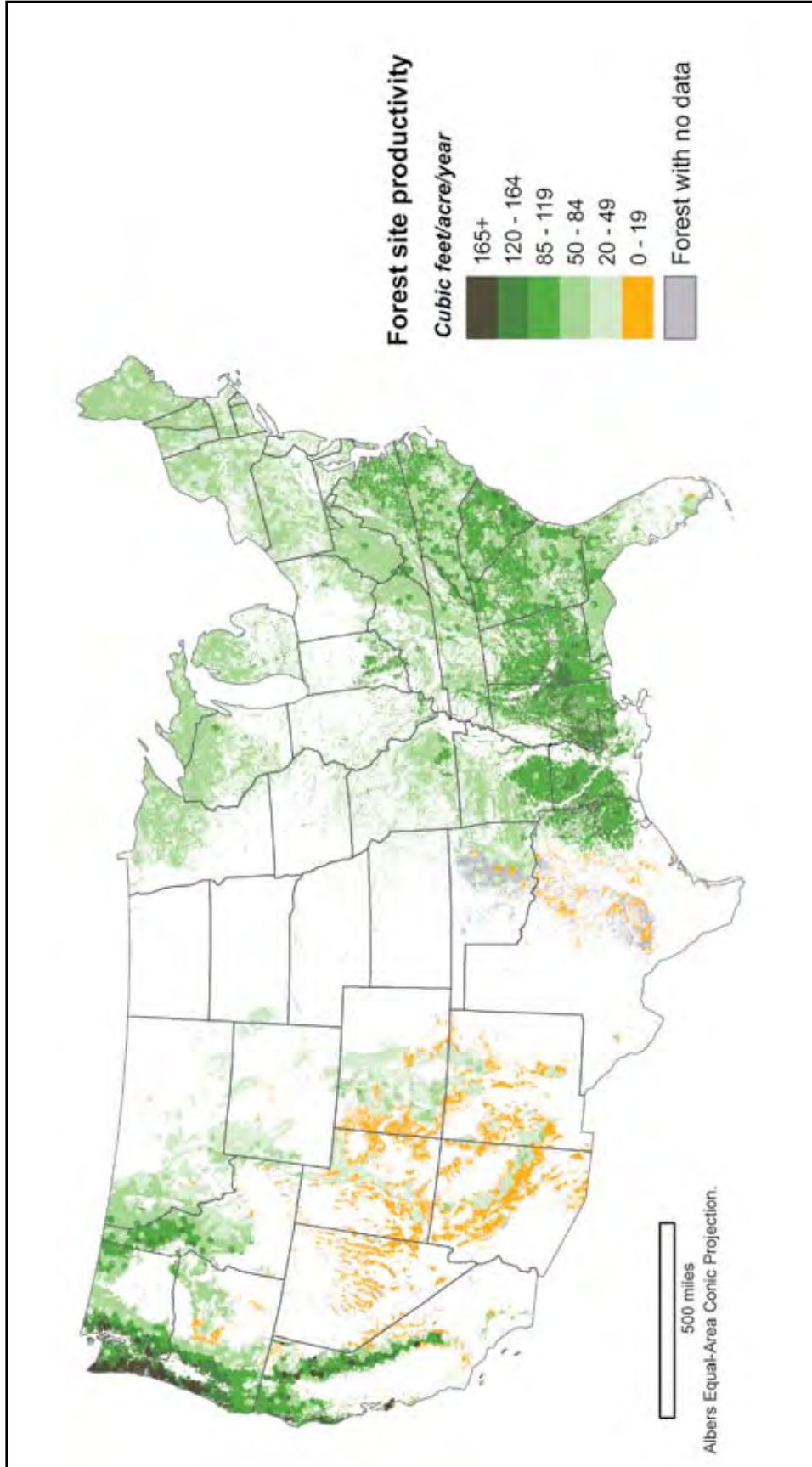
**Plate 11. Average size of private forest holdings in the United States**



Private forest holdings are forested lands that are privately owned. This map displays the average size of private forest holdings in the United States in the year 2006. The mapped information was derived by dividing the total number of private forest acres in a State by the total number of private forest owners in a State. Data for the map are from the Forest Service's National Woodland Owner Survey (<http://www.fia.fs.fed.us/nwos>).

Source: Forest Service, FIA program, Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

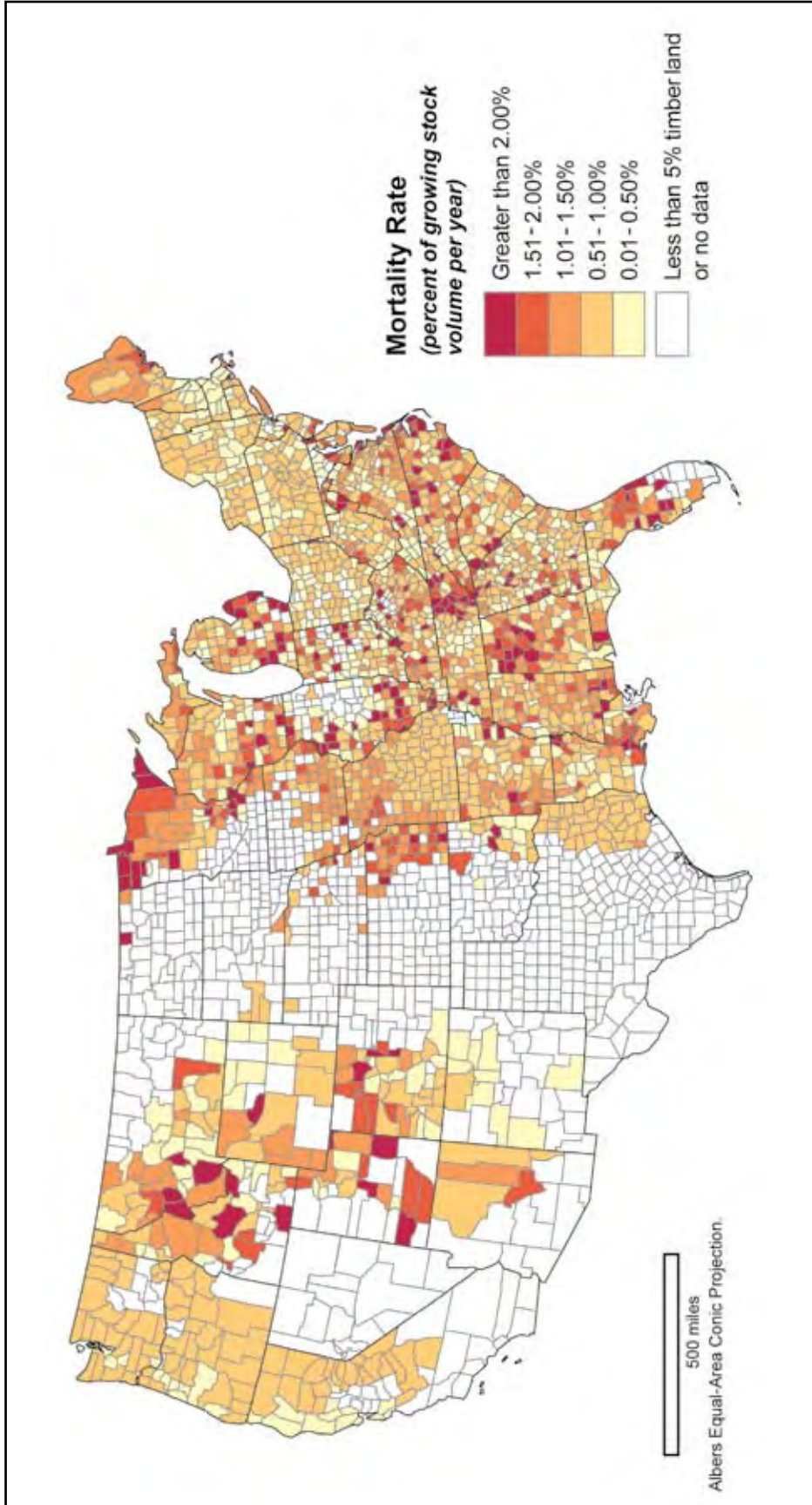
**Plate 12. Net primary forest productivity in the conterminous United States**



Forest site productivity is displayed for forested pixels from the 2001 Forest Service map of Forest Type Groups (Ruefenacht et al. 2008). Forest site productivity was estimated from RPA plot data; summarized over a hexagon sampling array developed by the U.S. Environmental Protection Agency, Environmental Monitoring and Assessment Program.

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

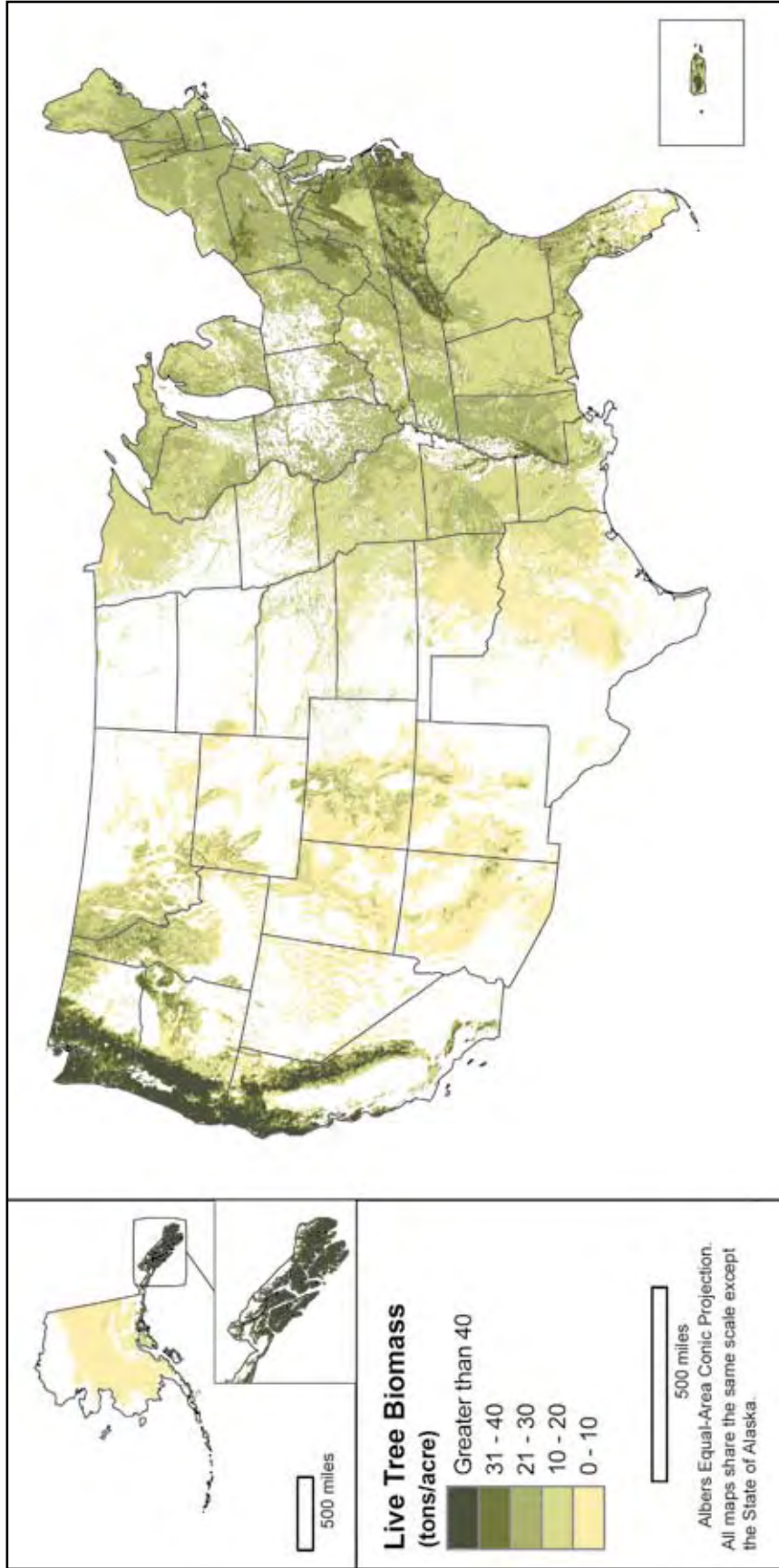
**Plate 13. Mortality rates of growing stock on timber land of the conterminous United States**



Mortality is the death of a tree due to natural causes. This map displays the mortality rate of growing stock on timber land by county across the conterminous United States. Data were derived from compiled FIA observations of mortality of growing stock trees on timber land (thousand cubic feet per year) and dividing by the observed total growing stock volume on timber land (thousand cubic feet). Current mortality data was not available for some States, so data from previous inventories was used to calculate mortality rates for categories defined by State group, softwood-hardwood group, and diameter class. These rates were then applied to the current standing inventory to impute an estimate of current mortality. The results were summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

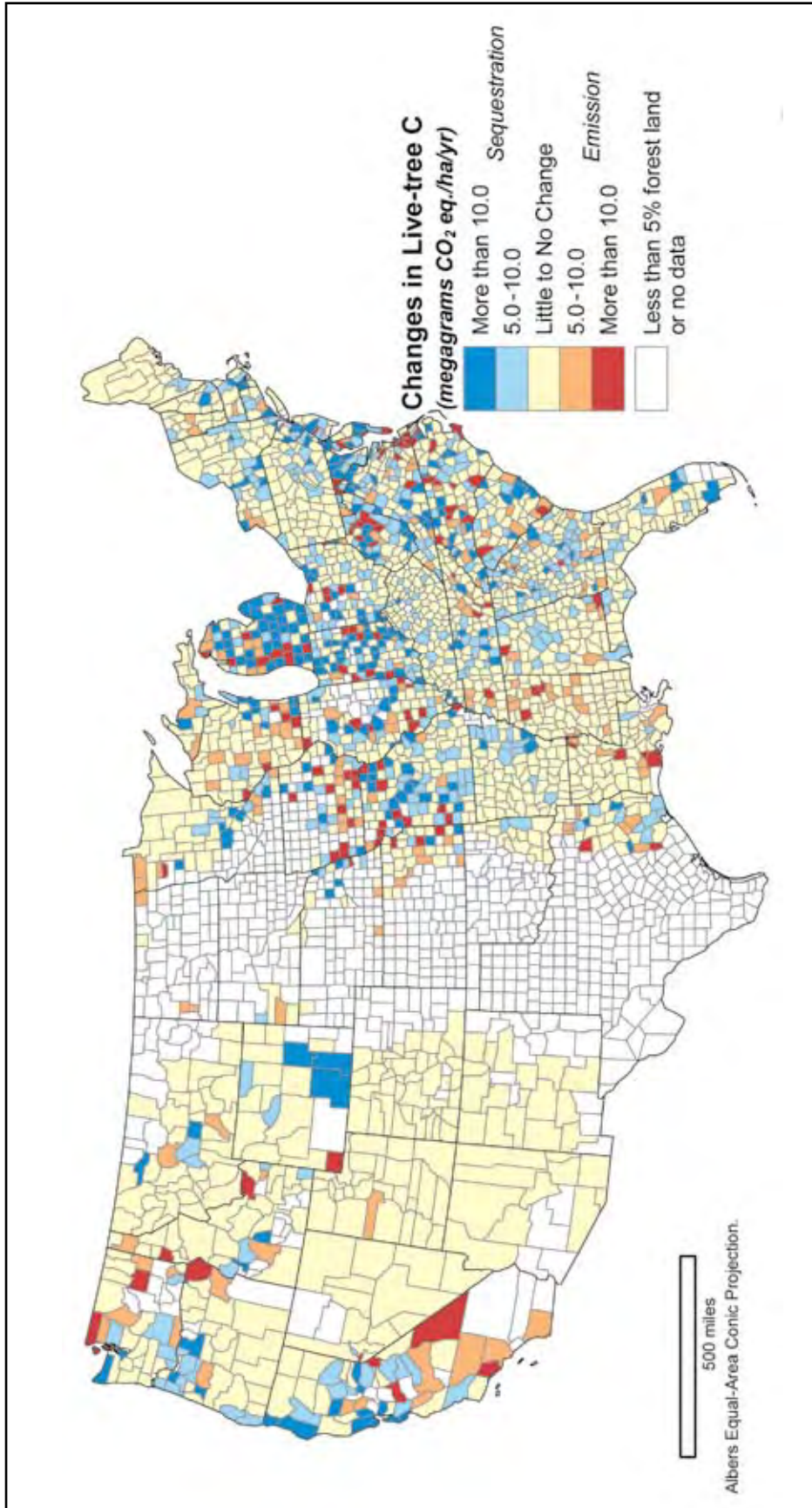
**Plate 14. Above-ground live tree biomass on forest land in the United States**



Above-ground biomass of live trees includes woody material contained in tree boles, forks, limbs, branches, and tops of live trees, but excludes foliage and roots. A collaborative effort between the Forest Service, FIA program, the Remote Sensing Applications Center, and the International Institute of Tropical Forestry produced this spatially explicit dataset of above-ground live tree biomass for the conterminous United States, Alaska, and Puerto Rico (note: no biomass data are available for Hawaii). Above-ground live tree biomass collected on FIA plots were modeled as functions of more than 100 geospatially continuous predictor layers, including Moderate Resolution Imaging Spectrometer (MODIS); topographic variables; monthly and annual climate parameters; and other ancillary variables (Blackard et al. 2008).

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. Biomass raster data for the lower 48 States and Alaska are available online at <http://fsgoodata.fs.fed.us/rastergateway/biomass>. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

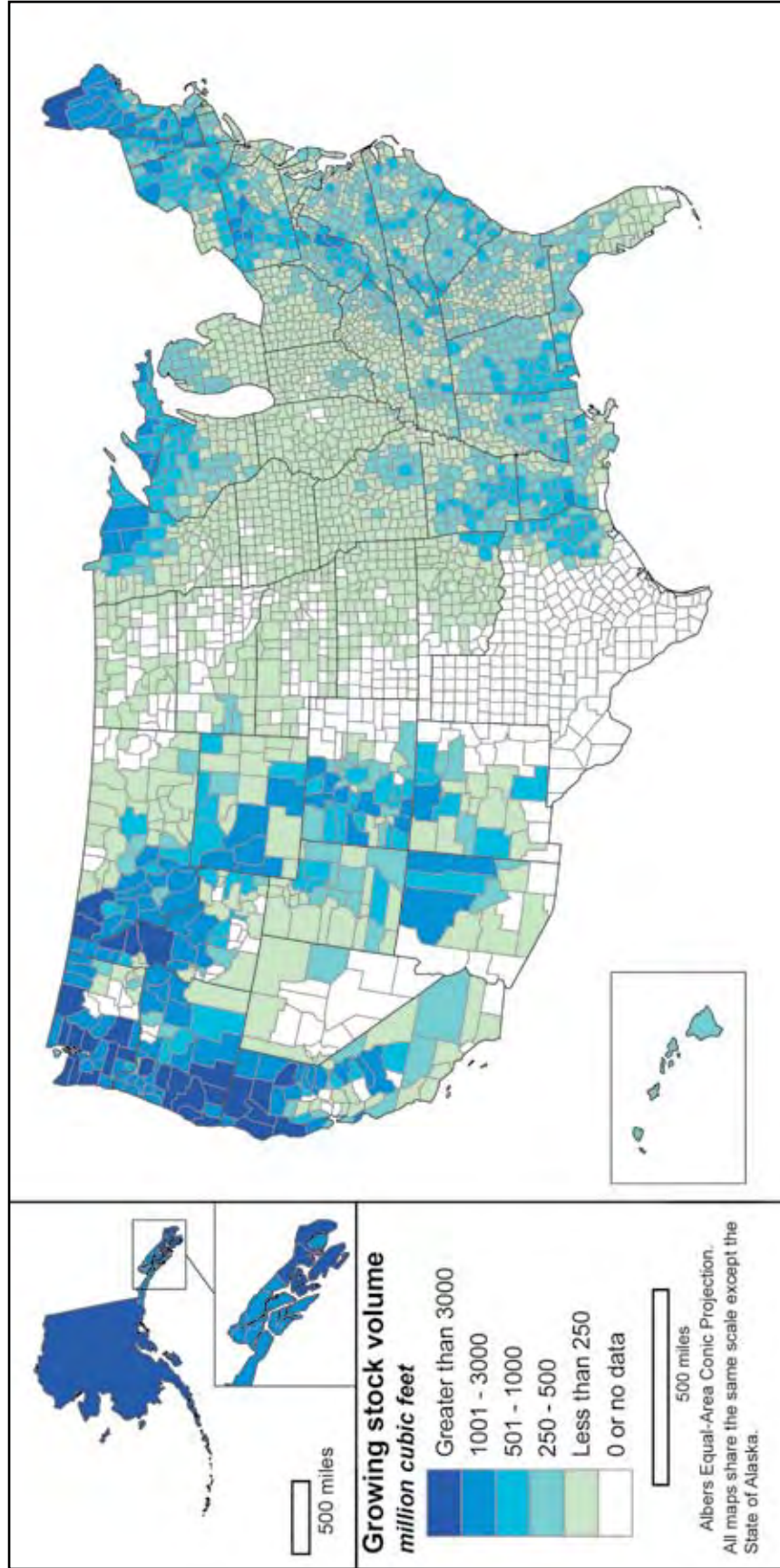
## Plate 15. Net annual change in live-tree forest carbon stocks of the conterminous United States



Change in live-tree forest carbon stocks includes estimated changes in coarse roots, stems, branches, and foliage. FIA plot data are converted into county-level estimates using the FORCARB2 model (EPA 2007, Smith and others 2007). These estimates are net changes, and include the effects of harvest and land use change. The atmosphere is the common frame of reference in carbon accounting. Losses from the atmosphere—forest carbon sequestration—are denoted by blue symbols. Emissions to the atmosphere—losses of forest carbon—are represented by red symbols.

Source: J.E. Smith, L.S. Heath, and E. LaPoint, Forest Service, FIA program, 2005 data. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>.  
Date: March 2009.

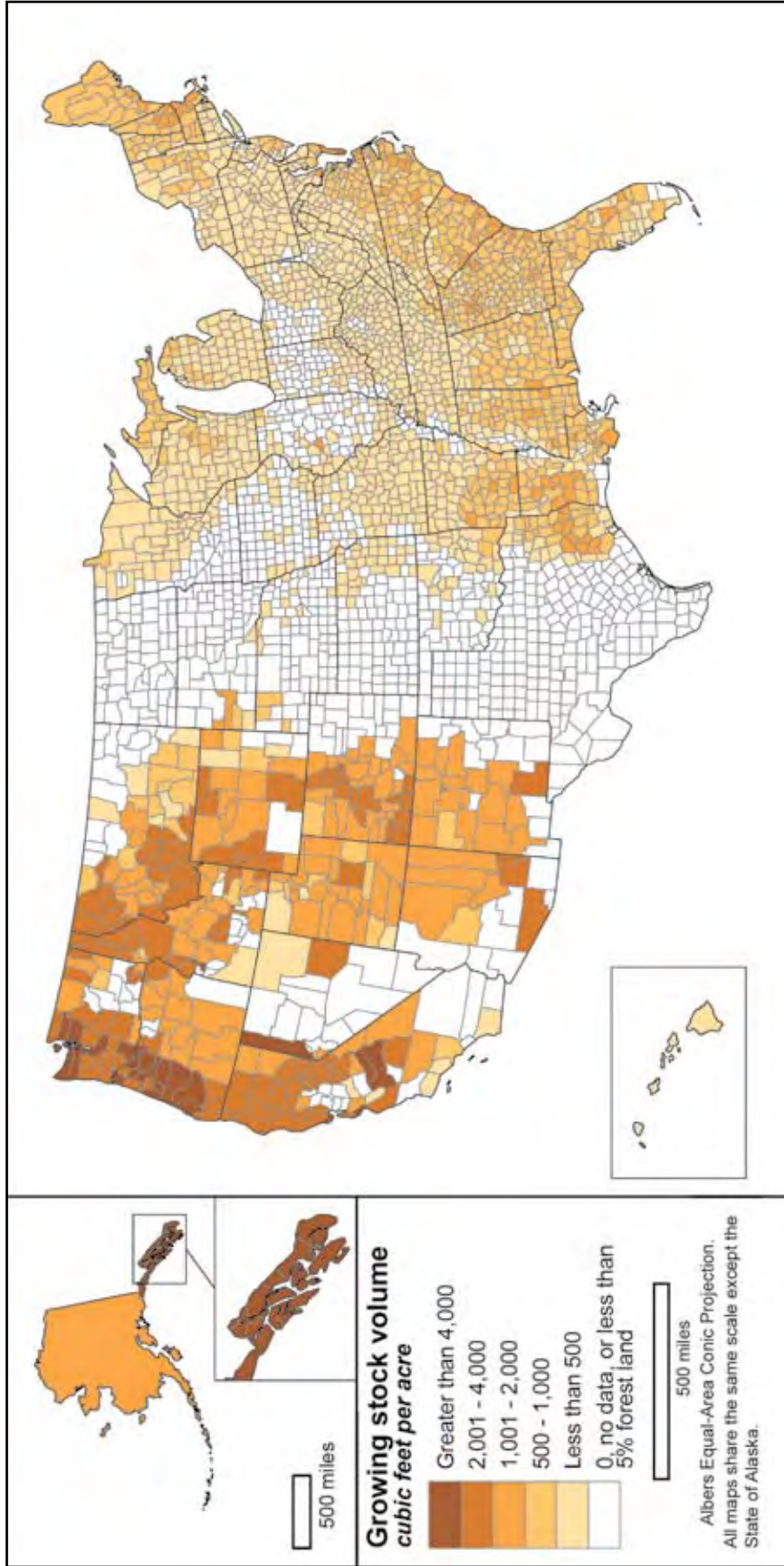
**Plate 16. Net volume of growing stock on timber land in the United States**



Net volume of growing-stock timber includes live trees, 5.0 inches diameter or greater, of commercial species meeting specified standards of quality or vigor, excluding cull trees. This map displays the total net cubic feet volume of growing-stock timber on timber land by county across the United States. Data for the map were derived from compiled FIA sample observations summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

**Plate 17. Net volume of softwood growing stock per acre on timber land in the United States**

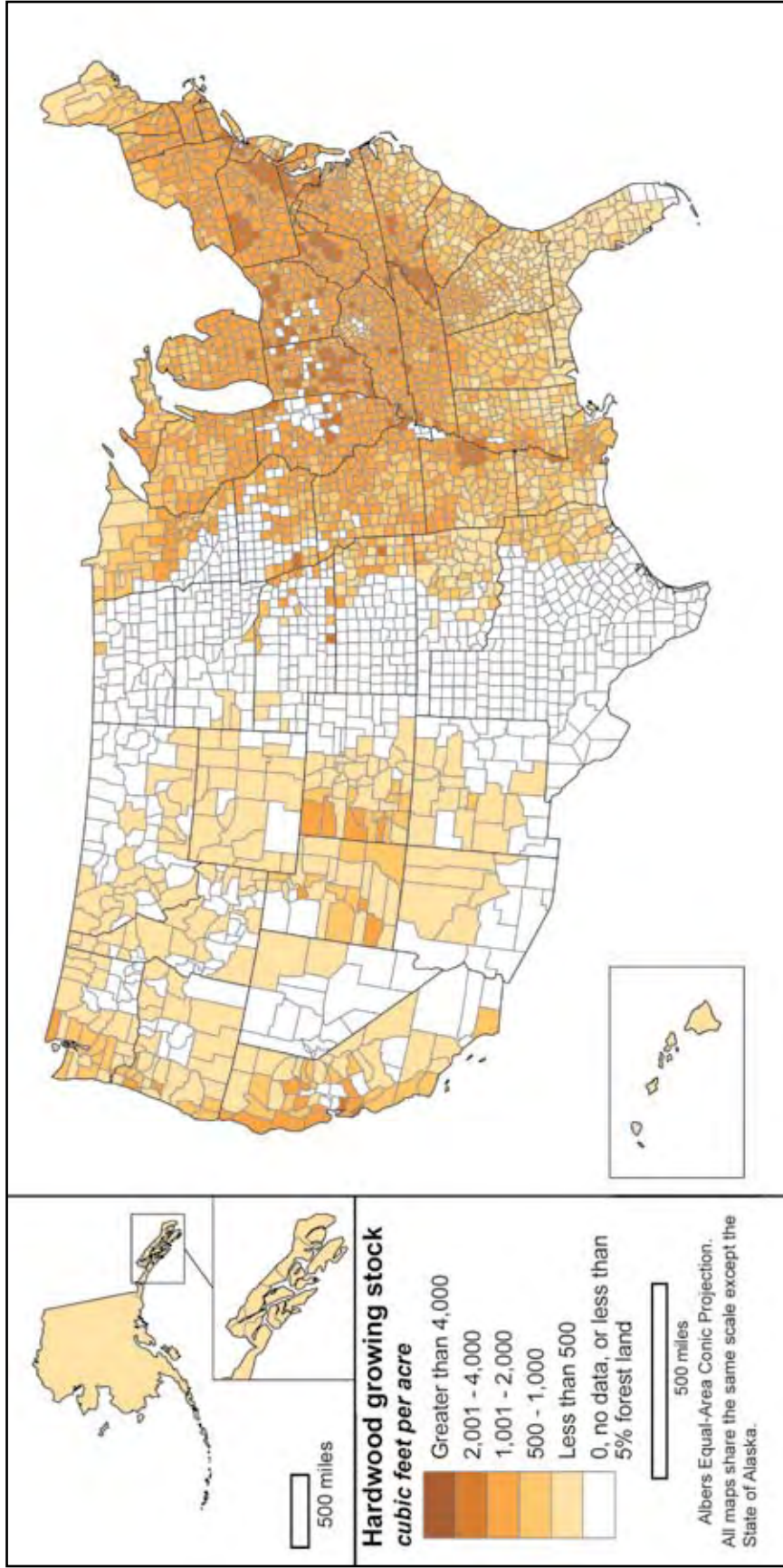


Net volume of growing-stock timber includes live trees, 5.0 inches diameter or greater, of commercial species meeting specified standards of quality or vigor, excluding cull trees. This map displays net cubic feet volume of softwood growing-stock per acre on timber land by county across the United States. Per acre estimates were generated by normalizing the data to the total timber land area of each county. Data for the map were derived from compiled FIA sample observations summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA Program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.



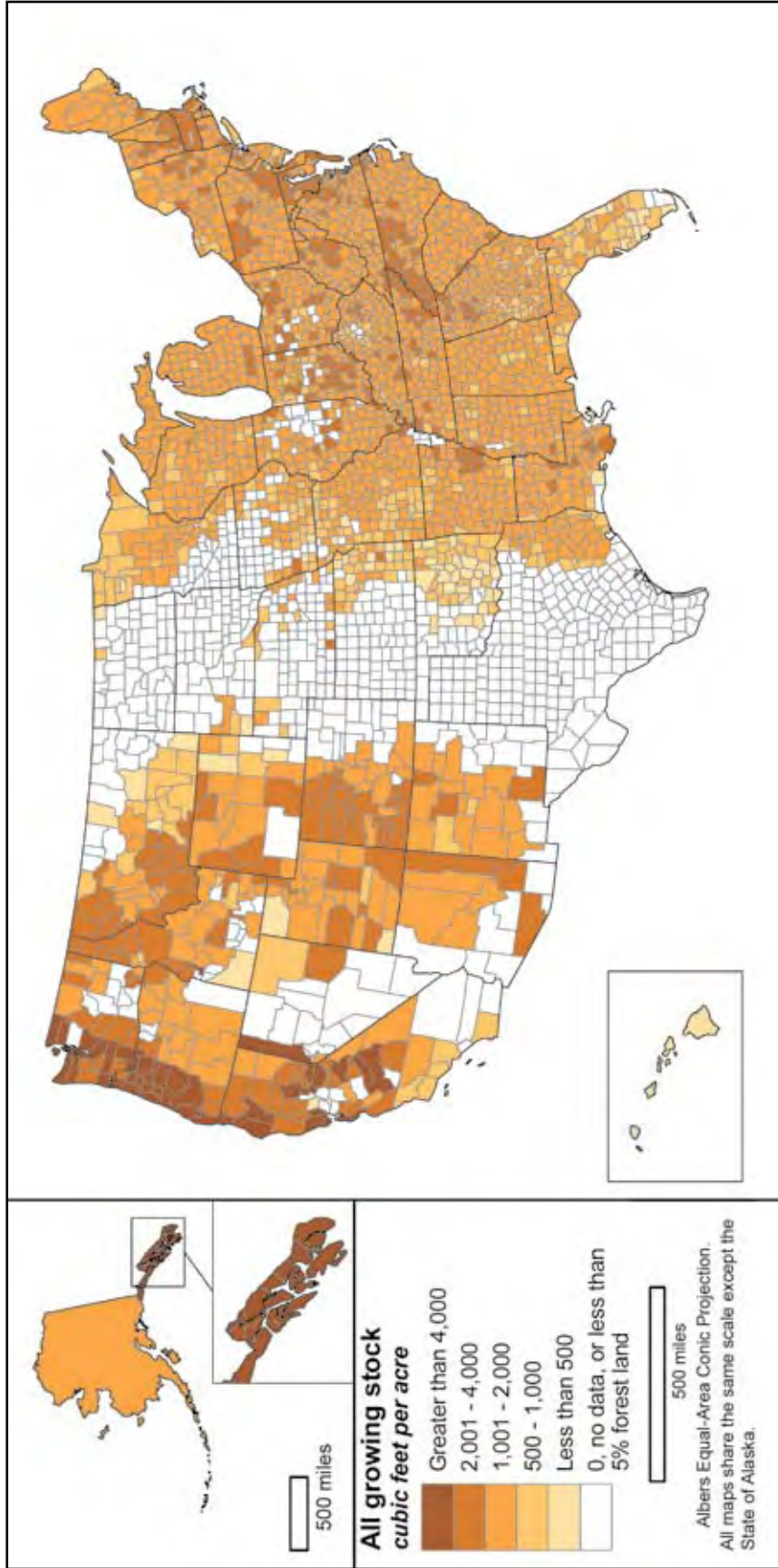
**Plate 18. Net volume of hardwood growing stock per acre on timber land in the United States**



Net volume of growing-stock timber includes live trees, 5.0 inches diameter or greater, of commercial species meeting specified standards of quality or vigor, excluding cull trees. This map displays net cubic feet volume of hardwood growing-stock per acre on timber land by county across the United States. Per acre estimates were generated by normalizing the data to the total timber land area of each county. Data for the map were derived from compiled FIA sample observations summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

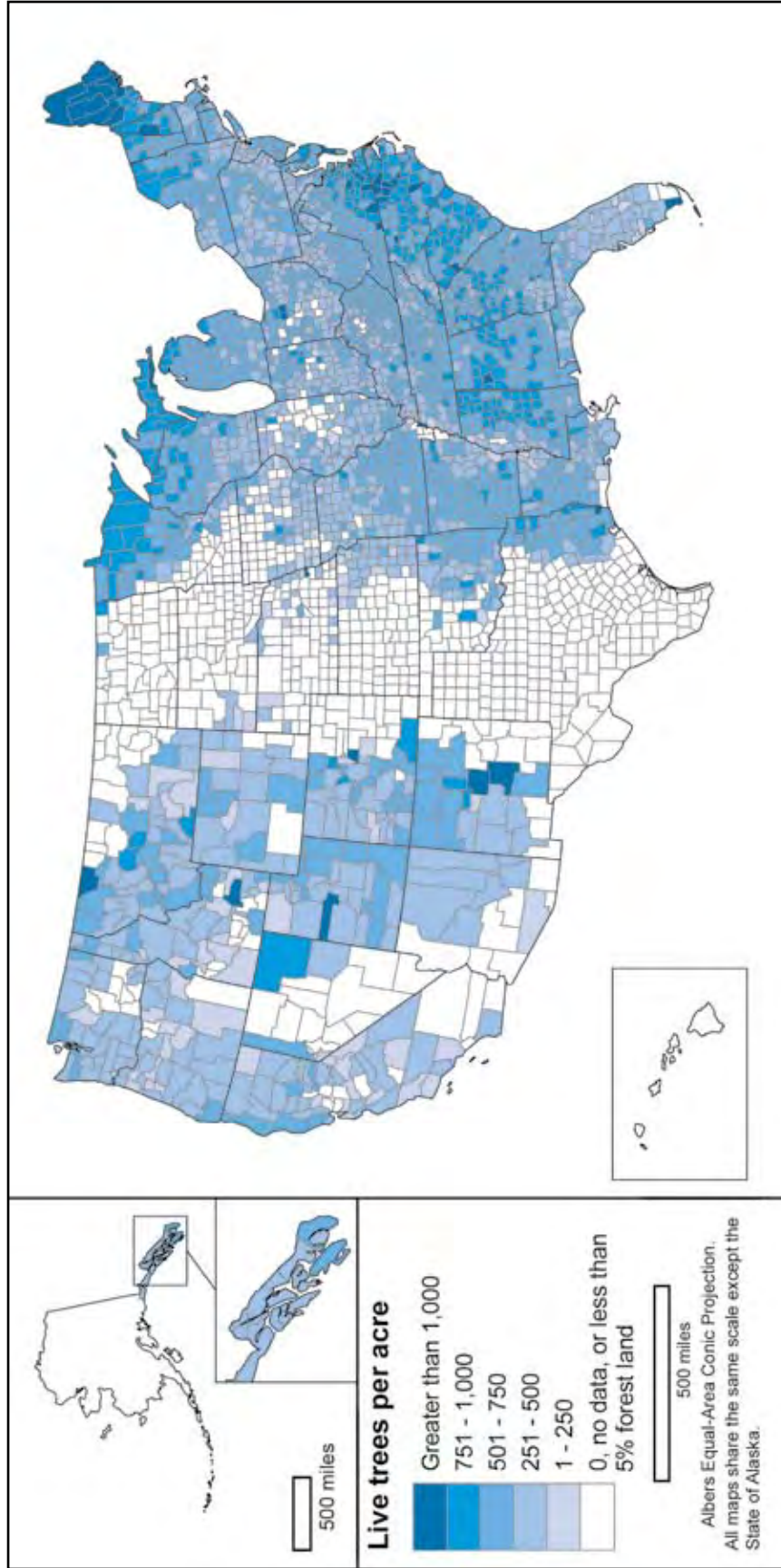
**Plate 19. Net volume of all growing stock per acre on timber land in the United States**



Net volume of growing-stock timber includes live trees, 5.0 inches diameter or greater, of commercial species meeting specified standards of quality or vigor, excluding cull trees. This map displays the total net cubic feet volume of all growing-stock timber per acre on timber land by county across the United States. Per acre estimates were generated by normalizing the data to the total timber land area of each county. Data for the map were derived from compiled FIA sample observations summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, RPA plot summary data base. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

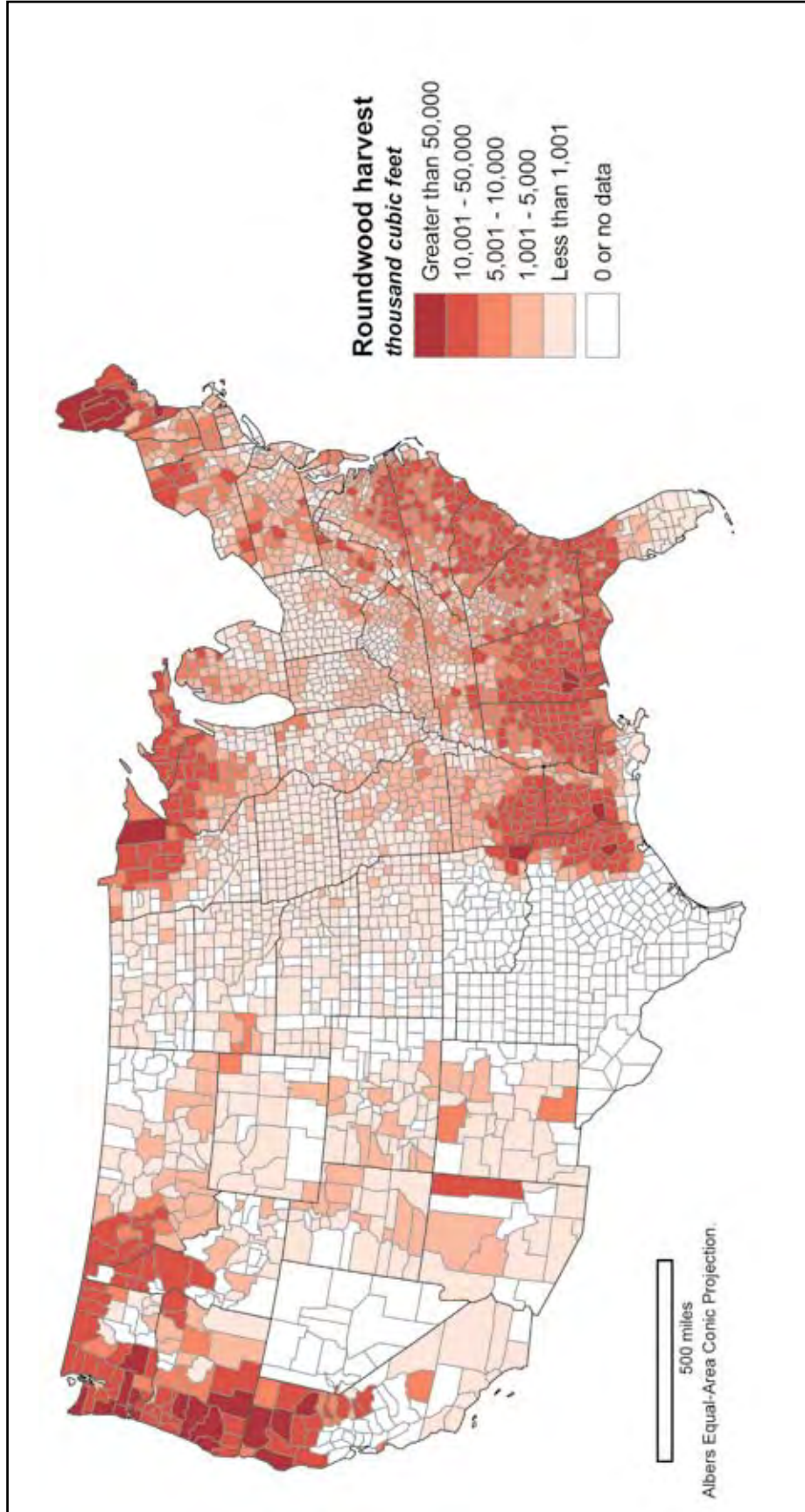
**Plate 20. Number of live trees greater than 1-inch d.b.h. per acre on timber land in the United States**



The number of live trees is an indicator of the composition and diversity of a forest. This map shows the number of live trees 1.0 inch diameter and greater on timber land by county across the United States. Per acre estimates were generated by normalizing the data to the total timber land area of each county. Data for the map were derived from compiled FIA sample observations summarized by county and associated with the 2002 United States County Boundaries shapefile using FIPS county codes.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

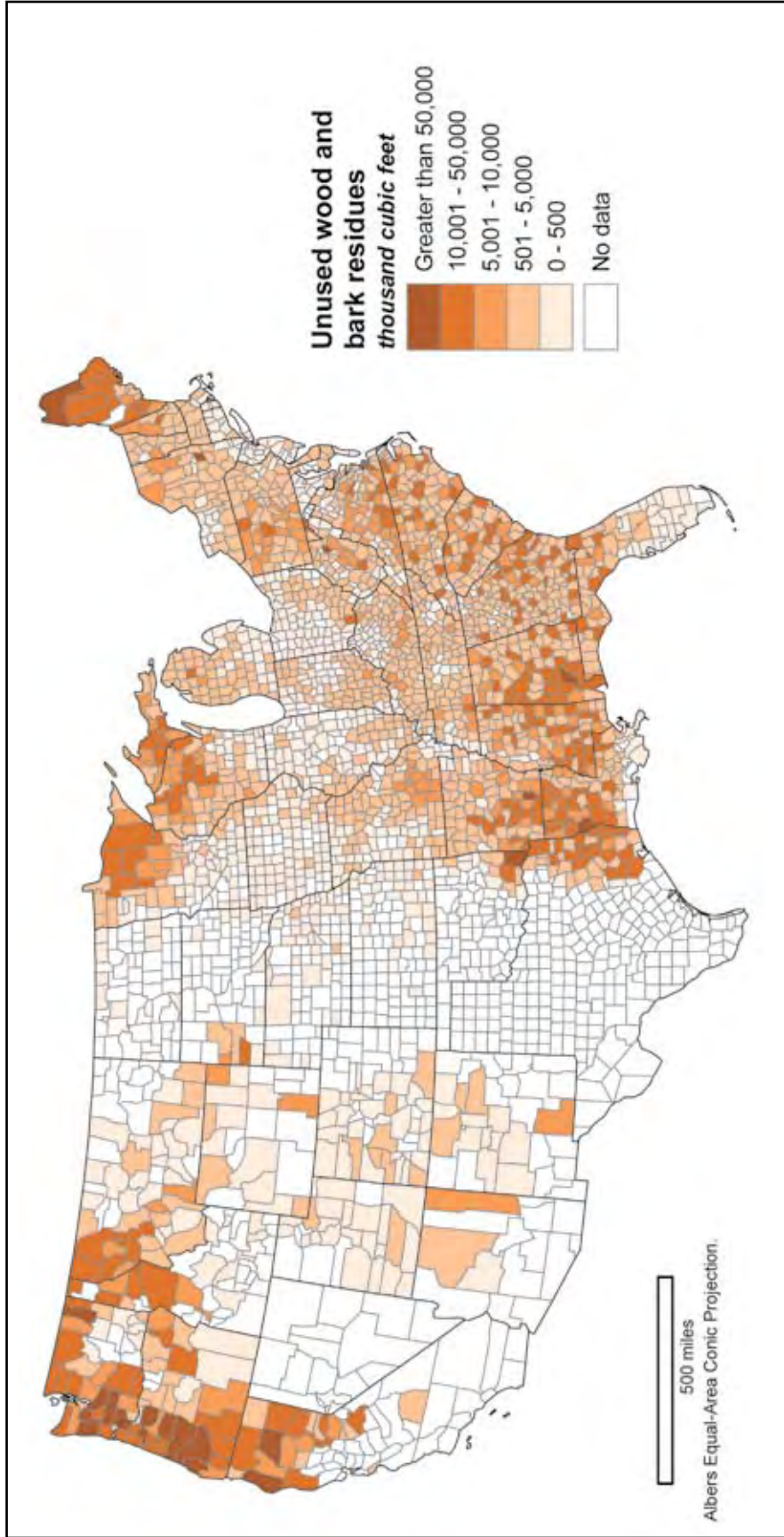
**Plate 21. Volume of roundwood harvested by county in the conterminous United States**



Roundwood (cubic foot volume) removed from forest land and processed into wood products was determined from: 1) annual and periodic surveys of primary wood-using mills; 2) periodic surveys of residential fuel use that have been adjusted with Department of Energy data of annual residential fuelwood consumption; and 3) Department of Energy data of annual residential fuelwood consumption. See Appendix A in this report for year of source data for each State.

Source: Forest Service, FIA program, RPA plot summary database. Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

**Plate 22. Unused wood and bark residues from timber harvesting and primary wood processing mills in the conterminous United States**



Unused wood and bark residues (cubic foot volume) are obtained from surveys of primary wood-using mills, based on the sum of 1) harvest residue volume, which is calculated by applying regional logging utilization factors to the volume of roundwood product harvested and 2) unused mill residue volume. See Appendix A in this report for year of source data for each State.

Source: Geographic base data are provided by the USDA National Agricultural Statistics Service. FIA data and mapping tools are available online at <http://fiatools.fs.fed.us>. Date: March 2009.

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# APPENDICES

# Appendix A—Inventory Procedures, Accuracy of the Data, and Glossary of Terms

## Inventory Procedures

The following sections provide information on the data and procedures used to develop this report. This guidance is to help the reader to understand how this comprehensive report was compiled.

### Timing of Inventory Data

The tables in appendix C are dated 2007 for area and volume and 2006 for growth, mortality, and removals. These dates are used as nominal dates for national assessment reporting. The actual inventory for resource variables by subregion and State is listed in table A-1. Until recently, forest inventory in the United States has been a cyclic process with new inventories conducted in each State every 10 to 12 years. Since 1999, the Forest Inventory and Analysis (FIA) program began collecting data annually and now does this in 45 States. Future assessments will continue to include more current data as all States enter the annualized inventory process. For more information on the FIA procedures, refer to the FIA Field Manuals and Strategic Plan found in the “Library” section at <http://fia.fs.fed.us>.

### Adjustments to Historic Data

Historic data presented in this report for previous national assessments may be adjusted from those found in the original publications. In general, this adjustment is due to changes in data classifications, regional reporting boundaries, or, occasionally, errors in reporting. Other than reporting errors, adjustments rarely exceed 1 to 2 percent of the value of the original data. As noted at the beginning of this report, historic data have been adjusted to remove chaparral as a forest type. This adjustment primarily affects data for California. In addition, historic data have been corrected to adjust forest land to conform to a minimum 10-percent crown cover. This adjustment primarily affects the eight Intermountain States. These adjustments were made to facilitate trend analyses based on standard definitions.

## The Database

In 1987, the first national database was developed for the assessment. It was a summary database that placed all inventory data in a common format at the State/owner level of resolution. In 1992, the summary database was made available online. After 1997, the national standard FIA Database (FIADB) was used as a basis for the Resources Planning Act (RPA) summary database.

The complete RPA logical database for 2007 is composed of three physical databases. The first is the FIADB national standard database with data available for all forest lands except west Texas, west Oklahoma, interior Alaska, and Hawaii. Due to insufficient field data, these areas were compiled in summary format from modeled inventory data. The second database is the national timber products output (TPO) database composed of data from surveys of primary wood-using facilities (e.g., sawmills, pulpmills, veneer mills, chip mills) and of residential fuelwood and post producers (Smith 1991 and May 1998). This database provides county-level removals data for the United States. The third database is the national summary database that draws on each of the other physical databases and on “value-added” data from the Bureau of the Census, such as total county land area, county minimum and maximum latitude and longitude, and population. The national summary database is available via the Internet and can provide data at the county level for most of the United States. Exceptions to this general rule are areas of Hawaii and interior Alaska, where data are stored in aggregate. Nearly all the data used to compile the main tables in this report are available on the RPA Data Wiz CD located in the back cover of this document.

For more information on these databases, log on to <http://fia.fs.fed.us>. Further information on data collection procedures is available from the Forest Service Research Stations and regions listed in appendix tables B-1 and B-2.



**Table A-1.** Dates of inventory data by subregion and State.<sup>a</sup>

Region/State	Area and volume data	Method for growth and mortality	Timber Products Output (removals) data			
			Pulpwood	Saw logs and Veneer <i>year of data</i>	Fuelwood	Other products
<b>NORTH</b>						
Connecticut	2005	Imputed	2005	2005	2003	2003
Delaware	1999	Reported	2005	2005	2003	2003
Illinois	2005	Reported	1998	1998	1998	1998
Indiana	2006	Reported	2005	2005	2005	2005
Iowa	2005	Imputed	2004	2004	2004	2004
Maine	2005	Reported	2005	2005	2003-05	2005
Maryland	1999	Reported	2004	2004	2003	2004
Massachusetts	2005	Imputed	2004	2004	2003	2004
Michigan	2006	Reported	2000	2000	2000	2000
Minnesota	2006	Reported	2004	2004	2004	2004
Missouri	2006	Imputed	2003	2003	2003	2003
New Hampshire	2005	Imputed	2005	2005	2005	2005
New Jersey	1999	Reported	2004	2004	2003	2003
New York	2004	Imputed	2003	2003	2003	2003
Ohio	2004	Imputed	2005	2005	2003	2005
Pennsylvania	2004	Imputed	2001-03	2001-03	2003	2003
Rhode Island	2005	Imputed	2005	2005	2003	2005
Vermont	1997	Reported	2005	2005	2003	2005
West Virginia	2000	Reported	2000	2000	2003	2000
Wisconsin	2006	Reported	2003	2003	2003	2003
<b>SOUTH</b>						
Alabama	2005	Reported	2003	2003	2003	2003
Arkansas	2005	Reported	2002	2002	2002	2002
Florida	2005	Reported	2003	2003	2003	2003
Georgia	2004	Reported	2003	2003	2003	2003
Kentucky	2004	Reported	2003	2003	2003	2003
Louisiana	2005	Reported	2002	2002	2002	2002
Mississippi	2006	Reported	2002	2002	2002	2002
North Carolina	2005	Reported	2003	2003	2003	2003
Oklahoma	1993	Reported	2002	2002	2002	2002
South Carolina	2005	Reported	2003	2003	2003	2003
Tennessee	2004	Reported	2003	2003	2003	2003
Texas	2005	Imputed	2003	2003	2003	2003
Virginia	2005	Reported	2003	2003	2003	2003

**Table A-1. (cont.)** Dates of inventory data by subregion and State.<sup>a</sup>

Region/State	Area and volume data	Method for growth and mortality	Timber Products Output (removals) data			
			Pulpwood	Saw logs and Veneer <i>year of data</i>	Fuelwood	Other products
<b>INTERIOR WEST</b>						
Arizona	2006	Reported	2002	2002	2002	2002
Colorado	2005	Reported	2002	2002	2002	2002
Idaho	2005	Reported	2001	2001	2001	2001
Kansas	2005	Imputed	2003	2003	2003	2003
Montana	2005	Reported	2004	2004	2004	2004
Nebraska	2005	Imputed	2001	2001	2001	2001
Nevada	2005	Reported	2005	2005	2005	2005
New Mexico	1999	Reported	2002	2002	2002	2002
North Dakota	2005	Imputed	2003	2003	2003	2003
South Dakota	2005	Imputed	2004	2004	2004	2004
Utah	2005	Reported	2002	2002	2002	2002
Wyoming	2000	Reported	2000	2000	2000	2000
<b>PACIFIC COAST</b>						
Alaska	1977-1994;1998	Reported	2005	2005	2005	2005
California	2006	Imputed	2000	2000	2000	2000
Hawaii	1985	Reported	1995	1995	n/a	1995
Oregon	2006	Imputed	2003	2003	2003	2003
Washington	2006	Imputed	2002	2002	2002	2002

<sup>a</sup> The inventory data reported in appendix C were not collected in 2006 and 2007. The nominal date of 2007 (January 1) is placed on area and volume and the nominal date of 2006 (January 1) is placed on removals, growth, and mortality.

## Accuracy of the Data

All of the forest inventory data for the national assessment are collected under the guidance of the Forest Service and compiled by the agency's FIA program. All data are collected by the FIA program in cooperation with State forestry agencies or National Forest System regions.

Inventories conducted by FIA are designed to meet the statistical guidelines for accuracy within one standard deviation at the 67-percent confidence level for each State. Table A-2 provides estimates of sampling errors for key variables presented in the resource tables (see appendix C). Because these estimates are for the State level, the accuracy of data for any national or multistate totals for these categories will be greater. Individual States with relatively small areas of forest or volumes of growing stock will be of lower accuracy and the reader is cautioned to consider States, such as those in New England, as a group for analysis.

## Interactive Data Availability

The included CD contains RPA Data Wiz 2007, a computer desktop application that allows custom summaries of Resource Planning Act (RPA) Assessment forest information. Summary tables, graphs, and choropleth maps can be produced with this software. A number of variables can be analyzed. Volumes for growing stock, live cull, dead salvable, netgrowth, and mortality can be estimated. Acreage, biomass, and tree count estimates are also available. Currently, removals are not available in this software. There is an English and a Metric version of RPA Data Wiz.

Your computer must have one of the following operating systems:

- Windows 95
- Windows 98
- Windows NT 4.0
- System administrator privileges for installation
- Windows 2000
- System administrator privileges for installation
- Service Pack 2 or higher
- Windows XP
- System administrator privileges for installation
- Not tested on Windows Vista

Your computer must have the following:

- CD-ROM or DVD-ROM drive
- Color monitor with 256 or more colors
- Microsoft Internet Explorer Version 5.0 or higher
- A minimum of 300 MB of disk space is required for installation of one version or 450 MB for both the English and metric versions.
- More space is required for temporary working files during operation of the application. This requirement depends on the operation performed. The application may require another 200+ MB of working space.

The following items are recommendations, but are not essential:

- Minimum of 200 MB of virtual memory
- Minimum of 512 MB of RAM
- Minimum of a Pentium III processor
- Minimum of a 14 inch computer monitor

## Board Foot Tables

Although this report does not contain board foot tables, it does recognize an important client base for these tables to compare historic data for certain products or geographic regions and provides the FIA Web site from where these tables may be downloaded: <http://www.fia.fs.fed.us/rpa>.

## Metric Equivalents for Various Units of Measure

For the convenience of those needing to have information in metric units, the following conversion factors are provided:

- 1 acre = 0.404686 hectares.
- 1,000 acres = 404.686 hectares.
- 1 board foot = 0.00348 cubic meters.
- 1 cubic foot = 0.028317 cubic meters.
- 1,000 cubic feet = 28.317 cubic meters.
- 1 inch = 2.54 centimeters or 0.0254 meters.
- 1 foot = 30.48 centimeters or 0.3048 meters.
- 1 mile = 1.609 kilometers.
- 1 square foot = 0.0929 square meters.
- 1 square foot per acre basal area = 0.229568 square meters per hectare.
- 1 ton = 0.90718 metric tons.
- Breast height = 1.37 meters above ground level.

**Table A-2.** Estimated sampling errors for data presented in this report<sup>a</sup>

State	Area of forest land	Area of timberland	Sampling category			
			Volume of growing stock	Volume of growing stock growth	Volume of growing stock mortality	Volume of growing stock removals <sup>b</sup>
Alabama	0.54	0.55	1.48	1.61	4.08	n/a
Alaska, Coast	3.84	6.30	8.82	n/a	n/a	n/a
Alaska, Interior	n/a	n/a	n/a	n/a	n/a	n/a
Arizona	1.55	5.52	7.20	5.40	17.80	n/a
Arkansas	0.25	0.34	1.44	1.70	3.96	n/a
California	0.86	1.36	2.22	2.98	3.31	n/a
Colorado	1.21	2.48	3.73	5.35	13.19	n/a
Connecticut	5.08	5.32	6.89	9.02	10.85	n/a
Delaware	5.22	5.03	8.65	17.17	12.29	n/a
Florida	1.30	1.18	2.97	1.72	4.55	n/a
Georgia	0.52	0.54	1.33	1.35	3.48	n/a
Hawaii	n/a	n/a	n/a	n/a	n/a	n/a
Idaho	1.69	2.53	4.53	2.70	4.50	n/a
Illinois	1.87	1.98	2.97	2.45	3.42	n/a
Indiana	1.63	1.72	2.55	2.36	3.89	n/a
Iowa	2.66	2.73	4.76	5.02	6.33	n/a
Kansas	3.74	3.87	7.86	4.87	5.11	n/a
Kentucky	0.43	0.56	1.65	3.45	5.54	n/a
Louisiana	0.32	0.37	2.00	2.30	5.36	n/a
Maine	0.42	0.52	1.36	3.60	3.70	n/a
Maryland	2.21	2.50	3.73	5.78	9.93	n/a
Massachusetts	3.52	3.77	5.07	4.39	9.03	n/a
Michigan	0.40	0.44	0.84	0.91	2.01	n/a
Minnesota	0.59	0.68	1.32	1.30	2.43	n/a
Mississippi	0.05	0.04	1.56	1.80	4.35	n/a
Missouri	0.83	0.90	1.34	1.57	2.38	n/a
Montana	1.25	1.78	3.10	2.74	4.31	n/a
Nebraska	5.30	5.51	9.99	8.88	7.08	n/a
Nevada	3.04	25.47	34.46	3.10	36.10	n/a
New Hampshire	1.53	1.76	3.16	0.00	0.00	n/a
New Jersey	3.34	3.84	5.52	8.03	21.21	n/a
New Mexico	1.52	3.34	4.39	4.70	26.50	n/a
New York	1.52	1.91	2.76	1.37	2.55	n/a
North Carolina	0.27	0.28	1.45	1.23	3.42	n/a
North Dakota	7.34	8.67	15.91	12.79	14.30	n/a

**Table A-2. (cont.)** Estimated sampling errors for data presented in this report<sup>a</sup>

State	Sampling category					
	Area of forest land	Area of timberland	Volume of growing stock	Volume of growing stock growth	Volume of growing stock mortality	Volume of growing stock removals <sup>b</sup>
Ohio	2.34	2.40	3.45	2.60	4.46	n/a
Oklahoma	0.36	1.32	3.09	4.30	14.32	n/a
Oregon	0.77	1.04	2.32	2.67	3.04	n/a
Pennsylvania	0.66	0.75	1.30	2.07	3.19	n/a
Rhode Island	8.37	8.43	11.39	9.17	17.57	n/a
South Carolina	0.70	0.74	2.13	4.14	3.88	n/a
South Dakota	3.33	3.60	5.05	8.00	10.94	n/a
Tennessee	0.68	0.79	1.53	1.90	3.02	n/a
Texas	0.77	0.82	2.15	2.20	5.49	n/a
Utah	1.23	4.08	5.79	10.50	6.90	n/a
Vermont	2.47	2.56	4.08	0.00	0.00	n/a
Virginia	0.61	0.69	1.42	1.29	3.87	n/a
Washington	0.96	1.38	3.14	1.68	1.95	n/a
West Virginia	0.76	0.82	1.44	1.96	4.01	n/a
Wisconsin	0.55	0.57	1.09	1.42	1.77	n/a
Wyoming	1.41	2.18	3.29	9.10	22.70	n/a

<sup>a</sup> Sampling errors for growth and mortality based on most recent periodic surveys.

<sup>b</sup> Removals data based on mill canvass data and assumed to have no error.

**Table A-3.** Common and scientific names of major tree species.

Common Name	Scientific Name
<b>Eastern Softwoods</b>	
True firs	<i>Abies</i> Mill.
Balsam fir	<i>A. balsamea</i> (L.) Mill.
Fraser fir	<i>A. fraseri</i> (Pursh) Poir.
Eastern redcedar	<i>Juniperus virginiana</i> L.
Tamarack	<i>Larix laricina</i> (Du Roi) K. Koch
Spruce	<i>Picea</i> A. Dietr.
Jack pine	<i>Pinus banksiana</i> Lamb.
Shortleaf pine	<i>P. echinata</i> Mill.
Slash pine	<i>P. elliotii</i> Engelm.
Longleaf pine	<i>P. palustris</i> Mill.
Red pine	<i>P. resinosa</i> Ait.
Eastern white pine	<i>P. strobus</i> L.
Loblolly pine	<i>P. taeda</i> L.
Baldcypress	<i>Taxodium</i> Rich.
Northern white-cedar	<i>Thuja occidentalis</i> L.
Eastern hemlock	<i>Tsuga canadensis</i> (L.) Carr.
<b>Eastern Hardwoods</b>	
Maple	<i>Acer</i> L.
Red (soft) maple	<i>A. rubrum</i> L.
Sugar (hard) maple	<i>A. saccharum</i> Marsh.
Birch	<i>Betula</i> L.
Yellow birch	<i>B. alleghaniensis</i> Britton
Paper birch	<i>B. papyrifera</i> Marsh.
Gray birch	<i>B. populifolia</i> Marsh.
Hackberry	<i>Celtis occidentalis</i> L.
American beech	<i>Fagus grandifolia</i> Ehrh.
Ash	<i>Fraxinus</i> L.
White Ash	<i>F. americana</i>
Black Ash	<i>F. nigra</i>
Green Ash	<i>F. pennsylvanica</i>
Black walnut	<i>Juglans nigra</i> L.
Sweetgum	<i>Liquidambar styraciflua</i> L.
Yellow-poplar	<i>Liriodendron tulipifera</i> L.
Tupelo, gum	<i>Nyssa</i> L.
Black tupelo	<i>N. sylvatica</i> Marsh. var. <i>sylvatica</i>
Sycamore	<i>Platanus occidentalis</i> L.
Aspen	<i>Populus</i> L.
Balsam poplar	<i>P. balsamifera</i> L.

Common Name	Scientific Name
<b>Eastern Hardwoods (cont.)</b>	
Eastern cottonwood	<i>P. deltoides</i> Bartr. ex Marsh.
Black cherry	<i>Prunus serotina</i> Ehrh.
Hickory spp.	<i>Carya</i> L.
Bitternut Hickory	<i>C. cordiformis</i>
Pignut Hickory	<i>C. glabra</i>
Shagbark Hickory	<i>C. ovata</i>
Mockernut Hickory	<i>C. tomentosa</i>
Oak	<i>Quercus</i> L.
White oak	<i>Q. alba</i> L.
Swamp white oak	<i>Q. bicolor</i> Willd.
Scarlet oak	<i>Q. coccinea</i> Muenchh.
Northern pin oak	<i>Q. ellipsoidalis</i> E. J. Hill
Southern red oak	<i>Q. falcata</i> Michx.
Cherrybark oak	<i>Q. falcata</i> var. <i>pagodifolia</i> Ell.
Bear oak	<i>Q. ilicifolia</i> Wangenh.
Shingle oak	<i>Q. imbricaria</i> Michx.
Overcup oak	<i>Q. lyrata</i> Walt.
Bur oak	<i>Q. macrocarpa</i> Michx.
Blackjack oak	<i>Q. marilandica</i> Muenchh.
Swamp chestnut oak	<i>Q. michauxii</i> Nutt.
Chinkapin oak	<i>Q. muehlenbergii</i> Engelm.
Water oak	<i>Q. nigra</i> L.
Pin oak	<i>Q. palustris</i> Muenchh.
Willow oak	<i>Q. phellos</i> L.
Chestnut oak	<i>Q. prinus</i> L.
Northern red oak	<i>Q. rubra</i> L.
Shumard oak	<i>Q. shumardii</i> Buckl.
Post oak	<i>Q. stellata</i> Wangenh. var. <i>stellata</i>
Black oak	<i>Q. velutina</i> Lam.
Willow	<i>Salix</i> L.
Basswood	<i>Tilia</i> L.
Elm	<i>Ulmus</i> L.

**Table A-3. (cont.)** Common and scientific names of major tree species.

Common Name	Scientific Name
<b>Western Softwoods</b>	
True firs	<i>Abies</i> Mill.
Pacific silver fir	<i>A. amabilis</i> Dougl. ex Forbes
White fir	<i>A. concolor</i> (Gord. & Glend.) Lindl. ex Hildebr.
Grand fir	<i>A. grandis</i> (Dougl. ex D. Don) Lindl.
Subalpine fir	<i>A. lasiocarpa</i> (Hook.) Nutt.
Juniper	<i>Juniperus</i> L.
Incense-cedar	<i>Libocedrus decurrens</i> Torr.
Engelmann spruce	<i>Picea engelmannii</i> Parry ex Engelm.
Blue spruce	<i>P. pungens</i> Engelm.
Sitka spruce	<i>P. sitchensis</i> (Bong.) Carr.
Lodgepole pine	<i>Pinus contorta</i> Dougl. ex Loud.
Pinyon pine	<i>P. edulis</i> Engelm.
Apache pine	<i>P. engelmannii</i> Carr.
Limber pine	<i>P. flexilis</i> James
Jeffrey pine	<i>P. jeffreyi</i> Grev. & Balf.
Sugar pine	<i>P. lambertiana</i> Dougl.
Chihuahua pine	<i>P. leiophylla</i> var. <i>chihuahuana</i> (Engelm.) Shaw
Western white pine	<i>P. monticola</i> Dougl. ex D. Don
Ponderosa pine	<i>P. ponderosa</i> Dougl. ex Laws.
Arizona pine	<i>P. ponderosa</i> var. <i>arizonica</i> (Engelm.) Shaw
Douglas-fir	<i>Pseudotsuga menziesii</i> (Mirb.) Franco
Redwood	<i>Sequoia sempervirens</i> (D. Don) Endl.
Western redcedar	<i>Thuja plicata</i> Donn ex D. Don
Western hemlock	<i>Tsuga heterophylla</i> (Raf.) Sarg.
Mountain hemlock	<i>T. mertensiana</i> (Bong.) Carr.
<b>Western Hardwoods</b>	
Red alder	<i>Alnus rubra</i> Bong.
Tanoak	<i>Lithocarpus densiflorus</i> (Hook & Arn.) Rehd.
Cottonwood	<i>Populus</i> L.
Oak	<i>Quercus</i> L.

Source: Little (1979).

## Glossary of Terms

**annual mortality**—The average annual volume of sound wood in growing-stock trees that died from natural causes during the period between inventories.

**annual removals**—The net volume of growing-stock trees removed from the inventory during a specified year by harvesting, cultural operations such as timber stand improvement, or land clearing.

**Bureau of Land Management (BLM)**—An ownership class of Federal lands administered by the Bureau of Land Management, U.S. Department of the Interior.

**coarse materials**—Wood residues suitable for chipping, such as slabs, edgings, and trimmings.

**commercial species**—Tree species suitable for industrial wood products.

**county and municipal**—An ownership class of public lands administered by counties or local public agencies, or lands leased by these governmental units for more than 50 years.

**cull tree**—A live tree, 5.0 inches in diameter at breast height (d.b.h.) or larger, that is unmerchantable for saw logs now or prospectively because of rot, roughness, or species. (See definitions for *rotten tree* and *rough tree*.)

**diameter class**—A classification of trees based on diameter outside bark measured at breast height (4.5 feet above ground). D.b.h. is the common abbreviation for “diameter at breast height.” With 2-inch diameter classes, the 6-inch class, for example, includes trees 5.0 through 6.9 inches d.b.h.

**ecoregions**—Areas of relative homogeneity in ecological systems and their components where similar climate, altitude, and predominant natural vegetation are important classification criteria. A group of ecoregions with associated landforms and climate forms ecozones.

**Federal**—An ownership class of public lands administered by the U.S. Government.

**fiber products**—Products derived from wood and bark residues, such as pulp, composition board products, and wood chips for export.

**fine materials**—Wood residues not suitable for chipping, such as planer shavings and sawdust.

**forest industry**—An ownership class of private lands administered by companies or individuals operating wood-using plants.

**forest land**—Land at least 120 feet wide and 1 acre in size with at least 10 percent cover (or equivalent stocking) by live trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Forest land includes transition zones, such as areas between forest and nonforest lands that have at least 10 percent cover (or equivalent stocking) with live trees and forest areas adjacent to urban and built-up lands. Roadside, streamside, and shelterbelt strips of trees must have a crown width of at least 120 feet and continuous length of at least 363 feet to qualify as forest land. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if they are less than 120 feet wide or an acre in size. Tree-covered areas in agricultural production settings, such as fruit orchards, or tree-covered areas in urban settings, such as city parks, are not considered forest land. NOTE: This definition does not apply to the data for western Texas, western Oklahoma, and interior Alaska, which, to date, have not had field verification of reported estimates that are based solely on remote sensing.

**forest type**—A classification of forest land based on the species presently forming a plurality of the live-tree stocking.

**forest-type group**—A combination of forest types that share closely associated species or site requirements and generally are combined for brevity of reporting.

### Major eastern forest-type groups

**white-red-jack pine**—Forests in which eastern white pine, red pine, or jack pine, singly or in combination, comprise a plurality of the stocking. Common associates include hemlock, aspen, birch, and maple.

**spruce-fir**—Forests in which spruce or true firs, singly or in combination, comprise a plurality of the stocking. Common associates include white cedar, tamarack, maple, birch, and hemlock.

**longleaf-slash pine**—Forests in which longleaf or slash pine, singly or in combination, comprise a plurality of the stocking. Common associates include other southern pines, oak, and gum.

**loblolly-shortleaf pine**—Forests in which loblolly pine, shortleaf pine, or southern yellow pines, except longleaf or slash pine, singly or in combination, comprise a plurality of the stocking. Common associates include oak, hickory, and gum.

**oak-pine**—Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking, but in which pine or eastern redcedar comprises 25 to 50 percent of the stocking. Common associates include gum, hickory, and yellow-poplar.



**oak-hickory**—Forests in which upland oaks or hickory, singly or in combination, comprise a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand is classified as oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

**oak-gum-cypress**—Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprise a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand is classified as oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

**elm-ash-cottonwood**—Forests in which elm, ash, or cottonwood, singly or in combination, comprise a plurality of the stocking. Common associates include willow, sycamore, beech, and maple.

**maple-beech-birch**—Forests in which maple, beech, or yellow birch, singly or in combination, comprise a plurality of the stocking. Common associates include hemlock, elm, basswood, and white pine.

**aspen-birch**—Forests in which aspen, balsam poplar, paper birch, or gray birch, singly or in combination, comprise a plurality of the stocking. Common associates include maple and balsam fir.

### Major western forest-type groups

**Douglas-fir**—Forests in which Douglas-fir comprises a plurality of the stocking. Common associates include western hemlock, western redcedar, true firs, redwood, ponderosa pine, and larch.

**hemlock-Sitka spruce**—Forests in which western hemlock and/or Sitka spruce comprise a plurality of the stocking. Common associates include Douglas-fir, silver fir, and western redcedar.

**redwood**—Forests in which redwood comprises a plurality of the stocking. Common associates include Douglas-fir, grand fir, and tanoak.

**ponderosa pine**—Forests in which ponderosa pine comprises a plurality of the stocking. Common associates include Jeffrey pine, sugar pine, limber pine, Arizona pine, Apache pine, Chihuahua pine, Douglas-fir, incense-cedar, and white fir.

**western white pine**—Forests in which western white pine comprises a plurality of the stocking. Common associates include western redcedar, larch, white fir, Douglas-fir, lodgepole pine, and Engelmann spruce.

**lodgepole pine**—Forests in which lodgepole pine comprises a plurality of the stocking. Common associates include alpine fir, western white pine, Engelmann spruce, aspen, and larch.

**larch**—Forests in which western larch comprises a plurality of the stocking. Common associates include Douglas-fir, grand fir, western redcedar, and western white pine.

**fir-spruce**—Forests in which true firs, Engelmann spruce, or Colorado blue spruce, singly or in combination, comprise a plurality of the stocking. Common associates include mountain hemlock and lodgepole pine.

**western hardwoods**—Forests in which aspen, red alder, or other western hardwoods, singly or in combination, comprise a plurality of the stocking.

**pinyon-juniper**—Forests in which pinyon or juniper, or both, comprise a plurality of the stocking.

**other softwoods**—Forests in which other softwood species not mentioned above comprise a plurality of the stocking. These are primarily black spruce forests in interior Alaska.

**fuelwood**—Wood used for conversion to some form of energy, primarily in residential use.

**growing stock**—A classification of timber inventory that includes live trees of commercial species meeting specified standards of quality or vigor. Cull trees are excluded. When associated with volume, includes only trees 5.0 inches d.b.h. and larger.

**hardwood**—A dicotyledonous tree, usually broad-leaved and deciduous.

**industrial wood**—All commercial roundwood products except fuelwood.

**land area**—The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 200 feet wide; and lakes, reservoirs, and ponds less than 4.5 acres in area.

**live cull**—A classification that includes live, cull trees. When associated with volume, it is the net volume in live, cull trees that are 5.0 inches d.b.h. and larger.

**logging residues**—The unused portions of growing-stock trees cut or killed by logging and left in the woods.

**lowland forest types**—Generally refers to the elm-ash-cottonwood and oak-gum-cypress forest types.

**national forest**—An ownership class of Federal lands, designated by Executive order or statute as national forests or purchase units, and other lands under the administration of the Forest Service including experimental areas and Bankhead-Jones Title III lands.

**Native American land**—(a) Lands held in trust by the United States or individual States for Native American tribes or individual Native Americans or (b) lands owned in fee by Native American tribes whether subject to Federal or State restrictions against alienation or not.

**net annual growth**—The average annual net increase in the volume of trees during the period between inventories. Components include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus the net volume of trees reaching the minimum size class during the year, minus the volume of trees that died during the year and minus the net volume of trees that became cull trees during the year.

**net volume in cubic feet**—The gross volume in cubic feet less deductions for rot, roughness, and poor form. Volume is computed for the central stem from a 1-foot stump to a minimum 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs.

**noncommercial species**—Tree species of typically small size, poor form, or inferior quality, which normally do not develop into trees suitable for industrial wood products.

**nonforest land**—Land that has never supported forests and lands formerly forested where use of timber management is precluded by development for other uses. (Note: Includes area used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 4.5-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, unimproved roads and nonforest strips must be more than 120 feet wide, and clearings, etc., must be more than 1 acre in area, to qualify as nonforest land.)

**nonindustrial private**—An ownership class of private lands where the owner does not operate wood-using plants.

**nonstocked areas**—Timber land with less than 10 percent of the area stocked with all live trees.

**other Federal**—An ownership class of Federal lands other than those administered by the Forest Service or the Bureau of Land Management. This category includes the National Park Service, Fish and Wildlife Service, Departments of Defense and Energy, and miscellaneous Federal ownerships.

**other forest land**—Forest land other than timber land and productive reserved forest land. It includes available forest land, which is incapable of annually producing 20 cubic feet per acre

of industrial wood under natural conditions because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

**other land**—Nonforest land less the area in streams, sloughs, estuaries, and canals between 120 and 200 feet wide and lakes, reservoirs, and ponds between 1 and 4.5 acres in area.

**other private**—An ownership class of private lands that are not owned by corporate interests, includes tribal lands.

**other products**—A miscellaneous category of roundwood products that includes such items as cooperage, pilings, poles, posts, shakes, shingles, board mills, charcoal, and export logs.

**other public**—An ownership class that includes all public lands except national forests. This category generally includes State, county, and municipal ownerships.

**other red oaks**—A group of species in the genus *Quercus* that includes scarlet oak, northern pin oak, southern red oak, bear oak, shingle oak, laurel oak, blackjack oak, water oak, pin oak, willow oak, and black oak.

**other removals**—Unutilized wood volume from cut or otherwise killed growing stock, from cultural operations such as precommercial thinnings or from timberland clearing. Does not include volume removed from inventory through reclassification of timber land to productive reserved forest land.

**other sources**—Sources of roundwood products that are nongrowing stock. These include salvable dead trees, rough and rotten trees, trees of noncommercial species, trees less than 5.0 inches d.b.h., tops, and roundwood harvested from nonforest land (e.g., fence rows).

**other white oaks**—A group of species in the genus *Quercus* that includes overcup oak, chestnut oak, and post oak.

**ownership**—The property owned by one ownership unit, including all parcels of land in the United States.

**ownership unit**—A classification of ownership encompassing all types of legal entities having an ownership interest in land, regardless of the number of people involved. A unit may be an individual; a combination of individuals; a legal entity such as a corporation, partnership, club, or trust; or a public agency. An ownership unit has control of a parcel or group of parcels of land.

**poletimber trees**—Live trees at least 5.0 inches in d.b.h., but smaller than sawtimber trees.

**primary wood-using mill**—A mill that converts roundwood products into other wood products. Common examples are sawmills that convert saw logs into lumber and pulpmills that convert pulpwood into wood pulp.

**productivity class**—A classification of forest land in terms of potential annual cubic-foot volume growth per acre at culmination of mean annual increment in fully stocked natural stands.

**private corporate**—An ownership class of forest land that is administered by entities that are legally incorporated.

**private noncorporate**—An ownership class of private lands that are not owned by corporate interests. Includes individuals, Native American lands, unincorporated partnerships, clubs, and lands leased by corporate interests.

**pulpwood**—Roundwood, whole-tree chips, or wood residues that are used for the production of wood pulp.

**reserved forest land**—Forest land withdrawn from timber utilization through statute, administrative regulation, or designation without regard to productive status.

**residues**—Bark and woody materials that are generated in primary wood-using mills when roundwood products are converted to other products. Examples are slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screenings. Includes bark residues and wood residues (both coarse and fine materials) but excludes logging residues.

**rotten tree**—A live tree of commercial species that does not contain a saw log now or prospectively primarily because of rot (that is, when rot accounts for more than 50 percent of the total cull volume).

**rough tree**—(a) A live tree of commercial species that does not contain a saw log now or prospectively primarily because of roughness (that is, when sound cull due to such factors as poor form, splits, or cracks accounts for more than 50 percent of the total cull volume) or (b) a live tree of noncommercial species.

**roundwood products**—Logs, bolts, and other round timber generated from harvesting trees for industrial or consumer use.

**rural-urban continuum**—A classification of U.S. counties by urban characteristic as described by Butler and Beale (1993). Classes are generically defined as follows:

### Major metro

**Major metro**— Central: Central counties of metropolitan areas of 1 million population or more.

**Major metro**— Fringe: Fringe counties of metropolitan areas of 1 million population or more.

### Intermediate and small metro

**Intermediate metro**—Counties in metropolitan areas of 250,000 to 1 million population.

**Small metro**—Counties in metropolitan areas of less than 250,000 population.

### Large town

**Large town metro**—Urban population of 20,000 or more, adjacent to a metropolitan area.

**Large town nonmetro**—Urban population of 20,000 or more, not adjacent to a metropolitan area.

### Small town

**Small town metro**—Urban population of 2,500 to 19,999, adjacent to a metropolitan area.

**Small town nonmetro**—Urban population of 2,500 to 19,999, not adjacent to a metropolitan area.

### Rural

**Rural metro**—Completely rural (no places with a population of 2,500 or more) adjacent to a metropolitan area.

**Rural nonmetro**—Completely rural (no places with a population of 2,500 or more) not adjacent to a metropolitan area.

**salvable dead tree**—A downed or standing dead tree that is considered currently or potentially merchantable by regional standards.

**saplings**—Live trees 1.0 inch through 4.9 inches d.b.h.

**saw log**—A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods, or meeting other combinations of size and defect specified by regional standards.

**seedlings**—Live trees less than 1.0 inch d.b.h. and at least 1 foot in height.

**select red oaks**—A group of species in the genus *Quercus* that includes cherrybark oak, northern red oak, and Shumard oak.

**select white oaks**—A group of species in the genus *Quercus* that includes white oak, swamp white oak, bur oak, swamp chestnut oak, and chinkapin oak.

**softwood**—A coniferous tree, usually evergreen, having needles or scale-like leaves.

**sound dead**—The net volume in salvable dead trees.

### stand size class

A classification of forest land based on the size class of all live trees in the area. The classes include the following:

**nonstocked stands**—Forest land that is stocked with less than 10 percent of full stocking with all live trees. Examples are recently cut-over areas or reverting agricultural fields.

**seedling-sapling stands**—Forest land that is stocked with at least 10 percent of full stocking with all live trees with half or more of such stocking in seedlings or saplings or both.

**poletimber stands**—Forest land that is stocked with at least 10 percent of full stocking with all live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of poletimber exceeds that of sawtimber.

**sawtimber stands**—Forest land that is stocked with at least 10 percent of full stocking with all live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

**State**—An ownership class of public lands owned by States or lands leased by States for more than 50 years.

**stocking**—The degree of occupancy of land by trees, measured by basal area or number of trees by size and spacing, or both, compared to a stocking standard; that is, the basal area or number of trees, or both, required to fully utilize the growth potential of the land.

**timber land**—Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timber land are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.)

**tops**—The wood of a tree above the merchantable height (or above the point on the stem 4.0 inches diameter outside bark [d.o.b.]). It includes the usable material in the uppermost stem.

**unreserved forest land**—Forest land that is not withdrawn from harvest by statute or administrative regulation. Includes forest lands that are not capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands.

**veneer log**—A roundwood product from which veneer is sliced or sawn and that usually meets certain standards of minimum diameter and length and maximum defect.

**weight**—The weight of wood and bark, oven-dry basis (approximately 12-percent moisture content).

**xerophytic plants**—Plants growing where soil moisture conditions are very dry most of the time.

### References

- Butler, M.A.; Beale, C.L.. 1993. Rural-Urban continuum Codes for Metro and Nonmetro counties, AGES-9028, U.S. Dept. Agr., Economic Research Service. p.3.
- Little, E., Jr. 1979. Checklist of United States trees (native and naturalized). Agric. Handb. 541. Washington, DC. U.S. Department of Agriculture, Forest Service. 375 p.

## Appendix B—Station and Regional Contacts

**Table B-1.** Addresses of Forest Service research stations with responsibilities for forest inventories in the United States and their area of responsibility.<sup>a</sup>

Address	Area of Responsibility
<b>Northern Research Station</b> Forest Service 1992 Folwell Ave. St. Paul, MN 55108	Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, West Virginia, and Wisconsin
<b>Southern Research Station</b> Forest Service 4700 Old Kingston Pike Knoxville, TN 37919	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, Puerto Rico, and the Virgin Islands
<b>Rocky Mountain Research Station</b> Forest Service 2150 Centre Ave., Building A Fort Collins, CO 80526-2098	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming
<b>Pacific Northwest Research Station</b> Forest Service 620 SW Main St., Suite 400 Portland, OR 97205	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, Republic of Palau, Republic of the Marshall Islands

<sup>a</sup>For additional information, visit the Forest Inventory and Analysis Web site: <http://www.fia.fs.fed.us>.

**Table B-2.** Addresses of National Forest System regional offices in the United States.

Address	Region	Location of national forests
Forest Service Northern Region Federal Building P.O. Box 7669 Missoula, MT 59807	Region 1	Northern Idaho, Montana, North Dakota, and northwestern South Dakota
Forest Service Rocky Mountain Region P.O. Box 25127 Lakewood, CO 80225	Region 2	Colorado, Kansas, Nebraska, South Dakota, and eastern Wyoming
Forest Service Southwestern Region 333 Broadway SE Albuquerque, NM 87102	Region 3	Arizona and New Mexico
Forest Service Intermountain Region Federal Building 324 25th St. Ogden, UT 84401	Region 4	Southern Idaho, Nevada, Utah, and western Wyoming
Forest Service Pacific Southwest Region 1323 Club Dr. Vallejo, CA 94592	Region 5	California
Forest Service Pacific Northwest Region 333 S.W. 1st Ave. P.O. Box 3632 Portland, OR 97208	Region 6	Oregon and Washington
Forest Service Southern Region 1720 Peachtree Rd., N.W. Atlanta, GA 30367	Region 8	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia, and Puerto Rico
Forest Service Eastern Region 626 E. Wisconsin Ave., Suite 700 Milwaukee, WI 53203	Region 9	Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin
Forest Service Alaska Region 709 W. 9th St. Juneau, AK 99802-1628	Region 10	Alaska

For additional information, contact the Internet sites for the regional offices through the Forest Service home page: <http://www.fs.fed.us>. The forest management staff in each regional office manages timber inventories.

## Appendix C—Resource Tables

**Table 1.** Land areas in the United States by major class, region, subregion, and State, 2007

**Table 2.** Forest land area in the United States by ownership, region, subregion, and State, 2007

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**Table 1.** Land area in the United States by major class, region, subregion, and State, 2007

Region, subregion, and State	Land class								
	Total land area <sup>a</sup>	Forest land						Other	Other land
		Total forest land	Timber land			Reserved			
			Total	Planted	Natural origin				
<i>Thousand acres</i>									
<b>North</b>									
<b>Northeast</b>									
Connecticut	3,101	1,794	1,732	27	1,705	31	30	1,307	
Delaware	1,251	383	376	16	359	0	7	868	
Maine	19,752	17,673	17,163	381	16,782	318	192	2,079	
Maryland <sup>b</sup>	6,256	2,566	2,372	162	2,210	180	14	3,690	
Massachusetts	5,018	3,171	2,947	36	2,910	131	93	1,846	
New Hampshire	5,740	4,850	4,674	25	4,649	128	48	890	
New Jersey	4,748	2,132	1,876	6	1,870	160	96	2,616	
New York	30,217	18,669	16,015	811	15,204	2,501	153	11,548	
Pennsylvania	28,683	16,577	16,018	766	15,253	458	100	12,105	
Rhode Island	669	356	351	0	350	0	5	313	
Vermont	5,920	4,618	4,482	34	4,448	114	21	1,302	
West Virginia	15,415	12,007	11,797	108	11,689	174	36	3,409	
<b>Northeast Total</b>	<b>126,767</b>	<b>84,796</b>	<b>79,803</b>	<b>2,374</b>	<b>77,429</b>	<b>4,196</b>	<b>797</b>	<b>41,972</b>	
<b>North Central</b>									
Illinois	35,608	4,525	4,363	96	4,267	162	0	31,083	
Indiana	22,980	4,656	4,533	171	4,362	123	0	18,324	
Iowa	35,842	2,879	2,824	23	2,801	15	40	32,963	
Michigan	36,275	19,545	19,023	1,143	17,880	325	197	16,730	
Minnesota	51,024	16,391	15,113	615	14,498	820	459	34,633	
Missouri	44,093	15,078	14,674	84	14,591	241	164	29,014	
Ohio	26,207	7,894	7,644	387	7,258	228	22	18,313	
Wisconsin	34,791	16,275	16,042	929	15,113	107	126	18,516	
<b>North Central Total</b>	<b>286,819</b>	<b>87,243</b>	<b>84,215</b>	<b>3,446</b>	<b>80,769</b>	<b>2,020</b>	<b>1,008</b>	<b>199,576</b>	
<b>North Total</b>	<b>413,586</b>	<b>172,039</b>	<b>164,018</b>	<b>5,820</b>	<b>158,198</b>	<b>6,216</b>	<b>1,805</b>	<b>241,548</b>	
<b>South</b>									
<b>Southeast</b>									
Florida	35,026	16,147	15,552	5,344	10,208	497	98	18,879	
Georgia	37,114	24,784	24,247	7,459	16,788	517	20	12,330	
North Carolina	31,128	18,447	17,916	3,376	14,540	410	120	12,682	
South Carolina	19,207	12,746	12,641	3,332	9,309	99	5	6,461	
Virginia	25,626	15,766	15,309	2,236	13,073	415	42	9,860	
<b>Southeast Total</b>	<b>148,102</b>	<b>87,889</b>	<b>85,665</b>	<b>21,747</b>	<b>63,918</b>	<b>1,939</b>	<b>285</b>	<b>60,213</b>	

**Table 1. (cont.)** Land area in the United States by major class, region, subregion, and State, 2007

Region, subregion, and State	Total land area <sup>a</sup>	Land class							
		Total forest land	Forest land					Other	Other land
			Timber land			Reserved			
			Total	Planted	Natural origin				
<i>Thousand acres</i>									
<b>South Central</b>									
Alabama	32,435	22,693	22,580	6,329	16,251	106	8	9,742	
Arkansas	33,324	18,830	18,480	2,984	15,496	234	116	14,494	
Kentucky	25,426	11,970	11,648	84	11,564	285	38	13,455	
Louisiana	27,880	14,222	14,116	4,260	9,857	80	26	13,658	
Mississippi	30,026	19,622	19,536	5,550	13,986	43	43	10,404	
Oklahoma	43,954	7,665	6,234	636	5,598	45	1,386	36,290	
Tennessee	26,390	14,480	13,913	518	13,395	568	0	11,909	
Texas	167,693	17,273	11,859	2,796	9,063	114	5,300	150,420	
<b>South Central Total</b>	<b>387,127</b>	<b>126,756</b>	<b>118,365</b>	<b>23,156</b>	<b>95,208</b>	<b>1,474</b>	<b>6,917</b>	<b>260,372</b>	
<b>South Total</b>	<b>535,229</b>	<b>214,644</b>	<b>204,029</b>	<b>44,903</b>	<b>159,126</b>	<b>3,414</b>	<b>7,202</b>	<b>320,585</b>	
<b>Rocky Mountain</b>									
<b>Great Plains</b>									
Kansas	52,488	2,106	2,028	39	1,988	1	76	50,383	
Nebraska	49,206	1,245	1,174	34	1,140	10	61	47,961	
North Dakota	44,337	724	534	5	529	25	165	43,613	
South Dakota	48,434	1,682	1,552	18	1,534	42	88	46,752	
<b>Great Plains Total</b>	<b>194,465</b>	<b>5,757</b>	<b>5,287</b>	<b>97</b>	<b>5,191</b>	<b>79</b>	<b>390</b>	<b>188,708</b>	
<b>Intermountain</b>									
Arizona	72,764	18,671	3,361	10	3,351	1,891	13,419	54,092	
Colorado	66,390	22,612	11,541	13	11,527	2,576	8,495	43,778	
Idaho	52,909	21,430	16,203	158	16,044	3,975	1,253	31,479	
Montana	93,306	25,014	19,790	187	19,604	3,939	1,284	68,293	
Nevada	70,446	11,089	417	0	417	653	10,019	59,357	
New Mexico	77,674	16,682	4,359	0	4,359	1,704	10,619	60,992	
Utah	52,497	17,962	4,014	9	4,004	1,904	12,045	34,535	
Wyoming	62,062	11,445	5,997	48	5,949	3,784	1,664	50,617	
<b>Intermountain Total</b>	<b>548,047</b>	<b>144,905</b>	<b>65,681</b>	<b>426</b>	<b>65,255</b>	<b>20,427</b>	<b>58,798</b>	<b>403,143</b>	
<b>Rocky Mountain Total</b>	<b>742,512</b>	<b>150,661</b>	<b>70,968</b>	<b>522</b>	<b>70,446</b>	<b>20,506</b>	<b>59,187</b>	<b>591,851</b>	
<b>Pacific Coast</b>									
<b>Alaska</b>									
Alaska	365,042	126,869	11,865	7	11,857	33,068	81,936	238,173	
<b>Alaska Total</b>	<b>365,042</b>	<b>126,869</b>	<b>11,865</b>	<b>7</b>	<b>11,857</b>	<b>33,068</b>	<b>81,936</b>	<b>238,173</b>	

**Table 1. (cont.)** Land area in the United States by major class, region, subregion, and State, 2007

Region, subregion, and State	Total land area <sup>a</sup>	Land class							
		Total forest land	Forest land					Other	Other land
			Timber land			Reserved			
			Total	Planted	Natural origin				
<i>Thousand acres</i>									
<b>Pacific Northwest</b>									
Oregon	61,181	30,169	24,617	5,610	19,006	2,357	3,196	31,011	
Washington	42,609	22,279	18,873	4,423	14,449	3,054	352	20,330	
<b>Pacific Northwest Total</b>	<b>103,790</b>	<b>52,449</b>	<b>43,489</b>	<b>10,034</b>	<b>33,456</b>	<b>5,411</b>	<b>3,548</b>	<b>51,341</b>	
<b>Pacific Southwest</b>									
California	99,599	32,817	19,144	1,355	17,789	5,834	7,839	66,783	
Hawaii	4,111	1,748	700	30	670	196	853	2,363	
<b>Pacific Southwest Total</b>	<b>103,710</b>	<b>34,565</b>	<b>19,843</b>	<b>1,385</b>	<b>18,458</b>	<b>6,030</b>	<b>8,692</b>	<b>69,145</b>	
<b>Pacific Coast Total</b>	<b>572,542</b>	<b>213,883</b>	<b>75,198</b>	<b>11,426</b>	<b>63,772</b>	<b>44,509</b>	<b>94,176</b>	<b>358,659</b>	
<b>U.S. Total</b>	<b>2,263,870</b>	<b>751,228</b>	<b>514,213</b>	<b>62,672</b>	<b>451,541</b>	<b>74,644</b>	<b>162,370</b>	<b>1,512,642</b>	

<sup>a</sup> Source: United States Department of Commerce. Census 2000 United States Gazetteer Files.

<sup>b</sup> Maryland Total land area includes 39,298 acres in District of Columbia.

**Note:** Data may not add to Totals because of rounding.

**Table 2.** Forest land area in the United States by ownership, region, subregion, and State, 2007

Region, subregion, and State	Public								Private <sup>a</sup>			
	All ownerships	Total public	Federal					State	County and municipal	Total private	Private corporate	Private noncorporate
			Total Federal	National forest	Bureau of Land Management	Other						
<i>Thousand acres</i>												
<b>North</b>												
<b>Northeast</b>												
Connecticut	1,794	411	0	0	0	0	257	154	1,383	235	1,148	
Delaware	383	32	0	0	0	0	32	0	351	107	244	
Maine	17,673	1,098	164	53	0	110	776	158	16,575	10,314	6,261	
Maryland	2,566	609	72	0	0	72	424	113	1,957	495	1,462	
Massachusetts	3,171	992	106	0	0	106	603	283	2,179	182	1,998	
New Hampshire	4,850	1,204	773	719	0	54	265	166	3,646	803	2,844	
New Jersey	2,132	810	106	0	0	106	531	173	1,322	517	805	
New York	18,669	4,231	142	11	0	131	3,630	459	14,438	2,248	12,190	
Pennsylvania	16,577	4,839	603	497	0	107	3,812	424	11,738	2,135	9,603	
Rhode Island	356	53	0	0	0	0	42	10	303	52	251	
Vermont	4,618	754	369	337	0	32	313	72	3,864	755	3,109	
West Virginia	12,007	1,589	1,233	1,073	0	161	278	77	10,418	3,244	7,174	
<b>Northeast Total</b>	<b>84,796</b>	<b>16,621</b>	<b>3,568</b>	<b>2,689</b>	<b>0</b>	<b>879</b>	<b>10,964</b>	<b>2,088</b>	<b>68,175</b>	<b>21,087</b>	<b>47,088</b>	
<b>North Central</b>												
Illinois	4,525	795	368	290	0	78	204	223	3,730	221	3,509	
Indiana	4,656	767	403	189	0	213	334	31	3,888	300	3,588	
Iowa	2,879	327	104	0	0	104	163	60	2,552	41	2,511	
Michigan	19,545	7,427	2,958	2,640	0	318	4,118	351	12,117	2,660	9,458	
Minnesota	16,391	9,277	2,789	2,459	1	329	4,400	2,089	7,114	1,193	5,921	
Missouri	15,078	2,686	1,838	1,493	0	345	784	63	12,393	638	11,755	
Ohio	7,894	921	276	225	0	50	423	222	6,973	909	6,064	
Wisconsin	16,275	5,157	1,576	1,407	0	169	1,075	2,506	11,117	1,443	9,674	
<b>North Central Total</b>	<b>87,243</b>	<b>27,357</b>	<b>10,312</b>	<b>8,704</b>	<b>1</b>	<b>1,607</b>	<b>11,501</b>	<b>5,545</b>	<b>59,885</b>	<b>7,405</b>	<b>52,481</b>	
<b>North Total</b>	<b>172,039</b>	<b>43,978</b>	<b>13,880</b>	<b>11,393</b>	<b>1</b>	<b>2,486</b>	<b>22,465</b>	<b>7,633</b>	<b>128,060</b>	<b>28,492</b>	<b>99,569</b>	
<b>South</b>												
<b>Southeast</b>												
Florida	16,147	4,720	2,068	1,067	0	1,000	2,221	431	11,427	6,441	4,986	
Georgia	24,784	2,343	1,758	736	0	1,022	356	230	22,440	7,965	14,475	
North Carolina	18,447	2,950	2,090	1,169	0	921	601	258	15,497	3,882	11,615	
South Carolina	12,746	1,557	1,071	641	0	430	325	160	11,189	3,574	7,615	
Virginia	15,766	2,766	2,250	1,692	0	558	302	213	13,000	2,912	10,088	
<b>Southeast Total</b>	<b>87,889</b>	<b>14,336</b>	<b>9,237</b>	<b>5,306</b>	<b>0</b>	<b>3,931</b>	<b>3,806</b>	<b>1,293</b>	<b>73,553</b>	<b>24,775</b>	<b>48,778</b>	

**Table 2. (cont.)** Forest land area in the United States by ownership, region, subregion, and State, 2007

Region, subregion, and State	Public							Private <sup>a</sup>				
	All ownerships	Federal						State	County and municipal	Total private	Private corporate	Private noncorporate
		Total public	Total Federal	National forest	Bureau of Land Management	Other	State					
<b>South Central</b>												
Alabama	22,693	1,429	986	746	0	240	330	113	21,264	6,311	14,953	
Arkansas	18,830	3,674	3,155	2,546	0	609	448	71	15,156	5,454	9,703	
Kentucky	11,970	1,324	1,059	744	0	315	212	53	10,647	1,491	9,156	
Louisiana	14,222	1,709	975	695	0	279	538	197	12,512	6,499	6,014	
Mississippi	19,622	2,303	1,834	1,326	0	508	236	233	17,320	4,714	12,605	
Oklahoma	7,665	665	499	245	0	255	139	27	7,000	1,283	5,716	
Tennessee	14,480	2,171	1,473	741	0	732	599	99	12,310	2,209	10,101	
Texas	17,273	1,069	905	682	0	224	109	54	16,204	4,418	11,786	
<b>South Central Total</b>	<b>126,756</b>	<b>14,344</b>	<b>10,886</b>	<b>7,725</b>	<b>0</b>	<b>3,161</b>	<b>2,611</b>	<b>847</b>	<b>112,412</b>	<b>32,378</b>	<b>80,034</b>	
<b>South Total</b>	<b>214,644</b>	<b>28,679</b>	<b>20,124</b>	<b>13,031</b>	<b>0</b>	<b>7,093</b>	<b>6,417</b>	<b>2,139</b>	<b>185,965</b>	<b>57,153</b>	<b>128,812</b>	
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	2,106	112	73	0	0	73	20	19	1,994	51	1,943	
Nebraska	1,245	153	81	48	0	33	52	19	1,092	7	1,085	
North Dakota	724	214	157	72	8	76	46	11	510	6	504	
South Dakota	1,682	1,190	1,138	1,039	45	54	52	0	492	23	469	
<b>Great Plains Total</b>	<b>5,757</b>	<b>1,669</b>	<b>1,449</b>	<b>1,160</b>	<b>53</b>	<b>237</b>	<b>170</b>	<b>49</b>	<b>4,088</b>	<b>87</b>	<b>4,001</b>	
<b>Intermountain</b>												
Arizona	18,671	11,291	9,658	7,663	1,603	391	1,609	24	7,381	338	7,042	
Colorado	22,612	17,252	16,590	11,259	4,893	438	603	58	5,360	614	4,746	
Idaho	21,430	18,877	17,342	16,380	874	89	1,535	0	2,553	1,230	1,323	
Montana	25,014	17,987	17,175	14,999	1,148	1,028	799	13	7,026	2,193	4,834	
Nevada	11,089	10,876	10,824	3,355	7,222	247	52	0	212	60	153	
New Mexico	16,682	10,351	9,522	8,092	1,120	309	825	3	6,331	0	6,331	
Utah	17,962	14,950	13,425	6,259	6,800	366	1,514	11	3,013	550	2,463	
Wyoming	11,445	9,503	9,084	6,028	1,290	1,766	419	0	1,942	0	1,942	
<b>Intermountain Total</b>	<b>144,905</b>	<b>111,086</b>	<b>103,620</b>	<b>74,035</b>	<b>24,951</b>	<b>4,635</b>	<b>7,357</b>	<b>109</b>	<b>33,819</b>	<b>4,984</b>	<b>28,834</b>	
<b>Rocky Mountain Total</b>	<b>150,661</b>	<b>112,755</b>	<b>105,070</b>	<b>75,195</b>	<b>25,004</b>	<b>4,871</b>	<b>7,527</b>	<b>159</b>	<b>37,906</b>	<b>5,071</b>	<b>32,835</b>	
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	126,869	90,994	63,423	10,455	16,954	36,014	27,469	101	35,875	31,777	4,098	
<b>Alaska Total</b>	<b>126,869</b>	<b>90,994</b>	<b>63,423</b>	<b>10,455</b>	<b>16,954</b>	<b>36,014</b>	<b>27,469</b>	<b>101</b>	<b>35,875</b>	<b>31,777</b>	<b>4,098</b>	

**Table 2. (cont.)** Forest land area in the United States by ownership, region, subregion, and State, 2007

Region, subregion, and State	Public								Private <sup>a</sup>			
	All ownerships	Federal						State	County and municipal	Total private	Private corporate	Private noncorpo- rate
		Total public	Total Federal	National forest	Bureau of Land Manage- ment		Other					
<i>Thousand acres</i>												
<b>Pacific Northwest</b>												
Oregon	30,169	19,111	17,960	14,012	3,751	197	969	181	11,059	5,995	5,063	
Washington	22,279	12,474	9,536	8,188	75	1,273	2,580	358	9,806	4,905	4,901	
<b>Pacific Northwest Total</b>	<b>52,449</b>	<b>31,584</b>	<b>27,496</b>	<b>22,200</b>	<b>3,827</b>	<b>1,469</b>	<b>3,549</b>	<b>539</b>	<b>20,864</b>	<b>10,900</b>	<b>9,964</b>	
<b>Pacific Southwest</b>												
California	32,817	19,614	18,409	14,906	1,844	1,658	831	375	13,202	4,603	8,600	
Hawaii	1,748	593	12	0	0	12	573	8	1,155	124	1,031	
<b>Pacific Southwest Total</b>	<b>34,565</b>	<b>20,208</b>	<b>18,421</b>	<b>14,906</b>	<b>1,844</b>	<b>1,671</b>	<b>1,404</b>	<b>383</b>	<b>14,357</b>	<b>4,727</b>	<b>9,631</b>	
<b>Pacific Coast Total</b>	<b>213,883</b>	<b>142,786</b>	<b>109,340</b>	<b>47,562</b>	<b>22,624</b>	<b>39,154</b>	<b>32,422</b>	<b>1,023</b>	<b>71,097</b>	<b>47,404</b>	<b>23,693</b>	
<b>U.S. Total</b>	<b>751,228</b>	<b>328,199</b>	<b>248,413</b>	<b>147,181</b>	<b>47,629</b>	<b>53,604</b>	<b>68,831</b>	<b>10,955</b>	<b>423,029</b>	<b>138,120</b>	<b>284,908</b>	

<sup>a</sup> It is no longer possible to classify private forest as forest industry and nonindustrial private due to disclosure issues. The new classes are private corporate and noncorporate. Native American lands are included in private noncorporate.

**Note:** Data may not add to Totals because of rounding.

**Table 3.** Forest area in the United States<sup>a</sup> by region, subregion, and State, 2007, 1997, 1987, 1977, 1953, 1938, 1920, 1907, and 1630

Region, subregion, and State	2007	1997 <sup>b</sup>	1987 <sup>c</sup>	1977 <sup>d</sup>	1963 <sup>e</sup>	1953 <sup>f</sup>	1938 <sup>g</sup>	1920 <sup>h</sup>	1907 <sup>i</sup>	1630 <sup>j</sup>
<i>Thousand acres</i>										
<b>North</b>										
<b>Northeast</b>										
Connecticut	1,794	1,863	1,815	1,861	1,910	1,990	1,809	1,526	1,418	2,930
Delaware	383	389	398	392	392	454	423	351	370	1,130
Maine	17,673	17,711	17,713	17,718	17,425	17,088	16,036	14,487	13,428	18,180
Maryland	2,566	2,701	2,632	2,653	2,920	2,920	2,595	2,461	2,217	5,730
Massachusetts	3,171	3,264	3,097	2,952	3,070	3,288	3,283	2,794	1,846	4,630
New Hampshire	4,850	4,955	5,021	5,014	5,019	4,848	4,664	4,094	3,302	5,490
New Jersey	2,132	1,991	1,985	1,928	2,371	2,098	2,157	2,069	1,708	4,330
New York	18,669	18,581	18,775	18,380	15,865	14,450	13,321	12,502	10,786	27,450
Pennsylvania	16,577	16,905	16,997	16,826	16,486	14,805	13,945	12,517	8,744	27,260
Rhode Island	356	409	399	404	434	434	360	305	226	650
Vermont	4,618	4,607	4,509	4,512	4,230	3,860	3,549	3,021	2,527	5,550
West Virginia	12,007	12,108	11,942	11,669	11,469	10,327	10,074	9,041	7,811	14,610
<b>Northeast Total</b>	<b>84,796</b>	<b>85,484</b>	<b>85,283</b>	<b>84,309</b>	<b>81,591</b>	<b>76,562</b>	<b>72,216</b>	<b>65,169</b>	<b>54,382</b>	<b>117,940</b>
<b>North Central</b>										
Illinois	4,525	4,294	4,266	4,151	4,144	3,890	3,600	2,997	3,288	13,805
Indiana	4,656	4,501	4,439	3,943	4,018	4,103	3,580	2,989	5,292	19,520
Iowa	2,879	2,050	1,562	1,561	2,620	2,600	2,550	2,079	2,612	5,340
Michigan	19,545	19,335	18,220	18,691	19,699	19,592	19,073	19,109	15,283	33,110
Minnesota	16,391	16,796	16,583	16,709	17,403	17,826	19,615	19,339	15,036	31,500
Missouri	15,078	14,047	12,523	12,876	15,296	15,177	16,200	15,610	17,226	26,390
Ohio	7,894	7,855	7,309	7,037	6,091	5,500	5,110	4,280	6,094	23,470
Wisconsin	16,275	15,963	15,319	14,908	14,885	15,559	16,946	17,449	15,164	26,520
<b>North Central Total</b>	<b>87,243</b>	<b>84,842</b>	<b>80,221</b>	<b>79,876</b>	<b>84,156</b>	<b>84,247</b>	<b>86,674</b>	<b>83,852</b>	<b>79,995</b>	<b>179,655</b>
<b>North Total</b>	<b>172,039</b>	<b>170,326</b>	<b>165,504</b>	<b>164,185</b>	<b>165,747</b>	<b>160,809</b>	<b>158,890</b>	<b>149,021</b>	<b>134,377</b>	<b>297,595</b>
<b>South</b>										
<b>Southeast</b>										
Florida	16,147	16,254	16,721	17,040	19,050	20,817	21,740	20,189	22,918	29,840
Georgia	24,784	24,413	24,187	24,556	26,365	24,057	21,433	20,644	22,729	35,700
North Carolina	18,447	19,298	19,281	19,913	20,662	20,113	18,400	17,889	19,791	29,630
South Carolina	12,746	12,651	12,257	12,569	12,250	11,943	10,704	10,301	12,113	17,570
Virginia	15,766	16,047	16,108	16,387	16,412	16,032	14,832	14,399	14,687	24,480
<b>Southeast Total</b>	<b>87,889</b>	<b>88,662</b>	<b>88,554</b>	<b>90,465</b>	<b>94,739</b>	<b>92,962</b>	<b>87,109</b>	<b>83,423</b>	<b>92,236</b>	<b>137,220</b>

**Table 3. (cont.)** Forest area in the United States<sup>a</sup> by region, subregion, and State, 2007, 1997, 1987, 1977, 1953, 1938, 1920, 1907, and 1630

Region, subregion, and State	2007	1997 <sup>b</sup>	1987 <sup>c</sup>	1977 <sup>d</sup>	1963 <sup>e</sup>	1953 <sup>f</sup>	1938 <sup>g</sup>	1920 <sup>h</sup>	1907 <sup>i</sup>	1630 <sup>j</sup>
<i>Thousand acres</i>										
<b>South Central</b>										
Alabama	22,693	21,964	21,725	21,525	21,770	20,771	18,878	18,198	21,513	29,540
Arkansas	18,830	18,790	16,987	16,852	20,051	19,681	20,963	20,074	25,405	31,940
Kentucky	11,970	12,684	12,256	12,161	11,791	11,647	11,546	10,636	12,144	23,140
Louisiana	14,222	13,783	13,883	14,348	16,176	16,230	16,211	16,939	18,020	26,160
Mississippi	19,622	18,595	16,693	16,716	17,076	16,890	16,253	16,506	18,968	26,700
Oklahoma	7,665	7,665	7,283	8,513	9,235	10,329	10,415	9,779	10,818	13,330
Tennessee	14,480	13,603	13,258	13,184	13,629	12,808	13,000	12,144	16,476	24,010
Texas	17,273	18,354	20,505	23,279	23,954	24,708	26,949	25,092	31,819	41,980
<b>South Central Total</b>	<b>126,756</b>	<b>125,438</b>	<b>122,590</b>	<b>126,578</b>	<b>133,682</b>	<b>133,064</b>	<b>134,215</b>	<b>129,368</b>	<b>155,164</b>	<b>216,800</b>
<b>South Total</b>	<b>214,644</b>	<b>214,100</b>	<b>211,144</b>	<b>217,043</b>	<b>228,421</b>	<b>226,026</b>	<b>221,324</b>	<b>212,791</b>	<b>247,400</b>	<b>354,020</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Kansas	2,106	2,096	1,908	1,894	1,901	2,218	2,408	2,221	2,788	1,570
Nebraska	1,245	1,228	1,002	1,309	1,442	1,183	1,188	1,028	1,472	1,470
North Dakota	724	674	460	422	439	473	495	551	355	450
South Dakota	1,682	1,632	1,690	1,702	1,837	2,169	2,080	1,905	2,111	2,480
<b>Great Plains Total</b>	<b>5,757</b>	<b>5,630</b>	<b>5,060</b>	<b>5,327</b>	<b>5,619</b>	<b>6,043</b>	<b>6,171</b>	<b>5,705</b>	<b>6,726</b>	<b>5,970</b>
<b>Intermountain</b>										
Arizona	18,671	19,926	19,384	18,494	19,902	19,212	20,106	19,379	20,553	21,570
Colorado	22,612	21,270	21,338	22,271	22,583	22,000	21,720	23,874	20,971	21,440
Idaho	21,430	21,937	21,818	21,727	21,815	21,025	21,713	22,428	21,967	24,130
Montana	25,014	23,232	21,910	22,559	22,048	22,330	22,415	21,304	22,095	23,320
Nevada	11,089	9,928	8,928	7,683	9,000	9,500	10,750	10,738	11,657	12,000
New Mexico	16,682	15,505	15,826	15,360	15,487	15,550	15,334	15,119	14,854	15,680
Utah	17,962	16,905	16,234	15,557	17,205	16,219	16,310	16,554	16,305	17,890
Wyoming	11,445	10,944	9,966	10,028	9,777	10,513	10,757	11,508	10,952	12,490
<b>Intermountain Total</b>	<b>144,905</b>	<b>139,647</b>	<b>135,404</b>	<b>133,679</b>	<b>137,817</b>	<b>136,349</b>	<b>139,104</b>	<b>140,905</b>	<b>139,354</b>	<b>148,520</b>
<b>Rocky Mountain Total</b>	<b>150,661</b>	<b>145,277</b>	<b>140,464</b>	<b>139,006</b>	<b>143,436</b>	<b>142,392</b>	<b>145,274</b>	<b>146,610</b>	<b>146,079</b>	<b>154,490</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Alaska	126,869	127,379	128,000	128,000	128,000	128,000	128,000	128,000	128,000	128,000
<b>Alaska Total</b>	<b>126,869</b>	<b>127,379</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>	<b>128,000</b>
<b>Pacific Northwest</b>										
Oregon	30,169	29,720	28,773	29,810	30,739	30,261	30,381	30,282	31,729	30,590
Washington	22,279	21,892	22,521	23,181	23,050	23,868	24,684	23,908	26,834	25,670
<b>Pacific Northwest Total</b>	<b>52,449</b>	<b>51,612</b>	<b>51,294</b>	<b>52,991</b>	<b>53,789</b>	<b>54,129</b>	<b>55,065</b>	<b>54,190</b>	<b>58,563</b>	<b>56,260</b>



**Table 3. (cont.)** Forest area in the United States<sup>a</sup> by region, subregion, and State, 2007, 1997, 1987, 1977, 1953, 1938, 1920, 1907, and 1630

Region, subregion, and State	2007	1997 <sup>b</sup>	1987 <sup>c</sup>	1977 <sup>d</sup>	1963 <sup>e</sup>	1953 <sup>f</sup>	1938 <sup>g</sup>	1920 <sup>h</sup>	1907 <sup>i</sup>	1630 <sup>j</sup>
<i>Thousand acres</i>										
Pacific Southwest										
California	32,817	32,411	32,108	32,574	34,541	34,078	35,619	37,143	37,404	44,470
Hawaii	1,748	1,749	1,749	1,986	1,982	2,000	2,000	2,000	2,000	2,200
Pacific Southwest Total	34,565	34,160	33,857	34,560	36,523	36,078	37,619	39,143	39,404	46,670
Pacific Coast Total	213,883	213,151	213,151	215,551	218,312	218,207	220,684	221,333	225,967	230,930
U.S. Total	751,228	742,854	730,263	735,785	755,916	747,434	746,171	729,755	753,823	

<sup>a</sup> Estimates for 1630, 1907, and 1938 include forest area for regions that would become the 50 States within the current United States. Estimates for 2007 and historic years have been adjusted for forest definition change to minimum 10 percent cover and removal of chaparral as a forest type. Refer to 1997 RPA tables for historic estimates prior to this change.

<sup>b</sup> Data for 1997 based on Smith et al. (2001). Adjusted for removal of chaparral type.

<sup>c</sup> Data for 1987 based on Waddell et al. (1989). Adjusted for removal of chaparral type.

<sup>d</sup> Data for 1977 based on USDA Forest Service (1982). Adjusted for removal of chaparral type.

<sup>e</sup> Data for 1963 based on USDA Forest Service (1965). Adjusted for removal of chaparral type.

<sup>f</sup> Data for 1953 based on USDA Forest Service (1958). Adjusted for removal of chaparral type.

<sup>g</sup> Data for 1938 based on United States Congress (1938). Adjusted for removal of chaparral type.

<sup>h</sup> Data for 1920 based on Capper Report. Adjusted for removal of chaparral type.

<sup>i</sup> Data for 1907 based on Kellogg (1909). Adjusted for removal of chaparral type.

<sup>j</sup> Data for 1630 were also from Kellogg (1909) as an estimate of the original forest area based on the current estimate of forest and historic land clearing information. These data are provided here for general reference purposes only to convey the relative extent of the forest estate, in what is now the United States, at the time of European settlement.

**Note:** Data may not add to Totals because of rounding.

**Table 4.** Forest land area in the United States by productivity class, region, subregion, and State, 2007

Region, subregion, and State	Total	Productivity class <sup>a</sup>					Reserved forest land
		120 + cu. ft.	85-119 cu. ft.	20-84 cu. ft.	20-49 cu. ft.	0-19 cu. ft.	
<i>Thousand acres</i>							
<b>North</b>							
<b>Northeast</b>							
Connecticut	1,794	21	114	605	992	30	31
Delaware	383	24	39	128	184	7	0
Maine	17,673	381	2,477	6,048	8,257	192	318
Maryland	2,566	191	416	890	875	14	180
Massachusetts	3,171	112	285	1,084	1,466	93	131
New Hampshire	4,850	141	813	1,849	1,871	48	128
New Jersey	2,132	26	137	475	1,238	96	160
New York	18,669	598	1,739	5,595	8,083	153	2,501
Pennsylvania	16,577	297	1,524	5,184	9,013	100	458
Rhode Island	356	0	29	146	176	5	0
Vermont	4,618	88	535	1,056	2,803	21	114
West Virginia	12,007	581	2,180	4,604	4,432	36	174
<b>Northeast Total</b>	<b>84,796</b>	<b>2,461</b>	<b>10,286</b>	<b>27,664</b>	<b>39,392</b>	<b>797</b>	<b>4,196</b>
<b>North Central</b>							
Illinois	4,525	337	1,435	2,004	587	0	162
Indiana	4,656	1,141	2,042	1,156	195	0	123
Iowa	2,879	108	664	1,407	645	40	15
Michigan	19,545	741	3,934	6,985	7,363	197	325
Minnesota	16,391	266	2,272	5,537	7,038	459	820
Missouri	15,078	324	3,129	7,024	4,196	164	241
Ohio	7,894	188	1,263	2,891	3,302	22	228
Wisconsin	16,275	852	4,037	6,626	4,527	126	107
<b>North Central Total</b>	<b>87,243</b>	<b>3,957</b>	<b>18,776</b>	<b>33,629</b>	<b>27,853</b>	<b>1,008</b>	<b>2,020</b>
<b>North Total</b>	<b>172,039</b>	<b>6,418</b>	<b>29,062</b>	<b>61,293</b>	<b>67,245</b>	<b>1,805</b>	<b>6,216</b>
<b>South</b>							
<b>Southeast</b>							
Florida	16,147	1,110	3,362	6,756	4,324	98	497
Georgia	24,784	4,006	6,941	11,706	1,593	20	517
North Carolina	18,447	2,780	4,433	7,619	3,084	120	410
South Carolina	12,746	3,462	4,420	3,755	1,004	5	99
Virginia	15,766	2,074	4,505	6,190	2,540	42	415
<b>Southeast Total</b>	<b>87,889</b>	<b>13,433</b>	<b>23,661</b>	<b>36,026</b>	<b>12,545</b>	<b>285</b>	<b>1,939</b>

**Table 4. (cont.)** Forest land area in the United States by productivity class, region, subregion, and State, 2007

Region, subregion, and State	Total	Productivity class <sup>a</sup>					Reserved forest land
		120 + cu. ft.	85-119 cu. ft.	20-84 cu. ft.	20-49 cu. ft.	0-19 cu. ft.	
<i>Thousand acres</i>							
<b>South Central</b>							
Alabama	22,693	5,975	8,208	6,839	1,557	8	106
Arkansas	18,830	1,691	4,650	8,001	4,138	116	234
Kentucky	11,970	889	2,448	5,363	2,949	38	285
Louisiana	14,222	4,615	5,022	3,822	656	26	80
Mississippi	19,622	6,833	7,308	4,829	565	43	43
Oklahoma	7,665	258	636	2,715	2,624	1,386	45
Tennessee	14,480	1,446	2,917	7,457	2,093	0	568
Texas	17,273	3,616	4,507	3,014	723	5,300	114
<b>South Central Total</b>	<b>126,756</b>	<b>25,322</b>	<b>35,695</b>	<b>42,041</b>	<b>15,306</b>	<b>6,917</b>	<b>1,474</b>
<b>South Total</b>	<b>214,644</b>	<b>38,755</b>	<b>59,356</b>	<b>78,067</b>	<b>27,851</b>	<b>7,202</b>	<b>3,414</b>
<b>Rocky Mountain</b>							
<b>Great Plains</b>							
Kansas	2,106	46	255	637	1,089	76	1
Nebraska	1,245	0	59	286	828	61	10
North Dakota	724	0	0	114	420	165	25
South Dakota	1,682	5	33	205	1,309	88	42
<b>Great Plains Total</b>	<b>5,757</b>	<b>51</b>	<b>348</b>	<b>1,241</b>	<b>3,647</b>	<b>390</b>	<b>79</b>
<b>Intermountain</b>							
Arizona	18,671	0	59	913	2,389	13,419	1,891
Colorado	22,612	36	392	3,158	7,954	8,495	2,576
Idaho	21,430	1,686	3,619	6,396	4,501	1,253	3,975
Montana	25,014	164	1,258	6,072	12,296	1,284	3,939
Nevada	11,089	0	42	28	347	10,019	653
New Mexico	16,682	0	35	1,253	3,071	10,619	1,704
Utah	17,962	0	49	929	3,036	12,045	1,904
Wyoming	11,445	0	26	1,024	4,947	1,664	3,784
<b>Intermountain Total</b>	<b>144,905</b>	<b>1,886</b>	<b>5,480</b>	<b>19,773</b>	<b>38,542</b>	<b>58,798</b>	<b>20,427</b>
<b>Rocky Mountain Total</b>	<b>150,661</b>	<b>1,937</b>	<b>5,828</b>	<b>21,015</b>	<b>42,189</b>	<b>59,187</b>	<b>20,506</b>
<b>Pacific Coast</b>							
<b>Alaska</b>							
Alaska	126,869	356	660	1,650	9,198	81,936	33,068
<b>Alaska Total</b>	<b>126,869</b>	<b>356</b>	<b>660</b>	<b>1,650</b>	<b>9,198</b>	<b>81,936</b>	<b>33,068</b>

**Table 4. (cont.)** Forest land area in the United States by productivity class, region, subregion, and State, 2007

Region, subregion, and State	Productivity class <sup>a</sup>						Reserved forest land
	Total	120 + cu. ft.	85-119 cu. ft.	20-84 cu. ft.	20-49 cu. ft.	0-19 cu. ft.	
<i>Thousand acres</i>							
<b>Pacific Northwest</b>							
Oregon	30,169	9,400	3,685	5,943	5,588	3,196	2,357
Washington	22,279	8,596	3,403	4,356	2,517	353	3,054
<b>Pacific Northwest Total</b>	<b>52,449</b>	<b>17,996</b>	<b>7,089</b>	<b>10,300</b>	<b>8,105</b>	<b>3,549</b>	<b>5,411</b>
<b>Pacific Southwest</b>							
California	32,817	6,872	4,000	4,682	3,590	7,839	5,834
Hawaii	1,748	700	0	0	0	853	196
<b>Pacific Southwest Total</b>	<b>34,565</b>	<b>7,571</b>	<b>4,000</b>	<b>4,682</b>	<b>3,590</b>	<b>8,692</b>	<b>6,030</b>
<b>Pacific Coast Total</b>	<b>213,883</b>	<b>25,923</b>	<b>11,749</b>	<b>16,632</b>	<b>20,893</b>	<b>94,177</b>	<b>44,509</b>
<b>U.S. Total</b>	<b>751,228</b>	<b>73,033</b>	<b>105,995</b>	<b>177,006</b>	<b>158,178</b>	<b>162,370</b>	<b>74,644</b>

<sup>a</sup> Productivity classes are displayed as cubic feet per acre per year.

Note: Data may not add to Totals because of rounding.

**Table 5.** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other softwoods	Western hardwoods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
All ownership groups													
<b>Great Plains</b>													
120 +	51	0	3	0	0	0	0	0	0	0	48	0	0
85 to 119	348	0	36	0	0	0	0	0	0	0	309	0	3
50 to 84	1,241	0	226	0	24	0	0	0	0	0	930	50	12
20 to 49	3,647	0	1,107	0	32	0	0	0	0	0	1,921	381	206
Other forest	390	0	6	0	0	0	0	0	0	0	289	64	31
Reserved	79	0	42	0	0	0	0	0	0	0	25	6	6
<b>Great Plains Total</b>	<b>5,757</b>	<b>0</b>	<b>1,421</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,523</b>	<b>500</b>	<b>257</b>
<b>Intermountain</b>													
120 +	1,886	439	156	36	872	110	90	12	0	0	62	0	109
85 to 119	5,480	1,669	404	30	2,157	563	258	154	0	0	102	0	143
50 to 84	19,773	5,371	2,418	0	6,654	463	555	1,585	0	29	2,000	0	697
20 to 49	38,542	8,527	9,481	0	5,417	29	160	6,538	0	1,575	4,813	138	1,864
Other forest	58,798	145	194	0	102	0	0	235	0	725	10,050	43,688	3,660
Reserved	20,427	2,395	931	36	5,857	0	90	3,382	0	1,066	1,312	3,656	1,701
<b>Intermountain Total</b>	<b>144,905</b>	<b>18,546</b>	<b>13,585</b>	<b>102</b>	<b>21,058</b>	<b>1,166</b>	<b>1,153</b>	<b>11,906</b>	<b>0</b>	<b>3,395</b>	<b>18,339</b>	<b>47,482</b>	<b>8,173</b>
<b>Alaska</b>													
120 +	356	0	0	0	0	336	0	0	0	0	20	0	0
85 to 119	660	0	0	0	6	620	0	0	0	0	17	0	17
50 to 84	1,650	0	0	0	104	1,406	0	6	0	0	82	0	52
20 to 49	9,198	0	0	0	3,515	1,794	0	34	0	149	3,541	0	165
Other forest	81,936	0	0	0	30,544	2,563	0	280	0	43,082	4,272	0	1,195
Reserved	33,068	0	0	0	11,359	3,622	0	23	0	14,940	1,346	0	1,778
<b>Alaska Total</b>	<b>126,869</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45,528</b>	<b>10,341</b>	<b>0</b>	<b>342</b>	<b>0</b>	<b>58,170</b>	<b>9,280</b>	<b>0</b>	<b>3,207</b>
<b>Pacific Northwest</b>													
120 +	17,996	9,887	358	0	1,077	2,709	100	242	0	2	3,224	36	362
85 to 119	7,089	3,158	771	25	1,317	470	88	233	0	19	828	32	147
50 to 84	10,300	3,179	3,158	0	1,584	363	255	525	0	22	743	116	354
20 to 49	8,105	1,886	2,748	10	712	312	26	1,299	0	16	431	305	359
Other forest	3,549	127	82	19	79	168	0	57	0	12	417	2,546	42
Reserved	5,411	1,174	211	9	1,585	1,348	64	356	0	127	356	59	120
<b>Pacific Northwest Total</b>	<b>52,449</b>	<b>19,411</b>	<b>7,330</b>	<b>63</b>	<b>6,355</b>	<b>5,371</b>	<b>533</b>	<b>2,711</b>	<b>0</b>	<b>198</b>	<b>5,999</b>	<b>3,095</b>	<b>1,383</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Pacific Southwest</b>													
120 +	7,571	423	365	26	945	14	0	42	515	2,377	2,375	34	455
85 to 119	4,000	310	235	0	292	0	0	7	38	1,499	1,526	17	75
50 to 84	4,682	172	632	9	55	23	0	78	0	1,671	1,823	122	97
20 to 49	3,590	89	727	23	26	3	0	168	0	1,121	916	320	199
Other forest	8,692	8	48	37	5	14	0	40	0	679	5,633	2,121	108
Reserved	6,030	105	254	88	516	117	0	596	144	1,770	1,551	751	138
<b>Pacific Southwest Total</b>	<b>34,565</b>	<b>1,107</b>	<b>2,260</b>	<b>183</b>	<b>1,839</b>	<b>172</b>	<b>0</b>	<b>930</b>	<b>697</b>	<b>9,116</b>	<b>13,824</b>	<b>3,365</b>	<b>1,073</b>
<b>West Total</b>													
120 +	27,860	10,749	883	62	2,894	3,170	189	296	515	2,379	5,730	70	925
85 to 119	17,577	5,137	1,446	55	3,772	1,653	346	395	38	1,518	2,783	50	385
50 to 84	37,647	8,721	6,435	9	8,422	2,256	810	2,194	0	1,722	5,579	288	1,211
20 to 49	63,082	10,502	14,064	33	9,702	2,138	186	8,038	0	2,861	11,622	1,144	2,793
Other forest	153,364	281	329	56	30,730	2,745	0	611	0	44,497	20,661	48,418	5,036
Reserved	65,015	3,674	1,438	133	19,317	5,087	154	4,357	144	17,903	4,591	4,472	3,743
<b>West Total</b>	<b>364,545</b>	<b>39,063</b>	<b>24,595</b>	<b>348</b>	<b>74,837</b>	<b>17,049</b>	<b>1,686</b>	<b>15,890</b>	<b>697</b>	<b>70,879</b>	<b>50,965</b>	<b>54,442</b>	<b>14,093</b>
<b>National forest</b>													
<b>Great Plains</b>													
120 +	5	0	0	0	0	0	0	0	0	0	5	0	0
85 to 119	16	0	16	0	0	0	0	0	0	0	0	0	0
50 to 84	163	0	127	0	24	0	0	0	0	0	6	0	6
20 to 49	871	0	714	0	26	0	0	0	0	0	55	10	67
Other forest	67	0	6	0	0	0	0	0	0	0	26	29	6
Reserved	37	0	31	0	0	0	0	0	0	0	0	0	6
<b>Great Plains Total</b>	<b>1,160</b>	<b>0</b>	<b>894</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>92</b>	<b>39</b>	<b>84</b>
<b>Intermountain</b>													
120 +	1,232	334	140	36	478	110	51	0	0	0	18	0	65
85 to 119	3,769	1,282	199	30	1,469	323	187	154	0	0	58	0	66
50 to 84	14,424	3,562	1,476	0	5,366	322	412	1,378	0	29	1,341	0	538
20 to 49	24,905	5,086	4,419	0	4,747	29	72	5,598	0	1,258	2,917	7	773
Other forest	16,258	96	35	0	71	0	0	163	0	440	3,777	10,668	1,009
Reserved	13,447	2,025	601	0	4,819	0	25	1,958	0	947	959	988	1,125
<b>Intermountain Total</b>	<b>74,035</b>	<b>12,385</b>	<b>6,870</b>	<b>66</b>	<b>16,949</b>	<b>784</b>	<b>747</b>	<b>9,252</b>	<b>0</b>	<b>2,673</b>	<b>9,070</b>	<b>11,664</b>	<b>3,576</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Alaska</b>													
120 +	256	0	0	0	0	244	0	0	0	0	12	0	0
85 to 119	519	0	0	0	6	496	0	0	0	0	6	0	12
50 to 84	1,140	0	0	0	104	1,018	0	6	0	0	3	0	9
20 to 49	1,857	0	0	0	415	1,369	0	22	0	0	31	0	20
Other forest	2,680	0	0	0	709	1,672	0	240	0	8	17	0	34
Reserved	4,003	0	0	0	915	3,005	0	23	0	0	28	0	32
<b>Alaska Total</b>	<b>10,455</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,149</b>	<b>7,805</b>	<b>0</b>	<b>291</b>	<b>0</b>	<b>8</b>	<b>96</b>	<b>0</b>	<b>106</b>
<b>Pacific Northwest</b>													
120 +	4,429	2,249	151	0	676	759	66	187	0	0	275	0	66
85 to 119	3,225	1,370	329	25	894	201	43	144	0	15	128	0	76
50 to 84	5,316	1,463	1,542	0	1,130	246	187	392	0	22	132	20	183
20 to 49	4,967	1,069	1,644	10	497	232	19	884	0	16	131	199	268
Other forest	556	72	28	19	28	74	0	57	0	12	80	182	5
Reserved	3,707	759	163	9	1,219	729	58	288	0	118	224	21	118
<b>Pacific Northwest Total</b>	<b>22,200</b>	<b>6,981</b>	<b>3,858</b>	<b>63</b>	<b>4,444</b>	<b>2,241</b>	<b>372</b>	<b>1,951</b>	<b>0</b>	<b>182</b>	<b>970</b>	<b>422</b>	<b>716</b>
<b>Pacific Southwest</b>													
120 +	2,958	67	174	15	689	0	0	21	6	1,474	435	11	66
85 to 119	1,703	93	94	0	235	0	0	7	0	887	340	7	40
50 to 84	2,266	59	418	9	45	8	0	68	0	953	575	74	57
20 to 49	2,347	74	494	23	24	3	0	131	0	764	530	181	125
Other forest	2,282	8	34	37	5	14	0	40	0	213	793	1,074	65
Reserved	3,350	57	161	88	320	80	0	338	13	1,210	739	247	96
<b>Pacific Southwest Total</b>	<b>14,906</b>	<b>357</b>	<b>1,375</b>	<b>171</b>	<b>1,318</b>	<b>106</b>	<b>0</b>	<b>606</b>	<b>20</b>	<b>5,502</b>	<b>3,411</b>	<b>1,594</b>	<b>448</b>
<b>West Total</b>													
120 +	8,880	2,650	465	51	1,843	1,114	117	208	6	1,474	744	11	197
85 to 119	9,233	2,745	639	55	2,603	1,020	230	306	0	902	532	7	194
50 to 84	23,310	5,084	3,563	9	6,668	1,594	599	1,844	0	1,004	2,058	94	793
20 to 49	34,947	6,228	7,270	33	5,710	1,633	91	6,635	0	2,037	3,663	397	1,251
Other forest	21,843	176	103	56	813	1,760	0	499	0	672	4,692	11,953	1,118
Reserved	24,544	2,841	956	97	7,273	3,814	83	2,607	13	2,275	1,950	1,256	1,377
<b>West Total</b>	<b>122,756</b>	<b>19,723</b>	<b>12,997</b>	<b>300</b>	<b>24,910</b>	<b>10,936</b>	<b>1,120</b>	<b>12,099</b>	<b>20</b>	<b>8,365</b>	<b>13,639</b>	<b>13,718</b>	<b>4,929</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other softwoods	Western hardwoods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
Other public													
<b>Great Plains</b>													
120 +	3	0	3	0	0	0	0	0	0	0	0	0	0
85 to 119	52	0	14	0	0	0	0	0	0	0	37	0	1
50 to 84	100	0	31	0	0	0	0	0	0	0	67	0	2
20 to 49	281	0	54	0	6	0	0	0	0	0	185	25	11
Other forest	37	0	0	0	0	0	0	0	0	0	28	9	0
Reserved	36	0	11	0	0	0	0	0	0	0	20	6	0
<b>Great Plains Total</b>	<b>509</b>	<b>0</b>	<b>114</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>336</b>	<b>39</b>	<b>14</b>
<b>Intermountain</b>													
120 +	189	0	0	0	150	0	0	12	0	0	26	0	0
85 to 119	663	155	36	0	387	0	30	0	0	0	0	0	55
50 to 84	1,485	599	160	0	419	39	57	41	0	0	164	0	6
20 to 49	3,640	975	1,013	0	327	0	22	349	0	158	343	131	323
Other forest	24,480	38	58	0	31	0	0	33	0	133	2,592	19,893	1,701
Reserved	6,595	253	314	36	995	0	65	1,331	0	79	342	2,624	556
<b>Intermountain Total</b>	<b>37,051</b>	<b>2,019</b>	<b>1,581</b>	<b>36</b>	<b>2,310</b>	<b>39</b>	<b>173</b>	<b>1,766</b>	<b>0</b>	<b>371</b>	<b>3,469</b>	<b>22,648</b>	<b>2,640</b>
<b>Alaska</b>													
120 +	60	0	0	0	0	55	0	0	0	0	6	0	0
85 to 119	100	0	0	0	0	88	0	0	0	0	12	0	0
50 to 84	239	0	0	0	0	159	0	0	0	0	79	0	0
20 to 49	4,922	0	0	0	1,943	129	0	0	0	57	2,718	0	75
Other forest	46,158	0	0	0	7,589	290	0	15	0	34,128	3,361	0	775
Reserved	29,059	0	0	0	10,438	617	0	0	0	14,940	1,319	0	1,746
<b>Alaska Total</b>	<b>80,538</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,970</b>	<b>1,338</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>49,124</b>	<b>7,495</b>	<b>0</b>	<b>2,595</b>
<b>Pacific Northwest</b>													
120 +	3,582	2,231	36	0	103	657	0	11	0	0	532	0	13
85 to 119	946	544	80	0	67	50	8	0	0	0	158	10	30
50 to 84	955	433	209	0	42	0	22	14	0	0	162	23	49
20 to 49	686	273	115	0	28	42	0	83	0	0	89	26	29
Other forest	1,512	40	14	0	8	22	0	0	0	0	79	1,330	18
Reserved	1,704	415	48	0	366	619	6	69	0	10	132	38	2
<b>Pacific Northwest Total</b>	<b>9,385</b>	<b>3,935</b>	<b>503</b>	<b>0</b>	<b>614</b>	<b>1,389</b>	<b>36</b>	<b>178</b>	<b>0</b>	<b>10</b>	<b>1,151</b>	<b>1,427</b>	<b>142</b>



**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Pacific Southwest</b>													
120 +	576	38	0	0	13	0	0	0	39	46	244	14	183
85 to 119	141	13	0	0	0	0	0	0	0	52	77	0	0
50 to 84	288	0	23	0	0	0	0	0	0	67	185	13	0
20 to 49	256	0	19	0	0	0	0	12	0	8	77	98	43
Other forest	1,366	0	0	0	0	0	0	0	0	128	627	589	22
Reserved	2,675	48	92	0	196	37	0	257	131	557	809	504	42
<b>Pacific Southwest Total</b>	<b>5,301</b>	<b>99</b>	<b>134</b>	<b>0</b>	<b>209</b>	<b>37</b>	<b>0</b>	<b>269</b>	<b>169</b>	<b>857</b>	<b>2,019</b>	<b>1,218</b>	<b>290</b>
<b>West Total</b>													
120 +	4,410	2,268	39	0	266	711	0	23	39	46	808	14	196
85 to 119	1,902	711	131	0	454	138	37	0	0	52	283	10	86
50 to 84	3,068	1,032	423	0	462	198	79	55	0	67	658	36	58
20 to 49	9,785	1,248	1,201	0	2,304	171	22	444	0	223	3,413	279	480
Other forest	73,552	78	72	0	7,628	312	0	49	0	34,389	6,687	21,821	2,516
Reserved	40,069	716	465	36	11,995	1,273	71	1,658	131	15,586	2,622	3,172	2,345
<b>West Total</b>	<b>132,785</b>	<b>6,054</b>	<b>2,331</b>	<b>36</b>	<b>23,109</b>	<b>2,803</b>	<b>209</b>	<b>2,228</b>	<b>169</b>	<b>50,362</b>	<b>14,470</b>	<b>25,333</b>	<b>5,681</b>
<b>Private corporate</b>													
<b>Great Plains</b>													
120 +	0	0	0	0	0	0	0	0	0	0	0	0	0
85 to 119	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 84	16	0	0	0	0	0	0	0	0	0	16	0	0
20 to 49	63	0	18	0	0	0	0	0	0	0	40	0	6
Other forest	7	0	0	0	0	0	0	0	0	0	7	0	0
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Great Plains Total</b>	<b>87</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>0</b>	<b>6</b>
<b>Intermountain</b>													
120 +	303	31	7	0	221	0	0	0	0	0	0	0	44
85 to 119	661	159	109	0	195	155	21	0	0	0	0	0	22
50 to 84	1,148	445	116	0	310	43	55	63	0	0	115	0	0
20 to 49	1,758	802	294	0	91	0	22	267	0	0	163	0	121
Other forest	1,115	0	0	0	0	0	0	0	0	0	372	714	29
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Intermountain Total</b>	<b>4,984</b>	<b>1,437</b>	<b>526</b>	<b>0</b>	<b>816</b>	<b>198</b>	<b>98</b>	<b>330</b>	<b>0</b>	<b>0</b>	<b>649</b>	<b>714</b>	<b>217</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Alaska</b>													
120 +	2	0	0	0	0	2	0	0	0	0	0	0	0
85 to 119	8	0	0	0	0	8	0	0	0	0	0	0	0
50 to 84	97	0	0	0	0	97	0	0	0	0	0	0	0
20 to 49	1,914	0	0	0	1,059	200	0	0	0	92	524	0	40
Other forest	29,756	0	0	0	20,058	216	0	0	0	8,548	674	0	258
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Alaska Total</b>	<b>31,777</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,117</b>	<b>524</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,640</b>	<b>1,198</b>	<b>0</b>	<b>298</b>
<b>Pacific Northwest</b>													
120 +	6,661	4,012	106	0	139	935	21	33	0	2	1,233	10	170
85 to 119	1,254	653	114	0	136	169	19	0	0	2	146	0	14
50 to 84	1,748	586	533	0	289	70	4	40	0	0	173	31	22
20 to 49	1,018	212	379	0	103	0	7	249	0	0	42	0	26
Other forest	219	6	17	0	12	40	0	0	0	0	48	96	0
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Pacific Northwest Total</b>	<b>10,900</b>	<b>5,468</b>	<b>1,149</b>	<b>0</b>	<b>678</b>	<b>1,215</b>	<b>52</b>	<b>322</b>	<b>0</b>	<b>4</b>	<b>1,643</b>	<b>138</b>	<b>232</b>
<b>Pacific Southwest</b>													
120 +	1,972	229	96	12	204	12	0	8	309	561	538	0	5
85 to 119	977	98	59	0	46	0	0	0	15	424	317	0	17
50 to 84	863	19	66	0	0	0	0	0	0	410	340	0	28
20 to 49	508	0	117	0	1	0	0	13	0	240	137	0	0
Other forest	401	0	11	0	0	0	0	0	0	128	251	8	2
Reserved	6	0	0	0	0	0	0	0	0	3	3	0	0
<b>Pacific Southwest Total</b>	<b>4,727</b>	<b>346</b>	<b>350</b>	<b>12</b>	<b>252</b>	<b>12</b>	<b>0</b>	<b>20</b>	<b>324</b>	<b>1,767</b>	<b>1,586</b>	<b>8</b>	<b>52</b>
<b>West Total</b>													
120 +	8,938	4,272	209	12	563	949	21	40	309	563	1,772	10	218
85 to 119	2,900	910	283	0	377	332	40	0	15	427	463	0	52
50 to 84	3,873	1,050	715	0	599	211	60	103	0	410	643	31	50
20 to 49	5,261	1,013	808	0	1,253	200	29	528	0	332	905	0	194
Other forest	31,498	6	29	0	20,070	257	0	0	0	8,676	1,353	818	290
Reserved	6	0	0	0	0	0	0	0	0	3	3	0	0
<b>West Total</b>	<b>52,475</b>	<b>7,251</b>	<b>2,043</b>	<b>12</b>	<b>22,863</b>	<b>1,949</b>	<b>150</b>	<b>671</b>	<b>324</b>	<b>10,411</b>	<b>5,139</b>	<b>859</b>	<b>805</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
Private Noncorporate													
<b>Great Plains</b>													
120 +	43	0	0	0	0	0	0	0	0	0	43	0	0
85 to 119	280	0	6	0	0	0	0	0	0	0	272	0	1
50 to 84	962	0	68	0	0	0	0	0	0	0	841	50	3
20 to 49	2,432	0	322	0	0	0	0	0	0	0	1,641	346	123
Other forest	279	0	0	0	0	0	0	0	0	0	228	26	25
Reserved	6	0	0	0	0	0	0	0	0	0	6	0	0
<b>Great Plains Total</b>	<b>4,001</b>	<b>0</b>	<b>396</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,031</b>	<b>422</b>	<b>152</b>
<b>Intermountain</b>													
120 +	162	74	8	0	23	0	39	0	0	0	18	0	0
85 to 119	387	72	59	0	106	85	21	0	0	0	44	0	0
50 to 84	2,717	765	666	0	559	60	31	104	0	0	380	0	153
20 to 49	8,239	1,664	3,756	0	252	0	45	325	0	159	1,390	0	647
Other forest	16,945	12	101	0	0	0	0	38	0	152	3,309	12,412	921
Reserved	385	117	17	0	43	0	0	92	0	40	11	44	21
<b>Intermountain Total</b>	<b>28,834</b>	<b>2,704</b>	<b>4,608</b>	<b>0</b>	<b>984</b>	<b>145</b>	<b>135</b>	<b>559</b>	<b>0</b>	<b>351</b>	<b>5,152</b>	<b>12,456</b>	<b>1,741</b>
<b>Alaska</b>													
120 +	38	0	0	0	0	35	0	0	0	0	3	0	0
85 to 119	33	0	0	0	0	27	0	0	0	0	0	0	6
50 to 84	174	0	0	0	0	131	0	0	0	0	0	0	43
20 to 49	505	0	0	0	98	95	0	12	0	0	268	0	31
Other forest	3,343	0	0	0	2,188	385	0	25	0	398	220	0	128
Reserved	6	0	0	0	6	0	0	0	0	0	0	0	0
<b>Alaska Total</b>	<b>4,098</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,292</b>	<b>673</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>398</b>	<b>491</b>	<b>0</b>	<b>208</b>
<b>Pacific Northwest</b>													
120 +	3,324	1,395	66	0	159	358	12	11	0	0	1,184	26	113
85 to 119	1,664	591	247	0	221	51	18	89	0	2	397	23	27
50 to 84	2,280	697	875	0	123	47	42	78	0	0	277	42	99
20 to 49	1,434	334	610	0	85	38	0	82	0	0	169	81	36
Other forest	1,262	10	23	0	31	32	0	0	0	0	210	938	20
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Pacific Northwest Total</b>	<b>9,964</b>	<b>3,027</b>	<b>1,820</b>	<b>0</b>	<b>619</b>	<b>526</b>	<b>73</b>	<b>261</b>	<b>0</b>	<b>2</b>	<b>2,235</b>	<b>1,109</b>	<b>294</b>

**Table 5. (cont.)** Forest land area in the Western United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other softwoods	Western hardwoods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Pacific Southwest</b>													
120 +	2,066	91	96	0	40	3	0	13	161	295	1,159	9	202
85 to 119	1,178	107	81	0	11	0	0	0	23	136	793	10	18
50 to 84	1,264	93	125	0	10	15	0	10	0	241	723	35	13
20 to 49	479	15	97	0	0	0	0	13	0	110	173	41	31
Other forest	4,643	0	2	0	0	0	0	0	0	209	3,962	450	20
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Pacific Southwest Total</b>	<b>9,631</b>	<b>305</b>	<b>402</b>	<b>0</b>	<b>60</b>	<b>17</b>	<b>0</b>	<b>35</b>	<b>184</b>	<b>991</b>	<b>6,809</b>	<b>545</b>	<b>283</b>
<b>West Total</b>													
120 +	5,631	1,559	170	0	222	395	51	24	161	295	2,406	35	315
85 to 119	3,543	770	394	0	337	163	39	89	23	137	1,505	32	52
50 to 84	7,397	1,555	1,733	0	692	253	73	192	0	241	2,220	127	310
20 to 49	13,089	2,013	4,785	0	435	134	45	431	0	269	3,641	468	867
Other forest	26,472	21	126	0	2,219	416	0	63	0	759	7,928	13,826	1,113
Reserved	396	117	17	0	49	0	0	92	0	40	17	44	21
<b>West Total</b>	<b>56,528</b>	<b>6,036</b>	<b>7,225</b>	<b>0</b>	<b>3,955</b>	<b>1,361</b>	<b>208</b>	<b>891</b>	<b>184</b>	<b>1,741</b>	<b>17,718</b>	<b>14,532</b>	<b>2,678</b>

<sup>a</sup> Productivity classes are displayed as cubic feet per acre per year.

<sup>b</sup> Poorly stocked reserved and other forest lands have insufficient data to determine a forest type.

Note: Data may not add to Totals because of rounding.

**Table 6.** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch	Other forest types	Non-stocked
<i>Thousand acres</i>													
All ownership groups													
<b>Northeast</b>													
120 +	2,461	268	194	0	44	194	630	2	167	807	119	21	15
85 to 119	10,286	999	1,216	0	132	473	2,965	44	253	3,592	553	21	39
50 to 84	27,664	2,171	2,671	0	215	1,257	8,375	93	638	10,957	1,178	65	44
20 to 49	39,392	1,453	2,665	0	700	1,096	11,629	264	1,473	17,597	1,903	209	401
Other forest	797	11	202	0	57	15	68	33	226	54	33	0	97
Reserved	4,196	252	399	0	81	34	671	24	69	2,426	211	19	9
<b>Northeast Total</b>	<b>84,796</b>	<b>5,154</b>	<b>7,348</b>	<b>0</b>	<b>1,230</b>	<b>3,070</b>	<b>24,339</b>	<b>460</b>	<b>2,826</b>	<b>35,433</b>	<b>3,998</b>	<b>334</b>	<b>605</b>
<b>North Central</b>													
120 +	3,957	599	79	0	41	180	1,444	37	428	660	452	7	30
85 to 119	18,776	1,382	442	0	152	656	7,060	110	2,026	3,098	3,673	71	107
50 to 84	33,629	1,313	1,434	0	97	1,007	13,818	59	3,026	6,760	5,775	107	233
20 to 49	27,853	1,307	5,211	0	55	805	7,365	15	3,191	6,188	2,823	528	366
Other forest	1,008	89	285	0	5	47	236	0	132	47	113	23	32
Reserved	2,020	186	272	0	11	93	503	4	160	317	428	12	32
<b>North Central Total</b>	<b>87,243</b>	<b>4,876</b>	<b>7,722</b>	<b>0</b>	<b>361</b>	<b>2,788</b>	<b>30,426</b>	<b>225</b>	<b>8,964</b>	<b>17,071</b>	<b>13,264</b>	<b>748</b>	<b>799</b>
<b>Southeast</b>													
120 +	13,433	256	0	908	6,261	1,683	3,162	719	260	36	0	24	125
85 to 119	23,661	105	1	3,033	7,367	2,619	7,269	2,210	610	77	0	105	265
50 to 84	36,026	115	10	4,499	7,149	4,251	13,863	4,404	632	195	0	400	508
20 to 49	12,545	10	4	1,534	1,449	1,312	5,609	1,911	184	48	0	237	245
Other forest	285	0	0	1	36	43	67	54	8	0	0	30	44
Reserved	1,939	14	103	90	51	168	741	567	66	16	0	88	36
<b>Southeast Total</b>	<b>87,889</b>	<b>500</b>	<b>119</b>	<b>10,065</b>	<b>22,314</b>	<b>10,076</b>	<b>30,712</b>	<b>9,866</b>	<b>1,760</b>	<b>371</b>	<b>0</b>	<b>884</b>	<b>1,224</b>
<b>South Central</b>													
120 +	25,322	66	0	505	11,408	2,726	5,866	2,806	1,399	76	0	216	256
85 to 119	35,695	66	0	1,060	12,246	4,321	11,510	3,608	1,978	300	0	289	316
50 to 84	42,041	89	0	1,126	7,845	4,672	20,512	3,900	2,307	372	4	809	404
20 to 49	15,306	57	0	213	845	1,406	10,497	846	684	159	0	399	201
Other forest	6,917	2	0	45	5	470	4,374	168	33	0	0	1,728	92
Reserved	1,474	76	13	8	164	159	744	150	82	71	0	8	0
<b>South Central Total</b>	<b>126,756</b>	<b>356</b>	<b>13</b>	<b>2,958</b>	<b>32,512</b>	<b>13,753</b>	<b>53,504</b>	<b>11,478</b>	<b>6,482</b>	<b>978</b>	<b>4</b>	<b>3,449</b>	<b>1,269</b>

**Table 6. (cont.)** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>East Total</b>													
120 +	45,173	1,188	273	1,413	17,754	4,783	11,102	3,564	2,254	1,579	570	268	425
85 to 119	88,418	2,552	1,659	4,093	19,897	8,069	28,805	5,972	4,867	7,068	4,226	485	726
50 to 84	139,360	3,688	4,116	5,625	15,306	11,186	56,569	8,455	6,603	18,285	6,957	1,381	1,189
20 to 49	95,096	2,826	7,881	1,747	3,050	4,620	35,101	3,035	5,533	23,991	4,727	1,373	1,213
Other forest	9,006	102	487	46	102	575	4,745	256	399	100	146	1,782	266
Reserved	9,630	528	787	98	307	454	2,659	746	377	2,830	639	126	78
<b>East Total</b>	<b>386,683</b>	<b>10,885</b>	<b>15,202</b>	<b>13,022</b>	<b>56,417</b>	<b>29,686</b>	<b>138,981</b>	<b>22,029</b>	<b>20,033</b>	<b>53,853</b>	<b>17,266</b>	<b>5,415</b>	<b>3,896</b>
<b>National forest</b>													
<b>Northeast</b>													
120 +	53	6	0	0	0	0	6	0	0	42	0	0	0
85 to 119	205	17	27	0	0	6	42	0	0	103	11	0	0
50 to 84	751	37	66	0	0	1	182	0	0	444	21	0	1
20 to 49	1,391	34	34	0	14	11	314	0	2	873	102	0	7
Other forest	12	0	7	0	0	0	6	0	0	0	0	0	0
Reserved	276	13	75	0	0	0	15	0	0	157	16	0	0
<b>Northeast Total</b>	<b>2,689</b>	<b>106</b>	<b>209</b>	<b>0</b>	<b>14</b>	<b>17</b>	<b>565</b>	<b>0</b>	<b>2</b>	<b>1,618</b>	<b>149</b>	<b>0</b>	<b>8</b>
<b>North Central</b>													
120 +	396	94	17	0	32	39	104	0	6	38	66	0	1
85 to 119	2,018	309	80	0	85	174	599	0	33	234	501	0	3
50 to 84	2,724	256	221	0	28	106	755	3	86	598	660	5	6
20 to 49	2,587	267	731	0	8	76	324	0	143	646	341	24	27
Other forest	124	32	39	0	0	6	15	0	11	0	18	0	3
Reserved	855	128	188	0	4	62	70	0	23	83	279	2	15
<b>North Central Total</b>	<b>8,704</b>	<b>1,085</b>	<b>1,276</b>	<b>0</b>	<b>156</b>	<b>463</b>	<b>1,867</b>	<b>3</b>	<b>302</b>	<b>1,599</b>	<b>1,865</b>	<b>31</b>	<b>56</b>
<b>Southeast</b>													
120 +	574	37	0	0	160	134	194	31	7	10	0	0	0
85 to 119	897	13	0	93	246	113	365	32	32	3	0	0	0
50 to 84	1,892	10	0	297	214	117	1,149	43	15	32	0	9	5
20 to 49	1,607	3	4	149	166	200	1,006	55	0	0	0	19	4
Other forest	55	0	0	0	9	14	31	0	0	0	0	0	0
Reserved	282	5	0	14	10	21	175	38	0	16	0	2	0
<b>Southeast Total</b>	<b>5,306</b>	<b>69</b>	<b>4</b>	<b>554</b>	<b>806</b>	<b>599</b>	<b>2,920</b>	<b>198</b>	<b>55</b>	<b>61</b>	<b>0</b>	<b>30</b>	<b>8</b>

**Table 6. (cont.)** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>South Central</b>													
120 +	1,468	17	0	76	780	237	255	81	17	6	0	0	0
85 to 119	1,620	20	0	165	626	182	562	44	10	4	0	0	7
50 to 84	3,015	23	0	292	884	408	1,289	74	3	18	0	22	4
20 to 49	1,152	28	0	43	125	132	793	11	6	1	0	1	9
Other forest	9	0	0	0	1	0	7	0	0	0	0	0	0
Reserved	461	43	0	8	82	41	268	2	0	17	0	0	0
<b>South Central Total</b>	<b>7,725</b>	<b>131</b>	<b>0</b>	<b>585</b>	<b>2,499</b>	<b>1,001</b>	<b>3,173</b>	<b>212</b>	<b>36</b>	<b>46</b>	<b>0</b>	<b>23</b>	<b>20</b>
<b>East Total</b>													
120 +	2,491	153	17	76	972	410	559	112	30	95	66	0	1
85 to 119	4,740	359	108	259	956	474	1,567	76	75	344	512	0	11
50 to 84	8,383	326	287	590	1,126	632	3,375	119	104	1,092	681	36	15
20 to 49	6,737	331	769	193	313	420	2,437	66	152	1,521	443	44	47
Other forest	200	32	46	0	11	20	59	0	11	0	18	0	3
Reserved	1,873	189	263	22	97	123	528	40	23	272	296	5	15
<b>East Total</b>	<b>24,424</b>	<b>1,390</b>	<b>1,490</b>	<b>1,140</b>	<b>3,475</b>	<b>2,081</b>	<b>8,526</b>	<b>413</b>	<b>395</b>	<b>3,324</b>	<b>2,015</b>	<b>84</b>	<b>92</b>
<b>Other public</b>													
<b>Northeast</b>													
120 +	177	22	57	0	7	3	22	0	19	31	0	16	0
85 to 119	1,012	154	108	0	23	47	295	3	28	318	28	0	8
50 to 84	3,147	229	135	0	22	172	1,195	23	86	1,220	50	14	1
20 to 49	5,542	141	114	0	295	176	2,284	21	229	2,096	86	73	27
Other forest	179	0	27	0	43	15	4	19	27	9	8	0	27
Reserved	3,874	218	325	0	81	34	643	24	64	2,263	195	19	9
<b>Northeast Total</b>	<b>13,932</b>	<b>766</b>	<b>767</b>	<b>0</b>	<b>471</b>	<b>448</b>	<b>4,442</b>	<b>90</b>	<b>453</b>	<b>5,937</b>	<b>366</b>	<b>122</b>	<b>71</b>
<b>North Central</b>													
120 +	591	133	33	0	5	24	131	5	61	55	141	1	1
85 to 119	3,347	418	121	0	2	145	648	15	303	395	1,273	2	25
50 to 84	6,332	442	489	0	4	209	1,448	13	487	1,063	2,105	8	64
20 to 49	6,876	477	2,629	0	6	132	713	3	785	1,053	934	13	132
Other forest	368	21	191	0	0	8	34	0	41	9	53	3	8
Reserved	1,140	55	84	0	7	31	421	4	137	226	147	10	17
<b>North Central Total</b>	<b>18,653</b>	<b>1,545</b>	<b>3,547</b>	<b>0</b>	<b>24</b>	<b>550</b>	<b>3,395</b>	<b>39</b>	<b>1,814</b>	<b>2,801</b>	<b>4,653</b>	<b>37</b>	<b>247</b>

**Table 6. (cont.)** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>Southeast</b>													
120 +	779	7	0	98	295	108	171	55	36	0	0	9	0
85 to 119	1,540	0	0	336	437	187	287	204	63	1	0	7	17
50 to 84	2,928	5	0	676	417	313	680	618	27	5	0	128	60
20 to 49	2,031	0	0	501	275	159	484	398	54	5	0	76	79
Other forest	95	0	0	1	0	0	10	26	8	0	0	30	19
Reserved	1,657	9	103	76	41	147	566	529	66	0	0	85	36
<b>Southeast Total</b>	<b>9,030</b>	<b>21</b>	<b>103</b>	<b>1,687</b>	<b>1,464</b>	<b>914</b>	<b>2,199</b>	<b>1,829</b>	<b>254</b>	<b>12</b>	<b>0</b>	<b>336</b>	<b>211</b>
<b>South Central</b>													
120 +	1,050	0	0	13	264	91	220	286	138	7	0	15	16
85 to 119	1,566	5	0	44	245	124	346	557	188	10	0	24	23
50 to 84	2,100	8	0	71	159	187	856	485	231	10	0	50	42
20 to 49	825	0	0	20	25	72	537	86	63	0	0	16	6
Other forest	65	0	0	0	0	0	38	6	6	0	0	0	15
Reserved	1,013	33	13	0	81	118	477	148	82	54	0	8	0
<b>South Central Total</b>	<b>6,618</b>	<b>47</b>	<b>13</b>	<b>148</b>	<b>774</b>	<b>591</b>	<b>2,474</b>	<b>1,568</b>	<b>707</b>	<b>81</b>	<b>0</b>	<b>113</b>	<b>102</b>
<b>East Total</b>													
120 +	2,597	163	90	110	570	226	543	346	254	93	141	42	17
85 to 119	7,465	577	229	380	707	503	1,576	779	582	725	1,300	33	73
50 to 84	14,508	684	625	747	602	881	4,179	1,138	830	2,299	2,155	200	167
20 to 49	15,273	618	2,743	521	600	540	4,018	507	1,131	3,154	1,019	179	244
Other forest	706	21	218	1	43	23	87	51	82	18	61	33	68
Reserved	7,685	315	524	76	211	330	2,106	706	349	2,542	342	121	63
<b>East Total</b>	<b>48,233</b>	<b>2,379</b>	<b>4,430</b>	<b>1,835</b>	<b>2,733</b>	<b>2,503</b>	<b>12,510</b>	<b>3,527</b>	<b>3,227</b>	<b>8,831</b>	<b>5,019</b>	<b>607</b>	<b>631</b>
<b>Private corporate</b>													
<b>Northeast</b>													
120 +	529	21	78	0	17	36	146	0	26	186	12	0	7
85 to 119	2,869	85	677	0	22	21	734	5	48	1,001	261	11	5
50 to 84	7,191	281	1,727	0	68	159	1,610	34	93	2,646	554	15	4
20 to 49	10,272	332	1,858	0	138	165	1,766	48	269	4,875	765	20	36
Other forest	227	0	92	0	2	0	28	3	36	8	18	0	39
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Northeast Total</b>	<b>21,087</b>	<b>719</b>	<b>4,433</b>	<b>0</b>	<b>247</b>	<b>381</b>	<b>4,283</b>	<b>91</b>	<b>472</b>	<b>8,716</b>	<b>1,610</b>	<b>45</b>	<b>91</b>



**Table 6. (cont.)** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>North Central</b>													
120 +	284	58	5	0	0	5	97	0	22	69	24	0	4
85 to 119	1,429	125	57	0	9	55	325	8	138	304	398	1	7
50 to 84	2,698	132	156	0	3	63	674	2	182	846	630	0	10
20 to 49	2,885	152	507	0	19	64	464	0	275	1,018	316	46	25
Other forest	96	21	17	0	5	9	7	0	17	6	3	8	3
Reserved	12	0	0	0	0	0	6	0	0	6	0	0	0
<b>North Central Total</b>	<b>7,405</b>	<b>488</b>	<b>742</b>	<b>0</b>	<b>36</b>	<b>197</b>	<b>1,573</b>	<b>11</b>	<b>634</b>	<b>2,249</b>	<b>1,372</b>	<b>55</b>	<b>49</b>
<b>Southeast</b>													
120 +	4,166	40	0	396	2,569	327	449	214	92	10	0	5	63
85 to 119	7,413	2	0	1,371	2,873	745	1,259	790	169	24	0	21	159
50 to 84	10,032	12	10	1,959	2,617	984	2,451	1,474	205	17	0	93	208
20 to 49	3,100	0	0	457	358	316	980	722	63	3	0	86	114
Other forest	64	0	0	0	5	10	16	28	0	0	0	0	4
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Southeast Total</b>	<b>24,775</b>	<b>54</b>	<b>10</b>	<b>4,183</b>	<b>8,424</b>	<b>2,382</b>	<b>5,155</b>	<b>3,229</b>	<b>530</b>	<b>54</b>	<b>0</b>	<b>206</b>	<b>548</b>
<b>South Central</b>													
120 +	8,630	3	0	319	4,847	793	1,217	881	433	8	0	30	98
85 to 119	11,697	6	0	507	5,773	1,336	2,320	1,004	489	95	0	31	135
50 to 84	9,924	6	0	314	3,620	1,094	2,950	1,182	498	61	0	92	106
20 to 49	2,040	7	0	59	317	178	1,042	216	99	10	0	49	65
Other forest	88	0	0	0	0	1	22	11	7	0	0	6	40
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>South Central Total</b>	<b>32,378</b>	<b>23</b>	<b>0</b>	<b>1,198</b>	<b>14,557</b>	<b>3,404</b>	<b>7,551</b>	<b>3,294</b>	<b>1,526</b>	<b>174</b>	<b>0</b>	<b>208</b>	<b>444</b>
<b>East Total</b>													
120 +	13,608	122	83	714	7,433	1,162	1,908	1,095	573	274	36	35	171
85 to 119	23,408	219	734	1,878	8,679	2,158	4,637	1,808	844	1,423	659	64	306
50 to 84	29,844	431	1,893	2,273	6,308	2,300	7,686	2,691	979	3,569	1,184	201	329
20 to 49	18,298	490	2,365	516	833	723	4,252	986	706	5,905	1,081	201	239
Other forest	475	21	110	0	12	20	73	43	60	15	21	14	86
Reserved	12	0	0	0	0	0	6	0	0	6	0	0	0
<b>East Total</b>	<b>85,645</b>	<b>1,283</b>	<b>5,185</b>	<b>5,381</b>	<b>23,264</b>	<b>6,363</b>	<b>18,562</b>	<b>6,624</b>	<b>3,162</b>	<b>11,193</b>	<b>2,982</b>	<b>515</b>	<b>1,132</b>

**Table 6. (cont.)** Forest land area in the Eastern United States by forest-type group, subregion, productivity class, and ownership group, 2007

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
Private noncorporate													
<b>Northeast</b>													
120 +	1,702	218	59	0	21	155	457	2	123	549	107	4	8
85 to 119	6,200	742	403	0	86	400	1,894	36	177	2,170	254	10	26
50 to 84	16,574	1,624	743	0	126	925	5,388	35	459	6,647	553	36	38
20 to 49	22,187	946	659	0	253	744	7,265	195	973	9,753	951	116	332
Other forest	379	11	76	0	12	0	31	10	163	36	7	0	32
Reserved	46	21	0	0	0	0	14	0	5	6	0	0	0
<b>Northeast Total</b>	<b>84,796</b>	<b>5,154</b>	<b>7,559</b>	<b>0</b>	<b>1,344</b>	<b>3,070</b>	<b>24,339</b>	<b>717</b>	<b>2,569</b>	<b>35,433</b>	<b>3,998</b>	<b>0</b>	<b>613</b>
<b>North Central</b>													
120 +	2,687	314	24	0	4	112	1,112	32	339	498	221	6	24
85 to 119	11,982	530	183	0	56	282	5,488	86	1,552	2,165	1,500	68	71
50 to 84	21,875	483	567	0	62	628	10,941	41	2,272	4,253	2,380	94	153
20 to 49	15,505	411	1,344	0	22	532	5,865	12	1,987	3,471	1,233	444	182
Other forest	420	16	37	0	0	24	180	0	63	31	38	13	18
Reserved	13	3	0	0	0	0	5	0	0	3	2	0	0
<b>North Central Total</b>	<b>87,243</b>	<b>4,876</b>	<b>7,769</b>	<b>0</b>	<b>1,037</b>	<b>2,788</b>	<b>30,426</b>	<b>2,565</b>	<b>6,624</b>	<b>17,071</b>	<b>13,264</b>	<b>25</b>	<b>799</b>
<b>Southeast</b>													
120 +	7,914	171	0	414	3,237	1,114	2,348	419	124	15	0	9	63
85 to 119	13,811	90	1	1,233	3,811	1,574	5,359	1,184	346	49	0	76	88
50 to 84	21,174	87	0	1,566	3,900	2,838	9,583	2,270	384	141	0	170	235
20 to 49	5,808	7	0	427	650	636	3,139	736	67	40	0	56	49
Other forest	72	0	0	0	22	19	9	0	0	0	0	0	21
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Southeast Total</b>	<b>87,889</b>	<b>500</b>	<b>119</b>	<b>10,065</b>	<b>22,535</b>	<b>10,076</b>	<b>30,712</b>	<b>10,306</b>	<b>1,320</b>	<b>371</b>	<b>0</b>	<b>663</b>	<b>1,224</b>
<b>South Central</b>													
120 +	14,175	46	0	98	5,517	1,605	4,174	1,557	811	55	0	171	141
85 to 119	20,812	35	0	343	5,602	2,679	8,283	2,003	1,292	191	0	235	150
50 to 84	27,002	52	0	449	3,182	2,982	15,417	2,160	1,575	284	4	645	252
20 to 49	11,289	21	0	90	379	1,024	8,125	533	516	147	0	333	121
Other forest	6,755	2	0	45	3	468	4,307	151	20	0	0	1,722	38
Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>South Central Total</b>	<b>126,756</b>	<b>356</b>	<b>13</b>	<b>2,958</b>	<b>33,762</b>	<b>13,753</b>	<b>53,504</b>	<b>14,811</b>	<b>3,150</b>	<b>978</b>	<b>4</b>	<b>2,200</b>	<b>1,269</b>

Subregion and productivity class <sup>a</sup>	All forest types	Forest-type group											
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	Non-stocked
<i>Thousand acres</i>													
<b>East Total</b>													
120 +	26,477	749	83	512	8,778	2,985	8,092	2,011	1,397	1,116	327	191	236
85 to 119	52,805	1,397	587	1,576	9,555	4,934	21,024	3,309	3,367	4,575	1,755	389	335
50 to 84	86,625	2,246	1,311	2,016	7,270	7,373	41,329	4,506	4,690	11,324	2,937	945	678
20 to 49	54,788	1,386	2,003	517	1,304	2,937	24,394	1,476	3,544	13,411	2,183	949	684
Other forest	7,625	29	113	45	37	511	4,526	162	247	68	46	1,734	108
Reserved	59	24	0	0	0	0	19	0	5	9	2	0	0
<b>East Total</b>	<b>228,380</b>	<b>5,832</b>	<b>4,097</b>	<b>4,666</b>	<b>26,944</b>	<b>18,740</b>	<b>99,384</b>	<b>11,464</b>	<b>13,249</b>	<b>30,505</b>	<b>7,250</b>	<b>4,208</b>	<b>2,041</b>

<sup>a</sup> Productivity classes are displayed as cubic feet per acre per year.  
Note: Data may not add to Totals because of rounding.

**Table 7.** Forest land area in the Eastern and Western United States by rural-urban continuum class and forest type group, 2007

Forest-type group	Total	Predominant county population continuum class				
		Major metro	Intermediate-small metro	Large town	Small town	Rural
<i>Thousand acres</i>						
<b>East</b>						
White-red-jack pine	10,886	2,034	1,869	775	3,987	2,221
Spruce-fir	15,201	1,235	930	1,274	8,600	3,162
Longleaf-slash pine	13,023	3,063	3,676	10	5,225	1,049
Loblolly-shortleaf pine	56,415	12,684	10,374	1,561	21,713	10,083
Oak-pine	29,686	7,547	5,789	863	10,524	4,963
Oak-hickory	138,980	35,021	26,266	3,233	49,635	24,825
Oak-gum-cypress	22,029	5,009	5,212	683	8,519	2,606
Elm-ash-cottonwood	20,033	5,452	3,972	974	7,029	2,606
Maple-beech-birch	53,854	9,068	9,915	4,151	21,234	9,486
Aspen-birch	17,266	2,440	1,046	1,152	8,389	4,239
Other forest types	5,414	2,064	942	125	1,439	844
Nonstocked	3,896	1,037	752	94	1,502	511
<b>East Total</b>	<b>386,683</b>	<b>86,654</b>	<b>70,743</b>	<b>14,895</b>	<b>147,796</b>	<b>66,595</b>
<b>West</b>						
Douglas-fir	39,063	6,185	9,700	3,118	13,260	6,800
Ponderosa pine	24,595	1,857	5,142	1,538	10,000	6,058
Western white pine	347	66	72	0	161	48
Fir-spruce	74,838	2,571	3,844	2,919	15,433	50,071
Hemlock-Sitka spruce	17,049	1,459	2,242	871	4,818	7,659
Larch	1,685	0	172	343	786	384
Lodgepole pine	15,889	1,200	1,308	2,394	7,486	3,501
Redwood	697	207	257	209	24	0
Other softwoods	70,879	1,873	2,784	334	5,126	60,762
Western hardwoods	50,966	8,386	11,180	3,962	12,606	14,832
Pinyon-juniper	54,441	3,717	13,432	1,994	25,850	9,448
Nonstocked	14,094	1,337	2,055	1,040	4,378	5,284
<b>West Total</b>	<b>364,543</b>	<b>28,858</b>	<b>52,188</b>	<b>18,722</b>	<b>99,928</b>	<b>164,847</b>
<b>U.S. Total</b>	<b>751,226</b>	<b>115,512</b>	<b>122,931</b>	<b>33,617</b>	<b>247,724</b>	<b>231,442</b>

\* Some low productivity and reserved forest land has not been inventoried and its forest type group remains unclassified.

**Note:** Data may not add to Totals because of rounding.

**Table 8.** Area of forest land by region, forest-type group, ownership class, and stand origin, 2007

Forest-type group	All owners			National forest			Other public			Private corporate			Private noncorporate		
	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	National origin
<i>Thousand acres</i>															
<b>North</b>															
White-red-jack pine	10,029	2,799	7,231	1,191	503	688	2,311	773	1,538	1,206	321	885	5,321	1,201	4,119
Spruce-fir	15,070	450	14,620	1,485	54	1,432	4,314	112	4,202	5,175	166	5,009	4,096	118	3,977
Longleaf-slash pine	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–
Loblolly-shortleaf pine	1,591	326	1,264	170	64	106	495	34	461	283	108	176	642	121	522
Oak-pine	5,858	500	5,358	481	62	419	997	99	898	578	91	486	3,802	248	3,554
Oak-hickory	54,765	494	54,271	2,432	5	2,427	7,837	122	7,715	5,856	90	5,766	38,640	277	38,363
Oak-gum-cypress	685	2	683	3	–	3	130	0	130	101	0	101	451	2	449
Elm-ash-cottonwood	11,790	167	11,623	304	1	303	2,266	32	2,235	1,106	53	1,053	8,114	82	8,032
Maple-beech-birch	52,504	682	51,822	3,217	14	3,203	8,739	109	8,629	10,965	139	10,826	29,584	420	29,164
Aspen-birch	17,262	252	17,010	2,015	47	1,968	5,019	36	4,983	2,982	77	2,904	7,246	92	7,154
Other forest types	1,082	239	842	31	–	31	159	98	60	100	20	80	791	120	671
Nonstocked	1,403	60	1,343	64	0	64	318	7	311	139	10	130	882	44	839
<b>North Total</b>	<b>172,039</b>	<b>5,972</b>	<b>166,067</b>	<b>11,393</b>	<b>749</b>	<b>10,644</b>	<b>32,585</b>	<b>1,423</b>	<b>31,162</b>	<b>28,492</b>	<b>1,075</b>	<b>27,416</b>	<b>99,569</b>	<b>2,725</b>	<b>96,844</b>
<b>South</b>															
White-red-jack pine	855	125	731	199	15	184	68	0	68	77	22	55	511	87	424
Spruce-fir	132	1	130	4	0	4	115	0	115	10	0	10	1	1	0
Longleaf-slash pine	13,022	7,572	5,450	1,140	294	845	1,835	593	1,243	5,381	4,170	1,211	4,666	2,515	2,151
Loblolly-shortleaf pine	54,826	30,092	24,734	3,305	703	2,602	2,238	532	1,706	22,981	17,203	5,778	26,302	11,654	14,648
Oak-pine	23,829	3,806	20,022	1,600	113	1,487	1,506	109	1,397	5,785	1,878	3,908	14,938	1,707	13,230
Oak-hickory	84,216	2,298	81,918	6,093	47	6,046	4,673	80	4,593	12,706	911	11,795	60,744	1,260	59,484
Oak-gum-cypress	21,344	339	21,005	410	9	401	3,397	66	3,331	6,523	104	6,419	11,013	159	10,854
Elm-ash-cottonwood	8,242	151	8,091	91	1	90	961	7	954	2,056	32	2,024	5,135	111	5,024
Maple-beech-birch	1,349	6	1,343	107	0	107	93	0	93	228	0	228	921	6	914
Aspen-birch	4	0	4	0	0	0	0	0	0	0	0	0	4	0	4
Other forest types	4,333	74	4,259	53	0	53	449	0	449	414	27	387	3,417	47	3,370
Nonstocked	2,493	486	2,007	28	5	24	314	42	272	992	260	732	1,158	179	980
<b>South Total</b>	<b>214,644</b>	<b>44,950</b>	<b>169,694</b>	<b>13,031</b>	<b>1,189</b>	<b>11,842</b>	<b>15,648</b>	<b>1,428</b>	<b>14,220</b>	<b>57,153</b>	<b>24,606</b>	<b>32,547</b>	<b>128,812</b>	<b>17,727</b>	<b>111,085</b>
<b>Rocky Mountain</b>															
Douglas-fir	18,546	151	18,394	12,385	41	12,345	2,019	0	2,019	1,437	105	1,332	2,704	6	2,698
Ponderosa pine	15,006	105	14,900	7,764	54	7,710	1,694	41	1,653	544	0	544	5,004	10	4,993
Western white pine	102	0	102	66	0	66	36	0	36	0	0	0	0	0	0
Fir-spruce	21,114	81	21,033	16,999	24	16,975	2,316	0	2,316	816	57	759	984	0	984
Hemlock-Sitka spruce	1,166	0	1,166	784	0	784	39	0	39	198	0	198	145	0	145

**Table 8. (cont.)** Area of forest land by region, forest-type group, ownership class, and stand origin, 2007

Forest-type group	All owners			National forest			Other public			Private corporate			Private noncorporate		
	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	Natural origin	Total	Planted	National origin
<i>Thousand acres</i>															
Larch	1,153	20	1,133	747	15	733	173	0	173	98	5	92	135	0	135
Lodgepole pine	11,906	87	11,819	9,252	87	9,164	1,766	0	1,766	330	0	330	559	0	559
Redwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other softwoods	3,395	0	3,395	2,673	0	2,673	371	0	371	0	0	0	351	0	351
Western hardwoods	21,862	73	21,789	9,162	0	9,162	3,805	20	3,785	712	0	712	8,183	53	8,130
Pinyon-juniper	47,982	28	47,955	11,703	10	11,693	22,687	5	22,682	714	0	714	12,878	13	12,865
Nonstocked	8,430	7	8,423	3,660	7	3,653	2,654	0	2,654	223	0	223	1,893	0	1,893
<b>Rocky Mountain Total</b>	<b>150,661</b>	<b>554</b>	<b>150,108</b>	<b>75,195</b>	<b>238</b>	<b>74,956</b>	<b>37,561</b>	<b>66</b>	<b>37,495</b>	<b>10,142</b>	<b>335</b>	<b>9,807</b>	<b>65,670</b>	<b>164</b>	<b>65,506</b>
<b>Pacific Coast</b>															
Douglas-fir	20,518	6,839	13,678	7,338	1,285	6,053	4,034	1,111	2,924	5,814	3,552	2,263	3,331	893	2,439
Ponderosa pine	9,590	1,066	8,523	5,233	615	4,618	636	1	635	1,499	309	1,190	2,221	141	2,080
Western white pine	246	23	222	234	12	222	0	0	0	12	12	0	0	0	0
Fir-spruce	53,723	530	53,193	7,911	368	7,544	20,793	14	20,779	22,047	140	21,906	2,971	8	2,963
Hemlock-Sitka spruce	15,883	775	15,108	10,152	127	10,025	2,765	99	2,666	1,750	459	1,291	1,217	90	1,126
Larch	533	35	498	372	28	344	36	0	36	52	7	45	73	0	73
Lodgepole pine	3,984	157	3,826	2,848	136	2,712	462	11	451	342	10	331	332	0	332
Redwood	697	25	672	20	6	13	169	13	157	324	6	317	184	0	184
Other softwoods	67,484	361	67,123	5,692	236	5,456	49,991	16	49,975	10,411	73	10,338	1,390	36	1,354
Western hardwoods	29,104	1,585	27,519	4,477	329	4,149	10,665	194	10,471	4,427	644	3,782	9,535	418	9,117
Pinyon-juniper	6,460	29	6,431	2,015	25	1,990	2,645	5	2,641	145	0	145	1,654	0	1,654
Nonstocked	5,663	264	5,399	1,269	145	1,124	3,027	14	3,013	582	63	519	785	42	743
<b>Pacific Coast Total</b>	<b>213,883</b>	<b>11,692</b>	<b>202,191</b>	<b>47,562</b>	<b>3,311</b>	<b>44,250</b>	<b>95,224</b>	<b>1,477</b>	<b>93,747</b>	<b>47,404</b>	<b>5,276</b>	<b>42,128</b>	<b>23,693</b>	<b>1,628</b>	<b>22,065</b>
<b>U.S. Total</b>	<b>751,228</b>	<b>63,167</b>	<b>688,060</b>	<b>71,986</b>	<b>5,249</b>	<b>66,737</b>	<b>143,457</b>	<b>4,328</b>	<b>139,129</b>	<b>133,049</b>	<b>30,957</b>	<b>102,092</b>	<b>252,073</b>	<b>22,079</b>	<b>229,994</b>

Note: Data may not add to Totals because of rounding.

**Table 9.** Forest land area in the East and West by forest-type group and average d.b.h. class, 2007

Forest-type group	Total	Average d.b.h. class (inches)			Undetermined <sup>a</sup>
		1.0-4.9	5.0-9.9	10.0+	
<i>Thousand acres</i>					
<b>East</b>					
White-red-jack pine	10,885	929	2,237	7,718	2
Spruce-fir	15,202	6,156	5,304	3,742	0
Longleaf-slash pine	13,022	3,587	4,095	5,295	45
Loblolly-shortleaf pine	56,417	12,924	18,695	24,797	0
Oak-pine	29,686	8,501	7,578	13,186	421
Oak-hickory	138,981	22,294	34,687	79,071	2,928
Oak-gum-cypress	22,029	4,019	4,279	13,593	137
Elm-ash-cottonwood	20,033	4,392	5,659	9,981	0
Maple-beech-birch	53,853	5,995	17,096	30,762	0
Aspen-birch	17,266	6,958	7,325	2,983	0
Other forest types	5,415	1,392	1,370	981	1,672
Nonstocked	3,896	3,896	0	0	0
<b>East Total</b>	<b>386,683</b>	<b>81,045</b>	<b>108,325</b>	<b>192,108</b>	<b>5,206</b>
<b>West</b>					
Douglas-fir	39,063	5,513	4,018	29,532	0
Ponderosa pine	24,595	2,141	1,747	20,707	0
Western white pine	347	71	39	237	0
Fir-spruce	74,838	11,015	6,496	26,764	30,564
Hemlock-Sitka spruce	17,049	1,337	561	10,553	4,598
Larch	1,685	367	223	1,096	0
Lodgepole pine	15,889	4,043	5,005	6,841	0
Redwood	697	30	4	663	0
Other softwoods	70,879	2,956	1,178	10,150	56,595
Western hardwoods	50,966	14,007	14,697	17,492	4,771
Pinyon-juniper	54,441	3,095	6,036	45,310	0
Nonstocked	14,095	11,401	0	0	2,694
<b>West Total</b>	<b>364,545</b>	<b>55,974</b>	<b>40,004</b>	<b>169,346</b>	<b>99,222</b>
<b>U.S. Total</b>	<b>751,228</b>	<b>137,019</b>	<b>148,328</b>	<b>361,453</b>	<b>104,428</b>

<sup>a</sup> Undetermined stands are predominantly in reserved and low productivity forests that currently do not have field data to establish average d.b.h.

**Note:** Data may not add to Totals because of rounding.

**Table 10.** Timberland area in the United States by ownership, region, subregions, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
<b>North</b>												
<b>Northeast</b>												
Connecticut	2007	1,732	393	0	0	0	0	257	136	1,339	235	1,104
	1997	1,815	249	10	0	0	10	163	77	1,565	b	c
	1987	1,776	246	16	0	0	16	156	74	1,530	b	c
	1977	1,805	146	2	0	0	2	120	24	1,659	b	c
	1953	1,973	155	1	0	0	1	122	32	1,818	b	c
Delaware	2007	376	25	0	0	0	0	25	0	351	107	244
	1997	376	13	0	0	0	0	13	0	363	b	c
	1987	388	14	0	0	0	0	14	0	374	b	c
	1977	384	14	1	0	0	1	13	0	370	b	c
	1953	392	13	1	0	0	1	10	2	379	b	c
Maine	2007	17,163	758	109	47	0	62	491	158	16,405	10,199	6,207
	1997	16,952	629	51	32	0	20	469	109	16,323	b	c
	1987	17,174	495	76	46	0	30	331	88	16,679	b	c
	1977	16,864	541	73	38	0	36	354	114	16,323	b	c
	1953	16,609	182	90	39	0	51	41	51	16,427	b	c
Maryland	2007	2,372	422	26	0	0	26	310	86	1,950	493	1,457
	1997	2,423	281	22	0	0	22	236	23	2,143	b	c
	1987	2,462	280	22	0	0	22	236	22	2,182	b	c
	1977	2,523	243	25	0	0	25	185	33	2,280	b	c
	1953	2,855	214	54	0	0	54	128	32	2,641	b	c
Massachusetts	2007	2,947	832	60	0	0	60	546	226	2,114	167	1,947
	1997	2,965	480	48	0	0	48	275	157	2,486	b	c
	1987	3,010	474	40	0	0	40	292	142	2,536	b	c
	1977	2,798	366	10	0	0	10	240	116	2,432	b	c
	1953	3,259	399	29	0	0	29	280	90	2,860	b	c
New Hampshire	2007	4,674	1,086	680	626	0	54	249	156	3,588	803	2,786
	1997	4,551	793	440	417	0	22	228	125	3,758	b	c
	1987	4,803	788	536	506	0	30	133	119	4,015	b	c
	1977	4,692	580	472	459	0	13	79	29	4,112	b	c
	1953	4,819	682	585	580	0	5	45	52	4,137	b	c



**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
New Jersey	2007	1,876	588	54	0	0	54	475	59	1,288	497	792
	1997	1,864	500	49	0	0	49	351	100	1,364	b	c
	1987	1,914	533	246	0	0	246	224	63	1,381	b	c
	1977	1,857	319	28	0	0	28	246	45	1,538	b	c
	1953	2,050	181	1	0	0	1	130	50	1,869	b	c
New York	2007	16,015	1,722	129	11	0	118	1,134	458	14,293	2,214	12,079
	1997	15,406	1,154	86	9	0	77	852	215	14,252	b	c
	1987	15,798	1,215	123	6	0	117	899	193	14,583	b	c
	1977	15,405	979	95	6	0	89	721	163	14,426	b	c
	1953	11,952	895	98	0	0	98	714	83	11,057	b	c
Pennsylvania	2007	16,018	4,367	538	482	0	57	3,427	401	11,651	2,108	9,544
	1997	15,853	3,519	498	446	0	51	2,788	233	12,334	b	c
	1987	15,918	3,487	543	478	0	65	2,731	213	12,431	b	c
	1977	15,925	3,472	503	485	0	18	2,796	173	12,453	b	c
	1953	14,574	3,229	492	454	0	38	2,580	157	11,345	b	c
Rhode Island	2007	351	53	0	0	0	0	42	10	298	52	246
	1997	356	69	5	0	0	5	64	0	287	b	c
	1987	368	78	3	0	0	3	68	7	290	b	c
	1977	395	32	0	0	0	0	20	12	363	b	c
	1953	430	26	0	0	0	0	13	13	404	b	c
Vermont	2007	4,482	633	286	255	0	32	275	72	3,850	755	3,094
	1997	4,461	593	251	221	0	31	271	70	3,868	b	c
	1987	4,424	660	251	251	0	0	330	79	3,764	b	c
	1977	4,430	422	213	209	0	4	168	41	4,008	b	c
	1953	3,846	297	199	191	0	8	79	19	3,549	b	c
West Virginia	2007	11,797	1,402	1,087	980	0	107	238	77	10,395	3,230	7,165
	1997	11,900	1,324	1,033	904	0	128	253	38	10,576	b	c
	1987	11,799	1,320	1,070	916	0	154	250	0	10,479	b	c
	1977	11,484	1,121	892	853	0	39	229	0	10,363	b	c
	1953	10,276	982	895	881	0	14	83	4	9,294	b	c
Northeast Total	2007	79,803	12,280	2,971	2,401	0	570	7,470	1,838	67,523	20,860	46,663
	1997	78,923	9,603	2,491	2,029	0	462	5,966	1,146	69,320	b	c
	1987	79,835	9,591	2,926	2,203	0	723	5,665	1,000	70,244	b	c
	1977	78,561	8,233	2,312	2,049	0	263	5,171	750	70,328	b	c
	1953	73,035	7,255	2,445	2,145	0	300	4,225	585	65,780	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
<b>North Central</b>												
Illinois	2007	4,363	639	352	281	0	71	135	153	3,724	215	3,509
	1997	4,058	417	321	254	0	66	55	42	3,641	b	c
	1987	4,030	389	292	226	0	66	55	42	3,641	b	c
	1977	4,033	330	273	211	0	62	22	35	3,703	b	c
	1953	3,830	226	216	184	0	32	10	0	3,604	b	c
Indiana	2007	4,533	651	375	178	0	197	245	31	3,882	294	3,588
	1997	4,342	624	373	170	0	203	238	13	3,719	b	c
	1987	4,296	535	329	166	0	163	177	29	3,761	b	c
	1977	3,815	410	239	162	0	77	170	1	3,405	b	c
	1953	4,015	283	172	112	0	60	109	2	3,732	b	c
Iowa	2007	2,824	312	104	0	0	104	157	51	2,511	41	2,471
	1997	1,944	156	44	0	0	44	74	38	1,788	b	c
	1987	1,460	102	43	0	0	43	52	7	1,358	b	c
	1977	1,461	111	55	0	0	55	51	5	1,350	b	c
	1953	2,595	36	12	3	0	9	22	2	2,559	b	c
Michigan	2007	19,023	7,000	2,655	2,497	0	158	4,002	343	12,023	2,631	9,392
	1997	18,667	6,628	2,643	2,593	0	50	3,728	256	12,039	b	c
	1987	17,364	6,288	2,520	2,475	0	45	3,581	187	11,076	b	c
	1977	18,200	6,361	2,489	2,435	8	45	3,763	109	11,839	b	c
	1953	19,121	6,289	2,509	2,410	9	90	3,695	85	12,832	b	c
Minnesota	2007	15,113	8,134	2,012	1,761	1	250	4,116	2,005	6,979	1,164	5,814
	1997	14,819	7,680	2,115	1,917	26	172	3,063	2,503	7,139	b	c
	1987	13,572	6,814	1,826	1,670	44	112	2,654	2,334	6,758	b	c
	1977	13,697	6,863	1,870	1,715	10	145	2,651	2,342	6,834	b	c
	1953	16,580	8,407	2,338	2,195	49	94	2,450	3,619	8,173	b	c
Missouri	2007	14,674	2,428	1,676	1,410	0	266	688	63	12,247	626	11,621
	1997	13,411	2,052	1,608	1,361	0	246	403	42	11,359	b	c
	1987	11,995	1,657	1,390	1,303	0	87	242	25	10,338	b	c
	1977	12,289	1,532	1,313	1,246	0	67	187	32	10,757	b	c
	1953	14,300	1,617	1,461	1,339	1	121	156	0	12,683	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
Ohio	2007	7,644	693	237	222	0	16	325	130	6,951	902	6,050
	1997	7,568	531	220	216	0	4	227	84	7,036	b	c
	1987	7,141	423	171	171	0	0	173	79	6,718	b	c
	1977	6,917	412	168	159	0	9	202	42	6,505	b	c
	1953	5,450	297	88	88	0	0	168	41	5,153	b	c
Wisconsin	2007	16,042	5,014	1,515	1,376	0	139	1,016	2,483	11,028	1,425	9,603
	1997	15,701	4,546	1,520	1,363	0	157	744	2,282	11,155	b	c
	1987	14,726	4,167	1,419	1,242	0	177	569	2,179	10,559	b	c
	1977	14,478	4,317	1,383	1,266	0	117	568	2,366	10,161	b	c
	1953	15,349	4,720	1,624	1,357	5	262	444	2,652	10,629	b	c
North Central Total	2007	84,215	24,871	8,926	7,725	1	1,201	10,684	5,260	59,345	7,297	52,048
	1997	80,510	22,633	8,843	7,874	26	942	8,530	5,260	57,877	b	c
	1987	74,584	20,375	7,990	7,253	44	693	7,503	4,882	54,209	b	c
	1977	74,886	20,334	7,790	7,194	18	578	7,613	4,931	54,552	b	c
	1953	81,240	21,875	8,420	7,688	64	668	7,054	6,401	59,365	b	c
North Total	2007	164,018	37,151	11,897	10,126	1	1,771	18,154	7,099	126,867	28,156	98,711
	1997	159,433	32,237	11,334	9,904	26	1,404	14,497	6,406	127,197	b	c
	1987	154,419	29,966	10,916	9,456	44	1,416	13,168	5,882	124,453	b	c
	1977	153,447	28,567	10,102	9,243	18	841	12,784	5,681	124,880	b	c
	1953	154,275	29,130	10,865	9,833	64	968	11,279	6,986	125,145	b	c
<b>South</b>												
<b>Southeast</b>												
Florida	2007	15,552	4,165	1,712	1,029	0	683	2,073	380	11,387	6,409	4,978
	1997	14,605	2,786	1,570	984	0	586	1,138	78	11,819	b	c
	1987	14,983	2,434	1,561	990	0	571	814	59	12,549	b	c
	1977	15,843	2,151	1,579	1,005	0	574	532	40	13,692	b	c
	1953	18,135	2,215	1,777	1,035	14	728	382	56	15,920	b	c
Georgia	2007	24,247	1,820	1,285	612	0	674	305	230	22,427	7,959	14,468
	1997	23,796	1,751	1,380	711	0	669	260	111	22,045	b	c
	1987	23,660	1,609	1,421	790	0	631	118	70	22,051	b	c
	1977	24,106	1,589	1,453	813	0	640	100	36	22,517	b	c
	1953	23,969	1,685	1,560	644	0	916	102	23	22,284	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
North Carolina	2007	17,916	2,481	1,690	1,093	0	597	532	258	15,436	3,866	11,570
	1997	18,639	1,878	1,448	1,011	0	437	346	84	16,760	b	c
	1987	18,749	1,861	1,440	1,025	0	415	339	82	16,888	b	c
	1977	19,435	1,717	1,319	1,029	0	290	320	78	17,718	b	c
	1953	19,583	1,540	1,251	1,020	0	232	253	36	18,043	b	c
South Carolina	2007	12,641	1,457	1,014	619	0	394	303	140	11,184	3,569	7,615
	1997	12,419	1,078	867	524	0	343	177	33	11,341	b	c
	1987	12,179	1,173	913	577	0	336	233	27	11,006	b	c
	1977	12,496	1,085	895	573	0	322	167	23	11,411	b	c
	1953	11,884	955	802	563	0	239	128	25	10,929	b	c
Virginia	2007	15,309	2,325	1,858	1,616	0	242	273	194	12,984	2,908	10,076
	1997	15,345	1,880	1,586	1,365	0	221	211	83	13,465	b	c
	1987	15,570	1,993	1,707	1,486	0	221	209	77	13,577	b	c
	1977	15,939	1,921	1,669	1,424	0	245	183	69	14,018	b	c
	1953	15,497	1,493	1,355	1,198	0	157	86	52	14,004	b	c
Southeast Total	2007	85,665	12,247	7,559	4,970	0	2,590	3,487	1,202	73,417	24,711	48,706
	1997	84,803	9,373	6,851	4,594	0	2,257	2,133	389	75,430	b	c
	1987	85,141	9,070	7,042	4,868	0	2,174	1,713	315	76,071	b	c
	1977	87,819	8,463	6,914	4,843	0	2,071	1,303	246	79,356	b	c
	1953	89,068	7,888	6,745	4,459	14	2,272	951	192	81,180	b	c
<b>South Central</b>												
Alabama	2007	22,580	1,323	910	687	0	223	301	113	21,256	6,311	14,946
	1997	21,911	1,130	823	573	0	250	212	95	20,781	b	c
	1987	21,659	1,161	951	689	5	257	147	63	20,498	b	c
	1977	21,498	1,091	860	659	0	201	172	59	20,407	b	c
	1953	20,756	968	791	616	10	165	150	27	19,788	b	c
Arkansas	2007	18,480	3,425	2,943	2,440	0	503	417	65	15,055	5,447	9,607
	1997	18,392	3,275	2,813	2,350	0	463	394	67	15,118	b	c
	1987	16,673	3,011	2,659	2,329	0	330	311	41	13,662	b	c
	1977	16,793	2,918	2,658	2,350	1	307	240	20	13,875	b	c
	1953	19,627	2,916	2,799	2,292	122	385	115	2	16,711	b	c
Kentucky	2007	11,648	1,030	808	590	0	217	173	50	10,618	1,472	9,146
	1997	12,347	1,004	863	628	0	235	141	0	11,344	b	c
	1987	11,909	890	856	583	0	273	34	0	11,019	b	c
	1977	11,903	896	819	589	0	230	76	1	11,007	b	c
	1953	11,497	725	672	455	0	217	53	0	10,772	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
Louisiana	2007	14,116	1,625	905	672	0	233	523	197	12,491	6,477	6,014
	1997	13,693	1,214	707	477	0	230	300	207	12,479	b	c
	1987	13,872	1,331	833	621	0	212	330	168	12,541	b	c
	1977	14,292	1,024	715	581	1	133	299	10	13,268	b	c
	1953	16,039	848	666	535	4	127	177	5	15,191	b	c
Mississippi	2007	19,536	2,253	1,790	1,316	0	474	236	227	17,283	4,713	12,570
	1997	18,587	1,936	1,526	1,091	0	435	311	100	16,651	b	c
	1987	16,674	1,720	1,488	1,240	0	248	100	132	14,954	b	c
	1977	16,504	1,663	1,202	1,121	1	80	95	366	14,841	b	c
	1953	16,853	1,709	1,235	1,036	4	195	54	420	15,144	b	c
Oklahoma	2007	6,234	582	443	223	0	220	118	21	5,651	1,257	4,394
	1997	6,234	574	435	214	0	221	118	21	5,659	b	c
	1987	6,087	586	464	243	0	221	115	7	5,501	b	c
	1977	5,536	448	342	219	0	123	91	15	5,088	b	c
	1953	5,075	494	309	213	7	89	185	0	4,581	b	c
Tennessee	2007	13,913	1,603	1,015	666	0	350	502	86	12,310	2,209	10,101
	1997	13,265	1,509	1,027	556	0	471	422	59	11,757	b	c
	1987	12,840	1,360	958	581	6	371	373	29	11,480	b	c
	1977	12,862	1,161	856	558	0	298	283	22	11,701	b	c
	1953	12,551	1,114	806	564	0	242	298	10	11,437	b	c
Texas	2007	11,859	955	791	662	0	129	109	54	10,904	4,404	6,500
	1997	11,766	776	661	569	0	92	68	47	10,990	b	c
	1987	12,414	795	708	610	0	98	75	12	11,619	b	c
	1977	12,426	773	717	576	0	141	49	7	11,653	b	c
	1953	13,081	782	745	654	0	91	35	2	12,299	b	c
South Central Total	2007	118,365	12,796	9,605	7,255	0	2,350	2,378	813	105,569	32,291	73,278
	1997	116,196	11,417	8,855	6,457	0	2,397	1,966	597	104,778	b	c
	1987	112,128	10,854	8,917	6,896	11	2,010	1,485	452	101,274	b	c
	1977	111,813	9,974	8,169	6,653	3	1,513	1,305	500	101,839	b	c
	1953	115,479	9,556	8,023	6,365	147	1,511	1,067	466	105,923	b	c
South Total	2007	204,029	25,043	17,164	12,225	0	4,939	5,864	2,015	178,986	57,002	121,985
	1997	200,999	20,791	15,706	11,052	0	4,654	4,099	986	180,208	b	c
	1987	197,269	19,924	15,959	11,764	11	4,184	3,198	767	177,345	b	c
	1977	199,632	18,437	15,083	11,496	3	3,584	2,608	746	181,195	b	c
	1953	204,547	17,444	14,768	10,824	161	3,783	2,018	658	187,103	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal				Other	State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment						
<i>Thousand acres</i>												
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	2007	2,028	109	73	0	0	73	18	18	1,919	44	1,875
	1997	1,491	92	53	0	0	53	32	8	1,399	b	c
	1987	1,207	46	37	0	0	37	7	2	1,161	b	c
	1977	1,188	37	27	0	0	27	8	2	1,151	b	c
	1953	1,208	27	27	0	0	27	0	0	1,181	b	c
Nebraska	2007	1,174	144	75	42	0	33	52	16	1,030	7	1,023
	1997	898	108	48	47	0	2	50	10	790	b	c
	1987	537	55	29	29	0	0	22	4	482	b	c
	1977	593	54	43	29	0	14	10	1	539	b	c
	1953	735	57	45	28	0	17	11	1	678	b	c
North Dakota	2007	534	122	73	23	1	49	38	11	411	6	405
	1997	442	55	28	14	0	14	26	0	387	b	c
	1987	338	36	12	0	0	12	22	2	302	b	c
	1977	405	63	53	0	0	53	10	0	342	b	c
	1953	451	68	57	0	1	57	11	0	383	b	c
South Dakota	2007	1,552	1,117	1,073	991	39	43	44	0	435	23	412
	1997	1,487	1,001	946	938	0	8	54	1	485	b	c
	1987	1,447	1,005	915	914	0	1	87	3	442	b	c
	1977	1,467	1,038	965	953	6	6	70	3	429	b	c
	1953	1,622	1,037	970	951	7	11	67	0	585	b	c
<b>Great Plains Total</b>	2007	<b>5,287</b>	<b>1,492</b>	<b>1,294</b>	<b>1,056</b>	<b>40</b>	<b>199</b>	<b>153</b>	<b>45</b>	<b>3,795</b>	<b>79</b>	<b>3,716</b>
	1997	4,317	1,256	1,076	999	0	76	162	18	3,062	b	c
	1987	3,529	1,142	993	943	0	50	138	11	2,387	b	c
	1977	3,652	1,190	1,087	982	6	99	98	5	2,462	b	c
	1953	4,015	1,188	1,099	979	8	112	88	1	2,827	b	c
<b>Intermountain</b>												
Arizona	2007	3,361	2,426	2,416	2,394	0	22	10	0	935	10	925
	1997	4,073	2,775	2,763	2,720	20	23	12	0	1,297	b	c
	1987	3,789	2,527	2,515	2,471	20	24	12	0	1,262	b	c
	1977	3,896	2,514	2,480	2,462	18	0	32	2	1,382	b	c
	1953	3,622	2,305	2,271	2,269	2	0	32	2	1,317	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
Colorado	2007	11,541	9,128	8,794	8,053	714	28	284	50	2,413	309	2,103
	1997	11,555	8,331	7,968	6,885	1,069	14	311	52	3,224	b	c
	1987	11,740	8,464	8,144	7,062	1,074	8	274	46	3,276	b	c
	1977	11,315	8,167	7,933	7,506	422	5	189	45	3,148	b	c
	1953	12,282	9,037	8,802	8,382	416	5	190	45	3,245	b	c
Idaho	2007	16,203	13,900	12,545	11,995	550	0	1,355	0	2,303	1,230	1,073
	1997	17,123	13,901	12,896	12,354	512	29	980	25	3,222	b	c
	1987	14,534	11,397	10,310	9,705	558	47	1,036	51	3,137	b	c
	1977	13,541	10,450	9,570	9,153	409	8	861	19	3,091	b	c
	1953	15,539	12,444	11,558	11,046	505	8	867	19	3,095	b	c
Montana	2007	19,790	13,544	12,848	11,962	886	0	683	13	6,247	2,133	4,114
	1997	19,164	13,207	12,485	11,602	783	100	715	7	5,957	b	c
	1987	14,737	9,382	8,742	8,300	431	11	638	2	5,355	b	c
	1977	14,360	9,170	8,635	8,162	420	53	530	5	5,190	b	c
	1953	16,754	11,530	10,992	10,456	482	54	533	5	5,224	b	c
Nevada	2007	417	379	358	253	105	0	21	0	38	0	38
	1997	169	86	70	57	5	8	16	0	82	b	c
	1987	221	109	106	99	6	1	3	0	112	b	c
	1977	134	65	61	61	0	0	3	1	69	b	c
	1953	141	72	68	68	0	0	3	1	69	b	c
New Mexico	2007	4,359	2,948	2,829	2,802	27	0	119	0	1,411	0	1,411
	1997	4,833	2,875	2,778	2,733	44	0	84	13	1,958	b	c
	1987	5,180	3,005	2,893	2,863	30	0	112	0	2,175	b	c
	1977	5,538	3,038	2,867	2,818	39	9	171	0	2,500	b	c
	1953	5,626	3,067	2,895	2,809	77	9	172	0	2,559	b	c
Utah	2007	4,014	3,314	3,148	2,995	153	0	154	11	700	187	512
	1997	4,700	3,822	3,603	3,265	338	0	212	7	878	b	c
	1987	3,078	2,481	2,314	2,108	175	31	150	17	597	b	c
	1977	3,405	2,670	2,431	2,277	154	0	239	0	735	b	c
	1953	3,882	3,058	2,817	2,662	155	0	241	0	824	b	c
Wyoming	2007	5,997	4,668	4,380	3,876	501	3	288	0	1,329	0	1,329
	1997	5,085	3,641	3,438	2,964	474	0	203	0	1,444	b	c
	1987	4,332	2,888	2,685	2,211	474	0	203	0	1,444	b	c
	1977	4,335	3,356	3,245	3,045	200	0	111	0	979	b	c
	1953	4,739	3,753	3,641	3,244	397	0	112	0	986	b	c

**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
<b>Intermountain Total</b>	<b>2007</b>	65,681	50,306	47,318	44,330	2,936	53	2,913	74	15,374	3,870	11,505
	1997	66,701	48,638	46,001	42,580	3,245	175	2,534	103	18,063	b	c
	1987	57,611	40,253	37,709	34,819	2,768	122	2,428	116	17,358	b	c
	1977	56,521	39,427	37,220	35,483	1,663	74	2,136	71	17,094	b	c
	1953	62,586	45,268	43,044	40,935	2,033	75	2,152	72	17,318	b	c
<b>Rocky Mountain Total</b>	<b>2007</b>	70,968	51,799	48,613	45,385	2,976	251	3,066	119	19,169	3,949	15,221
	1997	71,018	49,893	47,076	43,579	3,246	252	2,696	121	21,125	b	c
	1987	61,140	41,395	38,702	35,762	2,768	172	2,566	127	19,745	b	c
	1977	60,173	40,617	38,307	36,465	1,669	173	2,234	76	19,556	b	c
	1953	66,601	46,456	44,143	41,914	2,041	187	2,240	73	20,145	b	c
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	2007	11,865	9,094	4,750	3,772	805	173	4,282	62	2,771	2,022	749
	1997	12,395	8,605	4,306	3,780	407	119	4,279	20	3,790	b	c
	1987	15,763	9,578	4,936	4,476	336	124	4,622	20	6,185	b	c
	1977	19,722	19,164	15,751	6,529	9,096	126	3,396	17	558	b	c
	1953	20,343	20,086	20,007	6,873	13,008	126	75	4	257	b	c
<b>Alaska Total</b>	<b>2007</b>	11,865	9,094	4,750	3,772	805	173	4,282	62	2,771	2,022	749
	1997	12,395	8,605	4,306	3,780	407	119	4,279	20	3,790	b	c
	1987	15,763	9,578	4,936	4,476	336	124	4,622	20	6,185	b	c
	1977	19,722	19,164	15,751	6,529	9,096	126	3,396	17	558	b	c
	1953	20,343	20,086	20,007	6,873	13,008	126	75	4	257	b	c
<b>Pacific Northwest</b>												
<b>Oregon</b>	<b>2007</b>	24,617	14,907	13,885	11,583	2,279	23	873	149	9,709	5,841	3,868
	1997	23,749	15,123	14,217	11,999	2,213	6	815	91	8,626	b	c
	1987	22,801	14,107	13,178	10,868	2,304	6	827	102	8,694	b	c
	1977	24,211	14,743	13,817	11,633	2,178	6	820	106	9,468	b	c
	1953	25,688	14,706	13,654	11,296	2,350	8	797	255	10,982	b	c
<b>Washington</b>	<b>2007</b>	18,873	9,199	6,518	6,355	54	110	2,378	302	9,674	4,840	4,834
	1997	17,418	8,464	6,209	6,036	33	139	2,035	220	8,954	b	c
	1987	17,514	7,941	5,691	5,524	37	130	2,025	225	9,573	b	c
	1977	17,922	7,648	5,382	5,167	47	168	2,084	182	10,274	b	c
	1953	19,188	8,191	5,882	5,595	174	113	2,095	214	10,997	b	c



**Table 10. (cont.)** Timberland area in the United States by ownership, region, subregion, and State, 2007, 1997, 1987, 1977 and 1953

Region, subregion, and State	Year	Public						Private <sup>a</sup>				
		All owner- ships	Federal					State	County and municipal	Total private	Private corporate	Private noncorpo- rate
			Total public	Total Federal	National forest	Bureau of Land Manage- ment	Other					
<i>Thousand acres</i>												
<b>Pacific Northwest Total</b>	<b>2007</b>	<b>43,489</b>	<b>24,106</b>	<b>20,403</b>	<b>17,937</b>	<b>2,333</b>	<b>133</b>	<b>3,252</b>	<b>452</b>	<b>19,383</b>	<b>10,681</b>	<b>8,702</b>
	1997	41,167	23,587	20,426	18,035	2,246	145	2,850	310	17,580	b	c
	1987	40,315	22,048	18,869	16,392	2,341	136	2,852	327	18,267	b	c
	1977	42,133	22,391	19,199	16,800	2,225	174	2,904	288	19,742	b	c
	1953	44,876	22,897	19,536	16,891	2,524	121	2,892	469	21,979	b	c
<b>Pacific Southwest</b>												
<b>California</b>	<b>2007</b>	<b>19,144</b>	<b>10,198</b>	<b>9,907</b>	<b>9,275</b>	<b>589</b>	<b>43</b>	<b>186</b>	<b>105</b>	<b>8,946</b>	<b>4,294</b>	<b>4,652</b>
	1997	17,952	10,516	10,319	10,086	218	15	159	38	7,437	b	c
	1987	16,712	9,158	9,051	8,742	300	9	95	12	7,554	b	c
	1977	16,303	8,540	8,434	8,168	226	40	79	27	7,763	b	c
	1953	17,127	8,931	8,730	8,372	318	40	193	8	8,196	b	c
<b>Hawaii</b>	<b>2007</b>	<b>700</b>	<b>338</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>336</b>	<b>2</b>	<b>362</b>	<b>26</b>	<b>336</b>
	1997	700	338	0	0	0	0	336	2	362	b	c
	1987	700	338	0	0	0	0	336	2	362	b	c
	1977	948	454	12	0	0	12	442	0	494	b	c
	1953	1,089	496	9	0	0	9	487	0	593	b	c
<b>Pacific Southwest Total</b>	<b>2007</b>	<b>19,843</b>	<b>10,536</b>	<b>9,907</b>	<b>9,275</b>	<b>589</b>	<b>43</b>	<b>522</b>	<b>107</b>	<b>9,308</b>	<b>4,320</b>	<b>4,988</b>
	1997	18,652	10,854	10,319	10,086	218	15	495	40	7,798	b	c
	1987	17,412	9,496	9,051	8,742	300	9	431	14	7,916	b	c
	1977	17,251	8,994	8,446	8,168	226	52	521	27	8,257	b	c
	1953	18,216	9,427	8,739	8,372	318	49	680	8	8,789	b	c
<b>Pacific Coast Total</b>	<b>2007</b>	<b>75,198</b>	<b>43,736</b>	<b>35,060</b>	<b>30,984</b>	<b>3,726</b>	<b>349</b>	<b>8,055</b>	<b>620</b>	<b>31,462</b>	<b>17,023</b>	<b>14,439</b>
	1997	72,214	43,046	35,052	31,901	2,871	279	7,624	370	29,168	b	c
	1987	73,490	41,122	32,856	29,610	2,977	269	7,905	361	32,368	b	c
	1977	79,106	50,549	43,396	31,497	11,547	352	6,821	332	28,557	b	c
	1953	83,435	52,410	48,282	32,136	15,850	296	3,647	481	31,025	b	c
<b>U.S. Total</b>	<b>2007</b>	<b>514,213</b>	<b>157,728</b>	<b>112,734</b>	<b>98,721</b>	<b>6,703</b>	<b>7,311</b>	<b>35,141</b>	<b>9,853</b>	<b>356,485</b>	<b>106,130</b>	<b>250,355</b>
	1997	503,664	145,967	109,168	96,435	6,143	6,590	28,915	7,883	357,698	b	c
	1987	486,318	132,407	98,433	86,592	5,800	6,041	26,837	7,137	353,911	b	c
	1977	492,355	138,169	106,887	88,701	13,237	4,949	24,447	6,835	354,186	b	c
	1953	508,855	145,436	118,056	94,707	18,116	5,234	19,183	8,197	363,419	b	c

<sup>a</sup> These ownership classes only apply to data for 2007. See footnotes b and c for further information.

<sup>b</sup> Historic data for corporate ownerships is unavailable.

<sup>c</sup> Historic data for noncorporate ownerships is unavailable.

**Note:** Data may not add to Totals because of rounding.

**Table 11.** Timberland area in the United States by ownership group, region, subregion, and State, 2007

Region, subregion, and State	Ownership group				
	All ownerships	National forest	Other public	Private corporate	Private noncorporate
<i>Thousand acres</i>					
<b>North</b>					
<b>Northeast</b>					
Connecticut	1,732	0	393	235	1,104
Delaware	376	0	25	107	244
Maine	17,163	47	710	10,199	6,207
Maryland	2,372	0	422	493	1,457
Massachusetts	2,946	0	832	167	1,947
New Hampshire	4,674	626	459	803	2,786
New Jersey	1,877	0	588	497	792
New York	16,015	11	1,711	2,214	12,079
Pennsylvania	16,019	482	3,885	2,108	9,544
Rhode Island	351	0	53	52	246
Vermont	4,482	255	378	755	3,094
West Virginia	11,797	980	422	3,230	7,165
<b>Northeast Total</b>	<b>79,803</b>	<b>2,401</b>	<b>9,878</b>	<b>20,860</b>	<b>46,665</b>
<b>North Central</b>					
Illinois	4,363	281	358	215	3,509
Indiana	4,533	178	473	294	3,588
Iowa	2,824	0	312	41	2,471
Michigan	19,023	2,497	4,503	2,631	9,392
Minnesota	15,112	1,761	6,373	1,164	5,814
Missouri	14,674	1,410	1,017	626	11,621
Ohio	7,645	222	471	902	6,050
Wisconsin	16,042	1,376	3,638	1,425	9,603
<b>North Central Total</b>	<b>84,215</b>	<b>7,725</b>	<b>17,145</b>	<b>7,298</b>	<b>52,048</b>
<b>North Total</b>	<b>164,018</b>	<b>10,126</b>	<b>27,023</b>	<b>28,158</b>	<b>98,713</b>
<b>South</b>					
<b>Southeast</b>					
Florida	15,552	1,029	3,136	6,409	4,978
Georgia	24,247	612	1,208	7,959	14,468
North Carolina	17,917	1,093	1,388	3,866	11,570
South Carolina	12,641	619	838	3,569	7,615
Virginia	15,309	1,616	709	2,908	10,076
<b>Southeast Total</b>	<b>85,665</b>	<b>4,969</b>	<b>7,279</b>	<b>24,711</b>	<b>48,707</b>
<b>South Central</b>					
Alabama	22,581	687	637	6,311	14,946
Arkansas	18,479	2,440	985	5,447	9,607

**Table 11. (cont.)** Timberland area in the United States by ownership group, region, subregion, and State, 2007

Region, subregion, and State	Ownership group				
	All ownerships	National forest	Other public	Private corporate	Private noncorporate
<i>Thousand acres</i>					
Kentucky	11,648	590	440	1,472	9,146
Louisiana	14,116	672	953	6,477	6,014
Mississippi	19,535	1,316	936	4,713	12,570
Oklahoma	6,233	223	359	1,257	4,394
Tennessee	13,913	666	937	2,209	10,101
Texas	11,859	662	293	4,404	6,500
<b>South Central Total</b>	<b>118,365</b>	<b>7,256</b>	<b>5,540</b>	<b>32,290</b>	<b>73,278</b>
<b>South Total</b>	<b>204,030</b>	<b>12,225</b>	<b>12,819</b>	<b>57,001</b>	<b>121,985</b>
<b>Rocky Mountain</b>					
<b>Great Plains</b>					
Kansas	2,028	0	109	44	1,875
Nebraska	1,174	42	102	7	1,023
North Dakota	533	23	99	6	405
South Dakota	1,553	991	127	23	412
<b>Total</b>	<b>5,287</b>	<b>1,056</b>	<b>437</b>	<b>80</b>	<b>3,715</b>
<b>Intermountain</b>					
Arizona	3,361	2,394	32	10	925
Colorado	11,540	8,053	1,075	309	2,103
Idaho	16,203	11,995	1,905	1,230	1,073
Montana	19,791	11,962	1,582	2,133	4,114
Nevada	417	253	126	0	38
New Mexico	4,359	2,802	146	0	1,411
Utah	4,013	2,995	319	187	512
Wyoming	5,997	3,876	792	0	1,329
<b>Great Plains Total</b>	<b>65,681</b>	<b>44,330</b>	<b>5,977</b>	<b>3,869</b>	<b>11,505</b>
<b>Rocky Mountain Total</b>	<b>70,968</b>	<b>45,386</b>	<b>6,414</b>	<b>3,949</b>	<b>15,220</b>
<b>Pacific Coast</b>					
<b>Alaska</b>					
Alaska	11,865	3,772	5,321	2,022	749
<b>Alaska Total</b>	<b>11,865</b>	<b>3,772</b>	<b>5,321</b>	<b>2,022</b>	<b>749</b>
<b>Pacific Northwest</b>					
Oregon	24,617	11,583	3,325	5,841	3,868
Washington	18,873	6,355	2,844	4,840	4,834
<b>Pacific Northwest Total</b>	<b>43,489</b>	<b>17,938</b>	<b>6,169</b>	<b>10,681</b>	<b>8,702</b>

**Table 11. (cont.)** Timberland area in the United States by ownership group, region, subregion, and State, 2007

Region, subregion, and State	Ownership group				
	All ownerships	National forest	Other public	Private corporate	Private noncorporate
	<i>Thousand acres</i>				
<b>Pacific Southwest</b>					
California	19,144	9,275	923	4,294	4,652
Hawaii	700	0	338	26	336
Pacific Southwest Total	19,843	9,275	1,261	4,320	4,988
Pacific Coast Total	75,197	30,985	12,751	17,023	14,439
<b>U.S. Total</b>	<b>514,213</b>	<b>98,722</b>	<b>59,007</b>	<b>106,131</b>	<b>250,357</b>

Note: Data may not add to Totals because of rounding.

**Table 12.** Timberland area in the Eastern United States by forest-type group, subregion, and stand-age class, 2007

Subregion and stand-age class (Years)	Forest-type group												
	All forest types	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	Non-stocked
<i>Thousand acres</i>													
<b>Northeast</b>													
0 to 19	5,089	113	856	0	75	91	799	2	266	1,708	659	50	470
20 to 39	9,463	379	1,312	0	202	386	2,203	18	656	3,325	886	88	9
40 to 59	18,141	1,166	1,133	0	313	904	4,902	79	841	7,699	1,006	93	4
60 to 79	24,557	1,509	1,470	0	263	1,033	8,129	158	458	10,722	726	75	14
80 to 99	14,152	1,017	1,117	0	71	397	5,148	67	149	5,932	247	7	0
100 to 149	4,789	422	618	0	34	64	1,813	4	72	1,707	56	0	0
150 to 199	105	18	57	0	0	0	2	0	1	27	0	0	0
200 and older	16	0	0	0	0	0	0	0	0	16	0	0	0
Uneven aged	3,492	267	183	0	134	145	604	75	88	1,818	175	2	0
<b>Northeast Total</b>	<b>79,803</b>	<b>4,891</b>	<b>6,746</b>	<b>0</b>	<b>1,092</b>	<b>3,020</b>	<b>23,600</b>	<b>403</b>	<b>2,531</b>	<b>32,953</b>	<b>3,753</b>	<b>315</b>	<b>498</b>
<b>North Central</b>													
0 to 19	7,655	522	332	0	30	270	1,339	3	697	750	2,898	79	735
20 to 39	12,522	1,207	757	0	53	531	3,546	30	1,562	1,449	3,177	210	0
40 to 59	25,149	1,578	1,753	0	178	948	8,711	99	3,430	4,645	3,512	293	0
60 to 79	24,715	807	2,105	0	66	626	9,755	72	2,042	6,612	2,560	70	0
80 to 99	10,123	274	1,236	0	18	228	4,488	15	666	2,647	497	54	0
100 to 149	3,807	186	852	0	0	44	1,793	0	272	575	80	6	0
150 to 199	207	20	125	0	0	0	45	0	3	14	0	0	0
200 and older	28	6	5	0	0	0	11	0	0	6	0	0	0
Uneven aged	9	0	0	0	0	0	0	0	0	9	0	0	0
<b>North Central Total</b>	<b>84,215</b>	<b>4,600</b>	<b>7,166</b>	<b>0</b>	<b>345</b>	<b>2,648</b>	<b>29,687</b>	<b>220</b>	<b>8,672</b>	<b>16,707</b>	<b>12,723</b>	<b>713</b>	<b>735</b>
<b>Southeast</b>													
0 to 19	29,224	68	0	4,704	10,261	3,395	7,173	1,762	440	27	0	251	1,143
20 to 39	19,508	140	1	2,748	7,586	2,336	4,436	1,657	315	35	0	255	0
40 to 59	16,608	130	0	1,474	2,939	2,305	6,789	2,300	395	114	0	163	0
60 to 79	12,957	79	10	820	1,181	1,257	6,997	2,003	401	136	0	73	0
80 to 99	5,389	55	4	183	228	439	3,291	1,033	119	16	0	21	0
100 to 149	1,901	14	0	39	29	133	1,183	459	15	24	0	4	0
150 to 199	53	0	0	0	0	0	21	27	0	5	0	0	0
200 and older	0	0	0	0	0	0	0	0	0	0	0	0	0
Uneven aged	26	0	0	5	3	0	12	5	0	0	0	0	0
<b>Southeast Total</b>	<b>85,665</b>	<b>486</b>	<b>16</b>	<b>9,974</b>	<b>22,226</b>	<b>9,865</b>	<b>29,904</b>	<b>9,244</b>	<b>1,686</b>	<b>355</b>	<b>0</b>	<b>766</b>	<b>1,143</b>

**Table 12. (cont.)** Timberland area in the Eastern United States by forest-type group, subregion, and stand-age class, 2007

Subregion and stand-age class (Years)	Forest-type group												
	All forest types	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	Non-stocked
<i>Thousand acres</i>													
<b>South Central</b>													
0 to 19	34,648	15	0	844	15,373	4,325	9,577	1,461	1,360	58	4	593	1,038
20 to 39	25,837	53	0	842	9,695	3,112	8,289	1,794	1,297	105	0	595	53
40 to 59	31,220	105	0	713	4,891	3,607	14,784	4,087	2,209	407	0	365	52
60 to 79	20,293	65	0	460	2,042	1,700	11,883	2,729	1,039	228	0	127	21
80 to 99	4,246	25	0	41	323	271	2,572	693	225	82	0	6	7
100 to 149	872	15	0	5	20	60	481	224	36	26	0	0	6
150 to 199	20	0	0	0	0	0	9	4	6	0	0	0	0
200 and older	8	0	0	0	0	7	0	0	0	0	0	1	0
Uneven aged	1,221	0	0	0	0	44	790	165	196	0	0	26	0
<b>South Central Total</b>	<b>118,365</b>	<b>278</b>	<b>0</b>	<b>2,904</b>	<b>32,344</b>	<b>13,125</b>	<b>48,385</b>	<b>11,159</b>	<b>6,368</b>	<b>907</b>	<b>4</b>	<b>1,713</b>	<b>1,177</b>
<b>East Total</b>													
0 to 19	76,615	718	1,188	5,548	25,739	8,080	18,889	3,228	2,763	2,542	3,560	974	3,386
20 to 39	67,330	1,779	2,071	3,589	17,536	6,364	18,475	3,499	3,829	4,915	4,063	1,148	62
40 to 59	91,118	2,979	2,887	2,187	8,321	7,764	35,186	6,565	6,875	12,865	4,518	914	57
60 to 79	82,521	2,460	3,585	1,280	3,552	4,616	36,763	4,962	3,939	17,698	3,285	345	36
80 to 99	33,910	1,371	2,357	225	639	1,336	15,499	1,808	1,160	8,677	743	88	7
100 to 149	11,369	637	1,469	44	83	301	5,270	687	395	2,332	135	10	6
150 to 199	385	38	183	0	0	0	78	32	11	45	0	0	0
200 and older	52	6	5	0	0	7	11	0	0	22	0	1	0
Uneven aged	4,747	267	183	5	137	189	1,406	246	285	1,827	175	27	0
<b>East Total</b>	<b>368,047</b>	<b>10,255</b>	<b>13,928</b>	<b>12,878</b>	<b>56,007</b>	<b>28,658</b>	<b>131,576</b>	<b>21,027</b>	<b>19,257</b>	<b>50,923</b>	<b>16,480</b>	<b>3,507</b>	<b>3,553</b>

Note: Data may not add to Totals because of rounding.

**Table 13.** Timberland area in the Western United States by forest-type group, subregion, and stand-age class, 2007

Subregion and stand-age class (Years)	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Great Plains</b>													
0 to 19	432	0	16	0	0	0	0	0	0	0	179	16	220
20 to 39	1,146	0	61	0	5	0	0	0	0	0	927	152	0
40 to 59	1,533	0	139	0	6	0	0	0	0	0	1,239	149	0
60 to 79	1,121	0	441	0	19	0	0	0	0	0	572	89	0
80 to 99	690	0	454	0	7	0	0	0	0	0	212	17	0
100 to 149	322	0	225	0	13	0	0	0	0	0	76	8	0
150 to 199	36	0	28	0	6	0	0	0	0	0	1	0	0
200 and older	8	0	8	0	0	0	0	0	0	0	0	0	0
Uneven aged	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Great Plains Total</b>	<b>5,287</b>	<b>0</b>	<b>1,373</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,208</b>	<b>430</b>	<b>220</b>
<b>Intermountain</b>													
0 to 19	9,313	1,680	824	0	1,310	185	241	1,109	0	125	1,028	0	2,812
20 to 39	2,326	315	270	0	716	31	40	361	0	128	465	0	0
40 to 59	2,884	695	654	30	583	50	57	291	0	16	508	0	0
60 to 79	9,281	1,956	2,409	36	1,424	274	244	985	0	57	1,872	24	0
80 to 99	13,998	3,627	3,408	0	2,424	206	187	2,122	0	109	1,884	30	0
100 to 149	19,941	5,385	3,997	0	5,792	281	186	2,683	0	448	1,145	24	0
150 to 199	5,950	1,702	625	0	2,186	109	88	627	0	484	75	54	0
200 and older	1,988	647	272	0	665	29	20	111	0	236	0	7	0
Uneven aged	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Intermountain Total</b>	<b>65,681</b>	<b>16,006</b>	<b>12,460</b>	<b>66</b>	<b>15,100</b>	<b>1,166</b>	<b>1,063</b>	<b>8,290</b>	<b>0</b>	<b>1,604</b>	<b>6,977</b>	<b>138</b>	<b>2,812</b>
<b>Alaska</b>													
0 to 19	425	0	0	0	47	91	0	0	0	0	163	0	124
20 to 39	974	0	0	0	135	82	0	0	0	3	715	0	39
40 to 59	1,095	0	0	0	279	34	0	0	0	79	700	0	4
60 to 79	907	0	0	0	325	38	0	4	0	12	515	0	13
80 to 99	1,509	0	0	0	540	310	0	0	0	7	652	0	0
100 to 149	1,838	0	0	0	1,031	369	0	0	0	38	367	0	33
150 to 199	1,395	0	0	0	447	489	0	6	0	3	450	0	0
200 and older	3,217	0	0	0	724	2,444	0	29	0	0	6	0	14
Uneven aged	507	0	0	0	97	299	0	1	0	8	94	0	8
<b>Alaska Total</b>	<b>11,865</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,625</b>	<b>4,156</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>149</b>	<b>3,661</b>	<b>0</b>	<b>234</b>

**Table 13. (cont.)** Timberland area in the Western United States by forest-type group, subregion, and stand-age class, 2007

Subregion and stand-age class (Years)	Forest-type group												
	All forest types	Douglas-fir	Ponderosa pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodgepole pine	Redwood	Other soft-woods	Western hard-woods	Pinyon-juniper	Non-stocked
<i>Thousand acres</i>													
<b>Pacific Northwest</b>													
0 to 19	7,395	3,479	356	12	310	367	46	323	0	4	1,240	37	1,222
20 to 39	6,889	3,749	369	0	521	767	53	336	0	15	1,078	2	0
40 to 59	6,365	2,374	990	0	503	778	61	406	0	2	1,176	76	0
60 to 79	6,926	2,320	1,651	0	611	617	126	576	0	2	886	137	0
80 to 99	5,631	2,038	1,697	0	754	117	75	339	0	0	468	143	0
100 to 149	5,135	1,996	1,201	10	883	312	65	285	0	37	284	63	0
150 to 199	1,912	680	421	0	477	222	9	24	0	0	59	20	0
200 and older	3,226	1,465	351	13	633	674	33	9	0	0	36	12	0
Uneven aged	10	10	0	0	0	0	0	0	0	0	1	0	0
<b>Pacific Northwest Total</b>	<b>43,489</b>	<b>18,110</b>	<b>7,036</b>	<b>35</b>	<b>4,691</b>	<b>3,855</b>	<b>469</b>	<b>2,298</b>	<b>0</b>	<b>59</b>	<b>5,226</b>	<b>490</b>	<b>1,222</b>
<b>Pacific Southwest</b>													
0 to 19	2,089	38	162	12	40	0	0	8	22	283	699	0	826
20 to 39	1,528	212	272	0	25	12	0	9	80	191	684	45	0
40 to 59	2,746	239	150	8	113	0	0	30	106	695	1,361	43	0
60 to 79	3,554	140	412	0	256	0	0	54	144	1,342	1,076	130	0
80 to 99	3,270	111	486	1	238	1	0	55	69	1,299	942	67	0
100 to 149	3,525	86	353	16	319	1	0	68	82	1,558	916	126	0
150 to 199	1,233	86	60	8	176	3	0	44	16	549	264	27	0
200 and older	1,339	83	64	14	151	23	0	27	33	725	189	29	0
Uneven aged	560	0	0	0	0	0	0	0	0	25	509	27	0
<b>Pacific Southwest Total</b>	<b>19,843</b>	<b>994</b>	<b>1,959</b>	<b>58</b>	<b>1,318</b>	<b>41</b>	<b>0</b>	<b>294</b>	<b>553</b>	<b>6,668</b>	<b>6,640</b>	<b>493</b>	<b>826</b>
<b>West Total</b>													
0 to 19	19,654	5,197	1,358	23	1,706	643	287	1,439	22	412	3,309	54	5,204
20 to 39	12,862	4,275	971	0	1,402	892	93	706	80	337	3,870	199	39
40 to 59	14,623	3,307	1,934	38	1,484	863	118	727	106	791	4,984	268	4
60 to 79	21,789	4,415	4,913	36	2,635	929	370	1,619	144	1,414	4,921	379	13
80 to 99	25,097	5,776	6,045	1	3,963	634	262	2,517	69	1,415	4,159	256	0
100 to 149	30,761	7,467	5,777	26	8,039	962	251	3,036	82	2,080	2,789	220	33
150 to 199	10,525	2,468	1,135	8	3,291	824	97	701	16	1,036	849	101	0
200 and older	9,777	2,194	695	27	2,172	3,171	53	176	33	962	231	48	14
Uneven aged	1,077	10	0	0	97	299	0	1	0	33	603	27	8
<b>West Total</b>	<b>146,166</b>	<b>35,109</b>	<b>22,828</b>	<b>159</b>	<b>24,789</b>	<b>9,217</b>	<b>1,532</b>	<b>10,922</b>	<b>553</b>	<b>8,479</b>	<b>25,713</b>	<b>1,552</b>	<b>5,314</b>

Note: Data may not add to Totals because of rounding.



**Table 14.** Timberland area in the United States by forest-type group, subregion, and stand-size class, 2007

Subregion and stand-size class	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>Northeast</b>													
Nonstocked	507	0	0	0	0	0	0	0	0	0	0	9	498
Seedling-sapling	11,554	120	2,582	0	151	256	1,923	29	640	4,094	1,665	94	0
Poletimber	23,500	592	2,104	0	449	880	6,375	137	819	10,513	1,555	75	0
Sawtimber	44,242	4,179	2,060	0	491	1,884	15,302	238	1,072	18,347	534	137	0
<b>Northeast Total</b>	<b>79,803</b>	<b>4,891</b>	<b>6,746</b>	<b>0</b>	<b>1,092</b>	<b>3,020</b>	<b>23,600</b>	<b>403</b>	<b>2,531</b>	<b>32,953</b>	<b>3,753</b>	<b>315</b>	<b>498</b>
<b>North Central</b>													
Nonstocked	735	1	0	0	0	0	0	0	0	0	0	0	734
Seedling-sapling	15,664	667	2,983	0	28	545	2,767	20	1,706	1,694	5,043	211	1
Poletimber	28,460	1,473	2,848	0	78	876	8,521	51	2,959	5,927	5,399	330	0
Sawtimber	39,356	2,460	1,335	0	240	1,227	18,399	149	4,006	9,086	2,281	172	0
<b>North Central Total</b>	<b>84,215</b>	<b>4,600</b>	<b>7,166</b>	<b>0</b>	<b>345</b>	<b>2,648</b>	<b>29,687</b>	<b>220</b>	<b>8,672</b>	<b>16,707</b>	<b>12,723</b>	<b>713</b>	<b>735</b>
<b>Southeast</b>													
Nonstocked	1,143	0	0	0	0	0	0	0	0	0	0	0	1,143
Seedling-sapling	21,466	50	0	3,009	5,354	3,319	6,990	2,046	427	26	0	245	0
Poletimber	22,826	78	10	3,458	7,922	2,392	6,289	2,151	286	28	0	212	0
Sawtimber	40,230	358	6	3,507	8,950	4,154	16,625	5,048	972	302	0	308	0
<b>Southeast Total</b>	<b>85,665</b>	<b>486</b>	<b>16</b>	<b>9,974</b>	<b>22,226</b>	<b>9,865</b>	<b>29,904</b>	<b>9,244</b>	<b>1,686</b>	<b>355</b>	<b>0</b>	<b>766</b>	<b>1,143</b>
<b>South Central</b>													
Nonstocked	1,176	0	0	0	0	0	0	0	0	0	0	0	1,175
Seedling-sapling	25,955	16	0	577	7,291	4,275	10,041	1,614	1,326	68	4	742	2
Poletimber	30,252	31	0	632	10,136	3,244	12,165	1,789	1,429	117	0	710	0
Sawtimber	60,982	231	0	1,695	14,917	5,606	26,180	7,757	3,613	721	0	262	0
<b>South Central Total</b>	<b>118,365</b>	<b>278</b>	<b>0</b>	<b>2,904</b>	<b>32,344</b>	<b>13,125</b>	<b>48,385</b>	<b>11,159</b>	<b>6,368</b>	<b>907</b>	<b>4</b>	<b>1,713</b>	<b>1,177</b>
<b>East Total</b>													
Nonstocked	3,561	1	0	0	0	0	0	0	0	0	0	9	3,550
Seedling-sapling	74,639	854	5,565	3,586	12,823	8,395	21,720	3,709	4,099	5,882	6,712	1,292	2
Poletimber	105,038	2,173	4,962	4,090	18,585	7,392	33,350	4,127	5,494	16,585	6,953	1,327	0
Sawtimber	184,810	7,227	3,401	5,202	24,598	12,871	76,506	13,191	9,664	28,456	2,815	879	0
<b>East Total</b>	<b>368,047</b>	<b>10,255</b>	<b>13,928</b>	<b>12,878</b>	<b>56,007</b>	<b>28,658</b>	<b>131,576</b>	<b>21,027</b>	<b>19,257</b>	<b>50,923</b>	<b>16,480</b>	<b>3,507</b>	<b>3,553</b>
<b>Great Plains</b>													
Nonstocked	220	0	0	0	0	0	0	0	0	0	0	0	220
Seedling-sapling	712	0	131	0	8	0	0	0	0	0	457	116	0
Poletimber	1,451	0	161	0	6	0	0	0	0	0	1,086	198	0
Sawtimber	2,904	0	1,080	0	42	0	0	0	0	0	1,665	116	0
<b>Great Plains Total</b>	<b>5,287</b>	<b>0</b>	<b>1,373</b>	<b>0</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,208</b>	<b>430</b>	<b>220</b>

**Table 14. (cont.)** Timberland area in the United States by forest-type group, subregion, and stand-size class, 2007

Subregion and stand-size class	All forest types	Forest-type group											Non-stocked
		White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	
<i>Thousand acres</i>													
<b>Intermountain</b>													
Nonstocked	2,812	0	0	0	0	0	0	0	0	0	0	0	2,812
Seedling-sapling	8,902	2,026	985	0	1,983	216	261	1,639	0	258	1,535	0	0
Poletimber	11,686	1,697	873	30	2,073	82	145	3,236	0	289	3,259	0	0
Sawtimber	42,281	12,282	10,602	36	11,043	868	657	3,415	0	1,056	2,184	138	0
<b>Intermountain Total</b>	<b>65,681</b>	<b>16,006</b>	<b>12,460</b>	<b>66</b>	<b>15,100</b>	<b>1,166</b>	<b>1,063</b>	<b>8,290</b>	<b>0</b>	<b>1,604</b>	<b>6,977</b>	<b>138</b>	<b>2,812</b>
<b>Alaska</b>													
Nonstocked	234	0	0	0	0	0	0	0	0	0	0	0	234
Seedling-sapling	2,550	0	0	0	948	406	0	6	0	78	1,112	0	0
Poletimber	3,135	0	0	0	1,048	74	0	14	0	68	1,932	0	0
Sawtimber	5,945	0	0	0	1,629	3,676	0	19	0	3	618	0	0
<b>Alaska Total</b>	<b>11,865</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,625</b>	<b>4,156</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>149</b>	<b>3,661</b>	<b>0</b>	<b>234</b>
<b>Pacific Northwest</b>													
Nonstocked	1,222	0	0	0	0	0	0	0	0	0	0	0	1,222
Seedling-sapling	7,640	3,008	783	19	795	485	97	931	0	26	1,400	96	0
Poletimber	5,212	1,972	401	0	409	273	68	551	0	6	1,495	35	0
Sawtimber	29,416	13,129	5,852	16	3,487	3,097	304	816	0	26	2,331	358	0
<b>Pacific Northwest Total</b>	<b>43,489</b>	<b>18,110</b>	<b>7,036</b>	<b>35</b>	<b>4,691</b>	<b>3,855</b>	<b>469</b>	<b>2,298</b>	<b>0</b>	<b>59</b>	<b>5,226</b>	<b>490</b>	<b>1,222</b>
<b>Pacific Southwest</b>													
Nonstocked	826	0	0	0	0	0	0	0	0	0	0	0	826
Seedling-sapling	1,734	88	126	27	65	3	0	27	30	397	891	80	0
Poletimber	2,375	62	180	8	5	0	0	26	4	279	1,791	20	0
Sawtimber	14,908	843	1,653	23	1,248	37	0	242	519	5,991	3,959	393	0
<b>Pacific Southwest Total</b>	<b>19,843</b>	<b>994</b>	<b>1,959</b>	<b>58</b>	<b>1,318</b>	<b>41</b>	<b>0</b>	<b>294</b>	<b>553</b>	<b>6,668</b>	<b>6,640</b>	<b>493</b>	<b>826</b>
<b>West Total</b>													
Nonstocked	5,314	0	0	0	0	0	0	0	0	0	0	0	5,314
Seedling-sapling	21,538	5,122	2,025	46	3,798	1,111	358	2,602	30	760	5,395	293	0
Poletimber	23,858	3,732	1,615	38	3,541	428	213	3,828	4	643	9,563	253	0
Sawtimber	95,455	26,255	19,188	75	17,450	7,678	961	4,492	519	7,077	10,756	1,006	0
<b>West Total</b>	<b>146,166</b>	<b>35,109</b>	<b>22,828</b>	<b>159</b>	<b>24,789</b>	<b>9,217</b>	<b>1,532</b>	<b>10,922</b>	<b>553</b>	<b>8,479</b>	<b>25,713</b>	<b>1,552</b>	<b>5,314</b>

Note: Data may not add to Totals because of rounding.

**Table 15.** Timberland area in the United States by stand-size class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and subregion	Year	Total	Stand-size class			
			Sawtimber	Poletimber	Seedling/sapling	Nonstocked
<i>Thousand acres</i>						
<b>North</b>						
Northeast	2007	79,803	44,242	23,500	11,554	507
	1997	78,923	40,513	26,022	12,285	104
	1987	79,835	41,299	27,588	10,676	271
	1977	78,561	33,801	21,614	21,071	2,075
	1953	73,035	27,639	30,287	12,631	2,478
North Central	2007	84,215	39,356	28,460	15,664	735
	1997	80,510	35,545	25,025	19,640	300
	1987	74,585	26,017	28,018	19,022	1,528
	1977	74,885	21,971	29,774	20,811	2,329
	1953	81,240	15,414	26,712	26,524	12,590
North Total	2007	164,018	83,598	51,960	27,218	1,242
	1997	159,433	76,058	51,047	31,925	403
	1987	154,419	67,316	55,606	29,698	1,799
	1977	153,446	55,772	51,388	41,882	4,404
	1953	154,275	43,053	56,999	39,155	15,068
<b>South</b>						
Southeast	2007	85,665	40,230	22,826	21,466	1,143
	1997	84,803	35,742	22,385	25,511	1,165
	1987	85,141	36,415	25,189	20,273	3,264
	1977	87,818	32,878	28,619	22,162	4,159
	1953	89,067	25,669	29,709	21,804	11,885
South Central	2007	118,365	60,982	30,252	25,955	1,176
	1997	116,196	52,801	30,018	33,111	266
	1987	112,127	48,622	34,688	28,677	140
	1977	111,812	43,789	32,611	34,331	1,081
	1953	115,479	39,736	53,172	18,051	4,520
South Total	2007	204,029	101,211	53,078	47,421	2,319
	1997	200,999	88,543	52,403	58,622	1,431
	1987	197,268	85,037	59,877	48,950	3,404
	1977	199,630	76,667	61,230	56,493	5,240
	1953	204,546	65,405	82,881	39,855	16,405
East Total	2007	368,047	184,810	105,038	74,639	3,561
	1997	360,432	164,601	103,450	90,547	1,834
	1987	351,687	152,353	115,483	78,648	5,204
	1977	353,076	132,439	112,618	98,375	9,644
	1953	358,821	108,458	139,880	79,010	31,473

**Table 15. (cont.)** Timberland area in the United States by stand-size class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and subregion	Year	Total	Stand-size class			
			Sawtimber	Poletimber	Seedling/sapling	Nonstocked
<i>Thousand acres</i>						
<b>Rocky Mountain</b>						
Great Plains	2007	5,287	2,904	1,451	712	220
	1997	4,317	2,250	1,254	761	53
	1987	3,529	1,993	758	675	102
	1977	3,652	2,003	756	396	497
	1953	4,014	1,341	1,302	850	521
Intermountain	2007	65,681	42,281	11,686	8,902	2,812
	1997	66,701	45,416	12,078	6,543	2,664
	1987	57,610	40,526	9,453	6,308	1,324
	1977	56,521	35,880	12,197	5,873	2,571
	1953	62,585	29,613	19,412	8,823	4,737
<b>Rocky Mountain Total</b>	2007	70,968	45,185	13,136	9,614	3,032
	1997	71,018	47,666	13,332	7,304	2,717
	1987	61,139	42,519	10,211	6,983	1,426
	1977	60,173	37,883	12,953	6,269	3,068
	1953	66,599	30,954	20,714	9,673	5,258
<b>Pacific Coast</b>						
Alaska	2007	11,865	5,945	3,135	2,550	234
	1997	12,395	7,282	2,764	2,186	163
	1987	15,763	10,155	3,018	2,423	168
	1977	19,720	14,592	2,487	2,492	149
	1953	20,342	19,499	357	357	129
Pacific Northwest	2007	43,489	29,416	5,212	7,640	1,222
	1997	41,167	25,744	5,421	8,955	1,047
	1987	40,315	24,093	7,672	7,403	1,147
	1977	42,133	26,230	7,196	6,711	1,996
	1953	44,876	28,367	8,418	5,428	2,663
Pacific Southwest	2007	19,843	14,908	2,375	1,734	826
	1997	18,652	13,387	2,203	1,291	1,772
	1987	17,412	13,747	1,597	1,956	112
	1977	17,251	12,066	1,440	1,995	1,750
	1953	18,216	14,213	1,319	97	2,587
<b>Pacific Coast Total</b>	2007	75,198	50,270	10,722	11,924	2,282
	1997	72,214	46,413	10,387	12,431	2,982
	1987	73,490	47,994	12,286	11,782	1,427
	1977	79,104	52,888	11,123	11,198	3,895
	1953	83,434	62,079	10,094	5,882	5,379

**Table 15. (cont.)** Timberland area in the United States by stand-size class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and subregion	Year	Total	Stand-size class			
			Sawtimber	Poletimber	Seedling/sapling	Nonstocked
<i>Thousand acres</i>						
<b>West Total</b>	<b>2007</b>	<b>146,166</b>	<b>95,455</b>	<b>23,858</b>	<b>21,538</b>	<b>5,314</b>
	1997	143,232	94,079	23,719	19,735	5,699
	1987	134,629	90,513	22,498	18,765	2,853
	1977	139,277	90,771	24,076	17,467	6,963
	1953	150,033	93,033	30,808	15,555	10,637
<b>U.S. Total</b>	<b>2007</b>	<b>514,213</b>	<b>280,265</b>	<b>128,896</b>	<b>96,177</b>	<b>8,875</b>
	1997	503,664	258,680	127,169	110,283	7,533
	1987	486,316	242,855	137,993	97,413	8,055
	1977	492,353	223,210	136,694	115,842	16,607
	1953	508,854	201,491	170,688	94,565	42,110

**Note:** Data may not add to Totals because of rounding.

**Table 16.** Timberland area in the East and West by forest-type group, 2007, 1997, 1987, 1977, and 1953

Major region	Year	All eastern types	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash-cotton-wood	Maple-beech-birch	Aspen-birch	Other forest types	Non-stocked
East	Thousand acres													
North	2007	164,018	9,491	13,911	0	1,436	5,668	53,287	624	11,203	49,661	16,476	1,233	1,027
	1997	159,433	10,512	15,185	0	2,263	3,595	49,678	770	10,000	50,210	16,818	0	404
	1987	154,418	13,030	16,421	0	2,294	3,457	45,945	778	11,009	42,263	17,346	0	1,876
	1977	153,446	11,362	17,468	0	2,468	3,115	42,262	518	18,050	34,300	19,149	0	4,754
	1953	154,275	8,940	18,887	0	3,569	1,022	46,455	1,212	19,673	23,248	24,637	0	6,633
South	2007	204,029	763	16	12,878	54,570	22,989	78,289	20,403	8,054	1,262	4	2,320	2,479
	1997	200,999	645	11	13,129	49,719	29,809	74,315	28,495	2,299	1,146	0	0	1,431
	1987	197,269	519	18	15,640	46,694	28,043	71,239	27,596	3,036	884	0	0	3,599
	1977	199,630	407	8	16,725	47,433	31,453	66,307	26,116	4,171	1,776	0	0	5,234
	1953	204,546	329	12	26,926	51,792	23,970	54,872	34,498	4,051	750	0	0	7,346
East Total	2007	368,047	10,255	13,928	12,878	56,007	28,658	131,576	21,027	19,257	50,923	16,480	3,553	3,507
	1997	360,432	11,157	15,196	13,129	51,982	33,404	123,992	29,265	12,299	51,356	16,818	0	1,835
	1987	351,687	13,549	16,439	15,640	48,988	31,500	117,184	28,373	14,045	43,148	17,346	0	5,475
	1977	353,076	11,769	17,476	16,725	49,901	34,568	108,569	26,635	22,222	36,076	19,149	0	9,988
	1953	358,821	9,269	18,899	26,926	55,360	24,992	101,326	35,710	23,724	23,998	24,637	0	13,979

**Table 16. (cont.)** Timberland area in the East and West by forest-type group, 2007, 1997, 1987, 1977, and 1953

Major region	Year	All western types	Douglas fir	Ponderosa-Jeffrey pine	Western white pine	Fir-spruce	Hemlock-Sitka spruce	Larch	Lodge-pole pine	Redwood	Other western softwood types	Western hardwood types	Pinyon-Juniper	Non-stocked	
<b>West</b>		Thousand acres													
Rocky Mountain	2007	70,968	16,006	13,833	66	15,156	1,166	1,063	8,290	0	1,604	10,185	568	3,032	
	1997	71,018	17,645	15,752	131	14,236	1,510	873	9,696	0	1,906	8,796	365	108	
	1987	62,716	14,119	14,555	276	11,684	1,580	1,856	9,973	0	319	5,105	1,673	1,576	
	1977	62,729	12,729	15,285	333	10,545	1,298	1,822	10,225	0	528	4,745	2,663	2,556	
	1953	69,840	11,923	18,800	2,670	7,529	99	2,677	13,326	0	0	5,600	3,973	3,241	
Pacific West	2007	63,333	19,103	8,995	93	6,008	3,895	469	2,592	553	6,727	11,867	983	2,048	
	1997	59,819	18,889	13,553	147	7,214	5,084	288	2,573	738	1,610	8,248	273	1,203	
	1987	58,541	19,768	11,236	14	10,438	4,034	873	2,233	1,129	319	6,849	834	814	
	1977	63,166	18,666	11,969	126	8,197	4,819	683	2,917	662	0	7,566	3,780	3,782	
	1953	67,462	20,646	16,281	2,797	4,441	4,881	888	2,703	1,283	0	4,773	4,398	4,370	
Alaska	2007	11,865	0	0	0	3,625	4,156	0	39	0	149	3,661	0	234	
	1997	12,395	0	0	0	3,107	4,818	0	0	0	155	4,165	0	150	
	1987	15,767	0	0	0	5,661	5,560	0	0	0	181	4,358	4	4	
	1977	19,771	0	0	0	2,715	12,063	0	0	0	0	4,857	87	49	
	1953	20,532	0	0	0	0	19,438	0	0	0	0	0	904	190	
<b>West Total</b>	2007	146,166	35,109	22,828	159	24,789	9,217	1,532	10,922	553	8,479	25,713	1,552	5,314	
	1997	143,232	36,534	29,305	278	24,557	11,411	1,161	12,269	738	3,671	21,210	638	1,460	
	1987	137,024	33,887	25,791	290	27,783	11,174	2,729	12,205	1,129	819	16,312	2,511	2,394	
	1977	145,666	31,395	27,253	459	21,457	18,180	2,504	13,142	662	528	17,168	6,529	6,387	
	1953	157,833	32,570	35,081	5,467	11,970	24,419	3,565	16,030	1,283	0	10,373	9,275	7,800	

Note: Data may not add to Totals because of rounding.

**Table 17.** Net volume of timber on timber land in the United States by class of timber, species group, region, subregion, and State, 2007

Region, subregion, and state	Class of timber											
	All timber			Growing stock			Live cull			Sound dead		
	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods
<i>Million cubic feet</i>												
<b>North</b>												
<b>Northeast</b>												
Connecticut	3,501	494	3,008	3,314	458	2,856	175	23	152	13	13	0
Delaware	737	117	620	695	115	581	38	2	36	5	1	4
Maine	23,935	13,355	10,580	22,403	12,570	9,833	1,309	561	747	224	224	0
Maryland	5,254	815	4,438	5,092	801	4,291	141	7	135	21	8	13
Massachusetts	6,978	2,757	4,221	6,530	2,605	3,926	437	142	296	10	10	0
New Hampshire	9,880	4,377	5,504	9,154	3,975	5,179	673	348	324	53	53	0
New Jersey	2,968	629	2,339	2,819	582	2,238	117	28	89	31	19	12
New York	27,761	6,646	21,115	25,863	6,071	19,792	1,799	477	1,322	98	98	0
Pennsylvania	31,265	3,099	28,165	29,859	2,866	26,994	1,375	203	1,172	31	31	0
Rhode Island	663	150	514	636	142	494	24	4	20	4	4	0
Vermont	9,493	3,066	6,428	8,696	2,841	5,855	661	151	510	137	74	63
West Virginia	23,539	1,301	22,238	22,523	1,228	21,295	872	49	823	144	23	120
<b>Northeast Total</b>	<b>145,976</b>	<b>36,805</b>	<b>109,171</b>	<b>137,585</b>	<b>34,252</b>	<b>103,333</b>	<b>7,620</b>	<b>1,995</b>	<b>5,626</b>	<b>770</b>	<b>558</b>	<b>212</b>
<b>North Central</b>												
Illinois	7,642	244	7,398	6,875	229	6,646	765	13	752	2	2	0
Indiana	9,098	292	8,806	8,282	275	8,006	809	9	800	7	7	0
Iowa	4,046	45	4,001	3,115	29	3,086	931	15	915	1	1	0
Michigan	30,418	9,529	20,890	28,029	8,903	19,127	2,128	365	1,763	261	261	0
Minnesota	16,657	5,097	11,560	14,930	4,855	10,075	1,650	166	1,485	76	76	0
Missouri	18,886	1,432	17,455	16,595	1,336	15,259	2,289	93	2,196	2	2	0
Ohio	13,311	649	12,662	12,324	610	11,714	980	31	949	7	7	0
Wisconsin	22,268	5,608	16,660	20,272	5,376	14,896	1,902	137	1,765	95	95	0
<b>North Central Total</b>	<b>122,328</b>	<b>22,896</b>	<b>99,432</b>	<b>110,422</b>	<b>21,614</b>	<b>88,808</b>	<b>11,453</b>	<b>829</b>	<b>10,624</b>	<b>453</b>	<b>453</b>	<b>0</b>
<b>North Total</b>	<b>268,303</b>	<b>59,701</b>	<b>208,603</b>	<b>248,007</b>	<b>55,866</b>	<b>192,141</b>	<b>19,073</b>	<b>2,824</b>	<b>16,249</b>	<b>1,223</b>	<b>1,011</b>	<b>212</b>
<b>South</b>												
<b>Southeast</b>												
Florida	18,693	10,750	7,943	14,821	10,332	4,489	3,872	418	3,454	0	0	0
Georgia	36,610	17,712	18,898	33,065	17,319	15,746	3,545	393	3,152	0	0	0
North Carolina	35,167	12,690	22,477	33,139	12,461	20,677	2,028	229	1,799	0	0	0
South Carolina	21,134	10,185	10,948	18,844	9,786	9,058	2,290	399	1,891	0	0	0
Virginia	30,978	7,125	23,854	26,879	6,824	20,054	4,100	300	3,799	0	0	0
<b>Southeast Total</b>	<b>142,581</b>	<b>58,462</b>	<b>84,120</b>	<b>126,747</b>	<b>56,722</b>	<b>70,025</b>	<b>15,834</b>	<b>1,739</b>	<b>14,095</b>	<b>0</b>	<b>0</b>	<b>0</b>



**Table 17. (cont.)** Net volume of timber on timber land in the United States by class of timber, species group, region, subregion, and State, 2007

Region, subregion, and state	Class of timber											
	All timber			Growing stock			Live cull			Sound dead		
	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods
<i>Million cubic feet</i>												
<b>South Central</b>												
Alabama	32,091	14,137	17,954	28,299	13,460	14,839	3,792	677	3,115	0	0	0
Arkansas	27,938	10,556	17,383	25,414	10,268	15,147	2,524	288	2,236	0	0	0
Kentucky	21,188	1,450	19,738	18,217	1,182	17,035	2,971	267	2,703	0	0	0
Louisiana	22,305	10,652	11,653	20,514	10,421	10,093	1,791	230	1,560	0	0	0
Mississippi	29,510	13,102	16,408	26,049	12,622	13,427	3,461	480	2,981	0	0	0
Oklahoma	4,893	1,465	3,428	3,624	1,421	2,203	1,253	39	1,214	16	5	11
Tennessee	27,363	3,483	23,880	23,849	3,161	20,688	3,514	322	3,192	0	0	0
Texas	17,199	9,383	7,816	15,809	9,214	6,595	1,389	169	1,221	0	0	0
<b>South Central Total</b>	<b>182,486</b>	<b>64,226</b>	<b>118,260</b>	<b>161,776</b>	<b>61,749</b>	<b>100,026</b>	<b>20,695</b>	<b>2,472</b>	<b>18,223</b>	<b>16</b>	<b>5</b>	<b>11</b>
<b>South Total</b>	<b>325,068</b>	<b>122,688</b>	<b>202,380</b>	<b>288,523</b>	<b>118,471</b>	<b>170,051</b>	<b>36,529</b>	<b>4,211</b>	<b>32,318</b>	<b>16</b>	<b>5</b>	<b>11</b>
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	2,681	87	2,593	1,457	57	1,400	1,220	27	1,193	4	4	0
Nebraska	1,719	428	1,291	1,253	326	927	461	97	364	5	5	0
North Dakota	602	1	602	367	0	366	235	0	235	0	0	0
South Dakota	1,589	1,296	293	1,463	1,258	205	122	33	88	5	5	0
<b>Great Plains Total</b>	<b>6,591</b>	<b>1,812</b>	<b>4,779</b>	<b>4,539</b>	<b>1,641</b>	<b>2,898</b>	<b>2,039</b>	<b>158</b>	<b>1,881</b>	<b>14</b>	<b>14</b>	<b>0</b>
<b>Intermountain</b>												
Arizona	7,265	6,546	719	6,230	5,836	394	523	198	325	512	512	0
Colorado	28,670	23,552	5,118	25,851	21,085	4,766	601	249	352	2,218	2,218	0
Idaho	42,443	41,811	632	37,161	36,562	599	237	205	33	5,044	5,044	0
Montana	42,754	42,079	676	37,418	36,756	661	333	319	14	5,004	5,004	0
Nevada	768	717	51	638	597	41	79	69	9	51	51	0
New Mexico	8,023	7,179	844	7,013	6,385	628	456	262	194	554	533	21
Utah	8,394	6,516	1,879	7,009	5,243	1,765	233	120	113	1,152	1,152	0
Wyoming	14,232	13,470	762	11,404	10,704	700	200	168	32	2,628	2,598	30
<b>Intermountain Total</b>	<b>152,550</b>	<b>141,869</b>	<b>10,680</b>	<b>132,724</b>	<b>123,168</b>	<b>9,556</b>	<b>2,662</b>	<b>1,589</b>	<b>1,073</b>	<b>17,163</b>	<b>17,112</b>	<b>51</b>
<b>Rocky Mountain Total</b>	<b>159,141</b>	<b>143,682</b>	<b>15,459</b>	<b>137,263</b>	<b>124,809</b>	<b>12,454</b>	<b>4,701</b>	<b>1,747</b>	<b>2,954</b>	<b>17,177</b>	<b>17,125</b>	<b>51</b>
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	34,267	31,191	3,076	31,998	29,125	2,873	1,151	977	174	1,119	1,090	29
<b>Alaska Total</b>	<b>34,267</b>	<b>31,191</b>	<b>3,076</b>	<b>31,998</b>	<b>29,125</b>	<b>2,873</b>	<b>1,151</b>	<b>977</b>	<b>174</b>	<b>1,119</b>	<b>1,090</b>	<b>29</b>

**Table 17. (cont.)** Net volume of timber on timber land in the United States by class of timber, species group, region, subregion, and State, 2007

Region, subregion, and state	Class of timber											
	All timber			Growing stock			Live cull			Sound dead		
	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods	Total	Softwoods	Hard-woods
<i>Million cubic feet</i>												
<b>Pacific Northwest</b>												
Oregon	87,991	81,208	6,783	87,905	81,183	6,722	86	25	61	0	0	0
Washington	71,057	64,840	6,216	70,991	64,823	6,168	66	17	48	0	0	0
<b>Pacific Northwest Total</b>	<b>159,048</b>	<b>146,048</b>	<b>12,999</b>	<b>158,896</b>	<b>146,006</b>	<b>12,890</b>	<b>152</b>	<b>43</b>	<b>109</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Pacific Southwest</b>												
California	67,246	54,979	12,267	67,129	54,922	12,208	116	57	59	0	0	0
Hawaii	334	4	330	280	4	276	41	0	41	12	0	12
<b>Pacific Southwest Total</b>	<b>67,580</b>	<b>54,983</b>	<b>12,597</b>	<b>67,410</b>	<b>54,926</b>	<b>12,484</b>	<b>158</b>	<b>57</b>	<b>101</b>	<b>12</b>	<b>0</b>	<b>12</b>
<b>Pacific Coast Total</b>	<b>260,895</b>	<b>232,223</b>	<b>28,672</b>	<b>258,304</b>	<b>230,056</b>	<b>28,247</b>	<b>1,460</b>	<b>1,077</b>	<b>383</b>	<b>1,131</b>	<b>1,090</b>	<b>41</b>
<b>U.S. Total</b>	<b>1,013,407</b>	<b>558,293</b>	<b>455,114</b>	<b>932,096</b>	<b>529,202</b>	<b>402,894</b>	<b>61,763</b>	<b>9,859</b>	<b>51,904</b>	<b>19,548</b>	<b>19,232</b>	<b>316</b>

**Note:** Data may not add to Totals because of rounding.

**Table 18.** Net volume of softwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>North</b>										
<b>Northeast</b>										
Connecticut	457	442	414	425	158	0	0	0	0	0
Delaware	114	168	173	168	236	0	0	0	0	0
Maine	12,570	11,683	14,510	16,060	10,093	49	48	24	22	15
Maryland	801	816	805	793	717	0	0	0	0	0
Massachusetts	2,605	1,608	1,689	1,439	631	0	0	0	0	0
New Hampshire	3,976	3,819	3,408	3,526	2,208	504	332	360	276	253
New Jersey	582	523	563	252	250	0	0	0	0	0
New York	6,070	5,399	4,935	3,524	2,748	0	6	1	0	0
Pennsylvania	2,865	2,329	1,983	1,778	1,229	78	63	68	60	38
Rhode Island	142	45	59	108	15	0	0	0	0	0
Vermont	2,841	2,863	2,010	1,826	1,251	71	66	45	39	35
West Virginia	1,228	1,250	1,060	1,092	492	311	267	180	239	118
<b>Northeast Total</b>	<b>34,251</b>	<b>30,945</b>	<b>31,609</b>	<b>30,991</b>	<b>20,028</b>	<b>1,013</b>	<b>782</b>	<b>678</b>	<b>636</b>	<b>459</b>
<b>North Central</b>										
Illinois	229	118	118	81	17	70	47	47	35	5
Indiana	275	277	201	88	27	46	29	22	14	3
Iowa	29	18	7	6	4	0	0	0	0	0
Michigan	8,903	7,600	6,558	5,201	2,370	1,943	1,504	1,337	954	271
Minnesota	4,855	4,702	4,086	3,477	2,698	1,002	1,030	919	871	780
Missouri	1,337	862	601	392	264	448	311	273	177	134
Ohio	610	400	326	274	96	41	29	20	16	7
Wisconsin	5,375	4,450	4,112	3,340	1,549	652	627	652	475	136
<b>North Central Total</b>	<b>21,613</b>	<b>18,427</b>	<b>16,009</b>	<b>12,859</b>	<b>7,025</b>	<b>4,202</b>	<b>3,578</b>	<b>3,270</b>	<b>2,542</b>	<b>1,336</b>
<b>North Total</b>	<b>55,864</b>	<b>49,372</b>	<b>47,618</b>	<b>43,850</b>	<b>27,053</b>	<b>5,215</b>	<b>4,360</b>	<b>3,948</b>	<b>3,178</b>	<b>1,795</b>
<b>South</b>										
<b>Southeast</b>										
Florida	10,333	9,424	9,305	8,750	5,384	894	995	873	912	549
Georgia	17,320	15,224	15,870	16,096	10,751	467	506	377	468	366
North Carolina	12,461	12,531	12,286	11,526	9,097	503	546	523	496	337
South Carolina	9,785	8,033	8,835	8,708	4,800	807	582	744	758	582
Virginia	6,824	6,648	6,323	5,928	5,516	400	362	331	312	240
<b>Southeast Total</b>	<b>56,723</b>	<b>51,860</b>	<b>52,619</b>	<b>51,008</b>	<b>35,548</b>	<b>3,071</b>	<b>2,991</b>	<b>2,848</b>	<b>2,946</b>	<b>2,074</b>

**Table 18. (cont.)** Net volume of softwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>South Central</b>										
Alabama	13,460	11,102	11,328	11,469	5,875	714	562	659	561	278
Arkansas	10,267	9,341	8,586	7,973	4,640	1,916	1,895	1,677	1,520	886
Kentucky	1,183	1,212	1,110	916	493	151	158	164	153	139
Louisiana	10,421	9,928	10,552	9,342	4,253	1,269	732	775	724	268
Mississippi	12,622	9,209	9,746	8,930	3,674	1,916	1,374	1,474	1,253	579
Oklahoma	1,421	1,421	998	1,011	541	228	228	169	127	73
Tennessee	3,161	2,893	2,710	2,203	1,227	405	303	346	274	220
Texas	9,214	7,878	7,964	8,356	4,211	1,742	1,143	1,202	1,058	680
<b>South Central Total</b>	<b>61,749</b>	<b>52,984</b>	<b>52,994</b>	<b>50,200</b>	<b>24,914</b>	<b>8,341</b>	<b>6,395</b>	<b>6,466</b>	<b>5,670</b>	<b>3,123</b>
<b>South Total</b>	<b>118,472</b>	<b>104,844</b>	<b>105,613</b>	<b>101,208</b>	<b>60,462</b>	<b>11,412</b>	<b>9,386</b>	<b>9,314</b>	<b>8,616</b>	<b>5,197</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Kansas	57	17	6	1	0	0	0	0	0	0
Nebraska	325	211	177	148	73	39	54	31	28	19
North Dakota	0	3	3	0	0	0	1	0	0	0
South Dakota	1,257	1,331	1,726	1,650	1,236	977	1,090	1,270	1,345	1,046
<b>Great Plains Total</b>	<b>1,639</b>	<b>1,562</b>	<b>1,912</b>	<b>1,799</b>	<b>1,309</b>	<b>1,016</b>	<b>1,145</b>	<b>1,301</b>	<b>1,373</b>	<b>1,065</b>
<b>Intermountain</b>										
Arizona	5,835	5,609	5,980	4,763	4,600	4,175	3,931	4,176	3,208	2,888
Colorado	21,085	16,164	16,226	12,624	10,926	16,426	11,792	11,811	9,486	8,205
Idaho	36,561	38,473	32,088	31,662	28,677	29,457	29,580	23,440	21,589	18,894
Montana	36,756	34,254	27,611	27,691	27,367	28,178	25,148	18,595	18,090	17,444
Nevada	596	306	390	250	235	310	127	206	86	79
New Mexico	6,384	5,029	5,628	5,797	5,514	4,337	3,126	3,730	2,872	2,578
Utah	5,244	5,708	3,913	3,562	3,657	4,395	4,575	3,031	2,808	2,785
Wyoming	10,704	7,578	6,550	6,963	5,261	8,618	5,570	4,542	5,569	4,075
<b>Intermountain Total</b>	<b>123,165</b>	<b>113,121</b>	<b>98,386</b>	<b>93,312</b>	<b>86,237</b>	<b>95,896</b>	<b>83,849</b>	<b>69,531</b>	<b>63,708</b>	<b>56,948</b>
<b>Rocky Mountain Total</b>	<b>124,804</b>	<b>114,683</b>	<b>100,298</b>	<b>95,111</b>	<b>87,546</b>	<b>96,912</b>	<b>84,994</b>	<b>70,832</b>	<b>65,081</b>	<b>58,013</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Alaska	29,124	29,810	37,051	48,277	49,149	19,757	18,733	24,068	35,414	38,850
<b>Alaska Total</b>	<b>29,124</b>	<b>29,810</b>	<b>37,051</b>	<b>48,277</b>	<b>49,149</b>	<b>19,757</b>	<b>18,733</b>	<b>24,068</b>	<b>35,414</b>	<b>38,850</b>

**Table 18. (cont.)** Net volume of softwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>Pacific Northwest</b>										
Oregon	81,183	76,770	70,554	74,735	87,580	44,325	47,993	42,102	44,904	45,488
Washington	64,823	59,187	60,130	57,800	61,994	29,573	27,321	23,497	22,833	25,504
Pacific Northwest Total	146,006	135,957	130,684	132,535	149,574	73,898	75,314	65,599	67,737	70,992
<b>Pacific Southwest</b>										
California	54,921	49,167	46,307	45,975	58,006	33,358	29,539	27,213	28,073	29,590
Hawaii	4	4	4	4	4	0	0	0	0	0
Pacific Southwest Total	54,925	49,171	46,311	45,979	58,010	33,358	29,539	27,213	28,073	29,590
Pacific Coast Total	230,055	214,938	214,046	226,791	256,733	127,013	123,586	116,880	131,224	139,432
U.S. Total	529,195	483,837	467,575	466,960	431,794	240,552	222,326	200,974	208,099	204,437

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorporate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
<b>North</b>												
<b>Northeast</b>												
Connecticut	131	42	69	50	16	40	286	326	400	345	375	142
Delaware	4	7	8	9	5	51	59	110	161	165	159	231
Maine	700	508	527	265	112	7,009	4,812	11,821	11,127	13,959	15,773	9,966
Maryland	113	79	78	82	28	179	509	688	737	727	711	689
Massachusetts	712	223	270	263	78	151	1,742	1,893	1,385	1,419	1,176	553
New Hampshire	474	357	227	59	62	479	2,519	2,998	3,130	2,821	3,191	1,893
New Jersey	253	221	256	58	26	167	162	329	302	307	194	224
New York	1,156	734	648	442	344	741	4,173	4,914	4,659	4,286	3,082	2,404
Pennsylvania	569	390	230	213	147	294	1,924	2,218	1,876	1,685	1,505	1,044
Rhode Island	45	12	26	4	1	7	90	97	33	33	104	14
Vermont	154	152	130	92	38	332	2,284	2,616	2,645	1,835	1,695	1,178
West Virginia	64	73	27	18	28	165	688	853	910	853	835	346
Northeast Total	4,375	2,798	2,496	1,555	885	9,615	19,248	28,863	27,365	28,435	28,800	18,684

**Table 18. (cont.)** Net volume of softwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
<b>North Central</b>												
Illinois	43	25	25	15	0	3	113	116	46	46	31	12
Indiana	45	34	17	20	14	32	152	184	214	162	54	10
Iowa	4	0	0	0	0	2	23	25	18	7	6	4
Michigan	2,388	2,031	1,745	1,307	534	1,173	3,399	4,572	4,065	3,476	2,940	1,565
Minnesota	2,298	2,072	1,875	1,565	1,115	355	1,200	1,555	1,600	1,292	1,041	803
Missouri	85	68	22	12	5	57	747	804	483	306	203	125
Ohio	79	46	26	25	9	96	394	490	325	280	233	80
Wisconsin	1,406	994	1,130	784	485	429	2,888	3,317	2,829	2,330	2,081	928
<b>North Central Total</b>	<b>6,348</b>	<b>5,272</b>	<b>4,840</b>	<b>3,728</b>	<b>2,162</b>	<b>2,147</b>	<b>8,916</b>	<b>11,063</b>	<b>9,580</b>	<b>7,899</b>	<b>6,589</b>	<b>3,527</b>
<b>North Total</b>	<b>10,723</b>	<b>8,070</b>	<b>7,336</b>	<b>5,283</b>	<b>3,047</b>	<b>11,762</b>	<b>28,164</b>	<b>39,324</b>	<b>36,945</b>	<b>36,334</b>	<b>35,389</b>	<b>22,211</b>
<b>South</b>												
<b>Southeast</b>												
Florida	2,398	1,542	1,155	752	312	3,973	3,068	7,041	6,887	7,277	7,086	4,523
Georgia	1,326	1,202	969	856	656	5,945	9,582	15,527	13,516	14,524	14,772	9,729
North Carolina	1,245	745	579	404	273	3,707	7,006	10,713	11,240	11,184	10,626	8,487
South Carolina	822	604	585	462	112	2,986	5,170	8,156	6,847	7,506	7,488	4,106
Virginia	506	359	351	296	231	1,645	4,273	5,918	5,927	5,641	5,320	5,045
<b>Southeast Total</b>	<b>6,297</b>	<b>4,452</b>	<b>3,639</b>	<b>2,770</b>	<b>1,584</b>	<b>18,256</b>	<b>29,099</b>	<b>47,355</b>	<b>44,417</b>	<b>46,132</b>	<b>45,292</b>	<b>31,890</b>
<b>South Central</b>												
Alabama	426	270	229	216	98	4,534	7,786	12,320	10,270	10,440	10,692	5,499
Arkansas	481	284	224	155	41	4,111	3,759	7,870	7,162	6,685	6,298	3,713
Kentucky	94	35	4	4	63	135	803	938	1,019	942	759	291
Louisiana	554	351	277	206	83	5,045	3,553	8,598	8,845	9,500	8,412	3,902
Mississippi	617	508	268	376	342	3,248	6,841	10,089	7,327	8,004	7,301	2,753
Oklahoma	73	73	58	50	2	598	522	1,120	1,120	771	834	466
Tennessee	257	302	241	189	102	554	1,945	2,499	2,288	2,123	1,740	905
Texas	222	128	157	144	49	3,542	3,708	7,250	6,607	6,605	7,154	3,482
<b>South Central Total</b>	<b>2,724</b>	<b>1,951</b>	<b>1,458</b>	<b>1,340</b>	<b>780</b>	<b>21,767</b>	<b>28,917</b>	<b>50,684</b>	<b>44,638</b>	<b>45,070</b>	<b>43,190</b>	<b>21,011</b>
<b>South Total</b>	<b>9,021</b>	<b>6,403</b>	<b>5,097</b>	<b>4,110</b>	<b>2,364</b>	<b>40,023</b>	<b>58,016</b>	<b>95,277</b>	<b>89,055</b>	<b>91,202</b>	<b>88,482</b>	<b>52,901</b>

**Table 18. (cont.)** Net volume of softwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	8	1	0	0	0	0	49	49	16	6	1	0
Nebraska	15	22	17	13	4	12	259	271	135	129	107	50
North Dakota	0	0	0	0	0	0	0	0	2	3	0	0
South Dakota	85	47	118	100	51	11	184	195	194	338	205	139
<b>Great Plains Total</b>	<b>108</b>	<b>70</b>	<b>135</b>	<b>113</b>	<b>55</b>	<b>23</b>	<b>492</b>	<b>515</b>	<b>347</b>	<b>476</b>	<b>313</b>	<b>189</b>
<b>Intermountain</b>												
Arizona	33	47	1,753	1,449	1,596	6	1,621	1,627	1,631	51	106	116
Colorado	1,618	1,362	1,365	713	618	338	2,703	3,041	3,010	3,050	2,425	2,103
Idaho	4,031	3,353	3,480	3,267	2,992	1,713	1,360	3,073	5,540	5,168	6,806	6,791
Montana	2,889	2,318	2,458	2,543	2,335	1,871	3,818	5,689	6,788	6,558	7,058	7,588
Nevada	262	56	12	9	9	0	24	24	123	172	155	147
New Mexico	181	124	676	1,347	1,352	0	1,866	1,866	1,779	1,222	1,578	1,584
Utah	277	374	345	412	476	237	335	572	759	537	342	396
Wyoming	853	724	870	576	490	0	1,233	1,233	1,284	1,138	818	696
<b>Intermountain Total</b>	<b>10,144</b>	<b>8,358</b>	<b>10,959</b>	<b>10,316</b>	<b>9,868</b>	<b>4,165</b>	<b>12,960</b>	<b>17,125</b>	<b>20,914</b>	<b>17,896</b>	<b>19,288</b>	<b>19,421</b>
<b>Rocky Mountain Total</b>	<b>10,252</b>	<b>8,428</b>	<b>11,094</b>	<b>10,429</b>	<b>9,923</b>	<b>4,188</b>	<b>13,452</b>	<b>16,762</b>	<b>21,261</b>	<b>18,372</b>	<b>19,601</b>	<b>19,610</b>
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	5,190	5,090	5,880	12,200	10,081	2,648	1,529	4,177	5,987	7,103	663	218
<b>Alaska Total</b>	<b>5,190</b>	<b>5,090</b>	<b>5,880</b>	<b>12,200</b>	<b>10,081</b>	<b>2,648</b>	<b>1,529</b>	<b>4,177</b>	<b>5,987</b>	<b>7,103</b>	<b>663</b>	<b>218</b>
<b>Pacific Northwest</b>												
Oregon	15,943	12,058	12,805	12,709	15,272	12,903	8,012	20,915	16,719	15,647	17,122	26,820
Washington	13,405	9,723	13,798	13,200	12,605	10,962	10,883	21,845	22,143	22,835	21,767	23,885
<b>Pacific Northwest Total</b>	<b>29,348</b>	<b>21,781</b>	<b>26,603</b>	<b>25,909</b>	<b>27,877</b>	<b>23,865</b>	<b>18,895</b>	<b>42,760</b>	<b>38,862</b>	<b>38,482</b>	<b>38,889</b>	<b>50,705</b>
<b>Pacific Southwest</b>												
California	1,989	1,320	1,245	1,108	1,892	10,323	9,251	19,574	18,308	17,849	16,794	26,524
Hawaii	3	3	3	3	3	0	1	1	1	1	1	1
<b>Pacific Southwest Total</b>	<b>1,992</b>	<b>1,323</b>	<b>1,248</b>	<b>1,111</b>	<b>1,895</b>	<b>10,323</b>	<b>9,252</b>	<b>19,575</b>	<b>18,309</b>	<b>17,850</b>	<b>16,795</b>	<b>26,525</b>
<b>Pacific Coast Total</b>	<b>36,530</b>	<b>28,194</b>	<b>33,731</b>	<b>39,220</b>	<b>39,853</b>	<b>36,836</b>	<b>29,676</b>	<b>67,053</b>	<b>63,158</b>	<b>63,435</b>	<b>56,347</b>	<b>77,448</b>
<b>U.S. Total</b>	<b>66,526</b>	<b>51,095</b>	<b>57,258</b>	<b>59,042</b>	<b>55,187</b>	<b>92,809</b>	<b>129,308</b>	<b>218,416</b>	<b>210,419</b>	<b>209,343</b>	<b>199,819</b>	<b>172,170</b>

Note: Data may not add to Totals because of rounding.

**Table 19.** Net volume of hardwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>North</b>										
<b>Northeast</b>										
Connecticut	2,855	2,313	2,293	2,237	1,146	0	0	0	0	0
Delaware	581	471	469	457	219	0	0	0	0	0
Maine	9,832	9,209	7,938	6,543	5,378	68	45	27	46	18
Maryland	4,291	3,695	3,685	2,699	2,053	0	0	0	0	0
Massachusetts	3,925	3,254	3,040	2,454	1,240	0	0	0	0	0
New Hampshire	5,180	5,220	4,471	3,760	1,757	795	597	727	623	483
New Jersey	2,237	1,855	1,332	1,282	917	0	0	0	0	0
New York	19,792	16,427	15,154	9,732	7,775	12	18	6	0	0
Pennsylvania	26,994	22,574	22,763	21,625	11,716	1,188	983	1,184	1,184	444
Rhode Island	495	350	369	305	146	0	0	0	0	0
Vermont	5,855	5,812	4,233	3,164	2,228	417	339	331	155	152
West Virginia	21,296	19,054	14,777	13,062	8,622	2,101	1,715	1,799	1,741	886
<b>Northeast Total</b>	<b>103,333</b>	<b>90,234</b>	<b>80,524</b>	<b>67,320</b>	<b>43,197</b>	<b>4,581</b>	<b>3,696</b>	<b>4,074</b>	<b>3,749</b>	<b>1,983</b>
<b>North Central</b>										
Illinois	6,646	4,717	4,717	4,185	2,387	508	257	257	198	69
Indiana	8,006	6,623	5,015	3,671	2,876	330	280	217	156	50
Iowa	3,085	1,651	1,244	1,032	1,357	0	0	0	0	1
Michigan	19,126	19,134	14,414	13,103	7,610	2,405	2,100	1,689	1,392	578
Minnesota	10,076	10,564	9,645	7,978	4,253	948	1,193	1,045	1,000	570
Missouri	15,259	8,135	7,334	5,631	5,450	1,509	872	899	665	578
Ohio	11,714	9,758	7,227	6,121	3,153	396	302	202	190	72
Wisconsin	14,896	14,059	12,300	10,117	6,412	1,430	1,277	1,161	882	564
<b>North Central Total</b>	<b>88,808</b>	<b>74,640</b>	<b>61,896</b>	<b>51,838</b>	<b>33,498</b>	<b>7,526</b>	<b>6,281</b>	<b>5,470</b>	<b>4,483</b>	<b>2,482</b>
<b>North Total</b>	<b>192,141</b>	<b>164,874</b>	<b>142,420</b>	<b>119,158</b>	<b>76,695</b>	<b>12,107</b>	<b>9,977</b>	<b>9,544</b>	<b>8,232</b>	<b>4,465</b>
<b>South</b>										
<b>Southeast</b>										
Florida	4,490	5,942	5,665	4,700	3,517	132	269	214	187	103
Georgia	15,745	16,480	14,917	13,322	8,600	834	922	874	841	611
North Carolina	20,677	20,212	19,778	17,705	12,323	2,350	1,913	1,929	1,462	936
South Carolina	9,057	8,651	8,898	8,089	5,412	480	369	407	385	195
Virginia	20,054	19,838	18,896	16,875	11,681	2,420	2,300	2,079	1,804	939
<b>Southeast Total</b>	<b>70,023</b>	<b>71,124</b>	<b>68,154</b>	<b>60,691</b>	<b>41,533</b>	<b>6,216</b>	<b>5,773</b>	<b>5,503</b>	<b>4,679</b>	<b>2,784</b>



**Table 19. (cont.)** Net volume of hardwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>South Central</b>										
Alabama	14,839	11,974	10,484	9,489	6,477	618	369	326	259	147
Arkansas	15,147	12,344	10,655	9,048	9,469	2,147	1,942	1,529	1,247	656
Kentucky	17,035	14,739	13,500	11,052	5,858	1,146	883	799	627	314
Louisiana	10,093	8,916	8,440	7,813	6,756	541	293	290	214	89
Mississippi	13,427	11,402	10,069	8,305	6,370	1,204	760	662	502	144
Oklahoma	2,202	2,203	1,221	1,051	840	66	66	80	75	43
Tennessee	20,688	13,753	11,582	9,798	7,023	1,315	701	626	503	276
Texas	6,595	5,060	4,923	4,918	3,682	327	236	190	149	116
<b>South Central Total</b>	<b>100,026</b>	<b>80,392</b>	<b>70,874</b>	<b>61,474</b>	<b>46,475</b>	<b>7,364</b>	<b>5,249</b>	<b>4,502</b>	<b>3,576</b>	<b>1,785</b>
<b>South Total</b>	<b>170,049</b>	<b>151,515</b>	<b>139,028</b>	<b>122,165</b>	<b>88,008</b>	<b>13,580</b>	<b>11,022</b>	<b>10,005</b>	<b>8,255</b>	<b>4,569</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Kansas	1,400	1,238	847	584	477	0	0	0	0	0
Nebraska	927	643	312	304	285	0	0	1	1	0
North Dakota	366	327	239	257	257	8	1	0	0	0
South Dakota	204	161	70	128	79	24	9	9	9	2
<b>Great Plains Total</b>	<b>2,897</b>	<b>2,369</b>	<b>1,468</b>	<b>1,273</b>	<b>1,098</b>	<b>32</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>2</b>
<b>Intermountain</b>										
Arizona	394	368	336	220	174	156	164	151	133	103
Colorado	4,766	3,865	3,222	2,413	1,787	3,620	2,531	1,876	1,638	1,147
Idaho	600	784	503	223	213	268	268	152	67	77
Montana	662	562	405	287	248	168	108	40	46	28
Nevada	41	33	29	13	12	39	27	27	13	12
New Mexico	628	549	496	599	457	464	371	308	240	178
Utah	1,766	1,656	881	878	898	1,207	1,146	572	444	546
Wyoming	700	434	341	232	187	325	169	76	81	61
<b>Intermountain Total</b>	<b>9,557</b>	<b>8,251</b>	<b>6,213</b>	<b>4,865</b>	<b>3,976</b>	<b>6,247</b>	<b>4,784</b>	<b>3,202</b>	<b>2,662</b>	<b>2,152</b>
<b>Rocky Mountain Total</b>	<b>12,454</b>	<b>10,620</b>	<b>7,681</b>	<b>6,138</b>	<b>5,074</b>	<b>6,279</b>	<b>4,794</b>	<b>3,212</b>	<b>2,672</b>	<b>2,154</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Alaska	2,874	3,145	4,209	4,222	4,189	99	176	146	237	248
<b>Alaska Total</b>	<b>2,874</b>	<b>3,145</b>	<b>4,209</b>	<b>4,222</b>	<b>4,189</b>	<b>99</b>	<b>176</b>	<b>146</b>	<b>237</b>	<b>248</b>

**Table 19. (cont.)** Net volume of hardwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>Pacific Northwest</b>										
Oregon	6,723	6,525	6,066	4,819	4,217	1,120	1,185	1,135	897	723
Washington	6,169	6,537	6,937	5,703	2,859	575	372	335	141	121
<b>Pacific Northwest Total</b>	<b>12,892</b>	<b>13,062</b>	<b>13,003</b>	<b>10,522</b>	<b>7,076</b>	<b>1,695</b>	<b>1,557</b>	<b>1,470</b>	<b>1,038</b>	<b>844</b>
<b>Pacific Southwest</b>										
California	12,207	8,338	7,464	3,693	2,828	3,778	2,264	2,184	1,133	1,276
Hawaii	277	277	276	198	220	0	0	0	0	0
<b>Pacific Southwest Total</b>	<b>12,484</b>	<b>8,615</b>	<b>7,740</b>	<b>3,891</b>	<b>3,048</b>	<b>3,778</b>	<b>2,264</b>	<b>2,184</b>	<b>1,133</b>	<b>1,276</b>
<b>Pacific Coast Total</b>	<b>28,250</b>	<b>24,822</b>	<b>24,952</b>	<b>18,635</b>	<b>14,313</b>	<b>5,572</b>	<b>3,997</b>	<b>3,800</b>	<b>2,408</b>	<b>2,368</b>
<b>U.S. Total</b>	<b>402,894</b>	<b>351,832</b>	<b>314,081</b>	<b>266,096</b>	<b>184,090</b>	<b>37,538</b>	<b>29,790</b>	<b>26,561</b>	<b>21,567</b>	<b>13,556</b>

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												

**North**

**Northeast**

Connecticut	681	370	343	190	121	370	1,804	2,174	1,944	1,950	2,047	1,025
Delaware	48	40	17	18	4	136	397	533	431	452	439	215
Maine	463	367	253	87	51	4,987	4,314	9,301	8,796	7,658	6,410	5,309
Maryland	778	432	437	260	142	797	2,716	3,513	3,263	3,248	2,439	1,911
Massachusetts	1,200	597	504	326	164	171	2,554	2,725	2,656	2,536	2,128	1,076
New Hampshire	460	426	226	128	38	665	3,260	3,925	4,197	3,518	3,009	1,236
New Jersey	525	382	315	182	47	586	1,126	1,712	1,473	1,017	1,100	870
New York	2,302	1,327	1,245	647	517	2,858	14,620	17,478	15,081	13,903	9,085	7,258
Pennsylvania	7,387	4,766	4,645	4,175	2,262	3,567	14,852	18,419	16,826	16,934	16,266	9,010
Rhode Island	60	56	84	17	11	82	353	435	293	285	288	135
Vermont	599	590	507	157	109	952	3,887	4,839	4,884	3,395	2,852	1,967
West Virginia	819	806	534	291	337	6,022	12,354	18,376	16,533	12,444	11,030	7,399
<b>Northeast Total</b>	<b>15,322</b>	<b>10,158</b>	<b>9,110</b>	<b>6,478</b>	<b>3,803</b>	<b>21,193</b>	<b>62,237</b>	<b>83,430</b>	<b>76,377</b>	<b>67,340</b>	<b>57,093</b>	<b>37,411</b>

**North Central**

Illinois	612	250	250	174	36	358	5,168	5,526	4,210	4,210	3,813	2,282
Indiana	876	717	511	250	186	516	6,284	6,800	5,626	4,287	3,265	2,640
Iowa	462	164	145	118	19	40	2,583	2,623	1,486	1,099	914	1,337
Michigan	3,523	3,332	2,587	2,524	1,419	2,587	10,611	13,198	13,702	10,138	9,187	5,613

**Table 19. (cont.)** Net volume of hardwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
Minnesota	3,529	3,619	3,543	2,899	1,434	534	5,065	5,599	5,752	5,057	4,079	2,249
Missouri	1,173	437	265	153	109	578	11,999	12,577	6,826	6,170	4,813	4,763
Ohio	774	531	321	312	187	1,185	9,359	10,544	8,926	6,704	5,619	2,894
Wisconsin	2,805	2,381	2,490	1,913	1,193	1,269	9,392	10,661	10,400	8,649	7,322	4,655
North Central Total	13,754	11,430	10,112	8,343	4,583	7,067	60,461	67,528	56,928	46,314	39,012	26,433
North Total	29,076	21,588	19,222	14,821	8,386	28,260	122,698	150,958	133,305	113,654	96,105	63,844
<b>South</b>												
<b>Southeast</b>												
Florida	1,198	1,065	741	238	76	1,405	1,755	3,160	4,608	4,709	4,275	3,338
Georgia	883	927	588	443	250	3,873	10,155	14,028	14,632	13,455	12,038	7,739
North Carolina	1,542	767	574	382	197	2,722	14,063	16,785	17,532	17,275	15,861	11,190
South Carolina	824	362	336	278	76	2,159	5,594	7,753	7,920	8,155	7,426	5,141
Virginia	1,123	942	767	651	246	3,053	13,458	16,511	16,597	16,050	14,420	10,496
Southeast Total	5,570	4,062	3,006	1,992	845	13,212	45,025	58,237	61,289	59,644	54,020	37,904
<b>South Central</b>												
Alabama	715	464	330	203	83	2,744	10,762	13,506	11,141	9,828	9,027	6,247
Arkansas	1,705	1,156	639	475	360	2,977	8,318	11,295	9,246	8,487	7,326	8,453
Kentucky	755	501	393	351	181	2,324	12,810	15,134	13,355	12,308	10,074	5,363
Louisiana	1,317	674	617	306	114	3,514	4,721	8,235	7,949	7,533	7,293	6,553
Mississippi	931	804	363	366	199	2,609	8,683	11,292	9,839	9,044	7,437	6,027
Oklahoma	152	152	130	97	31	253	1,731	1,984	1,985	1,011	879	766
Tennessee	1,716	1,087	716	510	378	2,926	14,731	17,657	11,965	10,240	8,785	6,369
Texas	254	118	119	93	19	1,842	4,172	6,014	4,707	4,614	4,676	3,547
South Central Total	7,545	4,956	3,307	2,401	1,365	19,189	65,928	85,117	70,187	63,065	55,497	43,325
South Total	13,115	9,018	6,313	4,393	2,210	32,401	110,953	143,354	131,476	122,709	109,517	81,229
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	106	67	46	24	16	22	1,272	1,294	1,171	801	560	461
Nebraska	156	53	16	13	7	0	771	771	590	295	290	278
North Dakota	49	32	39	79	79	4	305	309	294	200	178	178
South Dakota	21	7	11	22	13	1	158	159	145	50	97	64
Great Plains Total	332	159	112	138	115	27	2,506	2,533	2,200	1,346	1,125	981
<b>Intermountain</b>												
Arizona	0	0	185	48	39	0	238	238	204	0	39	32
Colorado	404	285	304	150	124	110	632	742	1,049	1,042	625	516

**Table 19. (cont.)** Net volume of hardwood growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
Idaho	137	116	149	49	42	6	189	195	400	202	107	94
Montana	12	37	33	62	55	47	435	482	417	332	179	165
Nevada	0	5	1	0	0	0	2	2	1	1	0	0
New Mexico	17	16	41	32	25	0	147	147	162	147	327	254
Utah	123	127	68	145	118	115	321	436	383	241	289	234
Wyoming	110	79	81	58	48	0	265	265	186	184	93	78
Intermountain Total	803	665	862	544	451	278	2,229	2,507	2,802	2,149	1,659	1,373
Rocky Mountain Total	1,135	824	974	682	566	305	4,735	5,040	5,002	3,495	2,784	2,354
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	2,260	1,930	1,751	3,864	3,902	274	241	515	1,040	2,312	121	39
Pacific Coast Total	2,260	1,930	1,751	3,864	3,902	274	241	515	1,040	2,312	121	39
<b>Pacific Northwest</b>												
Oregon	1,739	1,535	1,124	1,198	628	2,000	1,864	3,864	3,805	3,807	2,724	2,866
Washington	1,507	1,311	1,319	1,124	507	1,581	2,506	4,087	4,854	5,283	4,438	2,231
Pacific Northwest Total	3,246	2,846	2,443	2,322	1,135	3,581	4,370	7,951	8,659	9,090	7,162	5,097
<b>Pacific Southwest</b>												
California	774	319	554	283	218	2,532	5,123	7,655	5,755	4,726	2,277	1,334
Hawaii	122	122	122	95	99	30	125	155	155	154	103	121
Pacific Southwest Total	896	440	676	378	317	2,562	5,248	7,810	5,910	4,880	2,380	1,455
Pacific Coast Total	6,402	5,216	4,870	6,564	5,354	6,417	9,859	16,276	15,609	16,282	9,663	6,591
<b>U.S. Total</b>	<b>49,728</b>	<b>36,646</b>	<b>31,379</b>	<b>26,460</b>	<b>16,516</b>	<b>67,383</b>	<b>248,245</b>	<b>312,212</b>	<b>285,392</b>	<b>256,140</b>	<b>218,069</b>	<b>154,018</b>

Note: Data may not add to Totals because of rounding.

**Table 20.** Net volume of growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>North</b>										
<b>Northeast</b>										
Connecticut	3,312	2,755	2,707	2,662	1,304	0	0	0	0	0
Delaware	695	639	642	625	455	0	0	0	0	0
Maine	22,402	20,892	22,448	22,603	15,471	117	93	51	68	33
Maryland	5,092	4,511	4,490	3,492	2,770	0	0	0	0	0
Massachusetts	6,530	4,862	4,729	3,893	1,871	0	0	0	0	0
New Hampshire	9,156	9,039	7,879	7,286	3,965	1,299	929	1,087	899	736
New Jersey	2,819	2,378	1,895	1,534	1,167	0	0	0	0	0
New York	25,862	21,826	20,089	13,256	10,523	12	24	7	0	0
Pennsylvania	29,859	24,903	24,746	23,403	12,945	1,266	1,046	1,252	1,244	482
Rhode Island	637	395	428	413	161	0	0	0	0	0
Vermont	8,696	8,675	6,243	4,990	3,479	488	405	376	194	187
West Virginia	22,524	20,304	15,837	14,154	9,114	2,412	1,982	1,979	1,980	1,004
<b>Northeast Total</b>	<b>137,584</b>	<b>121,179</b>	<b>112,133</b>	<b>98,311</b>	<b>63,225</b>	<b>5,594</b>	<b>4,478</b>	<b>4,752</b>	<b>4,385</b>	<b>2,442</b>
<b>North Central</b>										
Illinois	6,875	4,835	4,835	4,266	2,404	578	304	304	233	74
Indiana	8,281	6,900	5,216	3,759	2,903	376	309	239	170	53
Iowa	3,114	1,669	1,251	1,038	1,361	0	0	0	0	1
Michigan	28,029	26,734	20,972	18,304	9,980	4,348	3,604	3,026	2,346	849
Minnesota	14,931	15,266	13,731	11,455	6,951	1,950	2,223	1,964	1,871	1,350
Missouri	16,596	8,997	7,935	6,023	5,714	1,957	1,183	1,172	842	712
Ohio	12,324	10,158	7,553	6,395	3,249	437	331	222	206	79
Wisconsin	20,271	18,509	16,412	13,457	7,961	2,082	1,904	1,813	1,357	700
<b>North Central Total</b>	<b>110,421</b>	<b>93,067</b>	<b>77,905</b>	<b>64,697</b>	<b>40,523</b>	<b>11,728</b>	<b>9,859</b>	<b>8,740</b>	<b>7,025</b>	<b>3,818</b>
<b>North Total</b>	<b>248,005</b>	<b>214,246</b>	<b>190,038</b>	<b>163,008</b>	<b>103,748</b>	<b>17,322</b>	<b>14,337</b>	<b>13,492</b>	<b>11,410</b>	<b>6,260</b>
<b>South</b>										
<b>Southeast</b>										
Florida	14,823	15,366	14,970	13,450	8,901	1,026	1,264	1,087	1,099	652
Georgia	33,065	31,704	30,787	29,418	19,351	1,301	1,428	1,251	1,309	977
North Carolina	33,138	32,743	32,064	29,231	21,420	2,853	2,459	2,452	1,958	1,273
South Carolina	18,842	16,684	17,733	16,797	10,212	1,287	951	1,151	1,143	777
Virginia	26,878	26,486	25,219	22,803	17,197	2,820	2,662	2,410	2,116	1,179
<b>Southeast Total</b>	<b>126,746</b>	<b>122,984</b>	<b>120,773</b>	<b>111,699</b>	<b>77,081</b>	<b>9,287</b>	<b>8,764</b>	<b>8,351</b>	<b>7,625</b>	<b>4,858</b>

**Table 20. (cont.)** Net volume of growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>South Central</b>										
Alabama	28,299	23,076	21,812	20,958	12,352	1,332	931	985	820	425
Arkansas	25,414	21,685	19,241	17,021	14,109	4,063	3,837	3,206	2,767	1,542
Kentucky	18,218	15,951	14,610	11,968	6,351	1,297	1,041	963	780	453
Louisiana	20,514	18,844	18,992	17,155	11,009	1,810	1,025	1,065	938	357
Mississippi	26,049	20,611	19,815	17,235	10,044	3,120	2,134	2,136	1,755	723
Oklahoma	3,623	3,624	2,219	2,062	1,381	294	294	249	202	116
Tennessee	23,849	16,646	14,292	12,001	8,250	1,720	1,004	972	777	496
Texas	15,809	12,938	12,887	13,274	7,893	2,069	1,379	1,392	1,207	796
<b>South Central Total</b>	<b>161,775</b>	<b>133,376</b>	<b>123,868</b>	<b>111,674</b>	<b>71,389</b>	<b>15,705</b>	<b>11,644</b>	<b>10,968</b>	<b>9,246</b>	<b>4,908</b>
<b>South Total</b>	<b>288,521</b>	<b>256,359</b>	<b>244,641</b>	<b>223,373</b>	<b>148,470</b>	<b>24,992</b>	<b>20,408</b>	<b>19,319</b>	<b>16,871</b>	<b>9,766</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Kansas	1,457	1,255	853	585	477	0	0	0	0	0
Nebraska	1,252	854	489	452	358	39	54	32	29	19
North Dakota	366	330	242	257	257	8	2	0	0	0
South Dakota	1,461	1,492	1,796	1,778	1,315	1,001	1,099	1,279	1,354	1,048
<b>Great Plains Total</b>	<b>4,536</b>	<b>3,931</b>	<b>3,380</b>	<b>3,072</b>	<b>2,407</b>	<b>1,048</b>	<b>1,155</b>	<b>1,311</b>	<b>1,383</b>	<b>1,067</b>
<b>Intermountain</b>										
Arizona	6,229	5,977	6,316	4,983	4,774	4,331	4,095	4,327	3,341	2,991
Colorado	25,851	20,029	19,448	15,037	12,713	20,046	14,323	13,687	11,124	9,352
Idaho	37,161	39,257	32,591	31,885	28,890	29,725	29,848	23,592	21,656	18,971
Montana	37,418	34,816	28,016	27,978	27,615	28,346	25,256	18,635	18,136	17,472
Nevada	637	339	419	263	247	349	154	233	99	91
New Mexico	7,012	5,578	6,124	6,396	5,971	4,801	3,497	4,038	3,112	2,756
Utah	7,010	7,364	4,794	4,440	4,555	5,602	5,721	3,603	3,252	3,331
Wyoming	11,404	8,012	6,891	7,195	5,448	8,943	5,739	4,618	5,650	4,136
<b>Intermountain Total</b>	<b>132,722</b>	<b>121,372</b>	<b>104,599</b>	<b>98,177</b>	<b>90,213</b>	<b>102,143</b>	<b>88,633</b>	<b>72,733</b>	<b>66,370</b>	<b>59,100</b>
<b>Rocky Mountain Total</b>	<b>137,258</b>	<b>125,303</b>	<b>107,979</b>	<b>101,249</b>	<b>92,620</b>	<b>103,191</b>	<b>89,788</b>	<b>74,044</b>	<b>67,753</b>	<b>60,167</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Alaska	31,998	32,955	41,260	52,499	53,338	19,856	18,909	24,214	35,651	39,098
<b>Alaska Total</b>	<b>31,998</b>	<b>32,955</b>	<b>41,260</b>	<b>52,499</b>	<b>53,338</b>	<b>19,856</b>	<b>18,909</b>	<b>24,214</b>	<b>35,651</b>	<b>39,098</b>

**Table 20. (cont.)** Net volume of growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	All owners					National forest				
	2007	1997	1987	1977	1953	2007	1997	1987	1977	1953
<i>Million cubic feet</i>										
<b>Pacific Northwest</b>										
Oregon	87,906	83,295	76,620	79,554	91,797	45,445	49,178	43,237	45,801	46,211
Washington	70,992	65,724	67,067	63,503	64,853	30,148	27,693	23,832	22,974	25,625
<b>Pacific Northwest Total</b>	<b>158,898</b>	<b>149,019</b>	<b>143,687</b>	<b>143,057</b>	<b>156,650</b>	<b>75,593</b>	<b>76,871</b>	<b>67,069</b>	<b>68,775</b>	<b>71,836</b>
<b>Pacific Southwest</b>										
California	67,128	57,505	53,771	49,668	60,834	37,136	31,803	29,397	29,206	30,866
Hawaii	281	281	280	202	224	0	0	0	0	0
<b>Pacific Southwest Total</b>	<b>67,409</b>	<b>57,786</b>	<b>54,051</b>	<b>49,870</b>	<b>61,058</b>	<b>37,136</b>	<b>31,803</b>	<b>29,397</b>	<b>29,206</b>	<b>30,866</b>
<b>Pacific Coast Total</b>	<b>258,305</b>	<b>239,760</b>	<b>238,998</b>	<b>245,426</b>	<b>271,046</b>	<b>132,585</b>	<b>127,583</b>	<b>120,680</b>	<b>133,632</b>	<b>141,800</b>
<b>U.S. Total</b>	<b>932,089</b>	<b>835,669</b>	<b>781,656</b>	<b>733,056</b>	<b>615,884</b>	<b>278,090</b>	<b>252,116</b>	<b>227,535</b>	<b>229,666</b>	<b>217,993</b>

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorporate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												

**North**

**Northeast**

Connecticut	812	412	412	240	137	410	2,090	2,500	2,344	2,295	2,422	1,167
Delaware	52	47	25	27	9	187	456	643	592	617	598	446
Maine	1,163	875	780	352	163	11,996	9,126	21,122	19,923	21,617	22,183	15,275
Maryland	891	511	515	342	170	976	3,225	4,201	4,000	3,975	3,150	2,600
Massachusetts	1,912	820	774	589	242	322	4,296	4,618	4,041	3,955	3,304	1,629
New Hampshire	934	783	453	187	100	1,144	5,779	6,923	7,327	6,339	6,200	3,129
New Jersey	778	603	571	240	73	753	1,288	2,041	1,775	1,324	1,294	1,094
New York	3,458	2,061	1,893	1,089	861	3,599	18,793	22,392	19,740	18,189	12,167	9,662
Pennsylvania	7,956	5,156	4,875	4,388	2,409	3,861	16,776	20,637	18,702	18,619	17,771	10,054
Rhode Island	105	68	110	21	12	89	443	532	326	318	392	149
Vermont	753	742	637	249	147	1,284	6,171	7,455	7,529	5,230	4,547	3,145
West Virginia	883	879	561	309	365	6,187	13,042	19,229	17,443	13,297	11,865	7,745
<b>Northeast Total</b>	<b>19,697</b>	<b>12,956</b>	<b>11,606</b>	<b>8,033</b>	<b>4,688</b>	<b>30,808</b>	<b>81,485</b>	<b>111,024</b>	<b>103,746</b>	<b>95,775</b>	<b>85,893</b>	<b>56,095</b>

**North Central**

Illinois	655	275	275	189	36	361	5,281	5,642	4,256	4,256	3,844	2,294
Indiana	921	751	528	270	200	548	6,436	6,984	5,840	4,449	3,319	2,650
Iowa	466	164	145	118	19	42	2,606	2,648	1,504	1,106	920	1,341
Michigan	5,911	5,363	4,332	3,831	1,953	3,760	14,010	17,770	17,767	13,614	12,127	7,178

**Table 20. (cont.)** Net volume of growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
Minnesota	5,827	5,691	5,418	4,464	2,549	889	6,265	7,154	7,352	6,349	5,120	3,052
Missouri	1,258	505	287	165	114	635	12,746	13,381	7,309	6,476	5,016	4,888
Ohio	853	577	347	337	196	1,281	9,753	11,034	9,251	6,984	5,852	2,974
Wisconsin	4,211	3,375	3,620	2,697	1,678	1,698	12,280	13,978	13,229	10,979	9,403	5,583
North Central Total	20,102	16,702	14,952	12,071	6,745	9,214	69,377	78,591	66,508	54,213	45,601	29,960
North Total	39,799	29,658	26,558	20,104	11,433	40,022	150,862	190,282	170,250	149,988	131,494	86,055
<b>South</b>												
<b>Southeast</b>												
Florida	3,596	2,607	1,896	990	388	5,378	4,823	10,201	11,495	11,986	11,361	7,861
Georgia	2,209	2,129	1,557	1,299	906	9,818	19,737	29,555	28,148	27,979	26,810	17,468
North Carolina	2,787	1,512	1,153	786	470	6,429	21,069	27,498	28,772	28,459	26,487	19,677
South Carolina	1,646	966	921	740	188	5,145	10,764	15,909	14,767	15,661	14,914	9,247
Virginia	1,629	1,301	1,118	947	477	4,698	17,731	22,429	22,524	21,691	19,740	15,541
Southeast Total	11,867	8,514	6,645	4,762	2,429	31,468	74,124	105,592	105,706	105,776	99,312	69,794
<b>South Central</b>												
Alabama	1,141	734	559	419	181	7,278	18,548	25,826	21,411	20,268	19,719	11,746
Arkansas	2,186	1,440	863	630	401	7,088	12,077	19,165	16,408	15,172	13,624	12,166
Kentucky	849	536	397	355	244	2,459	13,613	16,072	14,374	13,250	10,833	5,654
Louisiana	1,871	1,025	894	512	197	8,559	8,274	16,833	16,794	17,033	15,705	10,455
Mississippi	1,548	1,312	631	742	541	5,857	15,524	21,381	17,166	17,048	14,738	8,780
Oklahoma	225	225	188	147	33	851	2,253	3,104	3,105	1,782	1,713	1,232
Tennessee	1,973	1,389	957	699	480	3,480	16,676	20,156	14,253	12,363	10,525	7,274
Texas	476	246	276	237	68	5,384	7,880	13,264	11,314	11,219	11,830	7,029
South Central Total	10,269	6,907	4,765	3,741	2,145	40,956	94,845	135,801	114,825	108,135	98,687	64,336
South Total	22,136	15,421	11,410	8,503	4,574	72,424	168,969	238,631	220,531	213,911	197,999	134,130
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Kansas	114	68	46	24	16	22	1,321	1,343	1,187	807	561	461
Nebraska	171	75	33	26	11	12	1,030	1,042	725	424	397	328
North Dakota	49	32	39	79	79	4	305	309	296	203	178	178
South Dakota	106	54	129	122	64	12	342	354	339	388	302	203
Great Plains Total	440	229	247	251	170	50	2,998	3,048	2,547	1,822	1,438	1,170



**Table 20. (cont.)** Net volume of growing stock on timber land in the United States by ownership group, region, subregion, and State, 2007, 1997, 1987, 1977, and 1953

Region, subregion, and State	Other public					2007	2007	Total Private				
	2007	1997	1987	1977	1953	Private corporate	Private noncorpo- rate	2007	1997	1987	1977	1953
<i>Million cubic feet</i>												
<b>Intermountain</b>												
Arizona	33	47	1,938	1,497	1,635	6	1,859	1,865	1,835	51	145	148
Colorado	2,022	1,647	1,669	863	742	448	3,335	3,783	4,059	4,092	3,050	2,619
Idaho	4,168	3,469	3,629	3,316	3,034	1,719	1,549	3,268	5,940	5,370	6,913	6,885
Montana	2,901	2,355	2,491	2,605	2,390	1,918	4,253	6,171	7,205	6,890	7,237	7,753
Nevada	262	61	13	9	9	0	26	26	124	173	155	147
New Mexico	198	140	717	1,379	1,377	0	2,013	2,013	1,941	1,369	1,905	1,838
Utah	400	501	413	557	594	352	656	1,008	1,142	778	631	630
Wyoming	963	803	951	634	538	0	1,498	1,498	1,470	1,322	911	774
<b>Intermountain Total</b>	<b>10,947</b>	<b>9,023</b>	<b>11,821</b>	<b>10,860</b>	<b>10,319</b>	<b>4,443</b>	<b>15,189</b>	<b>19,632</b>	<b>23,716</b>	<b>20,045</b>	<b>20,947</b>	<b>20,794</b>
<b>Rocky Mountain Total</b>	<b>11,387</b>	<b>9,252</b>	<b>12,068</b>	<b>11,111</b>	<b>10,489</b>	<b>4,493</b>	<b>18,187</b>	<b>21,802</b>	<b>26,263</b>	<b>21,867</b>	<b>22,385</b>	<b>21,964</b>
<b>Pacific Coast</b>												
<b>Alaska</b>												
Alaska	7,450	7,020	7,631	16,064	13,983	2,922	1,770	4,692	7,027	9,415	784	257
<b>Alaska Total</b>	<b>7,450</b>	<b>7,020</b>	<b>7,631</b>	<b>16,064</b>	<b>13,983</b>	<b>2,922</b>	<b>1,770</b>	<b>4,692</b>	<b>7,027</b>	<b>9,415</b>	<b>784</b>	<b>257</b>
<b>Pacific Northwest</b>												
Oregon	17,682	13,593	13,929	13,907	15,900	14,903	9,876	24,779	20,524	19,454	19,846	29,686
Washington	14,912	11,034	15,117	14,324	13,112	12,543	13,389	25,932	26,997	28,118	26,205	26,116
<b>Pacific Northwest Total</b>	<b>32,594</b>	<b>24,627</b>	<b>29,046</b>	<b>28,231</b>	<b>29,012</b>	<b>27,446</b>	<b>23,265</b>	<b>50,711</b>	<b>47,521</b>	<b>47,572</b>	<b>46,051</b>	<b>55,802</b>
<b>Pacific Southwest</b>												
California	2,763	1,639	1,799	1,391	2,110	12,855	14,374	27,229	24,063	22,575	19,071	27,858
Hawaii	125	125	125	98	102	30	126	156	156	155	104	122
<b>Pacific Southwest Total</b>	<b>2,888</b>	<b>1,763</b>	<b>1,924</b>	<b>1,489</b>	<b>2,212</b>	<b>12,885</b>	<b>14,500</b>	<b>27,385</b>	<b>24,219</b>	<b>22,730</b>	<b>19,175</b>	<b>27,980</b>
<b>Pacific Coast Total</b>	<b>42,932</b>	<b>33,410</b>	<b>38,601</b>	<b>45,784</b>	<b>45,207</b>	<b>43,253</b>	<b>39,535</b>	<b>83,329</b>	<b>78,767</b>	<b>79,717</b>	<b>66,010</b>	<b>84,039</b>
<b>U.S. Total</b>	<b>116,254</b>	<b>87,741</b>	<b>88,637</b>	<b>85,502</b>	<b>71,703</b>	<b>160,192</b>	<b>377,553</b>	<b>530,628</b>	<b>495,811</b>	<b>465,483</b>	<b>417,888</b>	<b>326,188</b>

Note: Data may not add to Totals because of rounding.

**Table 21.** Net volume of growing stock on timber land in the Eastern United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and subregion	Year	Softwoods										
		Total all species	Total softwoods	Longleaf and slash pines	Loblolly and short-leaf pines	Other yellow pines	White and red pines	Jack pine	Spruce and balsam fir	Eastern hemlock	Cypress	Other softwoods
<i>Million cubic feet</i>												
<b>North</b>												
Northeast	2007	137,585	34,253	0	658	1,605	11,093	3	9,413	8,281	6	3,193
	1997	121,179	30,945	0	652	1,717	9,460	14	9,184	6,949	3	2,965
	1987	112,133	31,609	0	658	1,573	7,977	0	12,977	5,878	0	2,547
	1977	98,311	30,991	0	656	1,368	7,123	0	14,895	5,006	0	1,943
	1963	76,869	24,034	0	701	1,119	4,958	46	11,042	4,113	0	2,056
North Central	2007	110,421	21,612	0	926	379	7,666	1,169	4,141	1,277	7	6,047
	1997	93,072	18,431	0	737	373	5,597	1,550	4,579	1,082	22	4,491
	1987	77,905	16,009	0	561	158	4,396	1,646	4,711	876	31	3,630
	1977	64,697	12,859	0	402	214	2,411	1,851	4,038	1,260	31	2,652
	1963	51,419	9,627	0	307	110	1,794	1,520	2,954	1,040	15	1,888
North Total	2007	248,006	55,865	0	1,584	1,984	18,759	1,172	13,554	9,558	13	9,240
	1997	214,251	49,376	0	1,389	2,090	15,058	1,564	13,763	8,031	25	7,456
	1987	190,038	47,618	0	1,219	1,731	12,373	1,646	17,688	6,753	31	6,178
	1977	163,008	43,850	0	1,058	1,582	9,534	1,851	18,934	6,265	31	4,596
	1963	128,288	33,661	0	1,008	1,229	6,752	1,566	13,995	5,153	15	3,944
<b>South</b>												
Southeast	2007	126,746	56,722	12,212	32,873	4,907	2,180	0	45	502	3,529	474
	1997	122,985	51,861	11,044	27,248	6,855	1,733	0	24	413	4,066	478
	1987	120,773	52,619	12,598	26,441	6,989	1,457	0	24	396	4,306	408
	1977	111,699	51,008	12,284	25,910	6,897	1,068	0	25	324	4,101	400
	1963	87,172	40,174	9,477	21,877	4,121	480	0	33	242	3,677	267
South Central	2007	161,776	61,749	4,618	49,856	2,088	517	0	0	449	3,001	1,214
	1997	133,377	52,985	4,886	41,517	2,774	281	0	0	213	2,317	997
	1987	123,868	52,994	5,039	42,006	2,670	207	0	1	115	2,225	732
	1977	111,674	50,200	5,114	40,108	2,375	185	0	0	67	1,829	522
	1963	86,900	34,913	3,806	27,874	1,341	146	0	0	182	1,332	231
South Total	2007	288,522	118,471	16,830	82,729	6,995	2,697	0	45	951	6,530	1,688
	1997	256,361	104,846	15,931	68,765	9,629	2,014	0	24	626	6,382	1,475
	1987	244,641	105,613	17,638	68,447	9,659	1,663	0	25	511	6,530	1,140
	1977	223,373	101,208	17,398	66,018	9,272	1,253	0	25	391	5,929	922
	1963	174,072	75,087	13,284	49,751	5,462	626	0	33	424	5,009	498
East Total	2007	536,528	174,336	16,830	84,313	8,979	21,456	1,172	13,599	10,509	6,543	10,928
	1997	470,612	154,222	15,931	70,154	11,719	17,072	1,564	13,787	8,657	6,408	8,931
	1987	434,679	153,231	17,638	69,666	11,390	14,037	1,646	17,713	7,264	6,561	7,317
	1977	386,381	145,058	17,398	67,076	10,854	10,787	1,851	18,958	6,657	5,960	5,518
	1963	302,360	108,748	13,284	50,759	6,691	7,378	1,566	14,028	5,577	5,023	4,442

**Table 21. (cont.)** Net volume of growing stock on timber land in the Eastern United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and subregion	Year	Hardwoods									
		Total hardwoods	Select white oaks	Select red oaks	Other white oaks	Other red oaks	Hickory	Yellow birch	Hard maple	Soft maple	Beech
<i>Million cubic feet</i>											
<b>North</b>											
Northeast	2007	103,332	5,395	9,775	4,785	5,141	3,499	3,355	12,696	20,418	4,922
	1997	90,234	4,437	8,625	4,271	4,932	2,846	3,062	11,533	16,741	5,466
	1987	80,524	4,384	8,137	4,928	5,405	2,791	2,987	10,104	13,544	4,685
	1977	67,320	4,721	7,616	4,589	4,890	2,563	2,452	7,755	10,645	3,807
	1963	52,835	3,402	6,536	3,709	2,550	1,810	3,791	5,883	6,515	3,973
North Central	2007	88,809	9,980	6,461	2,290	8,008	4,835	807	9,404	9,821	1,153
	1997	74,640	7,550	5,983	1,474	5,682	3,572	786	8,369	7,662	1,122
	1987	61,896	6,001	4,774	1,528	5,077	2,912	674	6,335	5,542	854
	1977	51,838	5,277	4,006	1,365	4,579	2,605	807	4,814	3,302	896
	1963	41,792	3,730	3,373	405	2,340	1,449	872	4,025	2,572	835
North Total	2007	192,141	15,375	16,236	7,075	13,149	8,334	4,162	22,100	30,239	6,075
	1997	164,874	11,987	14,608	5,745	10,615	6,417	3,848	19,902	24,403	6,588
	1987	142,420	10,385	12,911	6,456	10,482	5,703	3,661	16,439	19,086	5,538
	1977	119,158	9,121	12,186	5,788	7,991	4,401	3,719	12,972	14,985	5,278
	1963	94,627	6,093	11,705	6,642	4,567	3,241	6,790	10,536	11,668	7,115
<b>South</b>											
Southeast	2007	70,024	7,056	3,190	5,300	11,338	3,591	58	470	5,149	770
	1997	71,124	7,167	3,126	6,008	12,307	3,593	83	467	5,712	1,000
	1987	68,154	6,639	3,074	5,563	11,826	3,641	62	402	5,221	942
	1977	60,691	6,152	2,650	5,009	10,841	3,680	61	299	3,845	805
	1963	46,998	4,753	1,966	3,886	7,837	3,314	39	158	2,555	561
South Central	2007	100,027	11,619	5,815	9,384	19,542	9,098	11	1,839	3,092	1,505
	1997	80,392	9,194	4,620	7,186	15,900	7,625	5	1,411	2,283	1,458
	1987	70,874	7,974	3,969	6,722	15,062	7,254	6	933	1,719	1,193
	1977	61,474	6,623	3,071	6,362	12,584	6,816	0	758	1,319	1,054
	1963	51,987	5,262	2,053	5,607	9,652	5,799	11	428	898	1,116
South Total	2007	170,051	18,675	9,005	14,684	30,880	12,689	69	2,309	8,241	2,275
	1997	151,516	16,361	7,746	13,194	28,207	11,218	87	1,878	7,996	2,458
	1987	139,028	14,613	7,043	12,285	26,889	10,895	68	1,335	6,940	2,135
	1977	122,165	12,769	5,715	11,353	23,402	10,451	62	1,051	5,201	1,856
	1963	98,985	10,015	4,021	9,467	17,469	9,069	51	580	3,492	1,667
East Total	2007	362,192	34,050	25,241	21,759	44,029	21,023	4,231	24,409	38,480	8,350
	1997	316,390	28,348	22,354	18,939	38,821	17,635	3,936	21,780	32,399	9,047
	1987	281,448	24,998	19,955	18,741	37,370	16,598	3,730	17,774	26,026	7,673
	1977	241,323	22,230	17,227	17,679	32,904	15,442	3,409	12,806	19,176	6,781
	1963	193,612	17,154	13,364	16,832	25,683	13,941	4,815	8,117	12,657	7,123

**Table 21. (cont.)** Net volume of growing stock on timber land in the Eastern United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and subregion	Year	Hardwoods								
		Sweet-gum	Tupelo and black gum	Ash	Basswood	Yellow poplar	Cottonwood and aspen	Black walnut	Black cherry <sup>b</sup>	Other hardwoods
<i>Million cubic feet</i>										
<b>North</b>										
Northeast	2007	658	697	5,881	1,846	5,780	3,740	358	5,688	8,696
	1997	556	588	4,748	1,476	4,740	3,611	295	4,683	7,623
	1987	486	491	3,656	1,162	2,925	3,219	211	3,738	7,671
	1977	418	409	2,656	1,073	2,630	2,145	192	3,000	5,760
	1963	460	333	1,898	1,221	1,968	1,719	154	0	6,915
North Central	2007	219	288	6,205	3,185	2,438	11,004	1,554	2,193	8,964
	1997	148	199	4,798	3,098	1,686	12,061	804	1,639	8,007
	1987	122	79	3,657	2,476	1,073	10,521	612	1,144	8,516
	1977	153	89	2,818	1,861	641	9,669	459	530	7,967
	1963	168	63	2,127	1,505	441	8,807	340	0	8,740
North Total	2007	877	985	12,086	5,031	8,218	14,744	1,912	7,881	17,660
	1997	704	787	9,546	4,574	6,426	15,672	1,099	6,322	15,631
	1987	608	570	7,313	3,639	3,998	13,740	823	4,881	16,187
	1977	653	541	5,158	2,700	3,516	10,938	551	3,530	15,129
	1963	824	596	3,400	2,187	3,524	3,079	275	0	12,385
<b>South</b>										
Southeast	2007	7,637	6,005	1,545	316	12,009	99	196	427	4,866
	1997	7,573	7,248	1,752	334	9,538	92	197	311	4,618
	1987	7,487	7,854	1,735	314	8,392	107	181	222	4,491
	1977	6,850	7,462	1,492	259	6,732	117	138	155	4,143
	1963	5,582	7,106	1,348	247	3,845	53	160	0	3,588
South Central	2007	2,441	1,093	357	49	1,482	36	16	79	1,095
	1997	9,058	4,106	2,689	275	5,283	621	362	452	7,862
	1987	8,244	3,962	2,219	257	3,845	580	281	0	6,653
	1977	6,826	3,921	1,967	246	2,847	504	271	195	6,110
	1963	6,059	4,057	1,757	277	1,823	469	296	0	6,423
South Total	2007	10,078	7,098	1,902	365	13,491	135	212	506	5,961
	1997	16,631	11,354	4,441	609	14,821	713	559	763	12,480
	1987	15,732	11,816	3,954	571	12,237	687	462	222	11,144
	1977	13,678	11,436	3,452	506	9,637	616	407	349	10,225
	1963	11,644	11,240	3,100	524	5,718	514	453	0	9,960
East Total	2007	10,955	8,083	13,988	5,396	21,709	14,879	2,124	8,387	23,621
	1997	17,336	12,141	13,987	5,183	21,247	16,384	1,658	7,085	28,111
	1987	16,339	12,387	11,267	4,210	16,235	14,427	1,286	5,103	27,331
	1977	15,623	13,058	8,428	2,981	13,752	10,501	942	3,555	24,829
	1963	15,565	14,886	6,369	2,204	9,826	2,815	775	0	21,485

<sup>a</sup> Data for 1953 unavailable for this table, data for 1963 provided. <sup>b</sup> Separate black cherry data not available for 1963, included in other hardwoods category.

**Note:** Data may not add to Totals because of rounding.

**Table 22.** Net volume of growing stock on timber land in the Western United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and sub-region	Year	Softwoods									
		All species	Total softwoods	Douglas fir	Ponderosa and Jeffrey pines	True fir	Western hemlock	Sugar pine	Western white pine	Redwood	Sitka spruce
<i>Million cubic feet</i>											
<b>Rocky Mountain</b>											
Great Plains	2007	4,539	1,641	0	1,407	0	0	0	0	0	0
	1997	3,931	1,563	0	1,028	0	0	0	0	0	0
	1987	3,394	1,912	0	1,834	0	0	0	0	0	0
	1977	3,072	1,799	0	1,707	0	0	0	0	0	0
	1963	2,574	1,472	0	1,388	0	0	0	0	0	0
Intermountain	2007	132,725	123,168	30,504	17,383	23,024	941	0	443	0	0
	1997	121,368	113,118	29,052	16,426	18,912	1,063	1	534	0	0
	1987	104,603	98,386	22,560	15,544	14,861	971	2	1,578	0	0
	1977	98,177	93,312	20,475	14,762	13,591	1,462	1	2,184	0	0
	1963	96,245	91,751	19,913	15,650	12,984	1,694	4	3,069	0	0
Rocky Mountain Total	2007	137,264	124,809	30,504	18,790	23,024	941	0	443	0	0
	1997	125,299	114,681	29,052	17,454	18,912	1,063	1	534	0	0
	1987	107,997	100,298	22,560	17,378	14,861	971	2	1,578	0	0
	1977	101,249	95,111	20,475	16,469	13,591	1,462	1	2,184	0	0
	1963	98,819	93,223	19,913	17,038	12,984	1,694	4	3,069	0	0
<b>Pacific Coast</b>											
Alaska <sup>b</sup>	2007	31,997	29,124	0	0	6	11,224	0	0	0	8,641
	1997	32,562	29,417	0	0	2	11,425	0	0	0	8,519
	1987	41,262	37,051	0	0	15	15,873	0	0	0	10,145
	1977	52,499	48,277	0	0	179	30,259	0	0	0	10,500
	1963	53,617	49,426	0	0	97	30,083	0	0	0	16,111
Pacific Northwest	2007	158,894	146,006	75,516	12,420	17,213	21,697	677	436	1	1,486
	1997	149,018	135,969	69,559	11,564	16,332	19,806	689	386	32	328
	1987	143,700	130,711	63,660	11,094	17,060	20,049	588	343	45	1,771
	1977	143,057	132,535	60,076	12,634	16,926	24,266	761	888	91	1,466
	1963	154,241	144,994	64,250	15,613	19,816	24,892	900	1,231	46	1,601
Pacific Southwest	2007	67,408	54,926	18,608	10,379	12,803	78	2,717	283	4,710	106
	1997	57,785	49,172	13,898	9,722	13,346	31	2,960	276	4,610	0
	1987	54,055	46,311	12,700	8,695	12,689	42	3,031	319	5,114	36
	1977	49,870	45,979	12,786	9,124	12,804	129	3,355	231	4,302	48
	1963	56,559	53,365	17,277	10,210	13,428	69	3,694	305	5,352	33
Pacific Coast Total	2007	258,299	230,056	94,124	22,799	30,022	32,999	3,394	719	4,711	10,233
	1997	239,365	214,558	83,457	21,286	29,680	31,262	3,649	662	4,642	8,848
	1987	239,017	214,073	76,361	19,789	29,765	35,964	3,619	662	5,159	11,952
	1977	245,426	226,791	72,862	21,758	29,909	54,654	4,116	1,119	4,393	12,014
	1963	264,417	247,785	81,526	25,823	33,340	55,044	4,594	1,537	5,398	17,745

**Table 22. (cont.)** Net volume of growing stock on timber land in the Western United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and sub-region	Year	Softwoods									
		All species	Total softwoods	Douglas fir	Ponderosa and Jeffrey pines	True fir	Western hemlock	Sugar pine	Western white pine	Redwood	Sitka spruce
<i>Million cubic feet</i>											
West Total	2007	395,563	354,865	124,628	41,589	53,046	33,940	3,394	1,162	4,711	10,233
	1997	364,664	329,238	112,509	38,741	48,592	32,324	3,650	1,196	4,642	8,848
	1987	347,014	314,371	98,921	37,166	44,626	36,935	3,621	2,240	5,159	11,952
	1977	346,675	321,902	93,337	38,226	43,500	56,116	4,117	3,303	4,393	12,014
	1963	363,236	341,008	101,439	42,861	46,324	56,739	4,598	4,606	5,398	17,745

**Table 22. (cont.)** Net volume of growing stock on timber land in the Western United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and subregion	Year	Softwoods					Hardwoods				
		En-gelmann and other spruces	Western larch	Incense-cedar	Lodgepole pine	Other softwoods	Total hardwoods	Cottonwood and aspen	Red alder	Oak	Other hardwoods
<i>Million cubic feet</i>											
<b>Rocky Mountain</b>											
Great Plains	2007	0	0	0	0	234	2,898	1,029	0	564	1,305
	1997	48	0	0	0	486	2,368	841	0	461	1,066
	1987	61	0	0	0	17	1,482	463	0	314	705
	1977	62	0	0	0	30	1,273	424	0	197	651
	1963	63	0	0	0	21	1,102	387	0	217	499
Intermountain	2007	18,934	3,961	0	21,855	6,123	9,556	9,198	68	18	272
	1997	15,260	3,704	3	22,269	5,896	8,250	7,808	0	0	442
	1987	13,515	4,816	3	21,131	3,405	6,217	6,172	0	0	45
	1977	12,932	3,876	1	19,857	4,171	4,865	4,758	0	0	107
	1963	12,689	6,153	4	16,806	2,785	4,494	4,421	6	0	67
Rocky Mountain Total	2007	18,934	3,961	0	21,855	6,357	12,454	10,227	68	582	1,577
	1997	15,308	3,704	3	22,269	6,382	10,618	8,649	0	461	1,507
	1987	13,576	4,816	3	21,131	3,422	7,699	6,635	0	314	750
	1977	12,994	3,876	1	19,857	4,201	6,138	5,182	0	197	759
	1963	12,752	6,153	4	16,806	2,806	5,596	4,808	6	217	565
<b>Pacific Coast</b>											
Alaska	2007	4,287	3	0	81	4,884	2,873	843	73	0	1,957
	1997	4,605	0	0	38	4,827	3,145	1,555	33	0	1,557
	1987	6,052	0	0	39	4,927	4,211	1,827	62	0	2,322
	1977	2,889	0	0	57	4,392	4,222	1,863	214	0	2,145
	1963	6	0	0	28	3,101	4,191	3,706	436	0	48
Pacific Northwest	2007	1,889	2,135	695	3,678	8,164	12,889	969	6,317	777	4,826
	1997	2,825	2,254	723	4,012	7,459	13,049	740	7,535	484	4,290
	1987	1,863	2,365	624	4,479	6,768	12,990	600	8,290	606	3,494
	1977	1,273	2,568	648	5,640	5,298	10,522	348	6,781	486	2,906
	1963	1,386	2,413	776	3,826	8,243	9,247	346	5,111	756	3,034
Pacific Southwest	2007	18	0	3,336	923	964	12,482	124	333	6,068	5,957
	1997	36	0	2,849	911	534	8,613	35	218	4,320	4,041
	1987	14	0	2,365	861	445	7,744	20	133	5,728	1,863
	1977	7	0	2,004	870	319	3,891	21	64	1,796	2,010
	1963	0	0	1,699	903	395	3,194	41	61	892	2,200

**Table 22. (cont.)** Net volume of growing stock on timber land in the Western United States by species, region, and subregion, 2007, 1997, 1987, 1977, and 1963<sup>a</sup>

Region and subregion	Year	Softwoods					Hardwoods				
		Engelmann and other spruces	Western larch	Incense-cedar	Lodgepole pine	Other softwoods	Total hardwoods	Cottonwood and aspen	Red alder	Oak	Other hardwoods
<i>Million cubic feet</i>											
Pacific Coast Total	2007	6,194	2,138	4,031	4,682	14,012	28,244	1,936	6,723	6,845	12,740
	1997	7,466	2,254	3,571	4,960	12,821	24,808	2,330	7,786	4,804	9,888
	1987	7,929	2,365	2,989	5,379	12,140	24,944	2,447	8,485	6,334	7,679
	1977	4,169	2,568	2,652	6,567	10,009	18,635	2,232	7,059	2,282	7,062
	1963	1,392	2,413	2,476	4,757	11,739	16,632	4,094	5,609	1,647	5,282
West Total <sup>b</sup>	2007	25,128	6,099	4,031	26,537	20,369	40,698	12,163	6,791	7,427	14,317
	1997	22,773	5,958	3,574	27,229	19,203	35,425	10,979	7,786	5,265	11,396
	1987	21,506	7,181	2,992	26,510	15,562	32,644	9,082	8,485	6,648	8,429
	1977	17,163	6,444	2,653	26,424	14,210	24,773	7,414	7,059	2,480	7,821
	1963	14,144	8,567	2,479	21,564	14,544	22,228	8,901	5,615	1,864	5,848

<sup>a</sup> Data for 1953 unavailable for this table, data for 1963 provided.

<sup>b</sup> Data for Engelmann and other spruces included in other softwoods for 1963.

**Note:** Data may not add to Totals because of rounding.



**Table 23.** Net volume of softwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Total	Longleaf and slash pines	Loblolly and shortleaf pines	Other yellow pines	White and red pines	Jack pine	Spruce and balsam fir	Eastern hemlock	Cypress	Other softwoods
<i>Million cubic feet</i>										
<b>Northeast</b>										
Connecticut	458	0	0	0	236	0	0	197	0	25
Delaware	115	0	102	12	0	0	0	0	0	0
Maine	12,570	0	0	19	2,446	2	6,350	1,677	0	2,076
Maryland	801	0	527	161	74	0	0	12	6	21
Massachusetts	2,605	0	0	88	1,771	0	61	679	0	5
New Hampshire	3,975	0	0	35	2,022	0	1,022	869	0	27
New Jersey	582	0	11	403	12	0	0	12	0	143
New York	6,071	0	0	130	2,537	1	718	2,049	0	636
Pennsylvania	2,865	0	2	271	838	0	19	1,607	0	129
Rhode Island	142	0	0	28	98	0	0	14	0	2
Vermont	2,841	0	0	1	777	0	1,109	836	0	119
West Virginia	1,228	0	16	457	282	0	134	329	0	10
<b>Northeast Total</b>	<b>34,253</b>	<b>0</b>	<b>658</b>	<b>1,605</b>	<b>11,093</b>	<b>3</b>	<b>9,413</b>	<b>8,281</b>	<b>6</b>	<b>3,193</b>
<b>North Central</b>										
Illinois	229	0	70	5	104	5	4	0	7	34
Indiana	275	0	31	47	102	1	0	0	0	93
Iowa	29	0	0	0	1	0	0	0	0	28
Michigan	8,902	0	0	137	3,128	493	1,596	816	0	2,732
Minnesota	4,855	0	0	7	1,227	372	1,687	0	0	1,563
Missouri	1,336	0	819	1	10	0	0	0	0	506
Ohio	610	0	6	165	324	0	2	29	0	84
Wisconsin	5,376	0	0	17	2,770	298	852	432	0	1,007
<b>North Central Total</b>	<b>21,612</b>	<b>0</b>	<b>926</b>	<b>379</b>	<b>7,666</b>	<b>1,169</b>	<b>4,141</b>	<b>1,277</b>	<b>7</b>	<b>6,047</b>
<b>Southeast</b>										
Florida	10,332	6,174	1,553	634	0	0	0	0	1,869	102
Georgia	17,319	4,822	10,620	759	250	0	0	22	808	38
North Carolina	12,461	549	8,366	1,579	1,158	0	19	288	376	126
South Carolina	9,786	667	8,194	301	90	0	0	20	427	86
Virginia	6,824	0	4,140	1,634	682	0	26	172	49	122
<b>Southeast Total</b>	<b>56,722</b>	<b>12,212</b>	<b>32,873</b>	<b>4,907</b>	<b>2,180</b>	<b>0</b>	<b>45</b>	<b>502</b>	<b>3,529</b>	<b>474</b>

**Note:** Data may not add to Totals because of rounding. Volume by State in this table may differ slightly from volume by State in other tables because of rounding.

**Table 23. (cont.)** Net volume of softwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Total	Longleaf and slash pines	Loblolly and shortleaf pines	Other yellow pines	White and red pines	Jack pine	Spruce and balsam fir	Eastern hemlock	Cypress	Other softwoods
<i>Million cubic feet</i>										
<b>South Central</b>										
Alabama	13,460	1,762	10,705	605	0	0	0	17	256	115
Arkansas	10,268	0	9,528	0	0	0	0	0	447	292
Kentucky	1,182	0	218	460	85	0	0	127	80	211
Louisiana	10,421	1,259	7,467	94	0	0	0	0	1,596	4
Mississippi	12,622	1,279	10,811	128	0	0	0	0	278	125
Oklahoma	1,421	0	1,369	0	0	0	0	0	3	48
Tennessee	3,161	0	1,148	796	432	0	0	305	121	358
Texas	9,214	318	8,610	5	0	0	0	0	220	61
<b>South Central Total</b>	<b>61,749</b>	<b>4,618</b>	<b>49,856</b>	<b>2,088</b>	<b>517</b>	<b>0</b>	<b>0</b>	<b>449</b>	<b>3,001</b>	<b>1,214</b>
<b>East Total</b>	<b>174,336</b>	<b>16,830</b>	<b>84,313</b>	<b>8,979</b>	<b>21,456</b>	<b>1,172</b>	<b>13,599</b>	<b>10,509</b>	<b>6,543</b>	<b>10,928</b>

**Table 24.** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Total	Select white oaks	Select red oaks	Other white oaks	Other red oaks	Hickory	Yellow birch	Hard maple	Soft maple	Beech
<i>Million cubic feet</i>										
<b>Northeast</b>										
Connecticut	2,856	261	439	70	378	203	25	121	628	76
Delaware	580	78	7	4	108	3	0	0	164	11
Maine	9,833	20	670	0	18	0	1,093	1,782	2,645	721
Maryland	4,290	487	188	194	571	159	7	77	641	103
Massachusetts	3,926	173	838	45	372	64	146	271	1,005	112
New Hampshire	5,179	75	821	0	85	20	431	676	1,462	398
New Jersey	2,238	186	199	144	300	74	7	60	368	43
New York	19,792	408	1,569	291	379	627	651	3,868	4,530	1,224
Pennsylvania	26,994	1,502	2,827	2,058	1,184	725	266	2,351	5,782	886
Rhode Island	494	47	95	10	118	13	11	7	121	4
Vermont	5,855	23	289	16	3	45	503	1,993	1,045	482
West Virginia	21,295	2,135	1,833	1,953	1,625	1,566	215	1,490	2,027	862
<b>Northeast Total</b>	<b>103,332</b>	<b>5,395</b>	<b>9,775</b>	<b>4,785</b>	<b>5,141</b>	<b>3,499</b>	<b>3,355</b>	<b>12,696</b>	<b>20,418</b>	<b>4,922</b>
<b>North Central</b>										
Illinois	6,646	1,076	412	134	819	734	0	260	648	15
Indiana	8,006	823	383	141	762	798	0	809	439	218
Iowa	3,085	618	241	1	147	220	0	79	319	0
Michigan	19,127	745	1,359	0	813	190	501	4,225	3,915	435
Minnesota	10,076	758	759	0	70	28	31	530	540	0
Missouri	15,259	3,939	1,024	1,661	3,808	1,621	0	229	295	4
Ohio	11,714	1,008	596	353	720	989	5	1,074	1,358	445
Wisconsin	14,896	1,013	1,687	0	869	255	270	2,198	2,307	36
<b>North Central Total</b>	<b>88,809</b>	<b>9,980</b>	<b>6,461</b>	<b>2,290</b>	<b>8,008</b>	<b>4,835</b>	<b>807</b>	<b>9,404</b>	<b>9,821</b>	<b>1,153</b>
<b>Southeast</b>										
Florida	4,489	33	0	197	1,117	85	0	7	289	1
Georgia	15,746	1,519	309	1,071	3,619	856	2	18	865	53
North Carolina	20,677	1,927	1,065	1,428	2,158	874	37	151	2,201	310
South Carolina	9,058	858	327	328	1,949	383	1	5	520	32
Virginia	20,054	2,719	1,489	2,276	2,495	1,393	18	289	1,274	374
<b>Southeast Total</b>	<b>70,024</b>	<b>7,056</b>	<b>3,190</b>	<b>5,300</b>	<b>11,338</b>	<b>3,591</b>	<b>58</b>	<b>470</b>	<b>5,149</b>	<b>770</b>

**Table 24. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Total	Select white oaks	Select red oaks	Other white oaks	Other red oaks	Hickory	Yellow birch	Hard maple	Soft maple	Beech
<i>Million cubic feet</i>										
<b>South Central</b>										
Alabama	14,839	1,338	558	1,013	3,480	1,299	0	69	314	119
Arkansas	15,147	2,565	1,492	1,713	3,018	1,469	0	73	200	73
Kentucky	17,035	2,482	939	1,521	1,799	2,021	0	966	984	634
Louisiana	10,093	599	409	624	2,668	564	0	6	285	136
Mississippi	13,427	1,140	1,005	604	3,301	888	0	19	176	164
Oklahoma	2,203	158	170	509	382	288	0	3	29	0
Tennessee	20,688	2,952	949	2,535	2,827	2,327	11	693	1,043	330
Texas	6,595	385	293	865	2,067	242	0	10	61	49
South Central Total	100,027	11,619	5,815	9,384	19,542	9,098	11	1,839	3,092	1,505
East Total	362,192	34,050	25,241	21,759	44,029	21,023	4,231	24,409	38,480	8,350

**Table 24. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Sweetgum	Tupelo and black gum	Ash	Basswood	Yellow-poplar	Cottonwood and aspen	Black walnut	Black cherry	Other hardwoods
<i>Million cubic feet</i>									
<b>Northeast</b>									
Connecticut	0	7	175	1	38	54	0	47	333
Delaware	88	30	8	0	46	2	1	7	22
Maine	0	0	474	24	0	1,220	0	29	1,138
Maryland	441	125	101	27	750	13	15	132	258
Massachusetts	0	15	227	10	10	130	0	188	321
New Hampshire	0	1	268	18	0	219	0	41	664
New Jersey	126	64	183	7	232	15	10	28	192
New York	1	18	2,040	596	83	1,096	67	1,229	1,115
Pennsylvania	0	235	1,442	405	1,288	633	130	3,101	2,178
Rhode Island	0	11	17	0	2	4	0	3	32
Vermont	0	0	402	41	0	260	0	118	633
West Virginia	2	191	544	717	3,331	94	135	765	1,810
<b>Northeast Total</b>	<b>658</b>	<b>697</b>	<b>5,881</b>	<b>1,846</b>	<b>5,780</b>	<b>3,740</b>	<b>358</b>	<b>5,688</b>	<b>8,696</b>
<b>North Central</b>									
Illinois	87	20	374	64	121	304	210	149	1,219
Indiana	100	61	634	114	1,008	287	227	214	989
Iowa	0	0	110	155	0	345	219	44	588
Michigan	0	10	1,353	801	49	3,059	56	653	963
Minnesota	0	0	1,195	775	0	3,964	25	23	1,377
Missouri	23	97	377	29	13	174	461	83	1,419
Ohio	9	100	976	182	1,247	404	263	779	1,208
Wisconsin	0	0	1,186	1,065	0	2,467	93	248	1,201
<b>North Central Total</b>	<b>219</b>	<b>288</b>	<b>6,205</b>	<b>3,185</b>	<b>2,438</b>	<b>11,004</b>	<b>1,554</b>	<b>2,193</b>	<b>8,964</b>
<b>Southeast</b>									
Florida	462	1,211	234	26	92	1	0	36	698
Georgia	2,222	1,753	304	15	2,114	7	29	84	903
North Carolina	2,184	1,563	427	94	4,385	18	61	164	1,631
South Carolina	1,784	1,084	229	1	905	56	15	30	550
Virginia	985	394	351	180	4,513	17	91	113	1,084
<b>Southeast Total</b>	<b>7,637</b>	<b>6,005</b>	<b>1,545</b>	<b>316</b>	<b>12,009</b>	<b>99</b>	<b>196</b>	<b>427</b>	<b>4,866</b>

**Note:** Data may not add to Totals because of rounding. Volume by State in this table may differ slightly from volume by State in other tables because of rounding.

**Table 24. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and State, 2007

Subregion and State	Sweetgum	Tupelo and black gum	Ash	Basswood	Yellow-poplar	Cottonwood and aspen	Black walnut	Black cherry	Other hardwoods
<i>Million cubic feet</i>									
<b>South Central</b>									
Alabama	2,441	1,093	357	49	1,482	36	16	79	1,095
Arkansas	1,816	646	523	12	18	155	61	91	1,222
Kentucky	291	262	795	184	2,405	92	159	137	1,362
Louisiana	1,628	1,208	525	2	66	61	0	30	1,282
Mississippi	2,348	695	399	24	903	100	7	102	1,551
Oklahoma	37	19	125	1	0	90	32	4	358
Tennessee	959	386	709	118	2,725	18	174	206	1,728
Texas	1,327	284	194	4	0	56	6	7	747
<b>South Central Total</b>	<b>10,847</b>	<b>4,593</b>	<b>3,627</b>	<b>394</b>	<b>7,599</b>	<b>608</b>	<b>455</b>	<b>656</b>	<b>9,345</b>
<b>East Total</b>	<b>19,361</b>	<b>11,583</b>	<b>17,258</b>	<b>5,741</b>	<b>27,826</b>	<b>15,451</b>	<b>2,563</b>	<b>8,964</b>	<b>31,871</b>

**Table 25.** Net volume of growing stock on timber land in the Western United States by species, subregion, and State, 2007

Subregion and State	All species	Softwoods								
		Total softwoods	Douglas fir	Ponderosa and Jeffrey pines	True fir	Western hemlock	Sugar pine	Western white pine	Redwood	Sitka spruce
<i>Million cubic feet</i>										
<b>Great Plains</b>										
Kansas	1,457	57	0	4	0	0	0	0	0	0
Nebraska	1,253	326	0	236	0	0	0	0	0	0
North Dakota	367	0	0	0	0	0	0	0	0	0
South Dakota	1,463	1,258	0	1,168	0	0	0	0	0	0
<b>Great Plains Total</b>	<b>4,540</b>	<b>1,641</b>	<b>0</b>	<b>1,408</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Intermountain</b>										
Arizona	6,230	5,836	622	4,532	286	0	0	0	0	0
Colorado	25,852	21,085	2,825	2,357	3,416	0	0	0	0	0
Idaho	37,161	36,562	11,409	2,505	11,094	761	0	330	0	0
Montana	37,418	36,756	11,342	3,361	3,878	180	0	107	0	0
Nevada	638	597	54	92	223	0	0	7	0	0
New Mexico	7,013	6,385	1,538	2,934	971	0	0	0	0	0
Utah	7,009	5,243	1,132	442	1,543	0	0	0	0	0
Wyoming	11,404	10,704	1,583	1,158	1,613	0	0	0	0	0
<b>Intermountain Total</b>	<b>132,725</b>	<b>123,168</b>	<b>30,505</b>	<b>17,381</b>	<b>23,024</b>	<b>941</b>	<b>0</b>	<b>444</b>	<b>0</b>	<b>0</b>
<b>Alaska</b>										
Alaska	31,997	29,124	0	0	6	11,224	0	0	0	8,641
<b>Alaska Total</b>	<b>31,997</b>	<b>29,124</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>11,224</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,641</b>
<b>Pacific Northwest</b>										
Oregon	87,904	81,183	47,257	8,786	9,176	7,335	677	314	1	649
Washington	70,991	64,823	28,259	3,634	8,037	14,361	0	121	0	837
<b>Pacific Northwest Total</b>	<b>158,895</b>	<b>146,006</b>	<b>75,516</b>	<b>12,420</b>	<b>17,213</b>	<b>21,696</b>	<b>677</b>	<b>435</b>	<b>1</b>	<b>1,486</b>
<b>Pacific Southwest</b>										
California	67,128	54,922	18,608	10,379	12,803	78	2,717	283	4,710	106
Hawaii	280	4	0	0	0	0	0	0	0	0
<b>Pacific Southwest Total</b>	<b>67,408</b>	<b>54,926</b>	<b>18,608</b>	<b>10,379</b>	<b>12,803</b>	<b>78</b>	<b>2,717</b>	<b>283</b>	<b>4,710</b>	<b>106</b>
<b>West Total</b>	<b>395,565</b>	<b>354,865</b>	<b>124,629</b>	<b>41,588</b>	<b>53,046</b>	<b>33,939</b>	<b>3,394</b>	<b>1,162</b>	<b>4,711</b>	<b>10,233</b>

**Table 25. (cont.)** Net volume of growing stock on timber land in the Western United States by species, subregion, and State, 2007

Subregion and State	Softwoods—continued						Hardwoods				
	Engelmann and other spruces	Western larch	Incense-cedar	Lodgepole pine	Western redcedar <sup>a</sup>	Other softwoods	Total hardwoods	Cottonwood and aspen	Red sider	Oak	Other hardwoods
<i>Million cubic feet</i>											
<b>Great Plains</b>											
Kansas	0	0	0	0	0	53	1,400	251	0	300	849
Nebraska	0	0	0	0	0	90	927	500	0	146	281
North Dakota	0	0	0	0	0	0	366	190	0	73	103
South Dakota	0	0	0	0	0	90	205	88	0	45	73
<b>Great Plains Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>233</b>	<b>2,898</b>	<b>1,029</b>	<b>0</b>	<b>564</b>	<b>1,306</b>
<b>Intermountain</b>											
Arizona	325	0	0	0	0	71	394	390	0	0	4
Colorado	7,385	0	0	4,816	0	287	4,766	4,764	0	0	3
Idaho	2,605	1,214	0	4,016	1,327	1,301	599	358	68	0	173
Montana	4,322	2,747	0	8,888	538	1,393	661	578	0	0	83
Nevada	0	0	0	80	0	141	41	41	0	0	0
New Mexico	713	0	0	0	0	229	628	628	0	0	0
Utah	1,268	0	0	787	0	71	1,765	1,765	0	0	0
Wyoming	2,317	0	0	3,268	0	766	700	673	0	18	9
<b>Intermountain Total</b>	<b>18,935</b>	<b>3,961</b>	<b>0</b>	<b>21,855</b>	<b>1,865</b>	<b>4,259</b>	<b>9,554</b>	<b>9,197</b>	<b>68</b>	<b>18</b>	<b>272</b>
<b>Alaska</b>											
Alaska	4,287	3	0	81	1,213	3,671	2,873	843	73	0	1,957
<b>Alaska Total</b>	<b>4,287</b>	<b>3</b>	<b>0</b>	<b>81</b>	<b>1,213</b>	<b>3,671</b>	<b>2,873</b>	<b>843</b>	<b>73</b>	<b>0</b>	<b>1,957</b>
<b>Pacific Northwest</b>											
Oregon	591	623	695	2,074	1,447	1,556	6,720	117	2,746	667	3,189
Washington	1,298	1,512	0	1,604	4,144	1,017	6,168	851	3,571	110	1,636
<b>Pacific Northwest Total</b>	<b>1,889</b>	<b>2,135</b>	<b>695</b>	<b>3,678</b>	<b>5,591</b>	<b>2,573</b>	<b>12,888</b>	<b>968</b>	<b>6,317</b>	<b>777</b>	<b>4,825</b>
<b>Pacific Southwest</b>											
California	18	0	3,336	923	22	938	12,206	124	333	6,068	5,681
Hawaii	0	0	0	0	0	4	276	0	0	0	276
<b>Pacific Southwest Total</b>	<b>18</b>	<b>0</b>	<b>3,336</b>	<b>923</b>	<b>22</b>	<b>942</b>	<b>12,482</b>	<b>124</b>	<b>333</b>	<b>6,068</b>	<b>5,957</b>
<b>West Total</b>	<b>25,129</b>	<b>6,099</b>	<b>4,031</b>	<b>26,537</b>	<b>8,691</b>	<b>11,678</b>	<b>40,695</b>	<b>12,161</b>	<b>6,791</b>	<b>7,427</b>	<b>14,317</b>

<sup>a</sup> Western redcedar volume may be included in other western softwood volume. Western redcedar volume in Oregon for national forest lands includes some incense-cedar.

**Note:** Data may not add to Totals because of rounding. Total volume by State in this table may differ slightly from volume by State in other tables because of rounding.



**Table 26.** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Total	Select white oaks	Select red oaks	Other white oaks	Other red oaks	Hickory	Yellow birch	Hard maple	Soft maple	Beech
<b>Northeast</b>										
5.0 - 6.9	7,626	212	267	196	164	250	339	962	2,085	503
7.0 - 8.9	12,841	465	550	494	353	471	525	1,639	3,400	807
9.0 - 10.9	16,445	725	946	752	595	652	629	2,113	3,920	851
11.0 - 12.9	16,235	827	1,282	849	753	608	589	2,119	3,350	749
13.0 - 14.9	14,757	845	1,441	815	784	549	446	1,864	2,777	583
15.0 - 16.9	11,739	712	1,389	577	732	412	327	1,437	1,931	466
17.0 - 18.9	8,295	504	1,118	421	586	259	199	869	1,214	374
19.0 - 20.9	5,276	402	867	266	345	129	111	566	660	190
21.0 - 28.9	8,339	516	1,520	375	699	168	178	919	846	351
29.0 +	1,778	188	394	41	130	2	12	210	235	47
<b>Northeast Total</b>	<b>103,331</b>	<b>5,396</b>	<b>9,774</b>	<b>4,786</b>	<b>5,141</b>	<b>3,500</b>	<b>3,355</b>	<b>12,698</b>	<b>20,418</b>	<b>4,921</b>
<b>North Central</b>										
5.0 - 6.9	7,259	428	176	164	328	383	74	919	1,018	56
7.0 - 8.9	10,746	698	331	292	598	609	111	1,451	1,535	81
9.0 - 10.9	12,930	1,018	568	356	893	759	135	1,670	1,651	102
11.0 - 12.9	12,700	1,255	759	342	1,049	820	117	1,538	1,371	126
13.0 - 14.9	11,747	1,314	881	355	1,166	753	101	1,227	1,142	147
15.0 - 16.9	9,618	1,241	922	304	1,072	558	87	913	836	152
17.0 - 18.9	7,336	1,100	740	205	916	407	67	643	641	128
19.0 - 20.9	5,256	850	632	105	651	272	39	393	486	105
21.0 - 28.9	8,777	1,644	1,153	150	1,083	238	58	589	807	220
29.0 +	2,440	434	298	16	250	35	18	62	334	36
<b>North Central Total</b>	<b>88,809</b>	<b>9,982</b>	<b>6,460</b>	<b>2,289</b>	<b>8,006</b>	<b>4,834</b>	<b>807</b>	<b>9,405</b>	<b>9,821</b>	<b>1,153</b>
<b>Southeast</b>										
5.0 - 6.9	4,741	268	84	235	657	239	10	41	659	47
7.0 - 8.9	6,921	506	146	469	984	375	14	54	760	59
9.0 - 10.9	8,598	701	228	671	1,355	529	9	59	803	85
11.0 - 12.9	9,118	886	277	704	1,447	564	6	57	708	81
13.0 - 14.9	9,346	1,022	348	728	1,489	548	3	59	629	86
15.0 - 16.9	8,586	1,066	379	630	1,350	478	3	65	510	126
17.0 - 18.9	6,789	838	354	520	1,092	338	3	24	352	62
19.0 - 20.9	5,096	624	297	408	853	176	1	28	254	52
21.0 - 28.9	8,777	971	785	707	1,610	308	0	77	393	135
29.0 +	2,053	173	293	228	500	35	8	8	80	38
<b>Southeast Total</b>	<b>70,025</b>	<b>7,055</b>	<b>3,191</b>	<b>5,300</b>	<b>11,337</b>	<b>3,590</b>	<b>57</b>	<b>472</b>	<b>5,148</b>	<b>771</b>

**Table 26. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Total	Select white oaks	Select red oaks	Other white oaks	Other red oaks	Hickory	Yellow birch	Hard maple	Soft maple	Beech
<b>South Central</b>										
5.0 - 6.9	6,505	535	162	504	804	588	2	202	436	52
7.0 - 8.9	9,742	980	291	877	1,257	1,040	1	250	514	78
9.0 - 10.9	12,183	1,379	455	1,141	1,789	1,362	1	307	495	113
11.0 - 12.9	13,113	1,599	561	1,304	2,114	1,471	3	284	409	152
13.0 - 14.9	13,233	1,697	659	1,274	2,465	1,391	1	246	355	163
15.0 - 16.9	11,849	1,620	676	1,076	2,362	1,138	1	205	293	184
17.0 - 18.9	9,619	1,276	696	923	2,180	754	0	108	213	186
19.0 - 20.9	7,243	877	591	715	1,709	513	2	76	138	208
21.0 - 28.9	13,043	1,421	1,326	1,304	3,543	685	0	97	181	311
29.0 +	3,496	236	398	265	1,317	156	0	62	59	57
<b>South Central Total</b>	<b>100,026</b>	<b>11,620</b>	<b>5,815</b>	<b>9,383</b>	<b>19,540</b>	<b>9,098</b>	<b>11</b>	<b>1,837</b>	<b>3,093</b>	<b>1,504</b>
<b>East Total</b>										
5.0 - 6.9	26,131	1,443	689	1,099	1,953	1,460	425	2,124	4,198	658
7.0 - 8.9	40,250	2,649	1,318	2,132	3,192	2,495	651	3,394	6,209	1,025
9.0 - 10.9	50,156	3,823	2,197	2,920	4,632	3,302	774	4,149	6,869	1,151
11.0 - 12.9	51,166	4,567	2,879	3,199	5,363	3,463	715	3,998	5,838	1,108
13.0 - 14.9	49,083	4,878	3,329	3,172	5,904	3,241	551	3,396	4,903	979
15.0 - 16.9	41,792	4,639	3,366	2,587	5,516	2,586	418	2,620	3,570	928
17.0 - 18.9	32,039	3,718	2,908	2,069	4,774	1,758	269	1,644	2,420	750
19.0 - 20.9	22,871	2,753	2,387	1,494	3,558	1,090	153	1,063	1,538	555
21.0 - 28.9	38,936	4,552	4,784	2,536	6,935	1,399	236	1,682	2,227	1,017
29.0 +	9,767	1,031	1,383	550	2,197	228	38	342	708	178
<b>East Total</b>	<b>362,191</b>	<b>34,053</b>	<b>25,240</b>	<b>21,758</b>	<b>44,024</b>	<b>21,022</b>	<b>4,230</b>	<b>24,412</b>	<b>38,480</b>	<b>8,349</b>

**Table 26. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Sweetgum	Tupelo and black gum	Ash	Basswood	Yellow-poplar	Cottonwood and aspen	Black walnut	Black cherry	Other eastern Hardwoods
<i>Million cubic feet</i>									
<b>Northeast</b>									
5.0 - 6.9	40	120	501	57	121	306	20	334	1,150
7.0 - 8.9	69	122	753	140	265	519	41	570	1,657
9.0 - 10.9	101	128	977	227	435	752	51	754	1,836
11.0 - 12.9	105	97	909	298	604	796	60	874	1,366
13.0 - 14.9	110	72	841	310	845	554	52	848	1,020
15.0 - 16.9	92	52	691	295	837	364	53	712	660
17.0 - 18.9	49	36	460	197	718	248	29	626	390
19.0 - 20.9	18	40	256	107	604	78	19	401	217
21.0 - 28.9	62	28	403	181	1,180	103	33	514	264
29.0 +	11	0	90	35	171	19	0	54	137
<b>Northeast Total</b>	<b>657</b>	<b>695</b>	<b>5,881</b>	<b>1,847</b>	<b>5,780</b>	<b>3,739</b>	<b>358</b>	<b>5,687</b>	<b>8,697</b>
<b>North Central</b>									
5.0 - 6.9	14	37	713	182	66	1,266	72	219	1,144
7.0 - 8.9	21	39	960	374	108	1,564	132	313	1,527
9.0 - 10.9	28	43	1,041	527	187	1,821	187	391	1,553
11.0 - 12.9	30	36	892	574	261	1,783	233	368	1,147
13.0 - 14.9	33	37	790	515	286	1,499	256	305	943
15.0 - 16.9	29	27	570	365	321	1,022	230	237	730
17.0 - 18.9	20	26	438	261	294	614	181	131	522
19.0 - 20.9	33	16	328	156	234	366	116	89	386
21.0 - 28.9	11	26	374	222	596	575	142	128	762
29.0 +	0	0	99	9	85	494	7	13	249
<b>North Central Total</b>	<b>219</b>	<b>287</b>	<b>6,205</b>	<b>3,185</b>	<b>2,438</b>	<b>11,004</b>	<b>1,556</b>	<b>2,194</b>	<b>8,963</b>
<b>Southeast</b>									
5.0 - 6.9	682	505	102	11	444	5	12	71	668
7.0 - 8.9	969	763	151	19	729	8	13	72	832
9.0 - 10.9	1,155	892	195	26	1,032	7	17	67	768
11.0 - 12.9	1,118	915	227	38	1,353	5	33	48	649
13.0 - 14.9	1,090	873	212	51	1,594	5	25	49	535
15.0 - 16.9	911	738	209	62	1,558	16	35	39	411
17.0 - 18.9	622	566	133	54	1,490	8	20	26	286
19.0 - 20.9	458	317	137	23	1,210	0	15	19	223
21.0 - 28.9	592	365	166	32	2,216	33	17	30	339
29.0 +	42	71	13	0	383	11	9	7	154
<b>Southeast Total</b>	<b>7,639</b>	<b>6,005</b>	<b>1,545</b>	<b>316</b>	<b>12,009</b>	<b>98</b>	<b>196</b>	<b>428</b>	<b>4,865</b>

**Table 26. (cont.)** Net volume of hardwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Sweetgum	Tupelo and black gum	Ash	Basswood	Yellow-poplar	Cottonwood and aspen	Black walnut	Black cherry	Other eastern Hardwoods
<i>Million cubic feet</i>									
<b>South Central</b>									
5.0 - 6.9	966	360	230	18	329	14	21	101	1,181
7.0 - 8.9	1,377	549	373	30	535	17	46	122	1,405
9.0 - 10.9	1,627	649	486	36	737	24	78	115	1,390
11.0 - 12.9	1,614	712	489	53	898	16	94	94	1,246
13.0 - 14.9	1,485	733	485	52	1,007	25	78	63	1,056
15.0 - 16.9	1,135	547	459	73	1,038	30	57	67	887
17.0 - 18.9	862	387	302	61	881	23	44	41	683
19.0 - 20.9	625	241	298	28	684	37	9	29	463
21.0 - 28.9	1,002	356	398	43	1,285	191	29	19	851
29.0 +	155	60	107	0	205	233	0	4	182
<b>South Central Total</b>	<b>10,848</b>	<b>4,594</b>	<b>3,627</b>	<b>394</b>	<b>7,599</b>	<b>610</b>	<b>456</b>	<b>655</b>	<b>9,344</b>
<b>East Total</b>									
5.0 - 6.9	1,702	1,022	1,546	268	960	1,591	125	725	4,143
7.0 - 8.9	2,436	1,473	2,237	563	1,637	2,108	232	1,077	5,421
9.0 - 10.9	2,911	1,712	2,699	816	2,391	2,604	333	1,327	5,547
11.0 - 12.9	2,867	1,760	2,517	963	3,116	2,600	420	1,384	4,408
13.0 - 14.9	2,718	1,715	2,328	928	3,732	2,083	411	1,265	3,554
15.0 - 16.9	2,167	1,364	1,929	795	3,754	1,432	375	1,055	2,688
17.0 - 18.9	1,553	1,015	1,333	573	3,383	893	274	824	1,881
19.0 - 20.9	1,134	614	1,019	314	2,732	481	159	538	1,289
21.0 - 28.9	1,667	775	1,341	478	5,277	902	221	691	2,216
29.0 +	208	131	309	44	844	757	16	78	722
<b>East Total</b>	<b>19,363</b>	<b>11,581</b>	<b>17,258</b>	<b>5,742</b>	<b>27,826</b>	<b>15,451</b>	<b>2,566</b>	<b>8,964</b>	<b>31,869</b>

**Note:** Data may not add to Totals because of rounding. Total volume by region in this table may differ slightly from volume by region in other tables because of rounding.

**Table 27.** Net volume of softwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Total	Longleaf and slash pines	Loblolly and shortleaf pines	Other yellow pines	White and red pines	Jack pine	Spruce and balsam fir	Eastern hemlock	Cypress	Other softwoods
<i>Million cubic feet</i>										
<b>Northeast</b>										
5.0 - 6.9	3,790	0	60	174	503	1	2,025	639	0	389
7.0 - 8.9	5,344	0	100	325	877	1	2,362	1,062	0	616
9.0 - 10.9	5,385	0	124	342	1,112	0	1,988	1,173	0	647
11.0 - 12.9	5,143	0	116	346	1,348	1	1,412	1,326	0	594
13.0 - 14.9	4,267	0	86	232	1,427	0	867	1,236	0	418
15.0 - 16.9	3,219	0	71	115	1,326	0	424	1,025	0	257
17.0 - 18.9	2,347	0	44	42	1,171	0	178	764	1	148
19.0 - 20.9	1,596	0	38	23	928	0	104	436	1	66
21.0 - 28.9	2,595	0	19	6	1,922	0	55	533	4	57
29.0 +	565	0	0	0	478	0	0	87	0	0
<b>Northeast Total</b>	<b>34,251</b>	<b>0</b>	<b>658</b>	<b>1,605</b>	<b>11,092</b>	<b>3</b>	<b>9,415</b>	<b>8,281</b>	<b>6</b>	<b>3,192</b>
<b>North Central</b>										
5.0 - 6.9	3,369	0	57	39	527	196	1,321	37	0	1,192
7.0 - 8.9	4,200	0	113	73	963	312	1,187	77	0	1,474
9.0 - 10.9	3,838	0	171	86	1,189	298	732	113	0	1,247
11.0 - 12.9	3,037	0	208	83	1,125	200	390	151	0	879
13.0 - 14.9	2,209	0	175	60	893	101	229	173	0	577
15.0 - 16.9	1,587	0	97	27	767	44	145	184	0	322
17.0 - 18.9	1,040	0	51	8	568	12	63	171	0	168
19.0 - 20.9	771	0	34	2	471	5	42	130	2	85
21.0 - 28.9	1,345	0	20	1	978	0	32	218	4	93
29.0 +	218	0	0	0	184	0	0	24	0	10
<b>North Central Total</b>	<b>21,614</b>	<b>0</b>	<b>926</b>	<b>379</b>	<b>7,665</b>	<b>1,168</b>	<b>4,141</b>	<b>1,278</b>	<b>6</b>	<b>6,047</b>
<b>Southeast</b>										
5.0 - 6.9	6,472	1,748	3,661	571	119	0	2	37	232	102
7.0 - 8.9	10,413	2,580	6,196	913	177	0	7	57	372	111
9.0 - 10.9	9,966	2,183	5,953	1,058	181	0	5	45	463	79
11.0 - 12.9	8,654	1,812	4,987	1,001	209	0	10	61	511	63
13.0 - 14.9	6,945	1,591	3,765	711	209	0	4	60	563	43
15.0 - 16.9	4,985	1,032	2,950	332	186	0	7	47	410	21
17.0 - 18.9	3,430	646	2,038	152	237	0	3	38	299	16
19.0 - 20.9	2,242	320	1,291	79	225	0	2	34	274	18
21.0 - 28.9	3,112	281	1,877	76	481	0	4	54	318	20
29.0 +	503	18	155	14	156	0	0	70	89	0
<b>Southeast Total</b>	<b>56,722</b>	<b>12,211</b>	<b>32,873</b>	<b>4,907</b>	<b>2,180</b>	<b>0</b>	<b>44</b>	<b>503</b>	<b>3,531</b>	<b>473</b>

**Table 27. (cont.)** Net volume of softwood growing stock on timber land in the Eastern United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Total	Longleaf and slash pines	Loblolly and shortleaf pines	Other yellow pines	White and red pines	Jack pine	Spruce and balsam fir	Eastern hemlock	Cypress	Other softwoods
<i>Million cubic feet</i>										
<b>South Central</b>										
5.0 - 6.9	5,624	341	4,713	174	23	0	0	28	66	279
7.0 - 8.9	9,145	567	7,762	275	33	0	0	36	132	340
9.0 - 10.9	9,382	697	7,803	372	37	0	0	35	186	252
11.0 - 12.9	8,956	816	7,265	377	47	0	0	44	254	153
13.0 - 14.9	7,896	833	6,270	330	46	0	0	50	271	97
15.0 - 16.9	6,524	677	5,163	223	58	0	0	30	325	50
17.0 - 18.9	4,621	406	3,675	118	41	0	0	36	322	24
19.0 - 20.9	3,369	188	2,712	80	31	0	0	36	309	12
21.0 - 28.9	5,223	84	3,969	114	168	0	0	133	746	9
29.0 +	1,007	10	525	27	34	0	0	20	392	0
<b>South Central Total</b>	<b>61,747</b>	<b>4,619</b>	<b>49,857</b>	<b>2,090</b>	<b>518</b>	<b>0</b>	<b>0</b>	<b>448</b>	<b>3,003</b>	<b>1,216</b>
<b>East Total</b>										
5.0 - 6.9	19,255	2,089	8,491	958	1,172	197	3,348	741	298	1,962
7.0 - 8.9	29,102	3,147	14,171	1,586	2,050	313	3,556	1,232	504	2,541
9.0 - 10.9	28,571	2,880	14,051	1,858	2,519	298	2,725	1,366	649	2,225
11.0 - 12.9	25,790	2,628	12,576	1,807	2,729	201	1,812	1,582	765	1,689
13.0 - 14.9	21,317	2,424	10,296	1,333	2,575	101	1,100	1,519	834	1,135
15.0 - 16.9	16,315	1,709	8,281	697	2,337	44	576	1,286	735	650
17.0 - 18.9	11,438	1,052	5,808	320	2,017	12	244	1,009	622	356
19.0 - 20.9	7,978	508	4,075	184	1,655	5	148	636	586	181
21.0 - 28.9	12,275	365	5,885	197	3,549	0	91	938	1,072	179
29.0 +	2,293	28	680	41	852	0	0	201	481	10
<b>East Total</b>	<b>174,334</b>	<b>16,830</b>	<b>84,314</b>	<b>8,981</b>	<b>21,455</b>	<b>1,171</b>	<b>13,600</b>	<b>10,510</b>	<b>6,546</b>	<b>10,928</b>

Note: Data may not add to Totals because of rounding. Total volume by region in this table may differ slightly from volume by region in other tables because of rounding.

**Table 28.** Net volume of growing stock on timber land in the Western United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Softwoods									
	Total	Total softwoods	Douglas fir	Ponderosa and Jeffrey pines	True fir	Western hemlock	Sugar pine	Western white pine	Redwood	Sitka spruce
	<i>Million cubic feet</i>									
<b>Great Plains</b>										
5.0 - 6.9	282	114	0	77	0	0	0	0	0	0
7.0 - 8.9	459	215	0	171	0	0	0	0	0	0
9.0 - 10.9	550	277	0	235	0	0	0	0	0	0
11.0 - 12.9	534	282	0	242	0	0	0	0	0	0
13.0 - 14.9	525	256	0	219	0	0	0	0	0	0
15.0 - 16.9	429	188	0	168	0	0	0	0	0	0
17.0 - 18.9	341	139	0	131	0	0	0	0	0	0
19.0 - 20.9	302	90	0	84	0	0	0	0	0	0
21.0 - 28.9	613	72	0	72	0	0	0	0	0	0
29.0 +	505	8	0	8	0	0	0	0	0	0
<b>Great Plains Total</b>	<b>4,540</b>	<b>1,641</b>	<b>0</b>	<b>1,407</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Intermountain</b>										
5.0 - 6.9	8,882	8,005	1,206	518	1,987	47	0	20	0	0
7.0 - 8.9	15,232	13,573	2,200	1,126	2,764	75	0	28	0	0
9.0 - 10.9	18,008	16,033	3,172	1,679	2,931	75	0	36	0	0
11.0 - 12.9	18,011	16,205	3,727	2,096	3,149	86	0	53	0	0
13.0 - 14.9	16,295	14,960	3,867	2,053	2,703	117	0	41	0	0
15.0 - 16.9	13,399	12,691	3,706	2,005	2,334	132	0	65	0	0
17.0 - 18.9	10,550	10,153	2,989	1,607	1,794	60	0	77	0	0
19.0 - 20.9	8,018	7,720	2,389	1,403	1,391	79	0	17	0	0
21.0 - 28.9	17,402	17,007	5,142	3,452	2,527	222	0	106	0	0
29.0 +	6,928	6,822	2,106	1,444	1,443	48	0	0	0	0
<b>Intermountain Total</b>	<b>131,960</b>	<b>122,646</b>	<b>30,394</b>	<b>17,178</b>	<b>23,027</b>	<b>941</b>	<b>0</b>	<b>443</b>	<b>0</b>	<b>0</b>
<b>Alaska</b>										
5.0 - 6.9	1,439	800	0	0	0	258	0	0	0	72
7.0 - 8.9	2,364	1,604	0	0	0	444	0	0	0	146
9.0 - 10.9	2,405	1,941	0	0	0	588	0	0	0	258
11.0 - 12.9	2,580	2,236	0	0	1	713	0	0	0	338
13.0 - 14.9	2,378	2,192	0	0	0	735	0	0	0	402
15.0 - 16.9	2,389	2,182	0	0	0	789	0	0	0	489
17.0 - 18.9	2,095	2,023	0	0	0	783	0	0	0	550
19.0 - 20.9	1,943	1,911	0	0	0	847	0	0	0	543
21.0 - 28.9	6,662	6,547	0	0	3	3,156	0	0	0	2,097
29.0 +	7,743	7,688	0	0	0	2,910	0	0	0	3,745
<b>Alaska Total</b>	<b>31,998</b>	<b>29,124</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>11,223</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,640</b>

**Table 28. (cont.)** Net volume of growing stock on timber land in the Western United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Softwoods									
	Total	Total softwoods	Douglas fir	Ponderosa and Jeffrey pines	True fir	Western hemlock	Sugar pine	Western white pine	Redwood	Sitka spruce
	<i>Million cubic feet</i>									
<b>Pacific Northwest</b>										
5.0 - 6.9	4,355	3,474	1,294	222	552	591	2	9	0	16
7.0 - 8.9	8,481	7,052	2,983	468	948	1,200	7	12	0	28
9.0 - 10.9	11,577	9,916	4,441	778	1,284	1,666	7	20	0	65
11.0 - 12.9	13,300	11,600	5,497	925	1,422	2,059	6	29	0	77
13.0 - 14.9	13,533	11,977	5,628	1,123	1,500	2,176	10	30	0	81
15.0 - 16.9	13,290	11,847	5,741	1,037	1,399	2,277	10	29	0	98
17.0 - 18.9	11,948	10,852	5,261	1,073	1,454	1,869	13	18	0	90
19.0 - 20.9	11,033	10,182	5,195	1,007	1,179	1,675	24	34	0	86
21.0 - 28.9	34,094	32,544	16,628	3,177	4,193	4,858	116	57	0	380
29.0 +	37,283	36,562	22,849	2,611	3,281	3,325	483	197	0	565
<b>Pacific Northwest Total</b>	<b>161,054</b>	<b>147,599</b>	<b>75,984</b>	<b>12,569</b>	<b>16,866</b>	<b>22,210</b>	<b>697</b>	<b>456</b>	<b>2</b>	<b>1,597</b>
<b>Pacific Southwest</b>										
5.0 - 6.9	2,135	1,179	447	177	280	6	22	5	41	1
7.0 - 8.9	3,017	1,708	624	293	417	5	34	7	76	1
9.0 - 10.9	3,764	2,300	805	437	562	15	48	7	112	4
11.0 - 12.9	4,154	2,697	874	550	667	13	55	10	184	4
13.0 - 14.9	4,443	3,180	995	659	845	13	49	14	213	7
15.0 - 16.9	4,568	3,420	1,124	731	833	14	101	11	243	11
17.0 - 18.9	4,525	3,554	1,011	753	928	4	110	20	293	17
19.0 - 20.9	4,061	3,323	840	798	866	0	148	18	313	0
21.0 - 28.9	13,728	11,735	3,220	2,532	3,005	7	609	60	1,184	7
29.0 +	23,013	21,830	8,669	3,449	4,400	2	1,541	131	2,050	54
<b>Pacific Southwest Total</b>	<b>67,654</b>	<b>55,230</b>	<b>18,457</b>	<b>10,483</b>	<b>13,172</b>	<b>88</b>	<b>2,808</b>	<b>303</b>	<b>4,368</b>	<b>109</b>
<b>West Total</b>										
5.0 - 6.9	17,099	13,596	2,947	994	2,819	902	24	34	41	89
7.0 - 8.9	29,650	24,201	5,807	2,058	4,129	1,724	41	47	76	175
9.0 - 10.9	36,402	30,552	8,418	3,129	4,777	2,344	55	63	112	327
11.0 - 12.9	38,731	33,058	10,098	3,813	5,239	2,871	61	92	184	419
13.0 - 14.9	37,144	32,595	10,490	4,054	5,048	3,041	59	85	213	490
15.0 - 16.9	34,079	30,310	10,571	3,941	4,566	3,212	111	105	243	598
17.0 - 18.9	29,502	26,697	9,261	3,564	4,176	2,716	123	115	293	657
19.0 - 20.9	25,396	23,227	8,424	3,292	3,436	2,601	172	69	313	629
21.0 - 28.9	72,683	68,020	24,990	9,233	9,728	8,243	725	223	1,184	2,484
29.0 +	75,795	73,259	33,624	7,512	9,124	6,285	2,024	328	2,050	4,364
<b>West Total</b>	<b>396,481</b>	<b>355,515</b>	<b>124,630</b>	<b>41,590</b>	<b>53,042</b>	<b>33,939</b>	<b>3,395</b>	<b>1,161</b>	<b>4,709</b>	<b>10,232</b>



**Table 28. (cont.)** Net volume of growing stock on timber land in the Western United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Softwoods—continued						Hardwoods				
	Engelmann and other spruces	Western larch	Incense- cedar	Lodgepole pine	Western redcedar <sup>a</sup>	Other softwoods	Total hardwoods	Cottonwood and aspen	Red sider	Oak	Other hardwoods
<i>Million cubic feet</i>											
<b>Great Plains</b>											
5.0 - 6.9	0	0	0	0	0	37	169	25	0	34	109
7.0 - 8.9	0	0	0	0	0	45	243	35	0	50	158
9.0 - 10.9	0	0	0	0	0	42	273	42	0	59	171
11.0 - 12.9	0	0	0	0	0	41	251	49	0	53	149
13.0 - 14.9	0	0	0	0	0	36	269	46	0	48	176
15.0 - 16.9	0	0	0	0	0	20	241	52	0	42	147
17.0 - 18.9	0	0	0	0	0	8	202	49	0	58	96
19.0 - 20.9	0	0	0	0	0	5	212	64	0	49	99
21.0 - 28.9	0	0	0	0	0	0	541	273	0	121	146
29.0 +	0	0	0	0	0	0	497	393	0	51	53
<b>Great Plains Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>234</b>	<b>2,898</b>	<b>1,028</b>	<b>0</b>	<b>565</b>	<b>1,304</b>
<b>Intermountain</b>											
5.0 - 6.9	733	134	0	2,946	146	264	872	821	4	3	45
7.0 - 8.9	1,376	299	0	4,976	183	537	1,649	1,580	4	5	60
9.0 - 10.9	1,871	391	0	5,054	189	613	1,952	1,901	0	4	47
11.0 - 12.9	2,127	424	0	3,796	152	562	1,766	1,710	15	4	36
13.0 - 14.9	2,443	618	0	2,419	185	483	1,272	1,218	22	0	31
15.0 - 16.9	2,095	402	0	1,330	200	400	674	638	11	1	24
17.0 - 18.9	1,975	271	0	788	164	397	361	336	0	0	25
19.0 - 20.9	1,478	289	0	266	124	262	289	272	12	0	5
21.0 - 28.9	3,673	782	0	248	275	545	374	374	0	0	0
29.0 +	977	352	0	32	249	173	105	105	0	0	0
<b>Intermountain Total</b>	<b>18,748</b>	<b>3,962</b>	<b>0</b>	<b>21,855</b>	<b>1,867</b>	<b>4,236</b>	<b>9,314</b>	<b>8,955</b>	<b>68</b>	<b>17</b>	<b>273</b>
<b>Alaska</b>											
5.0 - 6.9	382	0	0	3	13	72	639	175	7	0	456
7.0 - 8.9	829	3	0	10	26	146	760	166	14	0	581
9.0 - 10.9	824	0	0	13	42	216	464	111	10	0	343
11.0 - 12.9	812	0	0	14	57	300	343	76	9	0	258
13.0 - 14.9	616	0	0	11	73	355	186	51	9	0	127
15.0 - 16.9	430	0	0	12	79	383	207	47	4	0	156
17.0 - 18.9	225	0	0	5	81	379	72	39	7	0	26
19.0 - 20.9	91	0	0	5	106	319	32	25	0	0	6
21.0 - 28.9	75	0	0	9	306	901	115	98	13	0	4
29.0 +	4	0	0	0	430	600	55	54	0	0	1
<b>Alaska Total</b>	<b>4,288</b>	<b>3</b>	<b>0</b>	<b>82</b>	<b>1,213</b>	<b>3,671</b>	<b>2,873</b>	<b>842</b>	<b>73</b>	<b>0</b>	<b>1,958</b>

**Table 28. (cont.)** Net volume of growing stock on timber land in the Western United States by species, subregion, and diameter class, 2007

Subregion and diameter class (in inches)	Softwoods—continued						Hardwoods				
	Engelmann and other spruces	Western larch	Incense- cedar	Lodgepole pine	Western redcedar <sup>a</sup>	Other softwoods	Total hardwoods	Cottonwood and aspen	Red sider	Oak	Other hardwoods
<i>Million cubic feet</i>											
<b>Pacific Northwest</b>											
5.0 - 6.9	42	72	24	438	159	78	877	17	339	95	426
7.0 - 8.9	90	154	27	771	277	137	1,493	34	737	108	614
9.0 - 10.9	189	230	31	816	311	178	1,703	51	910	100	641
11.0 - 12.9	155	254	22	636	374	210	1,807	56	1,034	88	630
13.0 - 14.9	214	254	59	445	342	175	1,524	58	850	90	525
15.0 - 16.9	192	276	28	245	289	200	1,482	55	891	85	450
17.0 - 18.9	189	183	39	151	358	143	1,197	76	650	67	403
19.0 - 20.9	131	144	40	85	372	216	909	78	546	56	229
21.0 - 28.9	432	458	147	63	1,386	757	1,679	375	460	103	741
29.0 +	267	212	322	27	1,928	776	784	300	46	56	382
<b>Pacific Northwest Total</b>	<b>1,901</b>	<b>2,237</b>	<b>739</b>	<b>3,677</b>	<b>5,796</b>	<b>2,870</b>	<b>13,455</b>	<b>1,100</b>	<b>6,463</b>	<b>848</b>	<b>5,041</b>
<b>Pacific Southwest</b>											
5.0 - 6.9	0	0	134	43	0	26	946	1	20	506	419
7.0 - 8.9	0	0	165	49	1	43	1,304	3	37	702	561
9.0 - 10.9	0	0	182	72	0	63	1,458	5	78	715	660
11.0 - 12.9	0	0	188	85	0	72	1,506	2	70	688	746
13.0 - 14.9	0	0	211	99	3	74	1,298	10	31	627	631
15.0 - 16.9	0	0	225	87	0	70	1,165	17	23	566	559
17.0 - 18.9	0	0	231	111	0	94	973	0	25	444	504
19.0 - 20.9	0	0	195	76	0	87	727	25	6	342	352
21.0 - 28.9	11	0	697	243	4	198	1,954	53	14	968	919
29.0 +	1	0	1,189	164	27	218	1,095	16	7	584	488
<b>Pacific Southwest Total</b>	<b>12</b>	<b>0</b>	<b>3,417</b>	<b>1,029</b>	<b>35</b>	<b>945</b>	<b>12,426</b>	<b>132</b>	<b>311</b>	<b>6,142</b>	<b>5,839</b>
<b>West Total</b>											
5.0 - 6.9	1,157	206	158	3,430	318	477	3,503	1,039	370	638	1,455
7.0 - 8.9	2,295	456	192	5,806	487	908	5,449	1,818	792	865	1,974
9.0 - 10.9	2,884	621	213	5,955	542	1,112	5,850	2,110	998	878	1,862
11.0 - 12.9	3,094	678	210	4,531	583	1,185	5,673	1,893	1,128	833	1,819
13.0 - 14.9	3,273	872	270	2,974	603	1,123	4,549	1,383	912	765	1,490
15.0 - 16.9	2,717	678	253	1,674	568	1,073	3,769	809	929	694	1,336
17.0 - 18.9	2,389	454	270	1,055	603	1,021	2,805	500	682	569	1,054
19.0 - 20.9	1,700	433	235	432	602	889	2,169	464	564	447	691
21.0 - 28.9	4,191	1,240	844	563	1,971	2,401	4,663	1,173	487	1,192	1,810
29.0 +	1,249	564	1,511	223	2,634	1,767	2,536	868	53	691	924
<b>West Total</b>	<b>24,949</b>	<b>6,202</b>	<b>4,156</b>	<b>26,643</b>	<b>8,911</b>	<b>11,956</b>	<b>40,966</b>	<b>12,057</b>	<b>6,915</b>	<b>7,572</b>	<b>14,415</b>

Note: Data may not add to Totals because of rounding. Total volume by region in this table may differ slightly from volume by region in other tables because of rounding.

**Table 29.** Net volume of softwood growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
<b>North</b>												
Northeast	2007	34,252	3,790	5,344	5,385	5,143	4,267	3,219	2,347	1,596	2,595	565
	1997	30,945	3,744	5,318	5,133	4,751	3,810	2,783	1,827	1,227	1,935	417
	1987	31,609	4,751	6,404	6,043	4,919	3,351	2,288	1,426	904	1,291	232
	1977	30,991	7,639	7,255	5,431	3,877	2,547	1,711	1,018	607	767	138
	1953	20,028	4,628	4,734	3,147	2,498	1,791	1,190	721	527	702	90
North Central	2007	21,614	3,369	4,200	3,838	3,037	2,209	1,587	1,040	771	1,345	218
	1997	18,431	3,571	4,149	3,316	2,374	1,579	1,058	772	542	893	178
	1987	16,009	3,429	3,816	2,939	1,964	1,285	865	609	426	598	81
	1977	12,859	3,163	3,103	2,190	1,430	949	695	491	315	461	60
	1953	7,025	1,802	1,592	1,167	862	516	348	261	161	274	41
North Total	2007	55,866	7,159	9,544	9,223	8,180	6,476	4,806	3,387	2,367	3,940	783
	1997	49,376	7,314	9,467	8,449	7,125	5,389	3,841	2,599	1,769	2,828	595
	1987	47,618	8,180	10,220	8,982	6,883	4,636	3,153	2,035	1,330	1,889	313
	1977	43,850	10,802	10,358	7,621	5,307	3,496	2,406	1,509	922	1,228	198
	1953	27,053	6,430	6,326	4,314	3,360	2,307	1,538	982	688	976	131
<b>South</b>												
Southeast	2007	56,722	6,472	10,413	9,966	8,654	6,945	4,985	3,430	2,242	3,112	503
	1997	51,861	6,621	9,358	9,146	8,043	6,447	4,732	3,032	1,888	2,293	301
	1987	52,619	6,483	9,420	9,878	8,847	6,834	4,544	2,886	1,640	1,845	242
	1977	51,008	6,929	9,384	9,780	8,535	6,467	4,337	2,500	1,408	1,487	181
	1953	35,548	4,547	6,776	7,473	6,574	4,265	2,550	1,464	805	969	125
South Central	2007	61,749	5,624	9,145	9,382	8,956	7,896	6,524	4,621	3,369	5,223	1,007
	1997	52,985	4,772	7,530	8,014	8,364	7,602	6,117	4,172	2,677	3,344	393
	1987	52,994	4,765	7,521	8,985	8,978	7,515	5,788	3,885	2,418	2,844	298
	1977	50,200	5,178	7,691	8,771	8,451	6,923	5,126	3,406	2,082	2,340	232
	1953	24,914	2,596	3,834	4,554	4,338	3,473	2,556	1,645	886	910	122
South Total	2007	118,471	12,096	19,558	19,348	17,610	14,841	11,509	8,051	5,611	8,335	1,510
	1997	104,846	11,393	16,888	17,160	16,407	14,049	10,849	7,204	4,564	5,637	694
	1987	105,613	11,248	16,941	18,863	17,825	14,349	10,332	6,771	4,058	4,689	540
	1977	101,208	12,107	17,075	18,551	16,986	13,390	9,463	5,906	3,490	3,827	413
	1953	60,462	7,143	10,610	12,027	10,912	7,738	5,106	3,109	1,691	1,879	247

**Table 29. (cont.)** Net volume of softwood growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
<b>Rocky Mountain</b>												
Great Plains	2007	1,641	114	215	277	282	256	188	139	90	72	8
	1997	1,563	145	267	271	266	221	157	107	64	63	2
	1987	1,912	162	278	334	339	285	215	156	74	69	1
	1977	1,799	147	267	324	315	263	195	130	83	72	2
	1953	1,309	68	132	174	197	177	176	136	111	131	8
Intermountain	2007	123,168	8,005	13,573	16,033	16,205	14,960	12,691	10,153	7,720	17,007	6,822
	1997	113,118	9,164	14,678	15,933	15,176	12,897	10,605	8,428	6,485	14,056	5,695
	1987	98,386	8,639	12,318	13,388	12,425	10,685	8,957	7,142	5,603	13,161	6,074
	1977	93,318	9,383	11,772	11,883	10,950	9,682	8,172	6,912	5,681	13,305	5,580
	1953	86,237	8,573	8,455	8,956	8,968	8,542	7,858	6,884	5,886	14,935	7,178
Rocky Mountain Total	2007	124,809	8,119	13,788	16,310	16,487	15,216	12,879	10,292	7,810	17,079	6,830
	1997	114,681	9,309	14,945	16,204	15,442	13,118	10,762	8,535	6,549	14,120	5,697
	1987	100,298	8,801	12,596	13,722	12,764	10,970	9,172	7,298	5,677	13,230	6,075
	1977	95,117	9,530	12,039	12,207	11,265	9,945	8,367	7,042	5,764	13,377	5,582
	1953	87,546	8,641	8,587	9,130	9,165	8,719	8,034	7,020	5,997	15,066	7,186
<b>Pacific Coast</b>												
Alaska	2007	29,124	800	1,604	1,941	2,236	2,192	2,182	2,023	1,911	6,547	7,688
	1997	29,810	743	1,538	1,830	2,044	2,162	1,995	2,052	2,008	6,908	8,530
	1987	37,051	956	1,934	2,394	2,705	2,675	2,662	2,750	2,506	8,797	9,670
	1977	48,277	1,346	1,849	2,754	3,521	3,996	4,116	3,685	3,424	11,547	12,042
	1953	49,149	1,103	1,495	2,279	3,097	3,619	3,963	3,792	3,624	12,414	13,764
Pacific Northwest	2007	146,006	3,474	7,052	9,916	11,600	11,977	11,847	10,852	10,182	32,544	36,562
	1997	135,969	3,767	6,983	9,101	10,397	10,471	10,273	9,629	8,884	26,732	39,732
	1987	130,684	4,154	7,662	9,780	10,863	10,636	10,266	9,527	8,533	24,926	34,337
	1977	132,535	5,821	7,235	8,235	8,800	8,719	8,682	8,493	7,859	26,299	42,392
	1953	149,574	4,264	5,593	6,366	7,370	7,242	8,090	7,844	7,967	29,507	65,331
Pacific Southwest	2007	54,926	1,179	1,708	2,300	2,697	3,180	3,420	3,554	3,323	11,735	21,830
	1997	49,172	820	1,444	2,064	2,462	2,676	3,070	3,134	3,201	11,369	18,931
	1987	46,311	891	1,417	1,754	2,135	2,383	2,627	2,791	2,664	10,222	19,429
	1977	45,979	769	1,259	1,613	1,885	2,213	2,387	2,456	2,511	10,016	20,870
	1953	58,010	766	1,245	1,603	1,835	2,055	2,160	2,269	2,282	10,141	33,654

**Table 29. (cont.)** Net volume of softwood growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
<b>Pacific Coast Total</b>	<b>2007</b>	<b>230,056</b>	<b>5,453</b>	<b>10,364</b>	<b>14,157</b>	<b>16,533</b>	<b>17,349</b>	<b>17,449</b>	<b>16,429</b>	<b>15,416</b>	<b>50,826</b>	<b>66,080</b>
	1997	214,951	5,330	9,966	12,994	14,903	15,309	15,339	14,815	14,093	45,009	67,193
	1987	214,046	6,001	11,013	13,928	15,703	15,694	15,555	15,068	13,703	43,945	63,436
	1977	226,791	7,936	10,343	12,602	14,206	14,928	15,185	14,634	13,794	47,862	75,304
	1953	256,733	6,133	8,333	10,248	12,302	12,916	14,213	13,905	13,873	52,062	112,749
<b>U.S. Total</b>	<b>2007</b>	<b>529,202</b>	<b>32,827</b>	<b>53,254</b>	<b>59,038</b>	<b>58,810</b>	<b>53,882</b>	<b>46,643</b>	<b>38,159</b>	<b>31,204</b>	<b>80,180</b>	<b>75,203</b>
	1997	483,854	33,346	51,266	54,808	53,877	47,865	40,791	33,153	26,975	67,593	74,179
	1987	467,575	34,230	50,770	55,495	53,175	45,649	38,212	31,172	24,768	63,753	70,364
	1977	466,966	40,375	49,815	50,981	47,764	41,759	35,421	29,091	23,970	66,294	81,497
	1953	431,794	28,347	33,856	35,719	35,739	31,680	28,891	25,016	22,249	69,983	120,313

Note: Data may not add to Totals because of rounding. Total volume by subregion in this table may differ slightly from volume by subregion in other tables because of rounding.

**Table 30.** Net volume of hardwood growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
<b>North</b>												
Northeast	2007	103,331	7,626	12,841	16,445	16,235	14,757	11,739	8,295	5,276	8,339	1,778
	1997	90,234	8,137	13,420	15,604	14,110	12,048	9,054	6,165	4,145	6,160	1,391
	1987	80,524	9,280	13,288	14,328	12,619	10,359	7,344	5,022	3,090	4,402	794
	1977	67,320	10,488	12,220	12,275	9,872	7,790	5,458	3,558	2,240	2,968	451
	1953	43,197	6,926	7,703	7,332	5,712	4,652	3,578	2,532	1,660	2,709	395
North Central	2007	88,808	7,259	10,746	12,930	12,700	11,747	9,618	7,336	5,256	8,777	2,440
	1997	74,640	7,436	10,575	12,210	11,341	9,678	7,475	5,305	3,499	5,798	1,323
	1987	61,896	8,177	10,121	10,432	9,074	7,103	5,452	3,829	2,604	4,076	1,028
	1977	51,838	7,773	9,665	9,338	7,414	5,925	4,203	2,775	1,753	2,468	521
	1953	33,498	4,766	5,925	6,037	4,359	3,630	2,705	1,928	1,319	2,401	428
North Total	2007	192,139	14,885	23,587	29,375	28,935	26,504	21,357	15,631	10,532	17,116	4,218
	1997	164,874	15,573	23,995	27,814	25,451	21,726	16,529	11,471	7,644	11,958	2,714
	1987	142,420	17,457	23,409	24,760	21,693	17,462	12,796	8,851	5,694	8,478	1,822
	1977	119,158	18,261	21,885	21,613	17,286	13,715	9,661	6,333	3,993	5,436	972
	1953	76,695	11,692	13,628	13,369	10,071	8,282	6,283	4,460	2,979	5,110	823
<b>South</b>												
Southeast	2007	70,025	4,741	6,921	8,598	9,118	9,346	8,586	6,789	5,096	8,777	2,053
	1997	71,124	5,598	7,861	9,542	10,208	9,781	8,365	6,387	4,613	7,219	1,550
	1987	68,154	5,963	8,156	9,556	10,345	9,516	7,805	5,787	3,815	5,947	1,264
	1977	60,691	6,005	8,037	9,192	9,239	8,346	6,500	4,616	2,985	4,766	1,005
	1953	41,533	3,558	5,218	6,391	6,315	5,900	4,309	3,293	2,226	3,603	720
South Central	2007	100,026	6,505	9,742	12,183	13,113	13,233	11,849	9,619	7,243	13,043	3,496
	1997	80,392	6,605	9,823	11,838	11,180	10,815	8,941	6,848	4,877	7,807	1,657
	1987	70,874	7,385	9,914	11,340	10,493	9,487	7,505	5,295	3,430	5,129	891
	1977	61,474	7,426	8,978	9,843	8,852	8,019	6,404	4,380	2,782	4,055	733
	1953	46,475	4,529	6,170	7,308	7,028	6,304	4,901	3,553	2,354	3,739	589
South Total	2007	170,051	11,246	16,663	20,781	22,231	22,579	20,435	16,408	12,339	21,820	5,549
	1997	151,516	12,202	17,684	21,380	21,389	20,596	17,306	13,235	9,490	15,026	3,207
	1987	139,028	13,348	18,070	20,896	20,838	19,003	15,310	11,082	7,245	11,076	2,155
	1977	122,165	13,431	17,015	19,035	18,091	16,365	12,904	8,996	5,767	8,821	1,738
	1953	88,008	8,087	11,388	13,699	13,343	12,204	9,210	6,846	4,580	7,342	1,309
<b>Rocky Mountain</b>												
Great Plains	2007	2,898	169	243	273	251	269	241	202	212	541	497
	1997	2,368	175	225	265	240	239	212	187	153	418	255
	1987	1,468	168	158	177	148	136	116	96	82	230	161
	1977	1,273	133	149	169	155	136	114	90	76	230	21
	1953	1,098	92	130	139	106	121	113	97	78	199	22

**Table 30. (cont.)** Net volume of hardwood growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
Intermountain	2007	9,556	876	1,660	1,975	1,806	1,335	708	397	298	395	105
	1997	8,250	1,462	1,933	1,837	1,222	750	439	216	139	178	74
	1987	6,213	1,086	1,423	1,424	888	550	317	167	124	163	75
	1977	4,865	797	1,164	1,007	738	462	278	175	95	133	14
	1953	3,976	444	802	817	660	467	298	188	114	158	25
Rocky Mountain Total	2007	12,454	1,045	1,903	2,248	2,057	1,604	949	599	510	936	602
	1997	10,618	1,636	2,158	2,103	1,461	989	652	402	292	596	328
	1987	7,681	1,254	1,581	1,601	1,036	686	433	263	206	393	236
	1977	6,138	930	1,313	1,176	893	598	392	265	171	363	35
	1953	5,074	536	932	956	766	588	411	285	192	357	47
<b>Pacific Coast</b>												
Alaska	2007	2,873	639	760	464	343	186	207	72	32	115	55
	1997	3,145	583	710	466	359	224	281	124	102	233	63
	1987	4,209	664	1,030	675	562	335	337	187	135	216	70
	1977	4,222	616	915	744	416	373	304	203	148	313	190
	1953	4,189	610	874	720	407	370	305	208	155	335	205
Pacific Northwest	2007	12,890	882	1,430	1,661	1,701	1,556	1,443	1,095	851	1,551	721
	1997	13,049	742	1,454	1,905	2,083	1,698	1,417	1,113	731	1,380	524
	1987	13,005	826	1,567	2,079	2,116	1,813	1,364	1,020	633	1,151	438
	1977	10,522	1,199	1,475	1,594	1,520	1,299	971	762	511	924	267
	1953	7,076	1,037	1,062	1,049	961	807	529	458	321	671	187
Pacific Southwest	2007	12,484	955	1,309	1,465	1,457	1,263	1,150	970	738	1,993	1,184
	1997	8,613	641	892	876	948	882	704	661	583	1,548	879
	1987	7,740	551	798	823	781	750	699	626	485	1,412	819
	1977	3,891	254	411	415	391	368	365	299	266	720	402
	1953	3,048	193	320	250	281	301	257	242	203	536	466
Pacific Coast Total	2007	28,247	2,476	3,499	3,590	3,501	3,005	2,800	2,137	1,621	3,659	1,960
	1997	24,808	1,966	3,055	3,247	3,391	2,804	2,403	1,899	1,416	3,162	1,466
	1987	24,954	2,041	3,395	3,577	3,459	2,898	2,400	1,833	1,253	2,779	1,327
	1977	18,635	2,069	2,801	2,753	2,327	2,040	1,640	1,264	925	1,957	859
	1953	14,313	1,840	2,256	2,019	1,649	1,478	1,091	908	679	1,542	858
U.S. Total	2007	402,891	29,652	45,652	55,994	56,724	53,692	45,541	34,775	25,002	43,531	12,329
	1997	351,815	31,377	46,892	54,544	51,692	46,115	36,890	27,006	18,843	30,742	7,715
	1987	314,083	34,100	46,455	50,834	47,026	40,049	30,939	22,029	14,398	22,726	5,540
	1977	266,096	34,691	43,014	44,577	38,597	32,718	24,597	16,858	10,856	16,577	3,604
	1953	184,090	22,155	28,204	30,043	25,829	22,552	16,995	12,499	8,430	14,351	3,037

**Note:** Data may not add to Totals because of rounding. Total volume by subregion in this table may differ slightly from volume by subregion in other tables because of rounding.

**Table 31.** Net volume of growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
<b>North</b>												
Northeast	2007	137,583	11,416	18,185	21,830	21,378	19,024	14,958	10,642	6,872	10,934	2,343
	1997	121,179	11,880	18,738	20,738	18,862	15,858	11,838	7,992	5,372	8,094	1,808
	1987	112,133	14,031	19,692	20,371	17,538	13,710	9,632	6,448	3,994	5,693	1,026
	1977	98,311	18,127	19,475	17,706	13,749	10,337	7,169	4,576	2,847	3,735	589
	1953	63,225	11,554	12,437	10,479	8,210	6,443	4,768	3,253	2,187	3,411	485
North Central	2007	110,422	10,628	14,946	16,768	15,737	13,956	11,205	8,376	6,027	10,122	2,658
	1997	93,072	11,007	14,724	15,526	13,714	11,257	8,533	6,078	4,042	6,691	1,501
	1987	77,905	11,606	13,937	13,371	11,038	8,388	6,317	4,438	3,030	4,674	1,109
	1977	64,697	10,936	12,768	11,528	8,844	6,874	4,898	3,266	2,068	2,929	581
	1953	40,523	6,568	7,517	7,204	5,221	4,146	3,053	2,189	1,480	2,675	469
North Total	2007	248,005	22,044	33,131	38,598	37,115	32,980	26,163	19,018	12,899	21,056	5,001
	1997	214,251	22,887	33,462	36,264	32,576	27,115	20,371	14,070	9,413	14,785	3,308
	1987	190,038	25,637	33,629	33,742	28,576	22,098	15,949	10,886	7,024	10,367	2,135
	1977	163,008	29,063	32,243	29,234	22,593	17,211	12,067	7,842	4,915	6,664	1,170
	1953	103,748	18,122	19,954	17,683	13,431	10,589	7,821	5,442	3,667	6,086	954
<b>South</b>												
Southeast	2007	126,747	11,213	17,334	18,564	17,772	16,291	13,571	10,219	7,338	11,889	2,556
	1997	122,985	12,218	17,219	18,688	18,252	16,229	13,097	9,419	6,500	9,512	1,850
	1987	120,773	12,446	17,576	19,434	19,192	16,350	12,349	8,673	5,455	7,792	1,506
	1977	111,699	12,934	17,421	18,972	17,774	14,813	10,837	7,116	4,393	6,253	1,186
	1953	77,081	8,105	11,994	13,864	12,889	10,165	6,859	4,757	3,031	4,572	845
South Central	2007	161,775	12,129	18,887	21,565	22,069	21,129	18,373	14,240	10,612	18,266	4,503
	1997	133,377	11,377	17,353	19,852	19,544	18,417	15,058	11,020	7,554	11,151	2,051
	1987	123,868	12,150	17,435	20,325	19,471	17,002	13,293	9,180	5,848	7,973	1,189
	1977	111,674	12,604	16,669	18,614	17,303	14,942	11,530	7,786	4,864	6,395	965
	1953	71,389	7,125	10,004	11,862	11,366	9,777	7,457	5,198	3,240	4,649	711
South Total	2007	288,522	23,342	36,221	40,129	39,841	37,420	31,944	24,459	17,950	30,155	7,059
	1997	256,361	23,595	34,572	38,540	37,796	34,645	28,155	20,439	14,054	20,664	3,901
	1987	244,641	24,596	35,011	39,759	38,663	33,352	25,642	17,853	11,303	15,765	2,695
	1977	223,373	25,538	34,090	37,586	35,077	29,755	22,367	14,902	9,257	12,648	2,151
	1953	148,470	15,230	21,998	25,726	24,255	19,942	14,316	9,955	6,271	9,221	1,556
<b>Rocky Mountain</b>												
Great Plains	2007	4,539	283	458	550	533	525	429	341	302	613	505
	1997	3,931	320	492	536	506	460	369	294	217	481	257
	1987	3,380	330	436	511	487	421	331	252	156	299	162
	1977	3,072	280	416	493	470	399	309	220	159	302	23
	1953	2,407	160	262	313	303	298	289	233	189	330	30



**Table 31. (cont.)** Net volume of growing stock on timber land in the United States by diameter class, region, and subregion, 2007, 1997, 1987, 1977, and 1953

Region and sub-region	Year	Total	Diameter class (inches)									
			5.0 to 6.9	7.0 to 8.9	9.0 to 10.9	11.0 to 12.9	13.0 to 14.9	15.0 to 16.9	17.0 to 18.9	19.0 to 20.9	21 to 28.9	29.0+
<i>Million cubic feet</i>												
Intermountain	2007	132,724	8,881	15,233	18,008	18,011	16,295	13,399	10,550	8,018	17,402	6,927
	1997	121,368	10,626	16,611	17,770	16,397	13,647	11,044	8,644	6,625	14,235	5,769
	1987	104,599	9,725	13,741	14,812	13,313	11,235	9,274	7,309	5,727	13,324	6,149
	1977	98,183	10,180	12,936	12,890	11,688	10,144	8,450	7,087	5,776	13,438	5,594
	1953	90,213	9,017	9,257	9,773	9,628	9,009	8,156	7,072	6,000	15,093	7,203
<b>Rocky Mountain Total</b>	<b>2007</b>	<b>137,263</b>	<b>9,164</b>	<b>15,691</b>	<b>18,558</b>	<b>18,544</b>	<b>16,820</b>	<b>13,828</b>	<b>10,891</b>	<b>8,320</b>	<b>18,015</b>	<b>7,432</b>
	1997	125,299	10,945	17,103	18,306	16,903	14,107	11,414	8,938	6,842	14,716	6,026
	1987	107,979	10,055	14,177	15,323	13,800	11,656	9,605	7,561	5,883	13,623	6,311
	1977	101,255	10,460	13,352	13,383	12,158	10,543	8,759	7,307	5,935	13,740	5,617
	1953	92,620	9,177	9,519	10,086	9,931	9,307	8,445	7,305	6,189	15,423	7,233
Pacific Coast												
Alaska	2007	31,998	1,439	2,364	2,405	2,580	2,378	2,389	2,095	1,943	6,662	7,743
	1997	32,955	1,326	2,248	2,296	2,403	2,387	2,277	2,175	2,110	7,141	8,593
	1987	41,260	1,620	2,964	3,069	3,267	3,010	2,999	2,937	2,641	9,013	9,740
	1977	52,499	1,962	2,764	3,498	3,937	4,369	4,420	3,888	3,572	11,860	12,232
	1953	53,338	1,713	2,369	2,999	3,504	3,989	4,268	4,000	3,779	12,749	13,969
Pacific Northwest	2007	158,896	4,356	8,482	11,577	13,301	13,533	13,290	11,947	11,033	34,095	37,283
	1997	149,018	4,509	8,438	11,006	12,480	12,169	11,690	10,743	9,615	28,112	40,256
	1987	143,689	4,980	9,229	11,859	12,979	12,449	11,630	10,547	9,166	26,077	34,775
	1977	143,057	7,020	8,710	9,829	10,320	10,018	9,653	9,255	8,370	27,223	42,659
	1953	156,650	5,301	6,655	7,415	8,331	8,049	8,619	8,302	8,288	30,178	65,518
Pacific Southwest	2007	67,410	2,134	3,017	3,765	4,154	4,443	4,570	4,524	4,061	13,728	23,014
	1997	57,785	1,461	2,336	2,939	3,411	3,557	3,775	3,795	3,784	12,917	19,810
	1987	54,051	1,442	2,215	2,577	2,916	3,133	3,326	3,417	3,149	11,634	20,248
	1977	49,870	1,023	1,670	2,028	2,276	2,581	2,752	2,755	2,777	10,736	21,272
	1953	61,058	959	1,565	1,853	2,116	2,356	2,417	2,511	2,485	10,677	34,120
<b>Pacific Coast Total</b>	<b>2007</b>	<b>258,304</b>	<b>7,929</b>	<b>13,863</b>	<b>17,747</b>	<b>20,035</b>	<b>20,354</b>	<b>20,249</b>	<b>18,566</b>	<b>17,037</b>	<b>54,485</b>	<b>68,040</b>
	1997	239,759	7,296	13,022	16,241	18,294	18,113	17,742	16,713	15,509	48,170	68,659
	1987	239,000	8,042	14,408	17,505	19,162	18,592	17,955	16,901	14,956	46,724	64,763
	1977	245,426	10,005	13,144	15,355	16,533	16,968	16,825	15,898	14,719	49,819	76,163
	1953	271,046	7,973	10,589	12,267	13,951	14,394	15,304	14,813	14,552	53,604	113,607
<b>U.S. Total</b>	<b>2007</b>	<b>932,094</b>	<b>62,479</b>	<b>98,906</b>	<b>115,032</b>	<b>115,535</b>	<b>107,574</b>	<b>92,184</b>	<b>72,934</b>	<b>56,206</b>	<b>123,711</b>	<b>87,532</b>
	1997	835,670	64,723	98,158	109,352	105,569	93,981	77,681	60,159	45,818	98,335	81,894
	1987	781,658	68,330	97,225	106,329	100,201	85,698	69,151	53,201	39,166	86,479	75,904
	1977	733,062	75,066	92,829	95,558	86,361	74,477	60,018	45,949	34,826	82,871	85,101
	1953	675,144	61,443	74,349	77,313	70,730	60,854	50,132	39,915	31,927	84,912	123,566

**Note:** Data may not add to Totals because of rounding. Total volume by subregion in this table may differ slightly from volume by subregion in other tables because of rounding.

**Table 32.** Net volume of growing stock on timber land by origin in the North, South, and West by forest-type group and major ownership group, 2007

Region and forest-type group <sup>a</sup>	All ownership groups			Public ownerships			Private ownerships		
	Total	Planted	Natural	Total	Planted	Natural	Total	Planted	Natural
<i>Million cubic feet</i>									
<b>North</b>									
White-red-jack pine	20,911	5,515	15,396	6,217	2,599	3,619	14,694	2,916	11,778
Spruce-fir	15,968	361	15,607	4,940	205	4,734	11,029	156	10,873
Longleaf-slash pine	2,025	471	1,554	787	238	549	1,238	233	1,005
Loblolly-shortleaf pine	0	0	0	0	0	0	0	0	0
Oak-pine	8,754	680	8,074	1,960	202	1,758	6,795	479	6,316
Oak-hickory	84,453	509	83,944	15,200	99	15,101	69,253	411	68,843
Oak-gum-cypress	1,195	0	1,195	194	0	194	1,002	0	1,002
Elm-ash-cottonwood	13,718	152	13,566	2,860	34	2,825	10,858	117	10,741
Maple-beech-birch	84,171	758	83,412	18,671	233	18,438	65,500	525	64,974
Aspen-birch	15,827	182	15,646	6,007	50	5,957	9,820	132	9,688
Other forest types	922	503	420	262	228	34	661	275	386
Nonstocked	62	2	60	22	0	22	39	2	38
<b>North Total</b>	<b>248,007</b>	<b>9,133</b>	<b>238,874</b>	<b>57,119</b>	<b>3,888</b>	<b>53,232</b>	<b>190,887</b>	<b>5,245</b>	<b>185,642</b>
<b>South</b>									
White-red-jack pine	2,244	257	1,987	624	47	577	1,620	210	1,410
Spruce-fir	41	8	33	16	0	16	25	8	17
Longleaf-slash pine	15,271	7,093	8,178	4,167	916	3,251	11,104	6,177	4,927
Loblolly-shortleaf pine	81,252	34,923	46,329	11,927	1,796	10,131	69,325	33,128	36,198
Oak-pine	26,996	1,258	25,738	4,573	145	4,428	22,423	1,114	21,310
Oak-hickory	111,071	590	110,481	17,055	116	16,939	94,016	474	93,542
Oak-gum-cypress	38,266	50	38,216	7,042	3	7,039	31,224	47	31,177
Elm-ash-cottonwood	10,214	20	10,195	1,348	0	1,348	8,866	19	8,847
Maple-beech-birch	2,165	0	2,164	263	0	263	1,902	0	1,901
Aspen-birch	0	0	0	0	0	0	0	0	0
Other forest types	926	9	917	97	0	97	829	9	820
Nonstocked	76	10	66	17	3	14	59	7	52
<b>South Total</b>	<b>288,523</b>	<b>44,218</b>	<b>244,305</b>	<b>47,128</b>	<b>3,025</b>	<b>44,104</b>	<b>241,395</b>	<b>41,193</b>	<b>200,201</b>

**Table 32. (cont.)** Net volume of growing stock on timber land by origin in the North, South, and West by forest-type group and major ownership group, 2007

Region and forest-type group <sup>a</sup>	All ownership groups			Public ownerships			Private ownerships		
	Total	Planted	Natural	Total	Planted	Natural	Total	Planted	Natural
<i>Million cubic feet</i>									
<b>Western</b>									
Douglas-fir	122,188	16,488	105,700	88,113	7,063	81,050	34,075	9,425	24,650
Ponderosa pine	35,806	816	34,991	24,045	508	23,537	11,761	308	11,453
Western white pine	245	1	244	245	1	244	0	0	0
Fir-spruce	72,914	621	72,293	65,201	420	64,781	7,714	201	7,513
Hemlock-Sitka spruce	52,214	1,940	50,274	40,270	515	39,755	11,944	1,425	10,519
Larch	4,211	16	4,195	3,771	15	3,756	440	2	439
Lodgepole pine	23,473	43	23,430	20,910	43	20,867	2,563	0	2,563
Redwood	3,899	5	3,895	433	0	433	3,467	5	3,462
Other softwoods	31,396	365	31,031	24,133	292	23,841	7,263	73	7,190
Western hardwoods	47,916	1,665	46,251	22,172	451	21,721	25,745	1,214	24,530
Pinyon-juniper	811	27	784	494	16	477	317	11	306
Nonstocked	494	13	481	313	10	303	181	3	178
<b>Western Total</b>	<b>395,567</b>	<b>21,998</b>	<b>373,569</b>	<b>290,099</b>	<b>9,332</b>	<b>280,767</b>	<b>105,468</b>	<b>12,666</b>	<b>92,803</b>
<b>U.S. Total</b>	<b>932,096</b>	<b>75,348</b>	<b>856,748</b>	<b>394,346</b>	<b>16,244</b>	<b>378,102</b>	<b>537,750</b>	<b>59,104</b>	<b>478,646</b>

Forest type reflects the current dominant species by plurality of stocking and may not reflect the actual species planted at the time of stand origin.

**Note:** Data may not add to Totals because of rounding. Total volume by subregion in this table may differ slightly from volume by subregion in other tables because of rounding.

**Table 33.** Annual mortality of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	All owners					National forest				
	2006	1996	1986	1976	1952	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>										
<b>North</b>										
<b>Northeast</b>										
Softwoods	299,645	273,609	257,140	191,544	150,800	10,769	7,549	5,393	1,746	3,570
Hardwoods	635,634	514,142	418,217	356,773	248,200	44,072	26,217	15,518	10,823	9,810
<b>Northeast Total</b>	<b>935,280</b>	<b>787,750</b>	<b>675,357</b>	<b>548,317</b>	<b>399,000</b>	<b>54,841</b>	<b>33,766</b>	<b>20,911</b>	<b>12,569</b>	<b>13,380</b>
<b>North Central</b>										
Softwoods	247,063	181,907	110,926	132,777	64,834	37,026	32,973	19,836	21,732	16,214
Hardwoods	851,427	658,116	456,852	467,451	226,384	64,876	55,959	44,034	36,115	18,417
<b>North Central Total</b>	<b>1,098,490</b>	<b>840,022</b>	<b>567,778</b>	<b>600,228</b>	<b>291,218</b>	<b>101,902</b>	<b>88,932</b>	<b>63,870</b>	<b>57,847</b>	<b>34,631</b>
<b>North Total</b>										
Softwoods	546,708	455,516	368,066	324,321	215,634	47,795	40,522	25,229	23,478	19,784
Hardwoods	1,487,061	1,172,257	875,069	824,224	474,584	108,948	82,176	59,552	46,938	28,227
<b>North Total</b>	<b>2,033,769</b>	<b>1,627,773</b>	<b>1,243,135</b>	<b>1,148,545</b>	<b>690,218</b>	<b>156,743</b>	<b>122,698</b>	<b>84,781</b>	<b>70,416</b>	<b>48,011</b>
<b>South</b>										
<b>Southeast</b>										
Softwoods	611,216	629,975	489,320	416,000	234,700	67,498	58,533	30,147	21,447	11,800
Hardwoods	580,751	603,553	371,125	286,783	283,800	41,751	53,034	35,262	24,358	18,600
<b>Southeast Total</b>	<b>1,191,967</b>	<b>1,233,528</b>	<b>860,445</b>	<b>702,783</b>	<b>518,500</b>	<b>109,248</b>	<b>111,567</b>	<b>65,409</b>	<b>45,805</b>	<b>30,400</b>
<b>South Central</b>										
Softwoods	754,352	405,829	351,451	216,201	98,700	146,598	34,270	29,491	19,769	12,132
Hardwoods	913,233	596,714	460,976	359,267	355,200	75,352	28,680	18,285	14,497	12,227
<b>South Central Total</b>	<b>1,667,585</b>	<b>1,002,543</b>	<b>812,427</b>	<b>575,468</b>	<b>453,900</b>	<b>221,950</b>	<b>62,950</b>	<b>47,776</b>	<b>34,266</b>	<b>24,359</b>
<b>South Total</b>										
Softwoods	1,365,568	1,035,804	840,771	632,201	333,400	214,095	92,803	59,638	41,216	23,932
Hardwoods	1,493,984	1,200,267	832,101	646,050	639,000	117,103	81,714	53,547	38,855	30,827
<b>South Total</b>	<b>2,859,552</b>	<b>2,236,071</b>	<b>1,672,872</b>	<b>1,278,251</b>	<b>972,400</b>	<b>331,198</b>	<b>174,517</b>	<b>113,185</b>	<b>80,071</b>	<b>54,759</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Softwoods	11,232	9,563	7,033	3,940	3,300	6,558	6,857	4,483	3,543	3,025
Hardwoods	42,976	38,025	7,803	29,312	24,730	714	245	61	0	0
<b>Great Plains Total</b>	<b>54,208</b>	<b>47,587</b>	<b>14,836</b>	<b>33,252</b>	<b>28,030</b>	<b>7,272</b>	<b>7,102</b>	<b>4,544</b>	<b>3,543</b>	<b>3,025</b>
<b>Intermountain</b>										
Softwoods	1,226,767	889,962	487,864	454,779	565,300	1,045,457	708,911	365,637	270,479	388,200
Hardwoods	83,071	103,244	42,628	39,160	34,600	56,174	70,177	22,143	17,860	17,200
<b>Intermountain Total</b>	<b>1,309,838</b>	<b>993,206</b>	<b>530,492</b>	<b>493,939</b>	<b>599,900</b>	<b>1,101,631</b>	<b>779,088</b>	<b>387,780</b>	<b>288,339</b>	<b>405,400</b>

**Table 33. (cont.)** Annual mortality of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	All owners					National forest				
	2006	1996	1986	1976	1952	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>										
<b>Rocky Mountain Total</b>										
Softwoods	1,237,999	899,525	494,897	458,719	568,600	1,052,014	715,768	370,120	274,022	391,225
Hardwoods	126,047	141,268	50,431	68,472	59,330	56,888	70,422	22,204	17,860	17,200
<b>Rocky Mountain Total</b>	<b>1,364,046</b>	<b>1,040,793</b>	<b>545,328</b>	<b>527,191</b>	<b>627,930</b>	<b>1,108,903</b>	<b>786,190</b>	<b>392,324</b>	<b>291,882</b>	<b>408,425</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Softwoods	236,177	194,542	172,267	213,596	224,700	104,123	123,624	99,767	146,799	171,090
Hardwoods	20,120	10,163	9,912	9,395	9,467	1,049	430	154	1,536	1,608
<b>Alaska Total</b>	<b>256,297</b>	<b>204,705</b>	<b>182,179</b>	<b>222,991</b>	<b>234,167</b>	<b>105,172</b>	<b>124,054</b>	<b>99,921</b>	<b>148,335</b>	<b>172,698</b>
<b>Pacific Northwest</b>										
Softwoods	835,797	777,610	657,843	699,600	952,500	451,403	468,829	422,000	326,700	407,300
Hardwoods	113,972	118,232	72,131	71,800	50,500	14,526	4,953	4,000	6,600	6,100
<b>Pacific Northwest Total</b>	<b>949,769</b>	<b>895,842</b>	<b>729,974</b>	<b>771,400</b>	<b>1,003,000</b>	<b>465,929</b>	<b>473,783</b>	<b>426,000</b>	<b>333,300</b>	<b>413,400</b>
<b>Pacific Southwest</b>										
Softwoods	288,358	263,106	247,804	137,700	366,800	195,699	151,846	171,205	80,800	199,500
Hardwoods	74,679	51,763	24,316	6,792	10,100	21,160	2,174	5,217	2,300	7,400
<b>Pacific Southwest Total</b>	<b>363,037</b>	<b>314,869</b>	<b>272,120</b>	<b>144,492</b>	<b>376,900</b>	<b>216,859</b>	<b>154,020</b>	<b>176,422</b>	<b>83,100</b>	<b>206,900</b>
<b>Pacific Coast Total</b>										
Softwoods	1,360,332	1,235,258	1,077,914	1,050,896	1,544,000	751,225	744,299	692,972	554,299	777,890
Hardwoods	208,770	180,158	106,359	87,987	70,067	36,735	7,558	9,371	10,436	15,108
<b>Pacific Coast Total</b>	<b>1,569,103</b>	<b>1,415,416</b>	<b>1,184,273</b>	<b>1,138,883</b>	<b>1,614,067</b>	<b>787,960</b>	<b>751,857</b>	<b>702,343</b>	<b>564,735</b>	<b>792,998</b>
<b>United States</b>										
Softwoods	4,510,608	3,626,102	2,781,648	2,466,137	2,661,634	2,065,130	1,593,393	1,147,959	893,015	1,212,831
Hardwoods	3,315,862	2,693,950	1,863,960	1,626,733	1,242,981	319,674	241,870	144,674	114,089	91,362
<b>U.S. Total</b>	<b>7,828,623</b>	<b>6,320,052</b>	<b>4,645,608</b>	<b>4,092,870</b>	<b>3,904,615</b>	<b>2,384,804</b>	<b>1,835,262</b>	<b>1,292,633</b>	<b>1,007,104</b>	<b>1,304,193</b>

**Table 33. (cont.)** Annual mortality of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	Other public					2006	2006	Total private				
	2006	1996	1986	1976	1952	Private corporate	Private non-corporate	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>												
<b>North</b>												
<b>Northeast</b>												
Softwoods	28,280	16,790	14,875	10,561	6,911	113,285	147,312	260,596	249,270	236,872	179,237	140,319
Hardwoods	88,889	73,113	51,156	33,580	21,982	134,015	368,659	502,673	414,812	351,543	312,370	216,408
<b>Northeast Total</b>	<b>117,169</b>	<b>89,902</b>	<b>66,031</b>	<b>44,141</b>	<b>28,893</b>	<b>247,299</b>	<b>515,970</b>	<b>763,270</b>	<b>664,082</b>	<b>588,415</b>	<b>491,607</b>	<b>356,727</b>
<b>North Central</b>												
Softwoods	81,223	60,153	41,299	36,930	19,644	27,476	101,337	128,813	88,781	49,791	74,115	28,976
Hardwoods	150,338	121,076	87,701	102,796	38,737	55,519	580,694	636,213	481,080	325,117	328,540	169,230
<b>North Central Total</b>	<b>231,561</b>	<b>181,229</b>	<b>129,000</b>	<b>139,726</b>	<b>58,381</b>	<b>82,995</b>	<b>682,031</b>	<b>765,026</b>	<b>569,861</b>	<b>374,908</b>	<b>402,655</b>	<b>198,206</b>
<b>North Total</b>												
Softwoods	109,503	76,943	56,174	47,491	26,555	140,761	248,649	389,410	338,051	286,663	253,352	169,295
Hardwoods	239,227	194,189	138,857	136,376	60,719	189,533	949,352	1,138,886	895,892	676,660	640,910	385,638
<b>North Total</b>	<b>348,730</b>	<b>271,132</b>	<b>195,031</b>	<b>183,867</b>	<b>87,274</b>	<b>247,267</b>	<b>1,198,001</b>	<b>1,528,296</b>	<b>1,233,943</b>	<b>963,323</b>	<b>894,262</b>	<b>554,933</b>
<b>South</b>												
<b>Southeast</b>												
Softwoods	58,098	41,084	26,081	18,553	11,100	151,331	334,290	485,621	530,358	433,092	376,000	211,800
Hardwoods	67,710	31,725	14,171	13,018	6,300	104,704	366,586	471,290	518,794	321,692	249,407	258,900
<b>Southeast Total</b>	<b>125,807</b>	<b>72,809</b>	<b>40,252</b>	<b>31,571</b>	<b>17,400</b>	<b>256,035</b>	<b>700,876</b>	<b>956,911</b>	<b>1,049,152</b>	<b>754,784</b>	<b>625,407</b>	<b>470,700</b>
<b>South Central</b>												
Softwoods	42,756	17,169	11,919	6,983	3,000	182,582	382,416	564,998	354,390	310,041	189,449	83,568
Hardwoods	86,139	50,648	30,302	18,081	8,359	173,562	578,181	751,743	517,386	412,389	326,689	334,614
<b>South Central Total</b>	<b>128,894</b>	<b>67,817</b>	<b>42,221</b>	<b>25,064</b>	<b>11,359</b>	<b>356,144</b>	<b>960,597</b>	<b>1,316,741</b>	<b>871,776</b>	<b>722,430</b>	<b>516,138</b>	<b>418,182</b>
<b>South Total</b>												
Softwoods	100,853	58,253	38,000	25,536	14,100	333,913	716,706	1,050,619	884,748	743,133	565,449	295,368
Hardwoods	153,848	82,373	44,473	31,099	14,659	278,266	944,767	1,223,033	1,036,180	734,081	576,096	593,514
<b>South Total</b>	<b>254,701</b>	<b>140,626</b>	<b>82,473</b>	<b>56,635</b>	<b>28,759</b>	<b>247,267</b>	<b>1,661,472</b>	<b>2,273,652</b>	<b>1,920,928</b>	<b>1,477,214</b>	<b>1,141,545</b>	<b>888,882</b>
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Softwoods	1,155	666	38	130	59	136	3,383	3,519	2,040	2,512	267	216
Hardwoods	4,511	2,902	474	4,379	3,896	372	37,380	37,752	34,877	7,268	24,933	20,834
<b>Great Plains Total</b>	<b>5,666</b>	<b>3,568</b>	<b>512</b>	<b>4,509</b>	<b>3,955</b>	<b>507</b>	<b>40,763</b>	<b>41,271</b>	<b>36,917</b>	<b>9,780</b>	<b>25,200</b>	<b>21,050</b>
<b>Intermountain</b>												
Softwoods	68,438	55,212	51,122	66,643	66,354	28,549	84,324	112,873	125,839	71,105	117,657	110,746
Hardwoods	5,915	4,036	4,082	6,709	5,443	2,618	18,364	20,982	29,030	16,403	14,591	11,957
<b>Intermountain Total</b>	<b>74,352</b>	<b>59,249</b>	<b>55,204</b>	<b>73,352</b>	<b>71,797</b>	<b>31,167</b>	<b>102,687</b>	<b>133,854</b>	<b>154,869</b>	<b>87,508</b>	<b>132,248</b>	<b>122,703</b>

**Table 33. (cont.)** Annual mortality of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	Other public					2006	2006	Total private				
	2006	1996	1986	1976	1952	Private corporate	Private non-corporate	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>												
<b>Rocky Mountain Total</b>												
Softwoods	69,593	55,878	51,160	66,773	66,413	28,685	87,707	116,392	127,879	73,617	117,924	110,962
Hardwoods	10,425	6,939	4,556	11,088	9,339	2,990	55,744	58,733	63,908	23,671	39,524	32,791
<b>Rocky Mountain Total</b>	<b>80,018</b>	<b>62,817</b>	<b>55,716</b>	<b>77,861</b>	<b>75,752</b>	<b>247,267</b>	<b>143,451</b>	<b>175,125</b>	<b>191,786</b>	<b>97,288</b>	<b>157,448</b>	<b>143,753</b>
<b>Pacific Coast</b>												
<b>Alaska</b>												
Softwoods	104,820	32,908	25,451	63,781	52,563	11,297	15,937	27,234	38,010	47,049	3,016	1,047
Hardwoods	8,413	6,450	5,742	7,656	7,756	530	10,129	10,659	3,283	4,016	203	103
<b>Alaska Total</b>	<b>113,232</b>	<b>39,358</b>	<b>31,193</b>	<b>71,437</b>	<b>60,319</b>	<b>11,827</b>	<b>26,066</b>	<b>37,893</b>	<b>41,293</b>	<b>51,065</b>	<b>3,219</b>	<b>1,150</b>
<b>Pacific Northwest</b>												
Softwoods	139,848	95,810	113,227	172,200	210,000	134,466	110,080	244,546	212,971	122,616	200,700	335,200
Hardwoods	28,319	23,946	12,559	11,900	13,700	33,858	37,268	71,126	89,332	55,572	53,300	30,700
<b>Pacific Northwest Total</b>	<b>168,168</b>	<b>119,756</b>	<b>125,786</b>	<b>184,100</b>	<b>223,700</b>	<b>168,324</b>	<b>147,348</b>	<b>315,673</b>	<b>302,303</b>	<b>178,188</b>	<b>254,000</b>	<b>365,900</b>
<b>Pacific Southwest</b>												
Softwoods	7,287	6,002	6,395	5,100	16,500	50,328	35,045	85,372	105,258	70,204	51,800	150,800
Hardwoods	4,970	3,381	2,399	870	300	18,387	30,162	48,549	46,208	16,700	3,622	2,400
<b>Pacific Southwest Total</b>	<b>12,257</b>	<b>9,383</b>	<b>8,794</b>	<b>5,970</b>	<b>16,800</b>	<b>68,715</b>	<b>65,206</b>	<b>133,921</b>	<b>151,466</b>	<b>86,904</b>	<b>55,422</b>	<b>153,200</b>
<b>Pacific Coast Total</b>												
Softwoods	251,955	134,721	145,073	241,081	279,063	196,840	161,651	358,491	356,238	239,869	255,516	487,047
Hardwoods	41,702	33,777	20,700	20,426	21,756	54,259	76,890	131,149	138,823	76,288	57,125	33,203
<b>Pacific Coast Total</b>	<b>293,656</b>	<b>168,498</b>	<b>165,773</b>	<b>261,507</b>	<b>300,819</b>	<b>247,267</b>	<b>238,541</b>	<b>489,640</b>	<b>495,061</b>	<b>316,157</b>	<b>312,641</b>	<b>520,250</b>
<b>United States</b>												
Softwoods	531,904	325,794	290,407	380,881	386,131	700,199	1,214,713	1,914,912	1,706,915	1,343,282	1,192,241	1,062,672
Hardwoods	445,202	317,278	208,586	198,989	106,473	525,048	2,026,753	2,551,801	2,134,803	1,510,700	1,313,655	1,045,146
<b>U.S. Total</b>	<b>977,106</b>	<b>643,072</b>	<b>498,993</b>	<b>579,870</b>	<b>492,604</b>	<b>1,225,247</b>	<b>3,241,465</b>	<b>4,466,713</b>	<b>3,841,718</b>	<b>2,853,982</b>	<b>2,505,896</b>	<b>2,107,818</b>

Note: Data may not add to Totals because of rounding.

**Table 34.** Net annual growth of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	All owners					National forest				
	2006	1996	1986	1976	1952	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>										
<b>North</b>										
<b>Northeast</b>										
Softwoods	836,486	646,083	701,741	1,067,271	652,600	15,518	13,839	19,019	18,359	13,282
Hardwoods	2,412,228	2,223,289	2,246,366	2,072,571	1,358,000	82,439	68,469	131,021	116,999	69,443
<b>Northeast Total</b>	<b>3,248,714</b>	<b>2,869,371</b>	<b>2,948,107</b>	<b>3,139,842</b>	<b>2,010,600</b>	<b>97,957</b>	<b>82,308</b>	<b>150,040</b>	<b>135,358</b>	<b>82,725</b>
<b>North Central</b>										
Softwoods	652,224	523,127	586,546	490,986	320,702	122,829	94,231	117,617	97,660	57,215
Hardwoods	2,674,738	2,027,493	1,977,350	1,718,072	1,385,188	151,365	138,894	154,278	158,742	112,026
<b>North Central Total</b>	<b>3,326,961</b>	<b>2,550,620</b>	<b>2,563,896</b>	<b>2,209,058</b>	<b>1,705,890</b>	<b>274,194</b>	<b>233,124</b>	<b>271,895</b>	<b>256,402</b>	<b>169,241</b>
<b>North Total</b>										
Softwoods	1,488,710	1,169,210	1,288,287	1,558,257	973,302	138,347	108,070	136,636	116,019	70,497
Hardwoods	5,086,966	4,250,781	4,223,716	3,790,643	2,743,188	233,804	207,362	285,299	275,741	181,469
<b>North Total</b>	<b>6,575,675</b>	<b>5,419,991</b>	<b>5,512,003</b>	<b>5,348,900</b>	<b>3,716,490</b>	<b>372,151</b>	<b>315,433</b>	<b>421,935</b>	<b>391,760</b>	<b>251,966</b>
<b>South</b>										
<b>Southeast</b>										
Softwoods	3,876,167	2,778,801	2,622,053	3,104,000	1,874,017	57,337	57,179	93,774	137,000	80,313
Hardwoods	2,239,043	1,951,849	2,104,004	2,186,000	1,291,618	127,335	104,629	139,288	141,000	73,208
<b>Southeast Total</b>	<b>6,115,210</b>	<b>4,730,651</b>	<b>4,726,057</b>	<b>5,290,000</b>	<b>3,165,635</b>	<b>184,672</b>	<b>161,808</b>	<b>233,062</b>	<b>278,000</b>	<b>153,521</b>
<b>South Central</b>										
Softwoods	3,756,275	3,110,078	2,876,764	3,210,598	1,767,400	233,012	192,018	230,844	245,340	211,300
Hardwoods	3,400,909	2,871,358	2,382,778	2,822,683	1,749,700	204,767	144,271	134,532	144,064	67,265
<b>South Central Total</b>	<b>7,157,184</b>	<b>5,981,436</b>	<b>5,259,542</b>	<b>6,033,281</b>	<b>3,517,100</b>	<b>437,778</b>	<b>336,289</b>	<b>365,376</b>	<b>389,404</b>	<b>278,565</b>
<b>South Total</b>										
Softwoods	7,632,442	5,888,879	5,498,817	6,314,598	3,641,417	290,348	249,197	324,618	382,340	291,613
Hardwoods	5,639,952	4,823,208	4,486,782	5,008,683	3,041,318	332,102	248,901	273,820	285,064	140,473
<b>South Total</b>	<b>13,272,393</b>	<b>10,712,087</b>	<b>9,985,599</b>	<b>11,323,281</b>	<b>6,682,735</b>	<b>622,450</b>	<b>498,097</b>	<b>598,438</b>	<b>667,404</b>	<b>432,086</b>
<b>Rocky Mountain</b>										
<b>Great Plains</b>										
Softwoods	26,756	50,448	47,412	43,521	22,220	17,379	32,989	31,087	20,993	14,700
Hardwoods	44,868	44,808	38,438	39,818	30,500	848	554	676	200	100
<b>Great Plains Total</b>	<b>71,625</b>	<b>95,256</b>	<b>85,850</b>	<b>83,339</b>	<b>52,720</b>	<b>18,227</b>	<b>33,543</b>	<b>31,763</b>	<b>21,193</b>	<b>14,800</b>
<b>Intermountain</b>										
Softwoods	1,550,420	1,912,245	1,909,449	1,550,496	1,077,700	986,271	1,263,727	1,013,396	754,900	673,400
Hardwoods	138,886	426,175	131,347	99,098	56,800	83,456	56,642	65,498	36,400	31,300
<b>Intermountain Total</b>	<b>1,689,306</b>	<b>2,338,421</b>	<b>2,040,796</b>	<b>1,649,594</b>	<b>1,134,500</b>	<b>1,069,727</b>	<b>1,320,369</b>	<b>1,078,894</b>	<b>791,300</b>	<b>704,700</b>



**Table 34. (cont.)** Net annual growth of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	All owners					National forest				
	2006	1996	1986	1976	1952	2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>										
<b>Rocky Mountain Total</b>										
Softwoods	1,577,176	1,962,694	1,956,861	1,594,017	1,099,920	1,003,651	1,296,716	1,044,483	775,893	688,100
Hardwoods	183,754	470,983	169,785	138,916	87,300	84,304	57,196	66,174	36,600	31,400
<b>Rocky Mountain Total</b>	<b>1,760,930</b>	<b>2,433,676</b>	<b>2,126,646</b>	<b>1,732,933</b>	<b>1,187,220</b>	<b>1,087,954</b>	<b>1,353,912</b>	<b>1,110,657</b>	<b>812,493</b>	<b>719,500</b>
<b>Pacific Coast</b>										
<b>Alaska</b>										
Softwoods	130,164	136,888	102,686	162,499	103,600	53,561	15,378	22,627	15,836	10,367
Hardwoods	117,609	85,888	93,664	6,824	6,725	2,040	768	15	16	16
<b>Alaska Total</b>	<b>247,774</b>	<b>222,776</b>	<b>196,350</b>	<b>169,323</b>	<b>110,325</b>	<b>55,601</b>	<b>16,146</b>	<b>22,642</b>	<b>15,852</b>	<b>10,383</b>
<b>Pacific Northwest</b>										
Softwoods	3,038,551	3,080,632	3,270,724	2,158,700	1,472,500	1,165,531	1,076,000	538,800	506,900	440,900
Hardwoods	301,186	391,648	498,155	400,800	221,500	41,343	67,000	14,700	14,800	13,600
<b>Pacific Northwest Total</b>	<b>3,339,737</b>	<b>3,472,280</b>	<b>3,768,879</b>	<b>2,559,500</b>	<b>1,694,000</b>	<b>1,206,875</b>	<b>1,143,000</b>	<b>553,500</b>	<b>521,700</b>	<b>454,500</b>
<b>Pacific Southwest</b>										
Softwoods	1,374,048	1,155,171	889,365	713,200	444,000	767,426	421,551	363,500	185,600	162,000
Hardwoods	173,807	133,172	156,834	79,137	75,000	44,773	-	16,100	30,000	29,000
<b>Pacific Southwest Total</b>	<b>1,547,856</b>	<b>1,288,343</b>	<b>1,046,199</b>	<b>792,337</b>	<b>519,000</b>	<b>812,199</b>	<b>421,551</b>	<b>379,600</b>	<b>215,600</b>	<b>191,000</b>
<b>Pacific Coast Total</b>										
Softwoods	4,542,764	4,262,775	3,034,399	2,443,100	2,020,100	1,986,518	1,799,222	1,512,929	924,927	613,267
Hardwoods	592,602	748,653	486,761	389,025	303,225	88,157	75,144	67,768	30,815	42,616
<b>Pacific Coast Total</b>	<b>5,135,366</b>	<b>5,011,428</b>	<b>3,521,160</b>	<b>2,832,125</b>	<b>2,323,325</b>	<b>2,074,675</b>	<b>1,874,366</b>	<b>1,580,697</b>	<b>955,742</b>	<b>655,883</b>
<b>United States</b>										
Softwoods	15,241,091	13,006,740	12,501,271	9,609,613	7,734,739	3,418,864	3,430,056	3,270,899	2,467,769	1,663,477
Hardwoods	11,503,274	9,628,936	9,425,003	7,095,418	6,175,031	738,367	674,152	684,083	657,794	395,958
<b>U.S. Total</b>	<b>26,744,366</b>	<b>22,635,676</b>	<b>21,926,274</b>	<b>16,705,031</b>	<b>13,909,770</b>	<b>4,157,231</b>	<b>4,104,208</b>	<b>3,954,982</b>	<b>3,125,563</b>	<b>2,059,435</b>

**Table 34. (cont.)** Net annual growth of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	Other public					2006 Private corporate	2006 Private non- corporate	Total private				
	2006	1996	1986	1976	1952			2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>												
<b>North</b>												
<b>Northeast</b>												
Softwoods	104,611	60,666	53,518	48,791	27,166	251,403	464,954	716,357	571,577	629,204	1,000,121	612,152
Hardwoods	337,709	194,964	265,069	237,900	142,264	499,432	1,492,647	1,992,079	1,959,856	1,850,276	1,717,672	1,146,293
<b>Northeast Total</b>	<b>442,320</b>	<b>255,631</b>	<b>318,587</b>	<b>286,691</b>	<b>169,430</b>	<b>750,835</b>	<b>1,957,601</b>	<b>2,708,436</b>	<b>2,531,432</b>	<b>2,479,480</b>	<b>2,717,793</b>	<b>1,758,445</b>
<b>North Central</b>												
Softwoods	177,872	140,565	168,327	142,017	92,256	83,690	267,832	351,523	288,332	300,602	251,309	171,231
Hardwoods	438,911	302,427	340,975	304,325	213,120	199,379	1,885,082	2,084,461	1,586,172	1,482,097	1,255,005	1,060,042
<b>North Central Total</b>	<b>616,784</b>	<b>442,991</b>	<b>509,302</b>	<b>446,342</b>	<b>305,376</b>	<b>283,070</b>	<b>2,152,914</b>	<b>2,435,984</b>	<b>1,874,504</b>	<b>1,782,699</b>	<b>1,506,314</b>	<b>1,231,273</b>
<b>North Total</b>												
Softwoods	282,483	201,231	221,845	190,808	119,422	335,093	732,786	1,067,879	859,909	929,806	1,251,430	783,383
Hardwoods	776,621	497,391	606,044	542,225	355,384	698,812	3,377,729	4,076,540	3,546,028	3,332,373	2,972,677	2,206,335
<b>North Total</b>	<b>1,059,104</b>	<b>698,622</b>	<b>827,889</b>	<b>733,033</b>	<b>474,806</b>	<b>1,033,905</b>	<b>4,110,515</b>	<b>5,144,420</b>	<b>4,405,937</b>	<b>4,262,179</b>	<b>4,224,107</b>	<b>2,989,718</b>
<b>South</b>												
<b>Southeast</b>												
Softwoods	224,853	144,516	147,893	149,000	70,017	1,606,579	1,987,397	3,593,977	2,577,107	2,380,386	2,818,000	1,723,687
Hardwoods	142,393	97,390	85,918	71,000	27,169	456,932	1,512,383	1,969,315	1,749,830	1,878,798	1,974,000	1,191,241
<b>Southeast Total</b>	<b>367,246</b>	<b>241,906</b>	<b>233,811</b>	<b>220,000</b>	<b>97,186</b>	<b>2,063,511</b>	<b>3,499,780</b>	<b>5,563,291</b>	<b>4,326,937</b>	<b>4,259,184</b>	<b>4,792,000</b>	<b>2,914,928</b>
<b>South Central</b>												
Softwoods	92,511	65,607	54,534	71,156	56,388	1,684,526	1,746,226	3,430,752	2,852,453	2,591,386	2,894,102	1,499,712
Hardwoods	197,211	131,442	100,875	108,706	55,182	557,063	2,441,868	2,998,931	2,595,645	2,147,371	2,569,913	1,627,253
<b>South Central Total</b>	<b>289,723</b>	<b>197,049</b>	<b>155,409</b>	<b>179,862</b>	<b>111,570</b>	<b>2,241,589</b>	<b>4,188,094</b>	<b>6,429,683</b>	<b>5,448,098</b>	<b>4,738,757</b>	<b>5,464,015</b>	<b>3,126,965</b>
<b>South Total</b>												
Softwoods	317,365	210,122	202,427	220,156	126,405	3,291,105	3,733,624	7,024,729	5,429,560	4,971,772	5,712,102	3,223,399
Hardwoods	339,604	228,833	186,793	179,706	82,351	1,013,995	3,954,251	4,968,245	4,345,475	4,026,169	4,543,913	2,818,494
<b>South Total</b>	<b>656,969</b>	<b>438,955</b>	<b>389,220</b>	<b>399,862</b>	<b>208,756</b>	<b>4,305,100</b>	<b>7,687,874</b>	<b>11,992,974</b>	<b>9,775,034</b>	<b>8,997,941</b>	<b>10,256,015</b>	<b>6,041,893</b>
<b>Rocky Mountain</b>												
<b>Great Plains</b>												
Softwoods	1,142	835	3,105	2,977	1,469	440	7,795	8,235	7,872	11,318	9,457	6,051
Hardwoods	5,158	3,300	3,266	3,552	2,615	537	38,326	38,863	41,133	34,618	35,590	27,785
<b>Great Plains Total</b>	<b>6,300</b>	<b>4,135</b>	<b>6,371</b>	<b>6,529</b>	<b>4,084</b>	<b>976</b>	<b>46,121</b>	<b>47,097</b>	<b>49,005</b>	<b>45,936</b>	<b>45,047</b>	<b>33,836</b>
<b>Intermountain</b>												
Softwoods	190,160	167,534	216,692	158,464	117,646	135,381	238,609	373,989	512,886	429,030	378,636	286,654
Hardwoods	13,373	60,282	24,216	6,945	5,462	6,145	35,912	42,057	223,523	50,489	26,655	20,038
<b>Intermountain Total</b>	<b>203,533</b>	<b>227,816</b>	<b>240,908</b>	<b>165,409</b>	<b>123,108</b>	<b>141,526</b>	<b>274,520</b>	<b>416,046</b>	<b>736,409</b>	<b>479,519</b>	<b>405,291</b>	<b>306,692</b>

**Table 34. (cont.)** Net annual growth of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, 1976, and 1952

Region, subregion, and species group	Other public					2006 Private corporate	2006 Private non-corporate	Total private				
	2006	1996	1986	1976	1952			2006	1996	1986	1976	1952
<i>Thousand cubic feet</i>												
<b>Rocky Mountain Total</b>												
Softwoods	191,301	168,369	219,797	161,441	119,115	135,820	246,404	382,224	520,758	440,348	388,093	292,705
Hardwoods	18,531	63,582	27,482	10,497	8,077	6,682	74,237	80,919	264,656	85,107	62,245	47,823
<b>Rocky Mountain Total</b>	<b>209,833</b>	<b>231,951</b>	<b>247,279</b>	<b>171,938</b>	<b>127,192</b>	<b>142,502</b>	<b>320,641</b>	<b>463,144</b>	<b>785,413</b>	<b>525,455</b>	<b>450,338</b>	<b>340,528</b>
<b>Pacific Coast</b>												
<b>Alaska</b>												
Softwoods	52,431	40,496	66,723	136,877	92,588	14,484	9,688	24,172	11,007	20,585	2,995	645
Hardwoods	106,979	61,201	55,309	6,609	6,609	4,919	3,671	8,591	20,628	37,587	200	100
<b>Alaska Total</b>	<b>159,410</b>	<b>101,696</b>	<b>122,032</b>	<b>143,486</b>	<b>99,197</b>	<b>19,403</b>	<b>13,359</b>	<b>32,762</b>	<b>31,635</b>	<b>58,172</b>	<b>3,195</b>	<b>745</b>
<b>Pacific Northwest</b>												
Softwoods	647,191	557,893	634,145	467,000	258,900	777,888	447,941	1,225,829	1,425,143	1,560,579	1,152,900	772,700
Hardwoods	72,703	81,629	87,510	93,000	33,500	88,780	98,359	187,139	243,057	343,645	293,100	174,400
<b>Pacific Northwest Total</b>	<b>719,894</b>	<b>639,522</b>	<b>721,655</b>	<b>560,000</b>	<b>292,400</b>	<b>866,668</b>	<b>546,300</b>	<b>1,412,968</b>	<b>1,668,200</b>	<b>1,904,224</b>	<b>1,446,000</b>	<b>947,100</b>
<b>Pacific Southwest</b>												
Softwoods	52,441	28,872	25,198	13,900	14,000	307,257	246,925	554,182	510,059	442,616	335,800	268,000
Hardwoods	10,717	5,248	15,865	7,735	6,000	47,359	70,957	118,317	123,802	140,969	55,302	40,000
<b>Pacific Southwest Total</b>	<b>63,158</b>	<b>34,121</b>	<b>41,063</b>	<b>21,635</b>	<b>20,000</b>	<b>354,616</b>	<b>317,882</b>	<b>672,498</b>	<b>633,861</b>	<b>583,585</b>	<b>391,102</b>	<b>308,000</b>
<b>Pacific Coast Total</b>												
Softwoods	752,063	627,261	726,066	617,777	365,488	1,099,628	704,554	1,804,182	1,946,209	2,023,780	1,491,695	1,041,345
Hardwoods	190,399	148,078	158,684	107,344	46,109	141,059	172,988	314,046	387,486	522,201	348,602	214,500
<b>Pacific Coast Total</b>	<b>942,463</b>	<b>775,339</b>	<b>884,750</b>	<b>725,121</b>	<b>411,597</b>	<b>1,240,687</b>	<b>877,541</b>	<b>2,118,229</b>	<b>2,333,695</b>	<b>2,545,981</b>	<b>1,840,297</b>	<b>1,255,845</b>
<b>United States</b>												
Softwoods	1,543,213	1,206,983	1,370,135	1,190,182	730,430	4,861,647	5,417,367	10,279,014	8,756,435	8,365,706	8,843,320	5,340,832
Hardwoods	1,325,156	937,884	979,003	839,772	491,921	1,860,547	7,579,204	9,439,752	8,543,645	7,965,850	7,927,437	5,287,152
<b>U.S. Total</b>	<b>2,868,368</b>	<b>2,144,867</b>	<b>2,349,138</b>	<b>2,029,954</b>	<b>1,222,351</b>	<b>6,722,194</b>	<b>12,996,572</b>	<b>19,718,766</b>	<b>17,300,080</b>	<b>16,331,556</b>	<b>16,770,757</b>	<b>10,627,984</b>

Note: Data may not add to Totals because of rounding.

**Table 35.** Annual removals of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, and 1976

Region, subregion, and species group	All owners				National forest	Other public	Private
	2006	1996	1986	1976	2006	2006	2006
<i>Thousand cubic feet</i>							
<b>North</b>							
<b>Northeast</b>							
Softwoods	353,460	413,718	520,797	498,576	1,172	13,071	339,217
Hardwoods	815,193	860,999	781,162	803,694	6,775	37,276	771,142
<b>Northeast Total</b>	<b>1,168,653</b>	<b>1,274,717</b>	<b>1,301,959</b>	<b>1,302,270</b>	<b>7,947</b>	<b>50,347</b>	<b>1,110,358</b>
<b>North Central</b>							
Softwoods	323,609	254,630	204,719	193,534	36,568	86,817	200,224
Hardwoods	1,327,845	1,243,071	1,201,539	999,059	47,902	263,733	1,016,210
<b>North Central Total</b>	<b>1,651,454</b>	<b>1,497,701</b>	<b>1,406,258</b>	<b>1,192,593</b>	<b>84,470</b>	<b>350,550</b>	<b>1,216,434</b>
<b>North Total</b>							
Softwoods	677,069	668,348	725,516	692,110	37,740	99,888	539,441
Hardwoods	2,143,038	2,104,070	1,982,701	1,802,753	54,677	301,008	1,787,352
<b>North Total</b>	<b>2,820,106</b>	<b>2,772,418</b>	<b>2,708,217</b>	<b>2,494,863</b>	<b>92,417</b>	<b>400,897</b>	<b>2,326,793</b>
<b>South</b>							
<b>Southeast</b>							
Softwoods	2,960,536	2,947,436	2,411,562	2,028,804	11,611	97,003	2,851,921
Hardwoods	1,345,288	1,511,833	1,260,821	1,002,521	4,676	24,381	1,316,231
<b>Southeast Total</b>	<b>4,305,824</b>	<b>4,459,269</b>	<b>3,672,383</b>	<b>3,031,325</b>	<b>16,287</b>	<b>121,385</b>	<b>4,168,152</b>
<b>South Central</b>							
Softwoods	3,356,641	3,530,826	2,905,505	2,407,658	30,480	52,363	3,273,797
Hardwoods	2,033,882	2,194,685	1,625,779	1,239,717	13,646	44,714	1,975,521
<b>South Central Total</b>	<b>5,390,523</b>	<b>5,725,511</b>	<b>4,531,284</b>	<b>3,647,375</b>	<b>44,127</b>	<b>97,077</b>	<b>5,249,319</b>
<b>South Total</b>							
Softwoods	6,317,177	6,478,262	5,317,067	4,436,462	42,092	149,367	6,125,719
Hardwoods	3,379,170	3,706,518	2,886,600	2,242,238	18,322	69,096	3,291,752
<b>South Total</b>	<b>9,696,347</b>	<b>10,184,780</b>	<b>8,203,667</b>	<b>6,678,700</b>	<b>60,414</b>	<b>218,462</b>	<b>9,417,471</b>
<b>Rocky Mountain</b>							
<b>Great Plains</b>							
Softwoods	24,802	20,181	25,797	21,322	15,088	390	9,324
Hardwoods	16,362	15,113	16,260	20,600	9	461	15,892
<b>Great Plains Total</b>	<b>41,164</b>	<b>35,294</b>	<b>42,057</b>	<b>41,922</b>	<b>15,098</b>	<b>851</b>	<b>25,215</b>
<b>Intermountain</b>							
Softwoods	496,044	480,943	817,031	821,687	60,633	62,895	372,517
Hardwoods	5,548	15,757	11,635	3,054	995	39	4,515
<b>Intermountain Total</b>	<b>501,593</b>	<b>496,700</b>	<b>828,666</b>	<b>824,741</b>	<b>61,628</b>	<b>62,933</b>	<b>377,032</b>

**Table 35. (cont.)** Annual removals of growing stock on timber land in the United States by ownership group, region, subregion, and species group, 2006, 1996, 1986, and 1976

Region, subregion, and species group	All owners				National forest	Other public	Private
	2006	1996	1986	1976	2006	2006	2006
<i>Thousand cubic feet</i>							
<b>Rocky Mountain Total</b>							
Softwoods	520,847	501,124	842,828	843,009	75,721	63,285	381,841
Hardwoods	21,910	30,870	27,895	23,654	1,004	499	20,406
<b>Rocky Mountain Total</b>	<b>542,757</b>	<b>531,994</b>	<b>870,723</b>	<b>866,663</b>	<b>76,726</b>	<b>63,784</b>	<b>402,247</b>
<b>Pacific Coast</b>							
<b>Alaska</b>							
Softwoods	59,303	177,298	117,881	107,437	8,140	14,770	36,392
Hardwoods	6,841	5,229	5,211	3,164	0	1,389	5,453
<b>Alaska Total</b>	<b>66,144</b>	<b>182,527</b>	<b>123,092</b>	<b>110,601</b>	<b>8,140</b>	<b>16,159</b>	<b>41,845</b>
<b>Pacific Northwest</b>							
Softwoods	1,818,155	1,621,480	3,121,025	3,101,707	67,918	221,849	1,528,388
Hardwoods	120,742	99,492	98,375	106,286	1,042	13,292	106,407
<b>Pacific Northwest Total</b>	<b>1,938,897</b>	<b>1,720,972</b>	<b>3,219,400</b>	<b>3,207,993</b>	<b>68,960</b>	<b>235,142</b>	<b>1,634,795</b>
<b>Pacific Southwest</b>							
Softwoods	466,293	618,021	818,897	818,402	71,324	5,299	389,670
Hardwoods	2,937	10,036	11,579	16,805	50	0	2,887
<b>Pacific Southwest Total</b>	<b>469,231</b>	<b>628,057</b>	<b>830,476</b>	<b>835,207</b>	<b>71,374</b>	<b>5,299</b>	<b>392,557</b>
<b>Pacific Coast Total</b>							
Softwoods	2,343,751	2,416,799	4,057,803	4,027,546	147,383	241,919	1,954,450
Hardwoods	130,520	114,757	115,165	126,255	1,092	14,681	114,747
<b>Pacific Coast Total</b>	<b>2,474,272</b>	<b>2,531,552</b>	<b>4,172,968</b>	<b>4,153,801</b>	<b>148,475</b>	<b>256,600</b>	<b>2,069,197</b>
<b>United States</b>							
Softwoods	9,858,844	10,064,531	10,943,214	9,999,127	302,935	554,459	9,001,450
Hardwoods	5,674,638	5,956,213	5,012,361	4,194,900	75,096	385,285	5,214,258
<b>U.S. Total</b>	<b>15,533,482</b>	<b>16,020,744</b>	<b>15,955,575</b>	<b>14,194,027</b>	<b>378,031</b>	<b>939,743</b>	<b>14,215,707</b>

Note: Data may not add to Totals because of rounding.

**Table 36.** Net annual growth, removals, and mortality of growing stock on timber land in the United States by species group, region, subregion, and State, 2006

Region, subregion, and State	All species			Softwoods			Hardwoods		
	Net growth	Removals	Mortality	Net growth	Removals	Mortality	Net growth	Removals	Mortality
<i>Thousand cubic feet</i>									
<b>North</b>									
<b>Northeast</b>									
Connecticut	62,372	6,000	16,529	10,931	795	1,147	51,441	5,205	15,383
Delaware	16,168	7,560	7,868	4,202	5,874	2,087	11,966	1,686	5,781
Maine	580,062	490,003	264,522	313,503	209,374	171,721	266,559	280,629	92,801
Maryland	107,091	38,091	36,964	23,675	16,752	6,265	83,416	21,338	30,700
Massachusetts	130,269	9,524	29,882	57,355	4,834	7,953	72,914	4,690	21,929
New Hampshire	184,864	39,591	57,754	80,082	15,570	28,150	104,782	24,021	29,605
New Jersey	55,431	3,730	16,475	14,614	557	4,414	40,817	3,173	12,061
New York	700,387	158,454	130,830	168,482	60,224	28,414	531,904	98,230	102,416
Pennsylvania	773,312	211,921	156,236	78,117	18,055	12,544	695,195	193,867	143,692
Rhode Island	12,063	1,465	3,246	2,824	511	511	9,239	954	2,735
Vermont	190,367	43,942	48,025	69,405	17,415	15,247	120,962	26,527	32,778
West Virginia	436,328	158,373	166,948	13,295	3,499	21,194	423,034	154,874	145,754
<b>Northeast Total</b>	<b>3,248,714</b>	<b>1,168,653</b>	<b>935,280</b>	<b>836,486</b>	<b>353,460</b>	<b>299,645</b>	<b>2,412,228</b>	<b>815,193</b>	<b>635,634</b>
<b>North Central</b>									
Illinois	327,042	77,655	86,618	7,812	204	1,762	319,230	77,452	84,855
Indiana	356,241	101,337	66,446	8,902	894	3,118	347,339	100,443	63,328
Iowa	58,895	22,285	35,205	638	102	182	58,256	22,183	35,023
Michigan	761,216	364,343	282,430	242,765	100,040	104,516	518,451	264,303	177,914
Minnesota	469,632	372,294	237,615	153,465	101,532	81,958	316,167	270,762	155,657
Missouri	438,528	187,226	134,842	36,574	10,183	5,003	401,954	177,043	129,838
Ohio	311,430	72,430	62,531	15,268	6,139	4,139	296,162	66,292	58,392
Wisconsin	603,978	453,883	192,803	186,800	104,516	46,384	417,179	349,368	146,419
<b>North Central Total</b>	<b>3,326,961</b>	<b>1,651,454</b>	<b>1,098,490</b>	<b>652,224</b>	<b>323,609</b>	<b>247,063</b>	<b>2,674,738</b>	<b>1,327,845</b>	<b>851,427</b>
<b>North Total</b>	<b>6,575,675</b>	<b>2,820,106</b>	<b>2,033,769</b>	<b>1,488,710</b>	<b>677,069</b>	<b>546,708</b>	<b>5,086,966</b>	<b>2,143,038</b>	<b>1,487,061</b>
<b>South</b>									
<b>Southeast</b>									
Florida	735,020	574,525	159,485	636,984	496,781	81,249	98,035	77,744	78,236
Georgia	1,927,557	1,340,534	291,872	1,378,561	1,043,796	153,149	548,997	296,738	138,723
North Carolina	1,458,552	1,074,973	349,525	727,773	635,597	177,634	730,779	439,376	171,891
South Carolina	1,037,302	671,532	165,778	725,838	498,269	102,620	311,464	173,263	63,159
Virginia	956,779	644,260	225,306	407,011	286,093	96,564	549,768	358,167	128,741
<b>Southeast Total</b>	<b>6,115,210</b>	<b>4,305,824</b>	<b>1,191,967</b>	<b>3,876,167</b>	<b>2,960,536</b>	<b>611,216</b>	<b>2,239,043</b>	<b>1,345,288</b>	<b>580,751</b>

**Table 36. (cont.)** Net annual growth, removals, and mortality of growing stock on timber land in the United States by species group, region, subregion, and State, 2006

Region, subregion, and State	All species			Softwoods			Hardwoods		
	Net growth	Removals	Mortality	Net growth	Removals	Mortality	Net growth	Removals	Mortality
<i>Thousand cubic feet</i>									
<b>South Central</b>									
Alabama	1,512,454	1,157,330	348,636	995,095	808,774	204,423	517,359	348,556	144,213
Arkansas	1,027,843	810,279	237,116	551,020	505,461	85,549	476,823	304,819	151,567
Kentucky	469,758	296,298	182,555	27,445	22,219	27,055	442,313	274,079	155,499
Louisiana	832,655	857,907	186,813	560,159	599,145	56,024	272,496	258,762	130,789
Mississippi	1,247,232	1,093,943	273,636	793,560	742,884	127,095	453,671	351,059	146,542
Oklahoma	243,259	138,533	15,066	117,178	92,173	3,249	126,081	46,360	11,817
Tennessee	801,166	377,516	335,347	35,427	92,118	190,819	765,739	285,398	144,527
Texas	1,022,817	658,718	88,417	676,390	493,868	60,138	346,427	164,849	28,279
<b>South Central Total</b>	<b>7,157,184</b>	<b>5,390,523</b>	<b>1,667,585</b>	<b>3,756,275</b>	<b>3,356,641</b>	<b>754,352</b>	<b>3,400,909</b>	<b>2,033,882</b>	<b>913,233</b>
<b>South Total</b>	<b>13,272,393</b>	<b>9,696,347</b>	<b>2,859,552</b>	<b>7,632,442</b>	<b>6,317,177</b>	<b>1,365,568</b>	<b>5,639,952</b>	<b>3,379,170</b>	<b>1,493,984</b>
<b>Rocky Mountain</b>									
<b>Great Plains</b>									
Kansas	22,848	7,599	21,791	1,332	68	397	21,516	7,531	21,395
Nebraska	17,894	7,391	14,923	5,528	2,114	2,060	12,366	5,277	12,863
North Dakota	7,068	2,929	5,583	10	1	2	7,058	2,928	5,581
South Dakota	23,815	23,245	11,910	19,887	22,620	8,773	3,928	625	3,137
<b>Great Plains Total</b>	<b>71,625</b>	<b>41,164</b>	<b>54,208</b>	<b>26,756</b>	<b>24,802</b>	<b>11,232</b>	<b>44,868</b>	<b>16,362</b>	<b>42,976</b>
<b>Intermountain</b>									
Arizona	50,636	10,369	63,067	46,085	10,369	58,214	4,551	0	4,854
Colorado	227,328	12,505	249,230	174,560	9,414	205,563	52,768	3,091	43,667
Idaho	611,391	245,740	382,919	597,709	245,735	374,967	13,682	4	7,953
Montana	484,306	197,903	389,727	469,731	197,889	386,900	14,575	14	2,827
Nevada	356	964	7,242	-781	964	6,755	1,137	0	487
New Mexico	140,494	13,623	21,614	128,754	12,586	17,207	11,740	1,037	4,407
Utah	47,287	5,418	109,051	16,712	4,063	96,194	30,575	1,355	12,857
Wyoming	127,508	15,072	86,988	117,650	15,024	80,968	9,858	48	6,020
<b>Intermountain Total</b>	<b>1,689,306</b>	<b>501,593</b>	<b>1,309,838</b>	<b>1,550,420</b>	<b>496,044</b>	<b>1,226,767</b>	<b>138,886</b>	<b>5,548</b>	<b>83,071</b>
<b>Rocky Mountain Total</b>	<b>1,760,930</b>	<b>542,757</b>	<b>1,364,046</b>	<b>1,577,176</b>	<b>520,847</b>	<b>1,237,999</b>	<b>183,754</b>	<b>21,910</b>	<b>126,047</b>
<b>Pacific Coast</b>									
<b>Alaska</b>									
Alaska	247,768	66,144	256,302	130,161	59,303	236,182	117,607	6,841	20,120
<b>Alaska Total</b>	<b>247,768</b>	<b>66,144</b>	<b>256,302</b>	<b>130,161</b>	<b>59,303</b>	<b>236,182</b>	<b>117,607</b>	<b>6,841</b>	<b>20,120</b>

Note: Data may not add to Totals because of rounding.

**Table 36. (cont.)** Net annual growth, removals, and mortality of growing stock on timber land in the United States by species group, region, subregion, and State, 2006

Region, subregion, and State	All species			Softwoods			Hardwoods		
	Net growth	Removals	Mortality	Net growth	Removals	Mortality	Net growth	Removals	Mortality
<i>Thousand cubic feet</i>									
<b>Pacific Northwest</b>									
Oregon	1,701,589	1,039,850	516,297	1,538,297	974,925	457,116	163,292	64,925	59,181
Washington	1,638,148	899,047	433,472	1,500,255	843,231	378,681	137,894	55,817	54,791
<b>Pacific Northwest Total</b>	<b>3,339,737</b>	<b>1,938,897</b>	<b>949,769</b>	<b>3,038,551</b>	<b>1,818,155</b>	<b>835,797</b>	<b>301,186</b>	<b>120,742</b>	<b>113,972</b>
<b>Pacific Southwest</b>									
California	1,546,868	469,231	361,949	1,374,048	466,293	288,358	172,819	2,937	73,591
Hawaii	988	0	1,088	0	0	0	988	0	1,088
<b>Pacific Southwest Total</b>	<b>1,547,856</b>	<b>469,231</b>	<b>363,037</b>	<b>1,374,048</b>	<b>466,293</b>	<b>288,358</b>	<b>173,807</b>	<b>2,937</b>	<b>74,679</b>
<b>Pacific Coast Total</b>	<b>5,135,361</b>	<b>2,474,272</b>	<b>1,569,108</b>	<b>4,542,761</b>	<b>2,343,751</b>	<b>1,360,338</b>	<b>592,600</b>	<b>130,520</b>	<b>208,771</b>
<b>U.S. Total</b>	<b>26,744,360</b>	<b>15,533,482</b>	<b>7,826,475</b>	<b>15,241,088</b>	<b>9,858,844</b>	<b>4,510,613</b>	<b>11,503,271</b>	<b>5,674,638</b>	<b>3,315,863</b>



**Table 37.** Net all live biomass on timber land in the East and West regions by rural-urban continuum class and forest-type group, 2007

Region and forest-type group	Predominant county population continuum class					
	Total	Major metro	Intermediate-small metro	Large town	Small town	Rural
<i>Million dry tons</i>						
<b>East</b>						
White-red-jack pine	521	107	104	31	184	95
Spruce-fir	414	25	29	39	241	79
Longleaf-slash pine	426	90	128	1	170	36
Loblolly-shortleaf pine	2,204	506	399	74	831	394
Oak-pine	1,089	301	204	31	368	185
Oak-hickory	6,329	1,686	1,214	129	2,166	1,133
Oak-gum-cypress	1,172	262	269	35	461	146
Elm-ash-cottonwood	728	207	149	35	248	89
Maple-beech-birch	2,645	437	498	189	1,067	454
Aspen-birch	485	61	31	35	235	122
Other forest types	81	29	18	3	22	9
Nonstocked	5	1	1	0	2	1
<b>East Total</b>	<b>16,098</b>	<b>3,713</b>	<b>3,044</b>	<b>602</b>	<b>5,996</b>	<b>2,743</b>
<b>West</b>						
Douglas-fir	2,428	616	743	212	604	254
Ponderosa pine	687	46	171	42	288	139
Western white pine	4	0	1	0	2	1
Fir-spruce	1,285	132	204	101	573	275
Hemlock-Sitka spruce	1,121	136	207	76	348	353
Larch	85	0	8	15	41	21
Lodgepole pine	471	32	39	52	216	131
Redwood	77	31	28	16	1	0
Other softwoods	595	82	162	6	210	134
Pinyon-juniper	22	4	1	2	9	6
Western hardwoods	1,189	174	347	134	314	219
Nonstocked	10	1	2	1	4	2
<b>West Total</b>	<b>7,973</b>	<b>1,256</b>	<b>1,915</b>	<b>656</b>	<b>2,610</b>	<b>1,537</b>
<b>U.S. Total</b>	<b>24,072</b>	<b>4,969</b>	<b>4,959</b>	<b>1,259</b>	<b>8,606</b>	<b>4,279</b>

**Note:** Data may not add to Totals because of rounding.

**Table 38a.** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 2007

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>North</b>							
<b>Northeast</b>							
Connecticut	98	98	69	3	18	7	0
Delaware	22	21	15	1	4	2	0
Maine	654	650	381	24	92	153	4
Maryland	151	150	108	5	26	11	1
Massachusetts	174	174	124	6	30	13	0
New Hampshire	253	252	171	9	43	29	1
New Jersey	90	89	62	3	15	9	2
New York	755	753	513	27	133	81	2
Pennsylvania	862	861	604	30	159	68	1
Rhode Island	19	19	13	1	4	2	0
Vermont	314	311	215	11	54	31	3
West Virginia	688	683	486	23	125	48	6
<b>Northeast Total</b>	<b>4,082</b>	<b>4,060</b>	<b>2,761</b>	<b>143</b>	<b>703</b>	<b>454</b>	<b>21</b>
<b>North Central</b>							
Illinois	210	210	151	7	36	16	0
Indiana	243	242	175	8	42	17	0
Iowa	112	112	79	4	20	9	0
Michigan	799	794	523	30	134	108	5
Minnesota	450	448	271	17	70	91	2
Missouri	592	591	397	20	105	70	0
Ohio	365	365	256	13	65	31	0
Wisconsin	606	604	395	21	104	83	2
<b>North Central Total</b>	<b>3,376</b>	<b>3,366</b>	<b>2,247</b>	<b>119</b>	<b>577</b>	<b>424</b>	<b>9</b>
<b>North Total</b>	<b>7,457</b>	<b>7,427</b>	<b>5,007</b>	<b>262</b>	<b>1,279</b>	<b>878</b>	<b>31</b>
<b>South</b>							
<b>Southeast</b>							
Florida	505	505	348	21	74	62	0
Georgia	975	975	667	35	153	120	0
North Carolina	896	896	621	31	145	99	0
South Carolina	551	551	377	20	86	69	0
Virginia	817	817	568	28	140	81	0
<b>Southeast Total</b>	<b>3,745</b>	<b>3,745</b>	<b>2,580</b>	<b>135</b>	<b>598</b>	<b>431</b>	<b>0</b>

**Table 38a. (cont.)** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 2007

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>South Central</b>							
Alabama	870	870	587	30	138	115	0
Arkansas	757	757	524	26	124	84	0
Kentucky	580	580	405	20	104	51	0
Louisiana	570	570	404	21	87	58	0
Mississippi	786	786	539	27	122	98	0
Oklahoma	169	168	99	6	27	36	1
Tennessee	739	739	520	26	132	61	0
Texas	457	457	317	15	70	55	0
<b>South Central Total</b>	<b>4,928</b>	<b>4,927</b>	<b>3,396</b>	<b>171</b>	<b>803</b>	<b>557</b>	<b>1</b>
<b>South Total</b>	<b>8,673</b>	<b>8,672</b>	<b>5,976</b>	<b>306</b>	<b>1,401</b>	<b>988</b>	<b>1</b>
<b>Rocky Mountain</b>							
<b>Great Plains</b>							
Kansas	71	71	51	3	12	5	0
Nebraska	38	38	28	2	6	2	0
North Dakota	16	16	10	1	3	2	0
South Dakota	32	32	23	1	5	3	0
<b>Great Plains Total</b>	<b>157</b>	<b>157</b>	<b>112</b>	<b>6</b>	<b>26</b>	<b>13</b>	<b>0</b>
<b>Intermountain</b>							
Arizona	139	129	98	5	17	8	11
Colorado	525	485	356	20	69	41	41
Idaho	773	681	528	29	87	38	98
Montana	821	739	546	33	93	67	95
Nevada	16	15	11	1	2	2	1
New Mexico	164	152	107	6	20	19	12
Utah	159	139	99	6	20	15	21
Wyoming	259	213	157	9	28	18	51
<b>Intermountain Total</b>	<b>2,857</b>	<b>2,552</b>	<b>1,902</b>	<b>108</b>	<b>336</b>	<b>207</b>	<b>331</b>
<b>Rocky Mountain Total</b>	<b>3,014</b>	<b>2,710</b>	<b>2,014</b>	<b>114</b>	<b>362</b>	<b>220</b>	<b>331</b>
<b>Pacific Coast</b>							
<b>Alaska</b>							
Alaska	771	757	568	22	66	101	14
<b>Alaska Total</b>	<b>771</b>	<b>757</b>	<b>568</b>	<b>22</b>	<b>66</b>	<b>101</b>	<b>14</b>

**Table 38a. (cont.)** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 2007

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>Pacific Northwest</b>							
Oregon	1,730	1,730	1,377	63	236	54	0
Washington	1,392	1,392	1,103	57	185	47	0
<b>Pacific Northwest Total</b>	<b>3,122</b>	<b>3,122</b>	<b>2,480</b>	<b>119</b>	<b>421</b>	<b>101</b>	<b>0</b>
<b>Pacific Southwest</b>							
California	1,381	1,381	1,080	53	195	53	0
Hawaii	4	4	4	0	0	0	0
<b>Pacific Southwest Total</b>	<b>1,385</b>	<b>1,385</b>	<b>1,084</b>	<b>53</b>	<b>195</b>	<b>53</b>	<b>0</b>
<b>Pacific Coast Total</b>	<b>5,277</b>	<b>5,264</b>	<b>4,132</b>	<b>194</b>	<b>681</b>	<b>256</b>	<b>14</b>
<b>U.S. Total</b>	<b>24,421</b>	<b>24,072</b>	<b>17,130</b>	<b>877</b>	<b>3,723</b>	<b>2,342</b>	<b>376</b>

**Note:** Data may not add to Totals because of rounding.

**Table 38b.** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 1997

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>North</b>							
<b>Northeast</b>							
Connecticut	71	70	43	2	12	12	1
Delaware	17	17	11	1	3	2	0
Maine	690	686	404	22	119	141	4
Maryland	129	128	87	5	23	13	1
Massachusetts	112	111	70	4	20	18	1
New Hampshire	259	258	170	9	48	31	1
New Jersey	70	69	41	2	12	14	1
New York	647	645	426	23	106	91	2
Pennsylvania	748	745	524	28	119	74	3
Rhode Island	11	11	7	0	2	2	0
Vermont	249	247	165	9	46	27	2
West Virginia	635	634	417	22	111	84	1
<b>Northeast Total</b>	<b>3,635</b>	<b>3,618</b>	<b>2,363</b>	<b>127</b>	<b>620</b>	<b>508</b>	<b>17</b>
<b>North Central</b>							
Illinois	146	145	99	5	25	16	1
Indiana	188	188	133	7	34	14	0
Iowa	68	67	46	3	12	7	1
Michigan	719	716	467	26	122	102	3
Minnesota	421	418	262	14	66	75	3
Missouri	432	431	273	15	78	65	1
Ohio	426	425	286	16	80	44	1
Wisconsin	510	503	337	19	88	59	7
<b>Northeast Total</b>	<b>2,913</b>	<b>2,896</b>	<b>1,902</b>	<b>105</b>	<b>505</b>	<b>384</b>	<b>17</b>
<b>North Total</b>	<b>6,548</b>	<b>6,514</b>	<b>4,265</b>	<b>232</b>	<b>1,125</b>	<b>892</b>	<b>34</b>
<b>South</b>							
<b>Southeast</b>							
Florida	472	472	316	17	76	63	0
Georgia	962	962	652	35	154	121	0
North Carolina	969	968	672	36	157	103	1
South Carolina	490	490	336	18	76	59	0
Virginia	857	856	587	32	151	87	1
<b>Southeast Total</b>	<b>3,749</b>	<b>3,747</b>	<b>2,563</b>	<b>138</b>	<b>614</b>	<b>432</b>	<b>2</b>

**Table 38b. (cont.)** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 1997

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>South Central</b>							
Alabama	719	718	453	24	107	134	1
Arkansas	702	699	457	24	116	102	3
Kentucky	522	520	362	19	78	62	2
Louisiana	545	545	372	19	89	64	0
Mississippi	654	653	425	22	107	99	1
Oklahoma	168	168	98	5	28	37	0
Tennessee	566	564	369	19	96	79	2
Texas	392	391	260	14	61	56	1
<b>South Central Total</b>	<b>4,267</b>	<b>4,258</b>	<b>2,796</b>	<b>146</b>	<b>682</b>	<b>633</b>	<b>9</b>
<b>South Total</b>	<b>8,016</b>	<b>8,005</b>	<b>5,359</b>	<b>284</b>	<b>1,297</b>	<b>1,065</b>	<b>11</b>
<b>Rocky Mountain</b>							
<b>Great Plains</b>							
Kansas	59	58	41	2	11	4	1
Nebraska	34	34	25	1	5	2	0
North Dakota	15	15	10	1	3	1	0
South Dakota	36	35	27	2	4	2	1
<b>Great Plains Total</b>	<b>146</b>	<b>144</b>	<b>104</b>	<b>6</b>	<b>25</b>	<b>9</b>	<b>2</b>
<b>Intermountain</b>							
Arizona	122	120	87	5	21	7	2
Colorado	365	339	258	15	44	22	26
Idaho	850	824	646	38	96	44	26
Montana	647	610	443	26	88	53	37
Nevada	18	17	13	1	3	0	1
New Mexico	128	125	91	5	19	10	3
Utah	179	165	122	7	23	13	14
Wyoming	148	137	103	6	21	7	11
<b>Intermountain Total</b>	<b>2,456</b>	<b>2,336</b>	<b>1,762</b>	<b>102</b>	<b>316</b>	<b>156</b>	<b>120</b>
<b>Rocky Mountain Total</b>	<b>2,602</b>	<b>2,480</b>	<b>1,866</b>	<b>108</b>	<b>341</b>	<b>165</b>	<b>123</b>
<b>Pacific Coast</b>							
<b>Alaska</b>							
Alaska	696	678	499	31	76	73	18
<b>Alaska Total</b>	<b>696</b>	<b>678</b>	<b>499</b>	<b>31</b>	<b>76</b>	<b>73</b>	<b>18</b>

**Table 38b. (cont.)** Total aboveground biomass on timber land in the United States by region, subregion, State, and tree component, 1997

Region, subregion, and State	Live trees greater than 5-inches dbh					Total sapling biomass	Sound dead biomass
	All biomass	Live tree biomass	Boles	Stumps	Tops/limbs		
<i>Million dry tons</i>							
<b>Pacific Northwest</b>							
Oregon	1,671	1,626	1,324	64	216	23	45
Washington	1,299	1,275	1,014	49	182	31	24
<b>Pacific Northwest Total</b>	<b>2,971</b>	<b>2,902</b>	<b>2,339</b>	<b>112</b>	<b>397</b>	<b>54</b>	<b>69</b>
<b>Pacific Southwest</b>							
California	1,195	1,192	926	45	164	58	3
Hawaii	6	6	5	0	1	0	0
<b>Pacific Southwest Total</b>	<b>1,203</b>	<b>1,200</b>	<b>930</b>	<b>45</b>	<b>165</b>	<b>59</b>	<b>3</b>
<b>Pacific Coast Total</b>	<b>4,870</b>	<b>4,780</b>	<b>3,768</b>	<b>188</b>	<b>638</b>	<b>186</b>	<b>90</b>
<b>U.S. Total</b>	<b>22,036</b>	<b>21,779</b>	<b>15,259</b>	<b>812</b>	<b>3,401</b>	<b>2,308</b>	<b>258</b>

**Note:** Data may not add to Totals because of rounding.

**Table 39.** Volume of roundwood products harvested in the United States by source of material, species group, region, subregion, and product, 2006

Region, subregion, and product	Source of material								
	All sources			Growing stock			Other sources		
	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>									
<b>North</b>									
<b>Northeast</b>									
Saw logs	613,253	247,138	366,115	521,622	197,847	323,775	91,630	49,291	42,339
Veneer logs	34,070	2,479	31,591	29,928	1,984	27,943	4,142	495	3,648
Pulpwood	425,550	157,502	268,049	342,507	123,134	219,372	83,044	34,367	48,677
Composite products	38,465	2,198	36,267	31,399	1,718	29,681	7,066	480	6,586
Fuelwood	328,549	23,482	305,068	105,522	2,860	102,663	223,027	20,622	202,405
Posts, poles, and pilings	3,395	756	2,640	2,821	502	2,319	575	254	321
Miscellaneous products	14,506	11,135	3,371	10,354	7,393	2,961	4,152	3,743	410
<b>Northeast Total</b>	<b>1,457,789</b>	<b>444,689</b>	<b>1,013,100</b>	<b>1,044,153</b>	<b>335,438</b>	<b>708,715</b>	<b>413,637</b>	<b>109,251</b>	<b>304,385</b>
<b>North Central</b>									
Saw logs	554,894	99,068	455,826	505,472	95,519	409,953	49,422	3,549	45,873
Veneer logs	21,583	867	20,716	19,577	781	18,797	2,006	86	1,920
Pulpwood	512,126	122,686	389,440	420,858	109,638	311,219	91,269	13,048	78,221
Composite products	222,629	28,982	193,647	203,285	25,139	178,146	19,344	3,843	15,501
Fuelwood	247,070	9,033	238,037	32,234	2,131	30,102	214,836	6,902	207,934
Posts, poles, and pilings	8,172	7,129	1,043	6,604	6,190	413	1,569	939	629
Miscellaneous products	20,299	5,655	14,644	18,334	5,540	12,794	1,965	115	1,850
<b>North Central Total</b>	<b>1,586,773</b>	<b>273,419</b>	<b>1,313,353</b>	<b>1,206,363</b>	<b>244,938</b>	<b>961,425</b>	<b>380,410</b>	<b>28,481</b>	<b>351,928</b>
<b>North Total</b>									
Saw logs	1,168,146	346,205	821,941	1,027,094	293,366	733,728	141,052	52,840	88,213
Veneer logs	55,654	3,346	52,308	49,505	2,765	46,740	6,148	581	5,568
Pulpwood	937,677	280,188	657,489	763,364	232,773	530,591	174,313	47,415	126,898
Composite products	261,093	31,180	229,914	234,684	26,857	207,827	26,409	4,323	22,087
Fuelwood	575,619	32,515	543,105	137,756	4,991	132,765	437,863	27,524	410,340
Posts, poles, and pilings	11,568	7,885	3,683	9,424	6,692	2,733	2,143	1,193	950
Miscellaneous products	34,805	16,790	18,015	28,688	12,932	15,755	6,117	3,857	2,259
<b>North Total</b>	<b>3,044,562</b>	<b>718,108</b>	<b>2,326,454</b>	<b>2,250,516</b>	<b>580,376</b>	<b>1,670,140</b>	<b>794,046</b>	<b>137,732</b>	<b>656,314</b>



**Table 39. (cont.)** Volume of roundwood products harvested in the United States by source of material, species group, region, subregion, and product, 2006

Region, subregion, and product	Source of material								
	All sources			Growing stock			Other sources		
	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>									
<b>South</b>									
<b>Southeast</b>									
Saw logs	1,474,662	1,143,447	331,215	1,428,561	1,110,571	317,990	46,101	32,876	13,225
Veneer logs	215,545	170,640	44,905	211,218	166,746	44,472	4,327	3,894	433
Pulpwood	1,566,630	1,154,293	412,337	1,468,327	1,089,242	379,085	98,303	65,051	33,252
Composite products	180,062	154,597	25,465	168,569	145,968	22,601	11,493	8,629	2,864
Fuelwood	230,040	26,543	203,497	182,892	20,556	162,337	47,148	5,987	41,160
Posts, poles, and pilings	30,502	30,433	69	28,299	28,240	58	2,203	2,193	11
Miscellaneous products	30,298	28,702	1,596	26,307	24,840	1,467	3,991	3,862	129
<b>Southeast Total</b>	<b>3,727,739</b>	<b>2,708,655</b>	<b>1,019,084</b>	<b>3,514,172</b>	<b>2,586,162</b>	<b>928,011</b>	<b>213,567</b>	<b>122,493</b>	<b>91,073</b>
<b>South Central</b>									
Saw logs	2,178,118	1,523,878	654,240	2,078,898	1,458,026	620,871	99,220	65,852	33,369
Veneer logs	614,289	573,501	40,788	577,339	537,349	39,990	36,950	36,152	798
Pulpwood	1,718,214	1,074,737	643,477	1,478,105	906,230	571,875	240,109	168,507	71,602
Composite products	97,830	78,065	19,765	77,967	60,916	17,051	19,863	17,149	2,714
Fuelwood	141,637	13,160	128,477	117,373	9,358	108,014	24,264	3,802	20,463
Posts, poles, and pilings	38,115	38,071	44	34,718	34,676	42	3,397	3,395	2
Miscellaneous products	50,852	37,707	13,145	46,127	33,644	12,484	4,725	4,063	661
<b>South Central Total</b>	<b>4,839,055</b>	<b>3,339,119</b>	<b>1,499,936</b>	<b>4,410,528</b>	<b>3,040,199</b>	<b>1,370,329</b>	<b>428,527</b>	<b>298,920</b>	<b>129,607</b>
<b>South Total</b>									
Saw logs	3,652,780	2,667,325	985,455	3,507,459	2,568,597	938,862	145,321	98,728	46,593
Veneer logs	829,834	744,141	85,693	788,557	704,095	84,462	41,277	40,046	1,231
Pulpwood	3,284,844	2,229,030	1,055,814	2,946,432	1,995,472	950,961	338,412	233,558	104,853
Composite products	277,892	232,662	45,230	246,536	206,884	39,653	31,356	25,778	5,577
Fuelwood	371,677	39,703	331,974	300,265	29,914	270,351	71,412	9,789	61,623
Posts, poles, and pilings	68,617	68,504	113	63,017	62,916	101	5,600	5,588	12
Miscellaneous products	81,150	66,409	14,741	72,434	58,483	13,951	8,716	7,926	790
<b>South Total</b>	<b>8,566,794</b>	<b>6,047,774</b>	<b>2,519,020</b>	<b>7,924,700</b>	<b>5,626,360</b>	<b>2,298,340</b>	<b>642,094</b>	<b>421,414</b>	<b>220,681</b>

**Table 39. (cont.)** Volume of roundwood products harvested in the United States by source of material, species group, region, subregion, and product, 2006

Region, subregion, and product	Source of material								
	All sources			Growing stock			Other sources		
	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>									
<b>Rocky Mountain</b>									
<b>Great Plains</b>									
Saw logs	28,609	21,351	7,258	27,810	21,115	6,696	799	236	563
Veneer logs	–	–	–	–	–	–	–	–	–
Pulpwood	–	–	–	–	–	–	–	–	–
Composite products	–	–	–	–	–	–	–	–	–
Fuelwood	35,495	1,315	34,179	1,089	63	1,026	34,406	1,252	33,154
Posts, poles, and pilings	849	409	441	229	227	2	620	181	439
Miscellaneous products	4,448	1,992	2,456	3,605	1,575	2,030	843	417	426
<b>Great Plains Total</b>	<b>69,402</b>	<b>25,068</b>	<b>44,334</b>	<b>32,734</b>	<b>22,981</b>	<b>9,753</b>	<b>36,668</b>	<b>2,087</b>	<b>34,581</b>
<b>Intermountain</b>									
Saw logs	441,678	439,577	2,101	398,083	396,676	1,408	43,595	42,901	694
Veneer logs	36,131	36,131	–	35,387	35,387	–	744	744	–
Pulpwood	17,428	17,428	–	15,976	15,976	–	1,452	1,452	–
Composite products	4,494	695	3,800	4,122	373	3,748	373	321	51
Fuelwood	84,302	78,637	5,665	4,525	4,511	14	79,777	74,126	5,652
Posts, poles, and pilings	10,635	10,579	56	8,813	8,769	43	1,822	1,809	13
Miscellaneous products	18,978	18,802	176	8,663	8,617	46	10,315	10,185	130
<b>Intermountain Total</b>	<b>613,646</b>	<b>601,848</b>	<b>11,798</b>	<b>475,569</b>	<b>470,310</b>	<b>5,259</b>	<b>138,077</b>	<b>131,538</b>	<b>6,539</b>
<b>Rocky Mountain Total</b>									
Saw logs	470,288	460,928	9,359	425,894	417,791	8,103	44,394	43,137	1,256
Veneer logs	36,131	36,131	0	35,387	35,387	0	744	744	0
Pulpwood	17,428	17,428	0	15,976	15,976	0	1,452	1,452	0
Composite products	4,494	695	3,800	4,122	373	3,748	373	321	51
Fuelwood	119,797	79,952	39,845	5,614	4,575	1,040	114,183	75,378	38,805
Posts, poles, and pilings	11,484	10,987	497	9,042	8,997	45	2,442	1,991	452
Miscellaneous products	23,426	20,794	2,632	12,268	10,192	2,076	11,158	10,602	556
<b>Rocky Mountain Total</b>	<b>683,048</b>	<b>626,916</b>	<b>56,132</b>	<b>508,303</b>	<b>493,291</b>	<b>15,012</b>	<b>174,745</b>	<b>133,625</b>	<b>41,120</b>

**Table 39. (cont.)** Volume of roundwood products harvested in the United States by source of material, species group, region, subregion, and product, 2006

Region, subregion, and product	Source of material								
	All sources			Growing stock			Other sources		
	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>									
<b>Pacific Coast</b>									
<b>Alaska</b>									
Saw logs	44,434	44,349	85	40,937	40,895	42	3,497	3,453	43
Veneer logs	–	–	–	–	–	–	–	–	–
Pulpwood	7,741	2,555	5,186	7,663	2,529	5,134	78	26	52
Composite products	–	–	–	–	–	–	–	–	–
Fuelwood	9,369	5,649	3,720	34	34	1	9,334	5,616	3,719
Posts, poles, and pilings	–	–	–	–	–	–	–	–	–
Miscellaneous products	468	432	35	293	268	25	175	165	10
<b>Alaska Total</b>	<b>62,011</b>	<b>52,985</b>	<b>9,027</b>	<b>48,927</b>	<b>43,725</b>	<b>5,202</b>	<b>13,084</b>	<b>9,260</b>	<b>3,825</b>
<b>Pacific Northwest</b>									
Saw logs	1,456,503	1,383,498	73,005	1,414,413	1,343,433	70,979	42,090	40,064	2,026
Veneer logs	257,741	253,235	4,505	252,526	248,213	4,313	5,214	5,022	192
Pulpwood	143,705	104,880	38,825	136,400	98,327	38,073	7,306	6,553	753
Composite products	–	–	–	–	–	–	–	–	–
Fuelwood	125,419	118,506	6,913	456	128	329	124,963	118,379	6,584
Posts, poles, and pilings	7,662	7,662	0	7,369	7,369	0	292	292	–
Miscellaneous products	14,836	14,836	0	14,276	14,276	0	560	560	–
<b>Pacific Northwest Total</b>	<b>2,005,866</b>	<b>1,882,617</b>	<b>123,249</b>	<b>1,825,440</b>	<b>1,711,746</b>	<b>113,694</b>	<b>180,426</b>	<b>170,871</b>	<b>9,555</b>
<b>Pacific Southwest</b>									
Saw logs	386,845	386,843	2	365,514	365,512	2	21,331	21,331	0
Veneer logs	31,990	31,608	382	29,921	29,542	379	2,069	2,065	4
Pulpwood	2,400	–	2,400	2,376	–	2,376	24	–	24
Composite products	–	–	–	–	–	–	–	–	–
Fuelwood	206,067	200,905	5,163	46,133	46,123	10	159,935	154,781	5,153
Posts, poles, and pilings	405	405	–	401	401	–	4	4	–
Miscellaneous products	124	124	–	123	123	–	1	1	–
<b>Pacific Southwest Total</b>	<b>627,831</b>	<b>619,884</b>	<b>7,947</b>	<b>444,467</b>	<b>441,701</b>	<b>2,766</b>	<b>183,365</b>	<b>178,183</b>	<b>5,181</b>

**Note:** Data may not add to Totals because of rounding.

**Table 39. (cont.)** Volume of roundwood products harvested in the United States by source of material, species group, region, subregion, and product, 2006

Region, subregion, and product	Source of material								
	All sources			Growing stock			Other sources		
	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>									
<b>Pacific Coast Total</b>									
Saw logs	1,887,782	1,814,689	73,092	1,820,864	1,749,840	71,023	66,918	64,849	2,069
Veneer logs	289,731	284,843	4,888	282,447	277,755	4,692	7,284	7,088	196
Pulpwood	153,846	107,434	46,412	146,438	100,855	45,583	7,408	6,579	829
Composite products	–	–	–	–	–	–	–	–	–
Fuelwood	340,855	325,060	15,795	46,624	46,285	339	294,232	278,776	15,456
Posts, poles, and pilings	8,066	8,066	0	7,770	7,770	0	297	297	–
Miscellaneous products	15,428	15,393	35	14,692	14,667	25	736	726	10
<b>Pacific Coast Total</b>	<b>2,695,709</b>	<b>2,555,486</b>	<b>140,223</b>	<b>2,318,834</b>	<b>2,197,172</b>	<b>121,662</b>	<b>376,875</b>	<b>358,314</b>	<b>18,561</b>
<b>United States</b>									
Saw logs	7,178,996	5,289,148	1,889,847	6,781,310	5,029,594	1,751,716	397,685	259,554	138,131
Veneer logs	1,211,349	1,068,460	142,889	1,155,896	1,020,002	135,894	55,453	48,458	6,995
Pulpwood	4,393,795	2,634,080	1,759,715	3,872,210	2,345,075	1,527,135	521,585	289,005	232,580
Composite products	543,480	264,536	278,943	485,342	234,114	251,228	58,138	30,422	27,715
Fuelwood	1,407,949	477,230	930,718	490,259	85,764	404,495	917,690	391,466	526,224
Posts, poles, and pilings	99,735	95,443	4,293	89,253	86,375	2,878	10,482	9,068	1,414
Miscellaneous products	154,809	119,386	35,423	128,082	96,275	31,807	26,727	23,111	3,616
<b>U.S. Total</b>	<b>14,990,113</b>	<b>9,948,284</b>	<b>5,041,828</b>	<b>13,002,353</b>	<b>8,897,199</b>	<b>4,105,153</b>	<b>1,987,760</b>	<b>1,051,085</b>	<b>936,675</b>

**Table 40.** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>			
<b>North</b>			
<b>Northeast</b>			
Roundwood products—			
Growing stock	1,044,153	335,438	708,715
Other sources	413,637	109,251	304,385
<b>Total</b>	<b>1,457,789</b>	<b>444,689</b>	<b>1,013,100</b>
Logging residues—			
Growing stock <sup>a</sup>	124,500	18,022	106,478
Other sources <sup>b</sup>	554,718	156,460	398,257
<b>Total</b>	<b>679,218</b>	<b>174,482</b>	<b>504,735</b>
Other removals—			
Growing stock <sup>c</sup>			
Other sources <sup>d</sup>	10,669	1,400	9,270
<b>Total</b>	<b>10,669</b>	<b>1,400</b>	<b>9,270</b>
<b>Total, all classes—</b>			
Growing stock	1,168,653	353,460	815,193
Other sources	979,024	267,111	711,912
<b>Total, all materials</b>	<b>2,147,676</b>	<b>620,571</b>	<b>1,527,105</b>
<b>North Central</b>			
Roundwood products—			
Growing stock	1,206,363	244,938	961,425
Other sources	380,410	28,481	351,928
<b>Total</b>	<b>1,586,773</b>	<b>273,419</b>	<b>1,313,353</b>
Logging residues—			
Growing stock <sup>a</sup>	128,097	11,173	116,924
Other sources <sup>b</sup>	510,443	93,556	416,887
<b>Total</b>	<b>638,540</b>	<b>104,729</b>	<b>533,812</b>
Other removals—			
Growing stock <sup>c</sup>	316,993	67,498	249,495
Other sources <sup>d</sup>	72,485	2,536	69,950
<b>Total</b>	<b>389,478</b>	<b>70,033</b>	<b>319,445</b>
<b>Total, all classes—</b>			
Growing stock	1,651,454	323,609	1,327,845
Other sources	963,338	124,573	838,765
<b>Total, all materials</b>	<b>2,614,791</b>	<b>448,182</b>	<b>2,166,610</b>
<b>North Total</b>			
Roundwood products—			
Growing stock	2,250,516	580,376	1,670,140
Other sources	794,046	137,732	656,314
<b>Total</b>	<b>3,044,562</b>	<b>718,108</b>	<b>2,326,454</b>

**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>			
Logging residues—			
Growing stock <sup>a</sup>	252,597	29,195	223,402
Other sources <sup>b</sup>	1,065,161	250,016	815,145
Total	1,317,758	279,211	1,038,547
Other removals—			
Growing stock <sup>c</sup>	316,993	67,498	249,495
Other sources <sup>d</sup>	83,155	3,935	79,219
Total	400,148	71,433	328,715
<b>Total, all classes—</b>			
Growing stock	2,820,106	677,069	2,143,038
Other sources	1,942,362	391,684	1,550,677
Total, all materials	4,762,468	1,068,753	3,693,715
<b>South</b>			
<b>Southeast</b>			
Roundwood products—			
Growing stock	3,514,172	2,586,162	928,011
Other sources	213,567	122,493	91,073
Total	3,727,739	2,708,655	1,019,084
Logging residues—			
Growing stock <sup>a</sup>	332,728	175,808	156,921
Other sources <sup>b</sup>	633,107	389,186	243,920
Total	965,835	564,994	400,841
Other removals—			
Growing stock <sup>c</sup>	458,924	198,567	260,357
Other sources <sup>d</sup>	136,821	48,188	88,633
Total	595,745	246,755	348,990
<b>Total, all classes—</b>			
Growing stock	4,305,824	2,960,536	1,345,288
Other sources	983,495	559,868	423,627
Total, all materials	5,289,319	3,520,404	1,768,915
<b>South Central</b>			
Roundwood products—			
Growing stock	4,410,528	3,040,199	1,370,329
Other sources	428,527	298,920	129,607
Total	4,839,055	3,339,119	1,499,936
Logging residues—			
Growing stock <sup>a</sup>	483,536	173,492	310,045
Other sources <sup>b</sup>	894,536	408,617	485,918
Total	1,378,072	582,109	795,963

**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
	<i>Thousand cubic feet</i>		
Other removals—			
Growing stock <sup>c</sup>	496,459	142,951	353,508
Other sources <sup>d</sup>	150,227	27,261	122,966
<b>Total</b>	<b>646,686</b>	<b>170,212</b>	<b>476,474</b>
<b>Total, all classes—</b>			
Growing stock	5,390,523	3,356,641	2,033,882
Other sources	1,473,290	734,799	738,491
<b>Total, all materials</b>	<b>6,863,813</b>	<b>4,091,440</b>	<b>2,772,373</b>
<b>South Total</b>			
Roundwood products—			
Growing stock	7,924,700	5,626,360	2,298,340
Other sources	642,094	421,414	220,681
<b>Total</b>	<b>8,566,794</b>	<b>6,047,774</b>	<b>2,519,020</b>
Logging residues—			
Growing stock <sup>a</sup>	816,264	349,299	466,965
Other sources <sup>b</sup>	1,527,643	797,804	729,839
<b>Total</b>	<b>2,343,907</b>	<b>1,147,103</b>	<b>1,196,804</b>
Other removals—			
Growing stock <sup>c</sup>	955,383	341,517	613,865
Other sources <sup>d</sup>	287,048	75,450	211,599
<b>Total</b>	<b>1,242,431</b>	<b>416,967</b>	<b>825,464</b>
<b>Total, all classes—</b>			
Growing stock	9,696,347	6,317,177	3,379,170
Other sources	2,456,785	1,294,667	1,162,118
<b>Total, all materials</b>	<b>12,153,132</b>	<b>7,611,844</b>	<b>4,541,288</b>
<b>Rocky Mountain</b>			
<b>Great Plains</b>			
Roundwood products—			
Growing stock	32,734	22,981	9,753
Other sources	36,668	2,087	34,581
<b>Total</b>	<b>69,402</b>	<b>25,068</b>	<b>44,334</b>
Logging residues—			
Growing stock <sup>a</sup>	2,940	1,678	1,262
Other sources <sup>b</sup>	9,964	7,549	2,415
<b>Total</b>	<b>12,904</b>	<b>9,227</b>	<b>3,677</b>
Other removals—			
Growing stock <sup>c</sup>	5,490	143	5,346
Other sources <sup>d</sup>	10,241	150	10,091
<b>Total</b>	<b>15,731</b>	<b>294</b>	<b>15,437</b>

**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>			
<b>Total, all classes—</b>			
Growing stock	41,164	24,802	16,362
Other sources	56,873	9,786	47,087
<b>Total, all materials</b>	<b>98,037</b>	<b>34,589</b>	<b>63,448</b>
<b>Intermountain</b>			
Roundwood products—			
Growing stock	475,569	470,310	5,259
Other sources	138,077	131,538	6,539
<b>Total</b>	<b>613,646</b>	<b>601,848</b>	<b>11,798</b>
Logging residues—			
Growing stock <sup>a</sup>	26,024	25,734	290
Other sources <sup>b</sup>	109,066	108,140	927
<b>Total</b>	<b>135,090</b>	<b>133,874</b>	<b>1,216</b>
Other removals—			
Growing stock <sup>c</sup>	—	—	—
Other sources <sup>d</sup>	—	—	—
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Total, all classes—</b>			
Growing stock	501,593	496,044	5,548
Other sources	247,144	239,678	7,466
<b>Total, all materials</b>	<b>748,736</b>	<b>735,722</b>	<b>13,014</b>
<b>Rocky Mountain Total</b>			
Roundwood products—			
Growing stock	508,303	493,291	15,012
Other sources	174,745	133,625	41,120
<b>Total</b>	<b>683,048</b>	<b>626,916</b>	<b>56,132</b>
Logging residues—			
Growing stock <sup>a</sup>	28,964	27,413	1,552
Other sources <sup>b</sup>	119,030	115,689	3,341
<b>Total</b>	<b>147,994</b>	<b>143,101</b>	<b>4,893</b>
Other removals—			
Growing stock <sup>c</sup>	5,490	143	5,346
Other sources <sup>d</sup>	10,241	150	10,091
<b>Total</b>	<b>15,731</b>	<b>294</b>	<b>15,437</b>
<b>Total, all classes—</b>			
Growing stock	542,757	520,847	21,910
Other sources	304,016	249,464	54,553
<b>Total, all materials</b>	<b>846,773</b>	<b>770,311</b>	<b>76,463</b>



**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>			
<b>Pacific Coast</b>			
<b>Alaska</b>			
Roundwood products—			
Growing stock	48,927	43,725	5,202
Other sources	13,084	9,260	3,825
<b>Total</b>	<b>62,011</b>	<b>52,985</b>	<b>9,027</b>
Logging residues—			
Growing stock <sup>a</sup>	17,217	15,578	1,639
Other sources <sup>b</sup>	9,199	8,652	547
<b>Total</b>	<b>26,416</b>	<b>24,230</b>	<b>2,186</b>
Other removals—			
Growing stock <sup>c</sup>	—	—	—
Other sources <sup>d</sup>	—	—	—
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Total, all classes—</b>			
Growing stock	66,144	59,303	6,841
Other sources	22,283	17,912	4,372
<b>Total, all materials</b>	<b>88,427</b>	<b>77,214</b>	<b>11,213</b>
<b>Pacific Northwest</b>			
Roundwood products—			
Growing stock	1,825,440	1,711,746	113,694
Other sources	180,426	170,871	9,555
<b>Total</b>	<b>2,005,866</b>	<b>1,882,617</b>	<b>123,249</b>
Logging residues—			
Growing stock <sup>a</sup>	113,457	106,409	7,048
Other sources <sup>b</sup>	449,440	409,692	39,747
<b>Total</b>	<b>562,896</b>	<b>516,101</b>	<b>46,795</b>
Other removals—			
Growing stock <sup>c</sup>	—	—	—
Other sources <sup>d</sup>	—	—	—
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Total, all classes—</b>			
Growing stock	1,938,897	1,818,155	120,742
Other sources	629,865	580,563	49,302
<b>Total, all materials</b>	<b>2,568,762</b>	<b>2,398,718</b>	<b>170,044</b>
<b>Pacific Southwest</b>			
Roundwood products—			
Growing stock	444,467	441,701	2,766
Other sources	183,365	178,183	5,181
<b>Total</b>	<b>627,831</b>	<b>619,884</b>	<b>7,947</b>

**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
	<i>Thousand cubic feet</i>		
Logging residues—			
Growing stock <sup>a</sup>	24,764	24,592	171
Other sources <sup>b</sup>	119,074	118,297	778
<b>Total</b>	<b>143,838</b>	<b>142,889</b>	<b>949</b>
Other removals—			
Growing stock <sup>c</sup>	—	—	—
Other sources <sup>d</sup>	—	—	—
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Total, all classes—</b>			
Growing stock	469,231	466,293	2,937
Other sources	302,439	296,480	5,959
<b>Total, all materials</b>	<b>771,670</b>	<b>762,774</b>	<b>8,896</b>
<b>Pacific Coast Total</b>			
Roundwood products—			
Growing stock	2,318,834	2,197,172	121,662
Other sources	376,875	358,314	18,561
<b>Total</b>	<b>2,695,709</b>	<b>2,555,486</b>	<b>140,223</b>
Logging residues—			
Growing stock <sup>a</sup>	155,437	146,579	8,858
Other sources <sup>b</sup>	577,713	536,641	41,072
<b>Total</b>	<b>733,150</b>	<b>683,220</b>	<b>49,930</b>
Other removals—			
Growing stock <sup>c</sup>	—	—	—
Other sources <sup>d</sup>	—	—	—
<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Total, all classes—</b>			
Growing stock	2,474,272	2,343,751	130,520
Other sources	954,587	894,954	59,633
<b>Total, all materials</b>	<b>3,428,859</b>	<b>3,238,706</b>	<b>190,153</b>
<b>United States</b>			
Roundwood products—			
Growing stock	13,002,353	8,897,199	4,105,153
Other sources	1,987,760	1,051,085	936,675
<b>Total</b>	<b>14,990,113</b>	<b>9,948,284</b>	<b>5,041,828</b>
Logging residues—			
Growing stock <sup>a</sup>	1,253,263	552,486	700,777
Other sources <sup>b</sup>	3,289,546	1,700,149	1,589,397
<b>Total</b>	<b>4,542,809</b>	<b>2,252,635</b>	<b>2,290,174</b>

**Table 40. (cont.)** Roundwood products, logging residues, and other removals from growing stock and other sources by species group, region, and subregion, 2006

Region, subregion, class of material, and source of material	Species group		
	Total	Softwoods	Hardwoods
	<i>Thousand cubic feet</i>		
Other removals—			
Growing stock <sup>c</sup>	1,277,866	409,159	868,707
Other sources <sup>d</sup>	380,444	79,535	300,909
<b>Total</b>	<b>1,658,310</b>	<b>488,694</b>	<b>1,169,616</b>
<b>Total, all classes—</b>			
Growing stock	15,533,482	9,858,844	5,674,638
Other sources	5,657,750	2,830,769	2,826,981
<b>Total, all materials</b>	<b>21,191,232</b>	<b>12,689,613</b>	<b>8,501,619</b>

<sup>a</sup> Growing-stock volume cut or knocked down during harvest but left at the harvest site.

<sup>b</sup> Wood volume other than growing stock cut or knocked down during harvest but left on the ground. This volume is net of wet rot or advanced dry rot, and excludes old punky logs; consists of material sound enough to chip; includes downed dead and cull trees, tops above the 4-inch growing-stock top, and smaller than 5 inches d.b.h.; excludes stumps and limbs.

<sup>c</sup> Growing-stock volume removed by cultural operations or timber land clearing.

<sup>d</sup> Wood volume other than growing stock removed by cultural operations or timber land clearing. This volume is net of wet rot or advanced dry rot, and excludes old punky logs; consists of material sound enough to chip; includes downed dead and cull trees, tops above the 4-inch growing-stock top, and smaller than 5 inches dbh; excludes stumps and limbs.

**Note:** Data may not add to Totals because of rounding.

**Table 41.** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
<b>United States</b>										
Sawlogs	2006	7,178,996	5,289,148	1,889,847	6,781,310	5,029,594	1,751,716	397,685	259,554	138,131
	1996	7,120,223	5,158,256	1,961,967	6,711,817	4,928,295	1,783,521	408,407	229,961	178,446
	1986	7,110,200	5,441,442	1,668,758	6,766,756	5,219,952	1,546,804	343,444	221,490	121,955
	1976	6,683,230	5,249,795	1,433,435	6,363,763	5,017,652	1,346,111	319,467	232,143	87,324
	1962	6,206,651	4,601,269	1,605,383	5,880,689	4,321,139	1,559,550	325,962	280,129	45,833
	1952 <sup>a</sup>	6,451,547	5,028,456	1,423,092	5,773,485	4,598,693	1,174,792	678,063	429,763	248,300
	Veneer logs	2006	1,211,349	1,068,460	142,889	1,155,896	1,020,002	135,894	55,453	48,458
1996		1,281,543	1,123,938	157,605	1,220,519	1,070,475	150,044	61,024	53,463	7,561
1986		1,544,905	1,437,832	107,073	1,444,218	1,341,878	102,340	100,687	95,954	4,733
1976		1,442,596	1,342,176	100,420	1,332,064	1,236,359	95,705	110,532	105,817	4,715
1962		883,991	591,992	291,999	756,054	473,058	282,996	127,937	118,934	9,003
1952 <sup>a</sup>		459,432	251,461	207,971	386,711	220,719	165,993	72,720	30,742	41,978
Pulpwood and composites		2006	4,937,275	2,898,616	2,038,658	4,357,552	2,579,190	1,778,363	579,722	319,427
	1996	5,404,562	2,964,592	2,439,969	4,770,291	2,645,756	2,124,535	634,271	318,837	315,434
	1986	4,768,790	3,083,553	1,685,237	4,216,679	2,796,630	1,420,049	552,112	286,923	265,188
	1976	3,708,990	2,556,020	1,152,970	3,312,673	2,309,107	1,003,566	396,317	246,913	149,404
	1962	2,920,189	1,871,963	1,048,226	2,707,912	1,761,958	945,954	212,277	110,006	102,272
	1952	1,750,145	1,492,893	257,252	1,642,181	1,395,044	247,137	107,964	97,849	10,115
	Fuelwood	2006	1,407,949	477,230	930,718	490,259	85,764	404,495	917,690	391,466
1996		2,282,849	493,048	1,789,801	798,960	187,308	611,652	1,483,889	305,740	1,178,149
1986		3,113,046	545,269	2,567,776	795,758	204,566	591,192	2,317,288	340,704	1,976,584
1976		602,989	131,822	471,167	335,647	62,963	272,684	267,342	68,859	198,483
1962		1,358,244	199,205	1,159,039	767,256	98,570	668,686	590,988	100,635	490,353
1952		1,726,275	422,375	1,303,900	967,771	238,663	729,108	758,503	183,711	574,792
Other products <sup>b</sup>		2006	254,544	214,829	39,715	217,335	182,649	34,685	37,210	32,180
	1996	341,752	296,365	45,387	308,364	269,747	38,617	33,388	26,618	6,770
	1986	502,454	283,594	218,860	454,219	264,873	189,346	48,235	18,721	29,514
	1976	377,563	238,451	139,112	343,261	225,830	117,431	34,302	12,621	21,681
	1962	560,120	246,296	313,824	483,421	210,747	272,674	76,700	35,549	41,151
	1952	710,444	326,533	383,911	622,452	284,403	338,049	87,993	42,130	45,862
	Total products	2006	14,990,113	9,948,284	5,041,828	13,002,353	8,897,199	4,105,153	1,987,760	1,051,085
1996		16,430,929	10,036,200	6,394,729	13,809,950	9,101,581	4,708,369	2,620,979	934,620	1,686,360
1986		17,039,395	10,791,690	6,247,705	13,677,630	9,495,350	3,842,712	3,361,765	1,296,340	2,404,993
1976		12,815,368	9,518,264	3,297,104	11,687,408	8,851,911	2,835,497	1,127,960	666,353	461,607
1962		11,929,196	7,510,725	4,418,471	10,595,332	6,865,472	3,735,860	1,333,864	645,253	688,611
1952		11,097,843	7,521,718	3,576,126	9,392,600	6,737,522	2,655,078	1,705,243	784,196	921,048

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Logging residue	2006	4,529,906	2,243,408	2,286,497	1,250,323	550,808	699,516	3,279,582	1,692,600	1,586,982
	1996	3,373,283	1,348,461	2,024,822	1,291,664	614,742	676,922	2,081,619	733,719	1,347,900
	1986	3,912,746	2,270,109	1,642,637	1,582,035	998,503	583,532	2,330,711	1,271,606	1,059,105
	1976	2,671,921	1,706,227	965,694	1,417,205	831,894	585,311	1,254,716	874,333	380,383
	1962	2,701,412	1,434,059	1,267,353	1,215,092	622,682	592,410	1,486,320	811,377	674,943
	1952	2,091,791	992,225	1,099,566	1,366,688	656,081	710,607	725,103	336,143	388,960
Other removals	2006	1,642,579	488,400	1,154,179	1,272,376	409,015	863,361	370,203	79,385	290,818
	1996	1,386,628	447,952	938,676	919,130	348,207	570,923	467,498	99,745	367,753
	1986	1,672,917	422,378	1,250,539	984,153	327,068	657,085	688,764	95,310	593,454
	1976	1,444,411	461,333	983,078	1,143,515	381,415	762,100	300,896	79,918	220,978
	1962	1,099,455	236,146	863,310	679,493	176,382	503,111	419,963	59,764	360,199
	1952	1,975,408	909,566	1,065,841	1,512,235	816,516	695,720	463,172	93,051	370,121
<b>Total harvest</b>	<b>2006</b>	<b>21,162,597</b>	<b>12,680,092</b>	<b>8,482,505</b>	<b>15,525,052</b>	<b>9,857,022</b>	<b>5,668,030</b>	<b>5,637,545</b>	<b>2,823,070</b>	<b>2,814,475</b>
	1996	21,190,840	11,832,613	9,358,227	16,020,744	10,064,530	5,956,214	5,170,096	1,768,084	3,402,013
	1986	22,625,058	13,484,177	9,140,881	16,243,818	10,820,921	5,083,329	6,381,240	2,663,256	4,057,552
	1976	16,931,700	11,685,824	5,245,876	14,248,128	10,065,220	4,182,908	2,683,572	1,620,604	1,062,968
	1962	15,730,063	9,180,929	6,549,134	12,489,917	7,664,536	4,831,381	3,240,146	1,516,393	1,717,753
	1952	15,165,042	9,423,509	5,741,534	12,271,523	8,210,119	4,061,405	2,893,519	1,213,390	1,680,129
<b>North</b>										
Sawlogs	2006	1,168,146	346,205	821,941	1,027,094	293,366	733,728	141,052	52,840	88,213
	1996	1,279,688	336,542	943,145	1,125,336	282,167	843,168	154,352	54,375	99,977
	1986	1,069,231	343,489	725,742	930,697	283,107	647,590	138,534	60,382	78,152
	1976	966,739	267,127	699,612	890,943	245,805	645,138	75,796	21,322	54,474
	1962	778,285	187,479	590,807	738,369	173,797	564,572	39,916	13,682	26,234
	1952 <sup>a</sup>	926,724	341,258	585,466	808,162	311,591	496,571	118,562	29,667	88,895
Veneer logs	2006	55,654	3,346	52,308	49,505	2,765	46,740	6,148	581	5,568
	1996	60,129	3,075	57,054	53,616	2,513	51,103	6,513	562	5,951
	1986	42,946	9,573	33,373	39,058	8,062	30,996	3,888	1,511	2,377
	1976	37,034	3,233	33,801	34,294	3,019	31,275	2,740	214	2,526
	1962	55,109	245	54,864	48,642	245	48,397	6,468	–	6,468
	1952 <sup>a</sup>	46,310	280	46,030	37,770	237	37,533	8,540	44	8,497
Pulpwood and composites	2006	1,198,770	311,367	887,403	998,048	259,630	738,419	200,722	51,738	148,984
	1996	1,265,166	380,738	884,427	1,060,444	314,211	746,232	204,722	66,527	138,195
	1986	976,018	378,001	598,017	804,471	309,898	494,573	171,547	68,103	103,444
	1976	789,056	334,920	454,136	680,737	283,946	396,791	108,319	50,974	57,345
	1962	682,643	302,840	379,804	644,685	281,197	363,488	37,959	21,643	16,316
	1952	439,483	299,796	139,687	420,417	284,708	135,709	19,066	15,088	3,978

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Fuelwood	2006	575,619	32,515	543,105	137,756	4,991	132,765	437,863	27,524	410,340
	1996	842,114	68,999	773,115	129,999	10,496	119,503	712,115	58,503	653,612
	1986	1,765,369	125,041	1,640,328	239,460	19,769	219,691	1,525,909	105,272	1,420,637
	1976	218,127	3,631	214,496	100,145	1,374	98,771	117,982	2,257	115,725
	1962	467,009	30,714	436,295	297,646	25,309	272,337	169,364	5,405	163,958
	1952	670,231	37,407	632,825	276,071	10,734	265,337	394,161	26,673	367,488
Other products <sup>b</sup>	2006	46,372	24,675	21,697	38,112	19,624	18,488	8,260	5,051	3,210
	1996	61,842	26,520	35,322	49,526	19,992	29,534	12,316	6,528	5,788
	1986	225,307	44,525	180,782	188,536	33,466	155,070	36,771	11,059	25,712
	1976	126,835	27,043	99,792	104,645	22,324	82,321	22,190	4,719	17,471
	1962	205,137	38,957	166,180	181,843	36,632	145,211	23,294	2,325	20,969
	1952	209,040	39,781	169,259	184,758	32,202	152,557	24,282	7,579	16,702
Total products	2006	3,044,562	718,108	2,326,454	2,250,516	580,376	1,670,140	794,046	137,732	656,314
	1996	3,508,939	815,875	2,693,064	2,418,921	629,380	1,789,541	1,090,018	186,495	903,523
	1986	4,078,871	900,629	3,178,242	2,202,222	654,302	1,547,920	1,876,649	246,327	1,630,322
	1976	2,137,791	635,954	1,501,837	1,810,764	556,468	1,254,296	327,027	79,486	247,541
	1962	2,188,184	560,235	1,627,949	1,911,184	517,180	1,400,004	277,000	43,055	233,945
	1952	2,291,788	718,522	1,573,266	1,727,177	639,471	1,087,706	564,611	79,051	485,560
Logging residue	2006	1,317,758	279,211	1,038,547	252,597	29,195	223,402	1,065,161	250,016	815,145
	1996	1,359,582	292,536	1,067,046	255,951	30,918	225,033	1,103,631	261,618	842,013
	1986	610,265	218,264	392,001	201,476	30,840	170,636	408,789	187,424	221,365
	1976	565,457	201,593	363,864	328,510	69,249	259,261	236,947	132,344	104,603
	1962	376,715	159,642	217,073	181,000	43,055	137,945	195,715	116,587	79,128
	1952	471,861	228,298	243,563	212,756	78,771	133,985	259,105	149,527	109,578
Other removals	2006	400,148	71,433	328,715	316,993	67,498	249,495	83,155	3,935	79,219
	1996	201,312	14,014	187,298	97,544	8,048	89,496	103,768	5,966	97,802
	1986	507,069	64,927	442,142	304,519	40,374	264,145	202,550	24,553	177,997
	1976	620,991	96,977	524,013	519,543	79,640	439,903	101,448	17,337	84,110
	1962	198,433	40,388	158,046	119,534	25,115	94,420	78,899	15,273	63,626
	1952	270,664	51,799	218,865	162,965	32,210	130,755	107,699	19,588	88,111
Total harvest	2006	4,762,468	1,068,753	3,693,715	2,820,106	677,069	2,143,038	1,942,362	391,684	1,550,677
	1996	5,069,833	1,122,425	3,947,408	2,772,416	668,346	2,104,070	2,297,417	454,079	1,843,338
	1986	5,196,205	1,183,820	4,012,385	2,708,217	725,516	1,982,701	2,487,988	458,304	2,029,684
	1976	3,324,239	934,525	2,389,714	2,658,817	705,357	1,953,460	665,422	229,168	436,254
	1962	2,763,332	760,265	2,003,067	2,211,718	585,350	1,632,369	551,614	174,915	370,699
	1952	3,034,313	998,619	2,035,695	2,102,898	750,452	1,352,446	931,415	248,166	683,249

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
<b>South</b>										
Sawlogs	2006	3,652,780	2,667,325	985,455	3,507,459	2,568,597	938,862	145,321	98,728	46,593
	1996	3,680,682	2,721,782	958,900	3,534,463	2,653,390	881,072	146,220	68,392	77,828
	1986	3,074,661	2,172,991	901,670	3,005,843	2,144,843	861,000	68,818	28,148	40,670
	1976	2,266,355	1,598,952	667,403	2,210,297	1,570,670	639,627	56,058	28,282	27,776
	1962	2,239,774	1,233,895	1,005,879	2,204,242	1,217,033	987,209	35,532	16,862	18,670
	1952 <sup>a</sup>	2,506,471	1,674,976	831,495	2,236,384	1,560,836	675,548	270,087	114,140	155,947
Veneer logs	2006	829,834	744,141	85,693	788,557	704,095	84,462	41,277	40,046	1,231
	1996	825,003	736,174	88,829	804,052	716,609	87,443	20,951	19,565	1,386
	1986	807,616	736,459	71,157	793,891	724,662	69,229	13,725	11,797	1,928
	1976	561,331	498,140	63,191	549,966	488,783	61,183	11,365	9,357	2,008
	1962	192,854	3,080	189,775	190,298	3,059	187,239	2,556	21	2,535
	1952 <sup>a</sup>	170,304	8,461	161,843	135,847	7,387	128,460	34,457	1,074	33,383
Pulpwood and composites	2006	3,562,736	2,461,692	1,101,044	3,192,969	2,202,355	990,613	369,767	259,337	110,431
	1996	4,046,778	2,499,130	1,547,648	3,633,402	2,262,754	1,370,647	413,376	236,375	177,000
	1986	3,284,136	2,207,980	1,076,156	2,978,875	2,062,611	916,264	305,261	145,369	159,892
	1976	2,615,220	1,937,776	677,444	2,380,275	1,794,210	586,065	234,945	143,566	91,379
	1962	1,999,963	1,336,960	663,003	1,832,555	1,253,938	578,617	167,408	83,022	84,386
	1952	1,002,469	888,871	113,598	946,192	838,656	107,536	56,277	50,215	6,062
Fuelwood	2006	371,677	39,703	331,974	300,265	29,914	270,351	71,412	9,789	61,623
	1996	947,981	109,044	838,937	507,358	62,841	444,517	440,623	46,203	394,420
	1986	746,698	53,225	693,473	323,259	31,592	291,667	423,439	21,633	401,806
	1976	322,593	76,784	245,809	220,585	51,397	169,188	102,008	25,387	76,621
	1962	812,848	104,066	708,782	459,625	63,554	396,071	353,223	40,512	312,711
	1952	932,198	277,676	654,521	668,777	206,876	461,901	263,421	70,800	192,620
Other products <sup>b</sup>	2006	149,767	134,913	14,854	135,451	121,399	14,051	14,316	13,514	803
	1996	92,338	88,708	3,630	80,310	77,113	3,197	12,028	11,595	433
	1986	166,274	131,688	34,586	158,508	127,478	31,030	7,766	4,210	3,556
	1976	159,606	121,945	37,661	149,439	115,873	33,566	10,167	6,072	4,095
	1962	279,358	133,700	145,658	255,126	129,527	125,599	24,232	4,173	20,059
	1952	399,900	187,748	212,151	360,549	177,105	183,444	39,351	10,644	28,707
Total products	2006	8,566,794	6,047,774	2,519,020	7,924,700	5,626,360	2,298,340	642,094	421,414	220,681
	1996	9,592,782	6,154,838	3,437,944	8,559,585	5,772,708	2,786,877	1,033,197	382,130	651,067
	1986	8,079,385	5,302,343	2,777,042	7,260,376	5,091,186	2,169,190	819,009	211,157	607,852
	1976	5,925,105	4,233,597	1,691,508	5,510,562	4,020,933	1,489,629	414,543	212,664	201,879
	1962	5,524,797	2,811,700	2,713,097	4,941,846	2,667,110	2,274,736	582,951	144,590	438,361
	1952	5,011,341	3,037,732	1,973,609	4,347,748	2,790,859	1,556,889	663,593	246,873	416,720

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Logging residue	2006	2,343,907	1,147,103	1,196,804	816,264	349,299	466,965	1,527,643	797,804	729,839
	1996	1,522,542	581,666	940,876	812,513	368,436	444,077	710,029	213,230	496,799
	1986	1,945,074	721,408	1,223,666	763,922	364,075	399,847	1,181,152	357,333	823,819
	1976	1,181,678	612,162	569,516	548,189	252,279	295,910	633,489	359,883	273,606
	1962	1,421,744	389,274	1,032,470	582,951	144,590	438,361	838,793	244,684	594,109
	1952	1,141,013	286,694	854,319	705,505	130,046	575,459	435,508	156,649	278,860
Other removals	2006	1,242,431	416,967	825,464	955,383	341,517	613,865	287,048	75,450	211,599
	1996	1,164,298	429,883	734,415	812,681	337,118	475,563	351,617	92,765	258,852
	1986	1,140,642	341,342	799,300	674,295	285,764	388,531	466,347	55,578	410,769
	1976	704,871	253,847	451,024	512,472	197,872	314,600	192,399	55,975	136,424
	1962	891,427	187,760	703,668	557,138	149,703	407,436	334,289	38,057	296,232
	1952	1,329,139	482,753	846,386	982,553	417,774	564,779	346,586	64,979	281,607
Total harvest	2006	12,153,132	7,611,844	4,541,288	9,696,347	6,317,177	3,379,170	2,456,785	1,294,667	1,162,118
	1996	12,279,622	7,166,387	5,113,235	10,184,779	6,478,262	3,706,517	2,094,843	688,125	1,406,718
	1986	11,165,101	6,365,093	4,800,008	8,698,593	5,741,025	2,957,568	2,466,508	624,068	1,842,440
	1976	7,811,654	5,099,606	2,712,048	6,571,223	4,471,084	2,100,139	1,240,431	628,522	611,909
	1962	7,837,968	3,388,734	4,449,234	6,081,935	2,961,403	3,120,533	1,756,033	427,331	1,328,701
	1952	7,481,493	3,807,179	3,674,314	6,035,806	3,338,679	2,697,127	1,445,687	468,500	977,187
<b>Rocky Mountain</b>										
Sawlogs	2006	470,288	460,928	9,359	425,894	417,791	8,103	44,394	43,137	1,256
	1996	389,865	381,097	8,768	361,533	353,363	8,170	28,331	27,733	598
	1986	619,134	607,393	11,741	608,957	598,186	10,771	10,177	9,207	970
	1976	641,601	640,684	917	630,910	630,017	893	10,691	10,667	24
	1962	557,741	555,379	2,362	523,412	521,089	2,323	34,329	34,290	39
	1952*	360,089	359,937	152	336,258	336,120	138	23,831	23,817	14
Veneer logs	2006	36,131	36,131	–	35,387	35,387	–	744	744	–
	1996	63,563	63,461	102	63,163	63,063	100	400	398	2
	1986	77,888	77,695	193	77,879	77,695	184	9	–	9
	1976	65,113	65,092	21	63,971	63,950	21	1,142	1,142	–
	1962	18,762	18,721	41	18,762	18,721	41	–	–	–
	1952*	1,422	1,422	–	1,306	1,306	–	116	116	–
Pulpwood and composites	2006	21,922	18,122	3,800	20,097	16,349	3,748	1,825	1,774	51
	1996	31,770	26,987	4,783	24,097	19,385	4,712	7,673	7,602	71
	1986	39,321	39,171	150	28,912	28,762	150	10,409	10,409	–
	1976	25,234	25,151	83	23,446	23,363	83	1,788	1,788	–
	1962	22,666	22,531	135	17,325	17,190	135	5,341	5,341	–
	1952	17,481	17,349	132	16,262	16,136	126	1,219	1,214	6



**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Fuelwood	2006	119,797	79,952	39,845	5,614	4,575	1,040	114,183	75,378	38,805
	1996	172,500	98,730	73,770	7,336	2,894	4,442	165,164	95,836	69,328
	1986	164,410	84,644	79,766	10,989	5,784	5,205	153,421	78,860	74,561
	1976	24,735	23,910	825	4,313	4,302	11	20,422	19,608	814
	1962	28,334	27,939	395	788	771	17	27,546	27,168	378
	1952	47,246	32,375	14,871	3,889	2,634	1,255	43,357	29,741	13,616
Other products <sup>b</sup>	2006	34,910	31,782	3,129	21,310	19,189	2,121	13,600	12,593	1,008
	1996	29,991	23,559	6,432	21,885	16,002	5,883	8,106	7,557	549
	1986	47,094	43,602	3,492	44,168	40,922	3,246	2,926	2,680	246
	1976	19,841	18,210	1,631	17,924	16,380	1,544	1,917	1,830	87
	1962	23,814	21,901	1,913	15,438	13,582	1,856	8,376	8,319	57
	1952	25,765	24,649	1,117	25,523	24,545	978	242	103	139
Total products	2006	683,048	626,916	56,132	508,303	493,291	15,012	174,745	133,625	41,120
	1996	687,689	593,834	93,855	478,014	454,707	23,307	209,675	139,127	70,548
	1986	947,847	852,505	95,342	770,905	751,349	19,556	176,942	101,156	75,786
	1976	776,524	773,047	3,477	740,564	738,012	2,552	35,960	35,035	925
	1962	651,317	646,471	4,846	575,725	571,353	4,372	75,592	75,118	474
	1952	452,004	435,732	16,272	383,238	380,741	2,497	68,766	54,991	13,775
Logging residue	2006	135,090	133,874	1,216	26,024	25,734	290	109,066	108,140	927
	1996	160,263	152,664	7,599	47,204	45,085	2,119	113,059	107,579	5,480
	1986	96,895	91,353	5,542	96,126	91,341	4,785	769	12	757
	1976	91,725	91,411	314	91,712	91,407	305	13	4	9
	1962	75,606	75,127	479	75,592	75,118	474	14	9	5
	1952	46,419	45,666	753	45,895	45,596	299	524	70	454
Other removals	2006	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable
	1996	18,668	2,269	16,399	6,777	1,332	5,445	11,891	937	10,954
	1986	5,922	200	5,722	3,692	138	3,554	2,230	62	2,168
	1976	12,923	12,699	223	12,875	12,678	197	48	21	26
	1962	959	151	808	899	105	795	60	46	14
	1952	572	40	532	144	7	138	428	34	394
Total harvest	2006	818,138	760,790	57,349	534,327	519,025	15,302	283,811	241,765	42,047
	1996	866,620	748,767	117,853	531,995	501,124	30,871	334,625	247,643	86,982
	1986	1,050,664	944,058	106,606	870,723	842,828	27,895	179,941	101,230	78,711
	1976	881,172	877,158	4,015	845,151	842,097	3,054	36,021	35,061	961
	1962	727,882	721,749	6,133	652,216	646,576	5,641	75,665	75,173	492
	1952	498,995	481,438	17,556	429,277	426,343	2,934	69,717	55,095	14,623

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
<b>Pacific Coast (excluding Alaska)</b>										
Sawlogs	2006	1,843,348	1,770,341	73,007	1,779,926	1,708,945	70,981	63,421	61,396	2,026
	1996	1,735,445	1,684,475	50,971	1,656,683	1,605,751	50,932	78,763	78,724	39
	1986	2,263,721	2,234,564	29,157	2,140,423	2,113,427	26,996	123,298	121,137	2,161
	1976	2,705,219	2,640,847	64,372	2,538,273	2,478,951	59,322	166,946	161,896	5,050
	1962	2,543,971	2,537,636	6,335	2,349,476	2,344,030	5,446	194,495	193,606	889
	1952 <sup>a</sup>	2,648,232	2,642,352	5,880	2,383,070	2,380,535	2,535	265,162	261,817	3,345
Veneer logs	2006	289,731	284,843	4,888	282,447	277,755	4,692	7,284	7,088	196
	1996	332,848	321,228	11,620	299,688	288,290	11,398	33,160	32,938	222
	1986	611,681	609,331	2,350	528,642	526,711	1,931	83,039	82,620	419
	1976	767,037	763,630	3,407	673,801	670,575	3,226	93,236	93,055	181
	1962	608,663	561,344	47,319	490,317	442,998	47,319	118,346	118,346	–
	1952 <sup>a</sup>	240,883	240,788	95	211,310	211,310	–	29,573	29,478	95
Pulpwood and composites	2006	146,105	104,880	41,225	138,775	98,327	40,449	7,330	6,553	777
	1996	41,593	38,554	3,039	35,070	32,192	2,878	6,523	6,362	161
	1986	467,932	457,281	10,651	403,750	394,915	8,835	64,182	62,366	1,816
	1976	278,670	258,106	20,564	227,405	207,521	19,884	51,265	50,585	680
	1962	214,873	209,589	5,284	213,303	209,589	3,714	1,570	–	1,570
	1952	290,566	286,731	3,835	259,181	255,415	3,766	31,386	31,316	69
Fuelwood	2006	331,487	319,411	12,076	46,589	46,251	338	284,897	273,160	11,737
	1996	307,472	209,198	98,274	144,094	105,245	38,849	163,378	103,953	59,425
	1986	423,513	274,744	148,769	212,718	142,428	70,290	210,795	132,316	78,479
	1976	35,776	27,029	8,747	9,275	5,851	3,424	26,502	21,179	5,323
	1962	49,415	35,848	13,567	9,177	8,916	261	40,238	26,932	13,306
	1952	76,561	74,906	1,654	19,028	18,413	615	57,533	56,493	1,040
Other products <sup>b</sup>	2006	23,027	23,027	–	22,169	22,169	–	858	858	–
	1996	78,103	78,103	–	77,165	77,165	–	938	938	–
	1986	61,466	61,466	–	60,694	60,694	–	772	772	–
	1976	70,835	70,807	28	70,807	70,807	–	28	–	28
	1962	50,510	50,436	73	30,537	30,529	7	19,973	19,907	66
	1952	75,715	74,339	1,376	51,605	50,535	1,070	24,110	23,804	306
Total products	2006	2,633,697	2,502,501	131,196	2,269,907	2,153,447	116,460	363,790	349,054	14,736
	1996	2,495,461	2,331,558	163,903	2,212,699	2,108,643	104,056	282,762	222,915	59,847
	1986	3,828,313	3,637,386	190,927	3,346,227	2,905,626	101,033	482,086	731,760	89,894
	1976	3,857,537	3,760,419	97,118	3,519,560	3,433,704	85,856	337,977	326,715	11,262
	1962	3,467,432	3,394,853	72,579	3,092,810	3,036,062	56,748	374,622	358,791	15,831
	1952	3,331,957	3,319,116	12,841	2,924,193	2,916,207	7,986	407,764	402,909	4,855

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Logging residue	2006	706,734	658,990	47,744	138,220	131,001	7,219	568,514	527,989	40,525
	1996	259,290	251,086	8,204	135,300	130,242	5,058	123,990	120,844	3,146
	1986	1,221,454	1,200,222	21,232	495,529	487,379	8,150	725,925	712,843	13,082
	1976	753,549	721,549	32,000	425,115	395,280	29,835	328,434	326,269	2,165
	1962	825,205	807,874	17,332	373,421	357,791	15,630	451,784	450,083	1,702
	1952	398,517	397,586	931	397,889	397,026	863	628	560	68
Other removals	2006	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable
	1996	1,249	691	558	1,027	614	413	222	77	145
	1986	19,074	15,783	3,291	1,437	666	771	17,637	15,117	2,520
	1976	105,527	97,710	7,817	98,525	91,125	7,400	7,002	6,585	417
	1962	7,750	6,971	779	1,034	583	451	6,715	6,387	328
	1952	375,033	374,975	58	366,574	366,525	49	8,459	8,450	9
Total harvest	2006	3,340,432	3,161,492	178,940	2,408,127	2,284,449	123,679	932,304	877,043	55,261
	1996	2,756,000	2,583,335	172,665	2,349,026	2,239,499	109,527	406,974	343,836	63,138
	1986	5,068,841	4,853,391	215,450	3,503,625	3,393,671	109,954	1,565,216	1,459,720	105,496
	1976	4,716,613	4,579,678	136,935	4,043,200	3,920,109	123,091	673,413	659,569	13,844
	1962	4,300,387	4,209,698	90,689	3,467,265	3,394,436	72,829	833,122	815,261	17,860
	1952	4,105,507	4,091,677	13,831	3,688,656	3,679,758	8,898	416,852	411,919	4,933
<b>Alaska</b>										
Sawlogs	2006	44,434	44,349	85	40,937	40,895	42	3,497	3,453	43
	1996	34,543	34,360	183	33,802	33,623	179	741	737	4
	1986	83,453	83,005	448	80,836	80,389	447	2,617	2,616	2
	1976	103,316	102,185	1,131	93,340	92,209	1,131	9,976	9,976	–
	1962	86,880	86,880	0	65,190	65,190	0	21,690	21,690	–
	1952 <sup>a</sup>	10,031	9,933	99	9,612	9,612	0	420	321	99
Veneer logs	2006	–	–	–	–	–	–	–	–	–
	1996	–	–	–	–	–	–	–	–	–
	1986	4,774	4,774	0	4,748	4,748	0	26	26	–
	1976	12,081	12,081	0	10,032	10,032	0	2,049	2,049	–
	1962	8,603	8,603	0	8,036	8,036	0	567	567	–
	1952 <sup>a</sup>	512	509	3	479	479	0	33	31	3
Pulpwood and composites	2006	7,741	2,555	5,186	7,663	2,529	5,134	78	26	52
	1996	19,255	19,183	72	17,278	17,213	65	1,977	1,970	7
	1986	1,383	1,120	263	671	444	227	713	676	36
	1976	810	67	743	810	67	743	–	–	–
	1962	44	44	0	44	44	0	–	–	–
	1952	146	146	0	130	130	0	16	16	–

**Table 41. (cont.)** Total volume of roundwood harvested in the United States by region, source of material, species group, and category, 2006, 1996, 1986, 1976, 1962, 1952

Category	Year	Source of material								
		All sources			Growing stock			Other sources		
		Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods	Total	Softwoods	Hardwoods
<i>Thousand cubic feet</i>										
Fuelwood	2006	9,369	5,649	3,720	34	34	1	9,334	5,616	3,719
	1996	12,782	7,077	5,705	10,173	5,832	4,341	2,609	1,245	1,364
	1986	13,056	7,615	5,440	9,332	4,993	4,339	3,724	2,623	1,101
	1976	1,758	467	1,290	1,330	39	1,290	428	428	–
	1962	638	638	0	20	20	0	617	617	–
	1952	39	11	28	7	7	–	32	4	28
Other products <sup>b</sup>	2006	468	432	35	293	268	25	175	165	10
	1996	79,478	79,475	3	79,478	79,475	3	–	–	–
	1986	2,313	2,313	–	2,313	2,313	–	–	–	–
	1976	446	446	–	446	446	–	–	–	–
	1962	1,301	1,301	–	477	477	–	824	824	–
	1952	25	17	8	16	16	–	8	0	8
Total products	2006	62,011	52,985	9,027	48,927	43,725	5,202	13,084	9,260	3,825
	1996	146,058	140,095	5,963	140,731	136,143	4,588	5,327	3,953	1,375
	1986	104,979	98,827	6,152	97,900	92,887	5,013	7,079	5,940	1,139
	1976	118,411	115,247	3,164	105,958	102,794	3,164	12,453	12,453	–
	1962	97,466	97,466	0	73,767	73,767	0	23,699	23,699	–
	1952	10,753	10,616	138	10,244	10,244	0	509	372	138
Logging residue	2006	26,416	24,230	2,186	17,217	15,578	1,639	9,199	8,652	547
	1996	71,606	70,509	1,097	40,696	40,061	635	30,910	30,448	462
	1986	39,058	38,862	196	24,982	24,868	114	14,076	13,994	82
	1976	79,511	79,511	0	23,679	23,679	0	55,832	55,832	–
	1962	2,142	2,142	0	2,128	2,128	0	14	14	–
	1952	33,981	33,981	0	4,643	4,643	0	29,338	29,338	–
Other removals	2006	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable	unavailable
	1996	1,101	1,095	6	1,101	1,095	6	–	–	–
	1986	210	126	84	210	126	84	–	–	–
	1976	100	100	0	100	100	0	–	–	–
	1962	886	876	10	886	876	10	–	–	–
	1952	0	0	0	0	0	0	–	–	–
Total harvest	2006	88,427	77,214	11,213	66,144	59,303	6,841	22,283	17,912	4,372
	1996	218,765	211,699	7,066	182,528	177,299	5,229	36,237	34,401	1,837
	1986	144,247	137,815	6,432	123,092	117,881	5,211	21,155	19,934	1,221
	1976	198,022	194,858	3,164	129,737	126,573	3,164	68,285	68,285	–
	1962	100,494	100,484	10	76,781	76,771	10	23,713	23,713	–
	1952	44,734	44,597	138	14,887	14,887	0	29,847	29,710	138

<sup>a</sup>Sawlog and veneer data corrected for 1952. <sup>b</sup>Includes poles, pilings, posts, cooperage, and miscellaneous products.

**Table 42.** Weight of bark and wood residue from primary wood-using mills by type of material, species group, region, subregion, and type of use, 2006

Region, subregion, and type of use	Total residue			Bark residue			Total coarse and fine			Coarse materials			Fine materials		
	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods
<i>Thousand dry tons</i>															
<b>North</b>															
<b>Northeast</b>															
Fiber products	1,234	292	942	30	8	23	1,204	284	919	1,159	263	896	45	21	24
Fuel	1,554	345	1,209	232	59	173	1,321	286	1,036	808	198	610	513	88	425
Other uses	1,917	481	1,436	652	146	506	1,265	335	930	295	61	233	971	274	697
Not used	389	109	281	103	30	74	286	79	207	157	52	105	129	27	102
<b>Northeast Total</b>	<b>5,094</b>	<b>1,227</b>	<b>3,868</b>	<b>1,017</b>	<b>243</b>	<b>776</b>	<b>4,076</b>	<b>984</b>	<b>3,092</b>	<b>2,419</b>	<b>574</b>	<b>1,844</b>	<b>1,658</b>	<b>410</b>	<b>1,248</b>
<b>North Central</b>															
Fiber products	1,564	463	1,100	8	3	5	1,556	461	1,096	1,434	387	1,047	122	73	49
Fuel	3,456	722	2,734	1,913	410	1,504	1,542	312	1,230	493	63	430	1,049	249	800
Other uses	2,269	243	2,026	863	113	749	1,407	130	1,277	654	42	612	753	88	665
Not used	233	36	197	60	11	49	173	25	148	90	16	74	83	9	74
<b>North Central Total</b>	<b>7,522</b>	<b>1,464</b>	<b>6,057</b>	<b>2,844</b>	<b>537</b>	<b>2,307</b>	<b>4,678</b>	<b>928</b>	<b>3,751</b>	<b>2,671</b>	<b>508</b>	<b>2,163</b>	<b>2,007</b>	<b>419</b>	<b>1,588</b>
<b>North Total</b>															
Fiber products	2,798	755	2,042	38	11	28	2,760	745	2,015	2,593	650	1,943	167	94	73
Fuel	5,010	1,067	3,943	2,145	469	1,677	2,863	598	2,266	1,301	261	1,040	1,562	337	1,225
Other uses	4,186	724	3,462	1,515	259	1,255	2,672	465	2,207	949	103	845	1,724	362	1,362
Not used	622	145	478	163	41	123	459	104	355	247	68	179	212	36	176
<b>North Total</b>	<b>12,616</b>	<b>2,691</b>	<b>9,925</b>	<b>3,861</b>	<b>780</b>	<b>3,083</b>	<b>8,754</b>	<b>1,912</b>	<b>6,843</b>	<b>5,090</b>	<b>1,082</b>	<b>4,007</b>	<b>3,665</b>	<b>829</b>	<b>2,836</b>
<b>South</b>															
<b>Southeast</b>															
Fiber products	8,320	6,755	1,565	6	0	6	8,315	6,755	1,559	6,873	5,370	1,502	1,442	1,385	57
Fuel	8,499	6,099	2,399	4,424	3,261	1,163	4,075	2,838	1,237	423	235	188	3,652	2,603	1,049
Other uses	3,545	2,632	913	1,634	1,195	439	1,911	1,436	475	641	360	281	1,270	1,076	194
Not used	101	54	46	37	30	7	64	24	40	31	16	15	33	8	24
<b>Southeast Total</b>	<b>20,465</b>	<b>15,540</b>	<b>4,923</b>	<b>6,101</b>	<b>4,486</b>	<b>1,615</b>	<b>14,365</b>	<b>11,053</b>	<b>3,311</b>	<b>7,968</b>	<b>5,981</b>	<b>1,986</b>	<b>6,397</b>	<b>5,072</b>	<b>1,324</b>
<b>South Central</b>															
Fiber products	11,980	9,609	2,371	0	0	0	11,979	9,609	2,371	10,789	8,449	2,339	1,191	1,159	32
Fuel	17,166	11,784	5,381	8,591	5,714	2,877	8,574	6,070	2,504	1,258	769	489	7,317	5,301	2,015
Other uses	2,989	1,785	1,204	1,177	600	577	1,812	1,185	627	715	530	185	1,098	655	443
Not used	392	136	255	83	30	53	309	106	202	161	39	121	148	67	81
<b>South Central Total</b>	<b>32,527</b>	<b>23,314</b>	<b>9,211</b>	<b>9,851</b>	<b>6,344</b>	<b>3,507</b>	<b>22,674</b>	<b>16,970</b>	<b>5,704</b>	<b>12,923</b>	<b>9,787</b>	<b>3,134</b>	<b>9,754</b>	<b>7,182</b>	<b>2,571</b>

**Table 42. (cont.)** Weight of bark and wood residue from primary wood-using mills by type of material, species group, region, subregion, and type of use, 2006

Region, subregion, and type of use	Total residue			Bark residue			Total coarse and fine			Coarse materials			Fine materials		
	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods
<i>Thousand dry tons</i>															
<b>South Total</b>															
Fiber products	20,300	16,364	3,936	6	0	6	20,294	16,364	3,930	17,662	13,819	3,841	2,633	2,544	89
Fuel	25,665	17,883	7,780	13,015	8,975	4,040	12,649	8,908	3,741	1,681	1,004	677	10,969	7,904	3,064
Other uses	6,534	4,417	2,117	2,811	1,795	1,016	3,723	2,621	1,102	1,356	890	466	2,368	1,731	637
Not used	493	190	301	120	60	60	373	130	242	192	55	136	181	75	105
<b>South Total</b>	<b>52,992</b>	<b>38,854</b>	<b>14,134</b>	<b>15,952</b>	<b>10,830</b>	<b>5,122</b>	<b>37,039</b>	<b>28,023</b>	<b>9,015</b>	<b>20,891</b>	<b>15,768</b>	<b>5,120</b>	<b>16,151</b>	<b>12,254</b>	<b>3,895</b>
<b>Rocky Mountain</b>															
<b>Great Plains</b>															
Fiber products	154	148	6	1	1	0	152	147	6	115	110	6	37	37	0
Fuel	43	33	10	33	31	2	10	2	7	8	1	7	1	1	0
Other uses	93	49	44	31	20	10	62	28	34	18	1	17	44	28	17
Not used	16	2	14	5	1	4	11	1	10	7	0	6	5	1	4
<b>Great Plains Total</b>	<b>306</b>	<b>232</b>	<b>74</b>	<b>70</b>	<b>53</b>	<b>16</b>	<b>235</b>	<b>178</b>	<b>57</b>	<b>148</b>	<b>112</b>	<b>36</b>	<b>87</b>	<b>67</b>	<b>21</b>
<b>Intermountain</b>															
Fiber products	2,559	2,559	0	0	0	0	2,559	2,559	0	1,815	1,815	0	744	744	0
Fuel	1,193	1,193	0	738	738	0	455	455	0	112	112	0	343	343	0
Other uses	501	501	0	213	213	0	288	288	0	109	109	0	179	179	0
Not used	62	62	0	36	36	0	26	26	0	18	18	0	8	8	0
<b>Intermountain Total</b>	<b>4,315</b>	<b>4,315</b>	<b>0</b>	<b>987</b>	<b>987</b>	<b>0</b>	<b>3,328</b>	<b>3,328</b>	<b>0</b>	<b>2,054</b>	<b>2,054</b>	<b>0</b>	<b>1,274</b>	<b>1,274</b>	<b>0</b>
<b>Rocky Mountain Total</b>															
Fiber products	2,713	2,707	6	1	1	0	2,711	2,706	6	1,930	1,925	6	781	781	0
Fuel	1,236	1,226	10	771	769	2	465	457	7	120	113	7	344	344	0
Other uses	594	550	44	244	233	10	350	316	34	127	110	17	223	207	17
Not used	78	64	14	41	37	4	37	27	10	25	18	6	13	9	4
<b>Rocky Mountain Total</b>	<b>4,621</b>	<b>4,547</b>	<b>74</b>	<b>1,057</b>	<b>1,040</b>	<b>16</b>	<b>3,563</b>	<b>3,506</b>	<b>57</b>	<b>2,202</b>	<b>2,166</b>	<b>36</b>	<b>1,361</b>	<b>1,341</b>	<b>21</b>
<b>Pacific Coast</b>															
<b>Alaska</b>															
Fiber products	32	32	–	0	0	–	32	32	–	32	32	0	0	0	–
Fuel	18	18	–	8	8	–	10	10	–	4	4	0	6	6	–
Other uses	4	4	–	1	1	–	3	3	–	2	2	0	2	2	–
Not used	15	15	–	6	6	–	9	9	–	3	3	0	6	6	–
<b>Alaska Total</b>	<b>69</b>	<b>69</b>	<b>–</b>	<b>15</b>	<b>15</b>	<b>–</b>	<b>54</b>	<b>54</b>	<b>–</b>	<b>41</b>	<b>41</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>–</b>

**Table 42. (cont.)** Weight of bark and wood residue from primary wood-using mills by type of material, species group, region, subregion, and type of use, 2006

Region, subregion, and type of use	Total residue			Bark residue			Total coarse and fine			Coarse materials			Fine materials		
	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods
<i>Thousand dry tons</i>															
<b>Pacific Northwest</b>															
Fiber products	8,122	8,060	62	125	123	1	7,997	7,937	60	5,898	5,850	48	2,099	2,087	12
Fuel	3,153	3,116	37	2,045	2,028	17	1,108	1,088	20	704	691	13	404	397	7
Other uses	1,543	1,521	23	797	786	11	746	735	12	476	469	8	270	266	4
Not used	38	37	0	12	12	0	26	26	0	5	5	0	21	21	0
<b>Pacific Northwest Total</b>	<b>12,856</b>	<b>12,734</b>	<b>122</b>	<b>2,979</b>	<b>2,949</b>	<b>29</b>	<b>9,877</b>	<b>9,786</b>	<b>92</b>	<b>7,083</b>	<b>7,015</b>	<b>69</b>	<b>2,794</b>	<b>2,771</b>	<b>23</b>
<b>Pacific Southwest</b>															
Fiber products	1,477	1,477	–	0	0	–	1,477	1,477	0	1,083	1,083	–	393	393	–
Fuel	1,665	1,665	–	666	666	–	999	999	0	475	475	–	524	524	–
Other uses	422	422	–	235	235	–	187	187	0	73	73	–	114	114	–
Not used	65	65	–	24	24	–	41	41	0	31	31	–	10	10	–
<b>Pacific Southwest Total</b>	<b>3,629</b>	<b>3,629</b>	<b>–</b>	<b>925</b>	<b>925</b>	<b>–</b>	<b>2,704</b>	<b>2,704</b>	<b>0</b>	<b>1,662</b>	<b>1,662</b>	<b>–</b>	<b>1,041</b>	<b>1,041</b>	<b>–</b>
<b>Pacific Coast Total</b>															
Fiber products	9,631	9,569	62	125	123	1	9,506	9,446	60	7,013	6,965	48	2,492	2,480	12
Fuel	4,836	4,799	37	2,719	2,702	17	2,117	2,097	20	1,183	1,170	13	934	927	7
Other uses	1,969	1,947	23	1,033	1,022	11	936	925	12	551	544	8	386	382	4
Not used	118	117	0	42	42	0	76	76	0	39	39	0	37	37	0
<b>Pacific Coast Total</b>	<b>16,554</b>	<b>16,432</b>	<b>122</b>	<b>3,919</b>	<b>3,889</b>	<b>29</b>	<b>12,635</b>	<b>12,544</b>	<b>92</b>	<b>8,786</b>	<b>8,718</b>	<b>69</b>	<b>3,849</b>	<b>3,826</b>	<b>23</b>
<b>United States</b>															
Fiber products	35,442	29,395	6,046	170	135	35	35,271	29,261	6,011	29,198	23,359	5,838	6,073	5,899	174
Fuel	36,747	24,975	11,770	18,650	12,915	5,736	18,094	12,060	6,034	4,285	2,548	1,737	13,809	9,512	4,296
Other uses	13,283	7,638	5,646	5,603	3,309	2,292	7,681	4,327	3,355	2,983	1,647	1,336	4,701	2,682	2,020
Not used	1,311	516	793	366	180	187	945	337	607	503	180	321	443	157	285
<b>U.S. Total</b>	<b>86,783</b>	<b>62,524</b>	<b>24,255</b>	<b>24,789</b>	<b>16,539</b>	<b>8,250</b>	<b>61,991</b>	<b>45,985</b>	<b>16,007</b>	<b>36,969</b>	<b>27,734</b>	<b>9,232</b>	<b>25,026</b>	<b>18,250</b>	<b>6,775</b>

**Table 43.** Average annual area of timber land harvested by region and harvest method, 2001–2005

Region and subregion	Timberland area	Annual area harvested	Percent area cut per year	Clearcut	Partial cut
	acres			acres	
<b>North</b>					
Northeast	79,741,192	1,798,640	2.3%	591,663	1,206,977
North Central	83,333,990	1,450,559	1.7%	356,003	1,094,556
<b>Total</b>	<b>163,075,182</b>	<b>3,249,199</b>	<b>2.0%</b>	<b>947,667</b>	<b>2,301,533</b>
<b>South</b>					
Southeast	85,664,725	2,292,187	2.7%	948,614	1,343,573
South Central	117,400,285	3,871,021	3.3%	1,763,407	2,107,614
<b>Total</b>	<b>203,065,010</b>	<b>6,163,208</b>	<b>3.0%</b>	<b>2,712,021</b>	<b>3,451,187</b>
<b>Rocky Mountain</b>					
Great Plains	5,287,438	57,279	1.1%	9,362	47,916
Intermountain	65,359,360	539,835	0.8%	207,980	331,855
<b>Total</b>	<b>70,646,799</b>	<b>597,113</b>	<b>0.8%</b>	<b>217,342</b>	<b>379,771</b>
<b>Pacific Coast</b>					
Pacific Northwest	55,565,000	546,769	1.0%	239,706	307,063
Pacific Southwest	20,250,434	267,476	1.3%	137,000	130,476
<b>Total</b>	<b>75,815,434</b>	<b>814,245</b>	<b>1.1%</b>	<b>376,706</b>	<b>437,539</b>
<b>U.S. Total</b>	<b>512,602,425</b>	<b>10,823,765</b>	<b>2.1%</b>	<b>4,253,736</b>	<b>6,570,030</b>



**Table 44.** Average annual area of timber land planted in the United States by region and subregion, 1928–2003<sup>a</sup>

Year	Total all regions	Northeast	North Central	Total North	Southeast	South Central	Total South	Great Plains	Inter-mountain	Total Rocky Mountain	Pacific Northwest	Pacific Southwest	Total Pacific Coast
<i>acres</i>													
1928	196,822	80,343	63,654	143,997	778	18,959	19,737	3,565	3,870	7,435	9,792	15,861	25,653
1929	193,080	72,832	64,175	137,007	4,134	22,594	26,728	4,380	5,351	9,731	9,651	9,963	19,614
1930	240,221	100,505	85,756	186,261	9,579	16,597	26,176	4,627	8,476	13,103	8,899	5,782	14,681
1931	268,769	124,351	105,270	229,621	6,764	8,577	15,341	5,911	8,314	14,225	5,114	4,468	9,582
1932	218,803	111,061	70,357	181,418	8,142	7,333	15,475	7,570	6,647	14,217	4,096	3,597	7,693
1934	314,231	135,721	129,896	265,617	9,980	10,442	20,422	5,590	8,553	14,143	7,044	7,005	14,049
1935	423,254	137,091	182,678	319,769	29,099	36,075	65,174	13,128	11,063	24,191	4,331	9,789	14,120
1936	569,775	172,127	197,588	369,715	78,552	74,626	153,178	12,491	11,717	24,208	7,249	15,425	22,674
1937	401,205	79,262	145,086	224,348	41,310	75,514	116,824	28,325	10,187	38,512	8,705	12,816	21,521
1938	501,891	61,497	165,190	226,687	65,509	128,586	194,095	44,962	15,752	60,714	12,414	7,981	20,395
1939	479,108	56,882	146,777	203,659	72,484	103,011	175,495	59,970	17,615	77,585	12,917	9,452	22,369
1940	518,035	68,248	153,012	221,260	74,866	123,866	198,732	48,616	26,265	74,881	9,799	13,363	23,162
1945	135,362	13,941	33,788	47,729	32,081	19,408	51,489	18,794	5,494	24,288	9,170	2,686	11,856
1946	143,451	18,705	43,919	62,624	34,448	19,745	54,193	8,475	3,938	12,413	13,051	1,170	14,221
1947	168,166	22,188	66,283	88,471	27,284	26,944	54,228	13,644	5,115	18,759	5,250	1,458	6,708
1948	332,971	24,227	70,145	94,372	95,522	94,315	189,837	16,198	6,762	22,960	23,257	2,545	25,802
1949	341,522	30,403	58,985	89,388	108,961	96,813	205,774	11,235	8,851	20,086	25,444	830	26,274
1950	480,779	52,352	69,295	121,647	142,671	142,036	284,707	15,617	6,980	22,597	48,371	3,457	51,828
1951	453,078	60,004	88,623	148,627	101,310	145,930	247,240	21,191	6,895	28,086	24,513	4,612	29,125
1952	519,622	68,575	101,503	170,078	116,637	136,209	252,846	25,297	8,061	33,358	55,615	7,725	63,340
1953	710,097	68,956	124,291	193,247	186,653	236,505	423,158	25,470	7,865	33,335	54,137	6,220	60,357
1954	808,210	145,738	138,672	284,410	213,987	199,182	413,169	29,543	18,431	47,974	59,473	3,184	62,657
1955	779,304	113,112	123,754	236,866	280,644	206,480	487,124	1,163	3,510	4,673	45,760	4,881	50,641
1956	886,235	95,234	132,655	227,889	307,565	273,180	580,745	1,810	5,826	7,636	63,876	6,089	69,965
1957	1,138,356	98,219	150,172	248,391	467,151	324,375	791,526	1,672	5,521	7,193	81,444	9,802	91,246
1958	1,532,734	108,381	160,568	268,949	591,123	503,666	1,094,789	2,208	5,557	7,765	152,058	9,173	161,231
1959	2,116,691	106,108	159,636	265,744	834,141	823,770	1,657,911	3,582	10,588	14,170	165,230	13,636	178,866
1960	2,100,019	110,449	178,496	288,945	824,954	759,421	1,584,375	3,126	11,835	14,961	189,870	21,868	211,738
1961	1,760,662	109,395	172,271	281,666	661,245	563,012	1,224,257	2,844	16,637	19,481	212,216	23,042	235,258
1962	1,365,783	87,992	162,740	250,732	403,157	431,075	834,232	2,141	26,062	28,203	219,715	32,901	252,616
1963	1,325,334	84,619	163,232	247,851	439,930	378,042	817,972	5,877	32,576	38,453	182,563	38,495	221,058
1964	1,312,686	81,926	164,924	246,850	448,523	327,586	776,109	2,897	40,513	43,410	208,463	37,854	246,317
1965	1,285,330	81,603	165,245	246,848	441,303	285,027	726,330	5,479	61,999	67,478	208,695	35,979	244,674
1966	1,280,826	98,975	142,625	241,600	443,237	273,036	716,273	4,945	66,888	71,833	209,464	41,656	251,120
1967	1,372,773	100,118	126,415	226,533	484,369	300,507	784,876	3,968	63,754	67,722	247,482	46,160	293,642
1968	1,438,609	101,152	156,656	257,808	475,413	339,114	814,527	4,770	67,313	72,083	239,583	54,608	294,191
1969	1,431,311	100,281	130,553	230,834	455,244	369,762	825,006	2,929	72,062	74,991	250,464	50,016	300,480

**Table 44. (cont.)** Average annual area of timber land planted in the United States by region and subregion, 1928–2003<sup>a</sup>

Year	Total all regions	Northeast	North Central	Total North	Southeast	South Central	Total South	Great Plains	Inter-mountain	Total Rocky Mountain	Pacific Northwest	Pacific Southwest	Total Pacific Coast
<i>acres</i>													
1970	1,576,672	87,689	115,509	203,198	442,550	498,804	941,354	3,288	72,797	76,085	297,512	58,523	356,035
1971	1,667,093	89,982	154,974	244,956	519,075	505,075	1,024,150	4,636	82,956	87,592	254,289	56,106	310,395
1972	1,646,325	80,370	125,379	205,749	516,809	497,472	1,014,281	3,957	67,603	71,560	291,183	63,552	354,735
1973	1,720,141	64,521	118,229	182,750	480,748	570,050	1,050,798	12,923	79,260	92,183	328,810	65,600	394,410
1974	1,575,667	55,956	108,908	164,864	516,286	520,266	1,036,552	4,276	63,436	67,712	261,001	45,538	306,539
1975	1,900,003	52,255	111,033	163,288	630,908	638,461	1,269,369	4,531	72,899	77,430	332,539	57,377	389,916
1976	1,858,877	60,642	103,030	163,672	574,219	616,103	1,190,322	3,255	75,274	78,529	360,774	65,580	426,354
1977	1,942,863	35,422	100,396	135,818	614,872	705,271	1,320,143	5,143	56,493	61,636	341,874	83,392	425,266
1978	2,087,889	86,456	139,985	226,441	636,227	619,142	1,255,369	12,238	73,770	86,008	410,062	110,009	520,071
1979	2,060,208	60,721	117,227	177,948	526,058	741,937	1,267,995	17,791	96,286	114,077	376,178	124,010	500,188
1980	2,262,080	43,560	128,575	172,135	705,798	784,452	1,490,250	16,044	118,852	134,896	356,410	108,389	464,799
1981	1,926,122	99,683	96,849	196,532	616,014	571,661	1,187,675	9,175	108,941	118,116	337,100	86,699	423,799
1982	2,374,207	41,171	95,159	136,330	730,574	974,935	1,705,509	14,052	100,843	114,895	347,695	69,778	417,473
1983	2,452,598	37,310	135,531	172,841	855,030	957,850	1,812,880	8,294	84,808	93,102	314,156	59,619	373,775
1984	2,552,375	36,624	129,731	166,355	949,646	907,175	1,856,821	13,531	96,839	110,370	360,413	58,416	418,829
1985	2,694,727	43,653	114,781	158,434	1,065,054	963,755	2,028,809	13,941	82,003	95,944	354,465	57,075	411,540
1986	2,752,544	31,054	106,247	137,301	1,110,364	1,004,091	2,114,455	13,634	79,883	93,517	350,375	56,896	407,271
1987	3,032,398	30,814	107,464	138,278	1,304,773	1,186,539	2,491,312	13,289	77,541	90,830	247,259	64,719	311,978
1988	3,393,841	31,037	109,533	140,570	1,387,581	1,327,647	2,715,228	14,733	69,586	84,319	376,114	77,610	453,724
1989	3,021,110	32,789	98,134	130,923	1,228,674	1,077,265	2,305,939	14,138	85,041	99,179	394,802	90,267	485,069
1990	2,861,642	32,078	135,846	167,924	990,806	1,036,812	2,027,618	23,787	89,500	113,287	461,598	91,215	552,813
1991	2,557,948	27,249	117,733	144,982	834,096	925,395	1,759,491	19,984	100,368	120,352	433,102	100,021	533,123
1992	2,544,311	34,194	119,362	153,556	834,353	956,152	1,790,505	21,068	109,619	130,687	389,650	79,913	469,563
1993	2,419,271	27,095	117,195	144,290	820,509	898,352	1,718,861	19,661	104,217	123,878	360,401	71,841	432,242
1994	2,477,012	25,472	100,507	125,979	916,257	887,792	1,804,049	16,066	105,177	121,243	355,837	69,904	425,741
1995	2,421,401	26,112	103,982	130,094	811,506	878,035	1,689,541	19,975	102,069	122,044	411,840	67,882	479,722
1996	2,406,455	30,739	112,897	143,636	933,361	906,101	1,839,462	20,316	93,212	113,528	279,254	30,575	309,829
1997	2,637,508	30,727	79,500	110,227	959,996	1,110,853	2,070,849	12,389	70,494	82,883	295,247	78,302	373,549
1998	2,651,538	29,869	93,165	123,034	1,018,613	1,081,617	2,100,230	12,266	68,690	80,955	283,410	63,910	347,320
1999	2,664,317	29,010	106,830	135,840	1,077,230	1,052,380	2,129,610	12,142	65,634	77,776	271,573	49,518	321,091
2000	2,373,016	45,481	128,883	174,364	882,649	1,076,549	1,959,198	24,424	57,226	81,650	127,730	30,074	157,804
2001	2,543,845	28,591	106,497	135,088	935,448	1,062,944	1,998,392	28,909	52,542	81,451	267,718	61,196	328,914
2002	2,368,287	44,428	162,611	207,039	797,677	1,048,871	1,846,548	29,447	34,649	64,096	232,062	18,542	250,604
2003	1,801,215	11,939	118,736	130,675	574,681	736,983	1,311,664	9,276	64,636	73,912	261,919	23,045	284,964

<sup>a</sup> Data from Forest Service, State and Private Forestry Tree Planters Notes. This data reflects only acres planted, which includes replanting of acres of previous plantings harvested and does not reflect all forest regeneration in the United States. Most regeneration in the United States is by natural means including natural seeding, stump sprouts or root sprouts, from existing trees.

**Table 45.** Number of live trees on timber land in the United States by subregion, species, and diameter class, 1977 and 2007<sup>a</sup>

Subregion	Years	Species grp.	million trees												All classes
			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	21.0-28.9	29.0+	
Northeast	1977	Hardwoods	18,094	8,560	4,267	2,402	1,343	744	406	215	114	61	60	10	36,275
	1977	Softwoods	8,329	4,603	2,448	1,267	630	304	139	68	32	15	14	2	17,851
	1977	All Species	26,424	13,162	6,714	3,670	1,973	1,047	546	283	146	76	74	12	54,127
	2007	Hardwoods	23,018	6,546	3,203	2,124	1,500	987	620	375	204	106	117	15	38,815
	2007	Softwoods	11,112	2,772	1,365	872	538	333	196	109	63	33	40	5	17,437
	2007	All Species	34,130	9,318	4,568	2,997	2,038	1,321	815	485	267	139	156	20	56,253
North Central	1977	Hardwoods	17,377	7,570	3,860	2,147	1,201	643	367	195	101	53	57	6	33,577
	1977	Softwoods	5,063	2,851	1,465	663	273	114	53	27	14	7	7	0	10,537
	1977	All Species	22,440	10,421	5,325	2,809	1,474	757	420	222	114	60	63	7	44,114
	2007	Hardwoods	24,328	7,144	3,373	2,154	1,417	899	561	332	193	108	127	19	40,655
	2007	Softwoods	6,434	2,672	1,419	811	419	208	102	51	25	14	15	1	12,169
	2007	All Species	30,762	9,815	4,792	2,964	1,836	1,107	663	382	218	122	142	20	52,824
Southeast	1977	Hardwoods	31,283	8,852	3,276	1,679	950	563	337	193	106	57	66	9	47,368
	1977	Softwoods	8,625	5,219	2,812	1,511	817	436	227	110	47	21	16	1	19,842
	1977	All Species	39,907	14,071	6,088	3,190	1,766	999	564	303	153	78	82	10	67,210
	2007	Hardwoods	27,270	6,651	2,608	1,484	950	627	415	269	160	94	116	18	40,663
	2007	Softwoods	6,944	3,996	2,704	1,718	865	451	243	124	64	32	30	3	17,173
	2007	All Species	34,214	10,646	5,312	3,201	1,815	1,077	658	393	224	127	146	21	57,836
South Central	1977	Hardwoods	41,716	12,686	4,654	2,327	1,364	811	500	298	162	88	105	14	64,726
	1977	Softwoods	8,632	4,655	2,391	1,392	811	479	266	140	70	34	28	2	18,898
	1977	All Species	50,347	17,341	7,045	3,718	2,175	1,290	766	439	232	121	133	16	83,624
	2007	Hardwoods	36,574	9,069	3,708	2,151	1,348	880	588	373	228	132	168	24	55,242
	2007	Softwoods	7,377	4,052	2,380	1,485	768	441	264	158	83	46	48	5	17,108
	2007	All Species	43,951	13,121	6,088	3,635	2,116	1,321	853	531	311	178	216	29	72,349
Great Plains	1977	Hardwoods	412	247	145	77	43	26	16	10	6	4	6	1	994
	1977	Softwoods	301	155	92	59	37	22	12	6	3	1	1	0	690
	1977	All Species	713	402	238	136	80	47	28	16	9	5	7	1	1,684
	2007	Hardwoods	523	247	155	97	60	35	21	14	9	6	10	3	1,180
	2007	Softwoods	231	104	72	63	43	27	16	8	4	2	1	0	572
	2007	All Species	754	351	227	161	103	62	37	22	13	8	11	3	1,752

**Table 45. (cont.)** Number of live trees on timber land in the United States by subregion, species, and diameter class, 1977 and 2007<sup>a</sup>

Subregion	Years	Species grp.	million trees												All classes
			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	21.0-28.9	29.0+	
Inter-mountain	1977	Hardwoods	1,447	961	672	324	154	64	30	15	7	4	4	0	3,683
	1977	Softwoods	9,600	5,671	3,580	2,191	1,290	745	445	265	165	103	154	31	24,240
	1977	All Species	11,046	6,633	4,252	2,515	1,444	808	475	280	172	107	158	31	27,923
	2007	Hardwoods	3,091	931	534	351	198	107	54	22	10	6	6	1	5,310
	2007	Softwoods	10,294	5,110	3,235	2,274	1,468	933	581	361	217	129	184	35	24,820
	2007	All Species	13,384	6,041	3,769	2,625	1,666	1,040	635	383	227	135	189	36	30,130
Pacific Northwest	1977	Hardwoods	3,060	1,628	592	353	208	114	66	39	23	14	19	4	6,120
	1977	Softwoods	11,369	5,406	2,389	1,502	985	676	479	359	273	206	476	328	24,449
	1977	All Species	14,429	7,034	2,981	1,854	1,194	790	545	399	296	220	496	333	30,569
	2007	Hardwoods	1,295	509	336	229	140	91	53	37	22	14	17	4	2,744
	2007	Softwoods	6,611	2,708	1,790	1,298	944	672	466	324	225	160	331	147	15,675
	2007	All Species	7,906	3,217	2,126	1,526	1,084	762	518	361	248	173	348	150	18,419
Pacific Southwest	1977	Hardwoods	1,233	526	200	117	66	41	26	16	11	8	13	4	2,262
	1977	Softwoods	2,745	1,382	416	257	176	197	97	72	52	40	92	61	5,588
	1977	All Species	3,978	1,908	616	374	242	238	123	89	63	49	106	64	7,850
	2007	Hardwoods	1,674	614	421	260	155	97	57	37	23	13	104	5	3,377
	2007	Softwoods	1,799	776	511	357	260	186	140	107	79	55	112	69	4,450
	2007	All Species	3,473	1,390	931	617	414	282	197	143	101	68	216	74	7,827
<b>U.S.</b>	1977	Hardwoods	114,621	41,030	17,666	9,426	5,329	3,005	1,748	982	530	289	331	48	195,006
<b>Total</b>	1977	Softwoods	54,665	29,942	15,593	8,840	5,019	2,973	1,718	1,048	656	426	788	426	122,094
	1977	All Species	169,285	70,972	33,259	18,267	10,348	5,978	3,467	2,030	1,186	716	1,119	474	317,101
	2007	Hardwoods	117,773	31,710	14,337	8,849	5,768	3,722	2,369	1,459	848	479	665	89	187,986
	2007	Softwoods	50,802	22,190	13,476	8,877	5,305	3,250	2,007	1,241	760	472	761	264	109,403
	2007	All Species	168,574	53,900	27,813	17,726	11,073	6,972	4,376	2,700	1,608	951	1,425	353	297,390

<sup>1</sup> Excludes interior Alaska.

**Table 46.** Reserved and roadless forest land area in the United States by major region and forest type group, 2007

Forest type group	All Regions			North		South		Rocky Mountain		Pacific Coast	
	Grand Total	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest
<i>Thousand acres</i>											
White-red-jack pine	561	528	33	438	20	90	14	n/a	n/a	n/a	n/a
Spruce-fir	886	787	100	671	100	115	n/a	n/a	n/a	n/a	n/a
Longleaf-slash pine	130	98	32	n/a	n/a	98	32	n/a	n/a	n/a	n/a
Loblolly-shortleaf pine	338	307	31	93	7	215	24	n/a	n/a	n/a	n/a
Oak-pine	515	454	61	127	8	326	53	n/a	n/a	n/a	n/a
Oak-hickory	3,337	2,659	677	1,174	137	1,485	541	n/a	n/a	n/a	n/a
Oak-gum-cypress	785	746	39	28	n/a	718	39	n/a	n/a	n/a	n/a
Elm-ash-cottonwood	387	377	10	229	10	148	n/a	n/a	n/a	n/a	n/a
Maple-beech-birch	3,081	2,830	251	2,744	234	87	17	n/a	n/a	n/a	n/a
Aspen-birch	731	639	92	639	92	n/a	n/a	n/a	n/a	n/a	n/a
Other eastern types	126	126	n/a	31	n/a	95	n/a	n/a	n/a	n/a	n/a
Eastern nonstocked	81	78	3	41	1	36	2	n/a	n/a	n/a	n/a
<b>Total East</b>	<b>10,959</b>	<b>9,630</b>	<b>1,329</b>	<b>6,216</b>	<b>607</b>	<b>3,414</b>	<b>722</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
Douglas-fir	9,356	3,685	5,671	n/a	n/a	n/a	n/a	2,395	4,753	1,290	917
Ponderosa pine	2,549	1,438	1,111	n/a	n/a	n/a	n/a	973	801	465	310
Western white pine	179	133	46	n/a	n/a	n/a	n/a	36	n/a	97	46
Fir-spruce	26,636	19,317	7,319	n/a	n/a	n/a	n/a	5,857	6,386	13,460	933
Hemlock-Sitka spruce	5,704	5,094	611	n/a	n/a	n/a	n/a	n/a	234	5,094	377
Larch	290	154	136	n/a	n/a	n/a	n/a	90	95	64	41
Lodgepole pine	8,159	4,357	3,802	n/a	n/a	n/a	n/a	3,382	3,439	975	362
Redwood	144	144	n/a	n/a	n/a	n/a	n/a	n/a	n/a	144	n/a
Other western soft-woods	19,706	17,915	1,791	n/a	n/a	n/a	n/a	1,066	1,131	16,849	660
Western hardwoods	9,008	4,602	4,406	n/a	n/a	n/a	n/a	1,338	3,582	3,264	824
Pinyon-juniper	8,423	4,474	3,949	n/a	n/a	n/a	n/a	3,662	3,404	812	545
Western nonstocked	5,094	3,743	1,351	n/a	n/a	n/a	n/a	1,707	1,113	2,035	238
<b>Total West</b>	<b>95,247</b>	<b>65,056</b>	<b>30,191</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>20,506</b>	<b>24,937</b>	<b>44,550</b>	<b>5,254</b>

**Table 47.** Reserved and roadless forest land area in the United States by major region and stand-age class, 2007

Stand-age class	All Regions		North		South		Rocky Mountain		Pacific Coast		
	Grand Total	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest	Reserved forest	Roadless forest
<i>Thousand acres</i>											
0 to 19	8,828	5,255	3,573	147	20	159	50	3,966	2,876	983	627
20 to 39	3,811	2,492	1,319	321	49	403	15	1,069	1,010	699	246
40 to 59	4,334	3,068	1,267	1,128	81	821	118	553	760	565	307
60 to 79	9,749	5,788	3,961	1,888	228	1,260	271	1,182	2,708	1,458	754
80 to 99	11,487	6,375	5,112	1,651	155	475	182	2,235	4,143	2,014	632
100 to 149	19,557	9,991	9,565	907	62	257	79	5,208	8,208	3,620	1,216
150 to 199	10,038	5,929	4,109	98	6	n/a	n/a	4,087	3,357	1,744	746
200 and older	8,906	6,039	2,868	23	n/a	n/a	n/a	2,223	1,897	3,793	971
Uneven aged	287	281	6	1	6	n/a	n/a	n/a	n/a	280	n/a
Undetermined	29,397	29,342	55	71	n/a	3	n/a	n/a	n/a	29,268	55
<b>Grand Total</b>	<b>106,395</b>	<b>74,559</b>	<b>31,835</b>	<b>6,236</b>	<b>606</b>	<b>3,378</b>	<b>716</b>	<b>20,522</b>	<b>24,959</b>	<b>44,423</b>	<b>5,554</b>

**Table 48.** Urban land as a percent of all land and urban percent growth (1990-2000) by region within the lower 48 United States

Region	Urban land 2000	Increase in percent urban land 1990-2000	Percent increase land in urban land 1990-2000	Urban land area growth 1990-2000
	<i>percent</i>	<i>percent</i>	<i>percent</i>	<i>acres</i>
Northeast	9.7	1.5	18.8	2,006,452
Southeast	7.5	1.8	33.0	2,829,295
North Central	4.2	0.7	19.0	1,953,326
South Central	2.8	0.5	23.2	2,078,605
Great Plains	0.5	0.1	17.7	157,403
Rocky Mountains	0.7	0.2	33.2	920,942
Pacific Northwest <sup>a</sup>	1.9	0.4	24.2	394,866
Pacific Southwest <sup>b</sup>	5.0	0.7	17.0	737,346
<b>Total</b>	<b>3.1</b>	<b>0.6</b>	<b>23.0</b>	<b>11,078,234</b>

<sup>a</sup> Data for Alaska unavailable.

<sup>b</sup> Data for Hawaii unavailable.

**Table 49.** Estimated regional carbon storage and gross annual sequestration, including percent urban tree cover, amount of urban land, and proportion of region in urban land, 2000

Region	Carbon storage in urban trees		Gross carbon sequestration		Average tree cover on urban land
	<i>tons</i>	<i>tons/acre</i>	<i>tons/year</i>	<i>tons/acre/year</i>	<i>percent</i>
North Central	174,909,000	13.7	5,673,000	0.44	33.2
Northeast	163,158,000	13.6	5,292,000	0.44	33.0
South Central	162,251,000	9.9	5,262,000	0.32	24.1
Southeast	159,279,000	13.9	5,166,000	0.45	33.7
Great Plains	9,234,000	7.9	300,000	0.26	19.2
Rocky Mountain	49,298,000	7.2	1,599,000	0.23	17.4
Pacific Northwest <sup>a</sup>	26,516,000	13.5	860,000	0.44	32.7
Pacific Southwest <sup>b</sup>	30,387,000	4.5	985,000	0.15	10.9
<b>U.S. Total<sup>c</sup></b>	<b>776,245,000</b>	<b>11.2</b>	<b>25,175,000</b>	<b>0.36</b>	<b>27.1</b>

<sup>a</sup> Data for Alaska unavailable.

<sup>b</sup> Data for Hawaii unavailable.

<sup>c</sup> U.S. Total includes the District of Columbia and 121,573 acres that crossed State borders and could not be assigned to an individual State, but does not include Alaska and Hawaii



**Table 50.** Summary (number of samples (N), median, minimum, and maximum) of physical and chemical properties of the 0-10 and 10-20 cm soil layers from FIA P3 plots in each region, 2000-2005.

Region	Soil layer cm	Statistic	1 M NH <sub>4</sub> Cl exchangeable											
			Bulk density g/cm <sup>3</sup>	Coarse frag-ments %	Total organic carbon %	Total inorganic carbon %	Total carbon %	Total nitrogen %	Water pH	Salt pH	Na mg/kg	K	Mg	Ca
Northeast	0-10	N	706	1041	1083	4	1083	1083	1043	1043	1016	1016	1016	1016
		Median	0.93	10.93	4.6	1.94	4.61	0.27	4.35	3.93	8	60	36	190
		Min	0.04	0	0.11	0.91	0.11	0.013	2.94	2.47	0	0	1	0
		Max	2.1	74.53	56.19	3.49	56.19	12.186	8.02	7.43	464	1375	1233	24340
	10-20	N	684	993	1021	5	1021	1021	995	995	974	974	974	974
		Median	1.29	15.22	2.25	1.57	2.26	0.145	4.58	4.16	7	35	13	66
		Min	0.09	0	0.01	0	0.01	0	3.35	2.7	0	0	0	0
		Max	2.26	88.28	55.36	2.09	55.36	3.332	8.17	7.57	304	459	1049	8874
North Central	0-10	N	733	825	853	17	853	853	836	836	825	825	825	825
		Median	1.1	2.84	3.12	0.54	3.17	0.201	5.23	4.82	9	85	153	1096
		Min	0.04	0	0.04	0.02	0.04	0	2.9	2.76	0	1	1	7
		Max	2.49	95.06	52.52	4.38	52.52	2.936	7.9	7.5	654	2803	2891	14800
	10-20	N	719	786	814	24	814	814	797	797	794	794	794	794
		Median	1.4	3.39	1.27	0.48	1.28	0.096	5.19	4.63	9	48	82	514
		Min	0.05	0	0.02	0.03	0.02	0	3.37	2.53	0	0	0	3
		Max	3.04	80.64	55.35	5.76	55.35	3.422	8.03	7.59	915	2899	2956	22503
South	0-10	N	1572	1750	1756	1756	1756	1756	1744	1744	1756	1756	1756	1756
		Median	1.16	3.21	2.01	0.02	2.11	0.108	4.89	4.34	6	55	56	280
		Min	0.06	0	0.07	0	0.07	0	2.96	2.44	0	0	0	0
		Max	2.5	97.07	80.8	9.8	50.8	13.124	8.55	7.85	10792	1888	3554	14635
	10-20	N	1573	1719	1717	1717	1717	1717	1714	1714	1717	1717	1717	1717
		Median	1.47	2.3	0.77	0	0.8	0.039	4.98	4.36	5	32	29	106
		Min	0.14	0	0.04	0	0.04	0	3.03	2.6	0	0	0	0
		Max	3.42	85	54.4	9.9	55.5	3.233	8.5	8.02	2675	905	2178	19860
Interior West	0-10	N	807	975	976	976	976	976	967	967	973	973	973	973
		Median	1.13	26.24	2.51	0.24	3.14	0.141	6.6	6.04	10	228	203	2481
		Min	0.05	0.03	0.11	0	0.16	0	4.14	3.51	0	0	10	27
		Max	2.31	97.34	44.4	9.98	44.6	2.175	9.35	8	415	2960	1986	18840
	10-20	N	750	870	870	870	870	870	866	866	868	868	868	868
		Median	1.3	32.14	1.56	0.21	1.95	0.098	6.61	5.98	12	181	192	2202
		Min	0.09	0	0.11	0	0.13	0	4.11	3.59	0	0	0	0
		Max	2.6	92.28	38.2	11.6	38.77	1.903	9.76	8.27	752	4151	2104	25110

**Table 50. (cont.)** Summary (number of samples (N), median, minimum, and maximum) of physical and chemical properties of the 0-10 and 10-20 cm soil layers from FIA P3 plots in each region, 2000-2005.

Region	Soil layer cm	Statistic	Bulk density g/cm <sup>3</sup>	Coarse frag-ments %	Total organic carbon %	Total inorganic carbon %	Total carbon %	Total nitrogen %	Water pH	Salt pH	1 M NH <sub>4</sub> Cl exchangeable			
											Na mg/kg	K	Mg	Ca
Pacific West	0-10	N	385	563	566	566	566	566	560	560	560	560	560	560
		Median	0.9	22.09	3.7	0.16	3.86	0.173	5.92	5.28	11	218	171	1423
		Min	0.14	0	0.32	0	0.46	0	3.69	3.07	0	4	3	13
		Max	1.88	85.81	49.2	0.94	49.2	1.662	8.01	7.53	1735	1719	3925	8407
	10-20	N	375	497	498	498	498	498	495	495	494	494	494	494
		Median	1.05	24.62	2.32	0.14	2.45	0.118	5.83	5.2	10	187	126	1059
		Min	0.16	0	0.3	0	0.43	0	3.46	3.06	0	0	0	0
		Max	2	89.43	45.33	0.77	45.33	1.496	8.32	7.76	1554	3323	3741	11480

**Table 50. (cont.)** Summary (number of samples (N), median, minimum, and maximum) of physical and chemical properties of the 0-10 and 10-20 cm soil layers from FIA P3 plots in each region, 2000-2005.

Region	Soil layer	Statistic	1 M NH <sub>4</sub> Cl extractable											
			Aluminum (Al)	Cation exchange capacity (ECEC)	Manganese (Mn)	Iron (Fe)	Nickel (Ni)	Copper (Cu)	Zinc (Zn)	Cadmium (Cd)	Lead (Pb)	Sulfur (S)	Bray 1a P (phosphorus)	Olsen Pa (phosphorus)
	cm		cmol/kg	mg/kg										
Northeast	0-10	N	1016	1016	1016	828	828	828	828	828	828	1016	999	24
		Median	258	6.2	24.7	8.2	0.3	0	2.7	0.1	1.8	21.3	5.2	11.3
		Min	0	0.09	0	0	0	0	0	0	0	1.4	0	1.5
		Max	1658	132.28	1097	2334	0.7	3.3	57.9	1.5	247.8	483.8	398	145.7
	10-20	N	974	974	974	796	796	796	796	796	796	974	944	29
		Median	213	4.43	10.6	3.3	0.1	0	1.3	0	0.6	18.6	3.5	3.6
		Min	0	0.1	0	0	0	0	0	0	0	0.3	0	0
		Max	1304	54.88	462.8	371	6.9	1.8	32.1	3.3	91.6	311	642	141.5
North Central	0-10	N	825	825	825	627	627	627	627	627	627	825	646	182
		Median	10	8.16	27.2	0.6	0.1	0	1.2	0.1	0.1	9.9	9.1	18.5
		Min	0	0.21	0	0	0	0	0	0	0	0	0.4	2.3
		Max	820	85.61	710.9	416	50.4	3	93	1.3	15.5	707.8	488	451.6
	10-20	N	794	794	794	605	605	605	605	605	605	794	639	156
		Median	37	4.92	10.3	0.7	0	0	0.5	0	0	6.3	6.6	10.3
		Min	0	0.15	0	0	0	0	0	0	0	0	0	0.6
		Max	796	134.95	357.1	547	6.3	1.3	33	3.6	25.3	1031	578	285.1
South	0-10	N	1756	1756	1756	754	754	754	754	754	754	1756	1570	188
		Median	48	3.58	19.1	2.4	0.1	0	0.4	0.1	0.5	11.5	4.8	3.9
		Min	0	0.21	0	0	0	0	0	0	0	0	0.2	0.6
		Max	1846	92.22	547.3	186.6	5.3	1	10.2	1	40.2	2240.5	396	78
	10-20	N	1717	1717	1717	731	731	731	731	731	731	1717	1556	161
		Median	61	2.29	7.8	2.6	0.1	0	0.2	0.1	0.4	9	3	2.4
		Min	0	0.1	0	0	0	0	0	0	0	0	0.1	0
		Max	1757	101.44	291.8	45.4	3.9	1.6	17.7	1	25.7	16191	484	46.8
Interior West	0-10	N	973	973	973	812	812	812	812	812	812	973	748	853
		Median	1	15.49	6.6	0	0	0	0	0.1	0	5.8	21.9	9.9
		Min	0	0.56	0	0	0	0	0	0	0	0	0	0.2
		Max	2164	95.12	1025	105.8	8	0.7	89.6	3.8	10.2	14420	579	181.7
	10-20	N	868	868	868	722	722	722	722	722	722	868	674	763
		Median	1	14.61	3.8	0	0	0	0	0	0	5.6	12.8	5.3
		Min	0	0.57	0	0	0	0	0	0	0	0	0	0
		Max	3484	128.81	122.1	43.9	8.9	1.5	37.8	0.5	5.1	14160	462	216

**Table 50. (cont.)** Summary (number of samples (N), median, minimum, and maximum) of physical and chemical properties of the 0-10 and 10-20 cm soil layers from FIA P3 plots in each region, 2000-2005.

Region	Soil layer	Statistic	1 M NH <sub>4</sub> Cl extractable											
			Aluminum (Al)	Cation exchange capacity (ECEC)	Manganese (Mn)	Iron (Fe)	Nickel (Ni)	Copper (Cu)	Zinc (Zn)	Cadmium (Cd)	Lead (Pb)	Sulfur (S)	Bray 1a P (phosphorus)	Olsen Pa (phosphorus)
	cm		cmol/kg	mg/kg										
Pacific West	0-10	N	560	560	560	430	430	430	430	430	430	560	457	400
		Median	6	10.68	19	0	0	0	0.1	0	0	6.1	33.3	18.4
		Min	0	0.7	0.1	0	0	0	0	0	0	0	0	0.2
		Max	1798	49.94	364.7	145.4	17.3	1	37.5	0.7	6.3	244.5	576.5	190.2
	10-20	N	494	494	494	379	379	379	379	379	379	494	410	348
		Median	9	8.59	12.2	0	0	0	0.1	0	0	5.9	19.6	11.8
		Min	0	0.29	0.3	0	0	0	0	0	0	0	0.1	0
		Max	2186	67.77	171.1	97.5	12	0.8	8.7	0.2	2.1	478.7	514.8	190.9

**Table 51.** Summary of FIA ozone biosite data in the Eastern United States, 2003-2006

Parameter, Region	Biomonitoring Program			
	2003	2004	2005	2006
<b>Number of biosites evaluated</b>				
Northeast	229	227	232	233
North Central	269	268	240	–
South	315	349	–	–
West Coast	132	127	132	132
<b>Number of biosites with injury</b>				
Northeast	82	80	79	103
North Central	55	71	52	–
South	94	61	–	–
West Coast	16	22	24	–
<b>Number of plants evaluated</b>				
Northeast	22,763	22,118	23,330	23,057
North Central	23,615	24,328	23,114	–
South	28,645	30,617	–	–
West Coast	9,897	9,768	9,512	–
<b>Number of plants injured</b>				
Northeast	660	888	502	700
North Central	240	270	174	–
South	879	363	–	–
West Coast	123	199	259	–

Percent of evaluated plants with injury by species	2003		2004		2005		2006	
	%	N	%	N	%	N	%	N
<b>Northeast</b>								
Big Leaf Aster	8.3	120	15.0	60	0.7	413	0.3	301
Black Cherry	3.0	3,642	3.2	3,305	2.4	3,638	3.7	3,739
Blackberry	5.5	4,676	5.1	4,398	3.9	3,956	5.0	4,224
Common and Tall Milkweed	3.8	4,514	8.3	4,423	2.3	4,561	3.7	4,377
Pin Cherry	1.8	339	0.0	630	0.0	537	0.0	658
Sassafras	0.1	1,478	1.8	1,242	0.4	1,407	3.0	1,292
Spreading Dogbane	0.8	3,348	1.9	3,276	0.9	4,122	1.3	3,841
Sweetgum	6.4	437	0.2	469	12.7	441	5.0	499
White Ash	0.7	3,342	2.1	3,402	1.4	3,326	1.9	3,186
Yellow Poplar	2.7	867	2.5	913	1.5	929	1.1	940
<b>North Central</b>								
Big Leaf Aster	0.4	917	0.1	1,103	0.0	772	–	–
Black Cherry	0.7	3,225	1.3	3,280	0.3	2,588	–	–

**Table 51. (cont.)** Summary of FIA ozone biosite data in the Eastern United States, 2003-2006

Percent of evaluated plants with injury by species	%	N	%	N	%	N	%	N
Blackberry	2.7	2,099	0.5	2,206	1.6	1,647	–	–
Common and Tall Milkweed	1.8	5,348	3.0	5,426	1.7	5,166	–	–
Evening primrose	0.0	30	0.0	0	0.0	0	–	–
Mountain snowberry	0.0	856	0.0	673	0.0	1,311	–	–
Pin Cherry	0.0	366	0.0	395	0.0	431	–	–
Ponderosa pine	0.0	247	0.0	135	0.0	270	–	–
Quaking aspen	0.0	11	0.0	0	0.0	0	–	–
Sassafras	0.0	856	0.5	1,175	0.2	1,002	–	–
Skunk bush	0.0	334	0.0	280	0.0	431	–	–
Spreading Dogbane	0.6	3,931	0.5	4,303	0.6	4,351	–	–
Sweetgum	0.7	302	0.0	272	0.8	256	–	–
Western wormwood	0.0	531	0.0	554	0.0	662	–	–
White Ash	0.2	4,255	0.4	4,258	0.4	4,166	–	–
Yellow Poplar	6.5	339	1.9	268	1.1	273	–	–
<b>South</b>								
Big Leaf Aster	0.0	12	0.0	30	–	–	–	–
Black Cherry	0.5	4,450	0.0	4,312	–	–	–	–
Blackberry	7.6	8,782	2.7	9,432	–	–	–	–
Common and Tall Milkweed	9.4	956	2.9	1,461	–	–	–	–
Pin Cherry	0.0	0	0.0	352	–	–	–	–
Sassafras	0.0	3,245	0.0	3,288	–	–	–	–
Spreading Dogbane	6.0	380	2.0	403	–	–	–	–
Sweetgum	0.6	6,534	0.9	6,830	–	–	–	–
White Ash	1.9	1,022	0.3	1,168	–	–	–	–
Yellow Poplar	1.1	3,264	0.1	3,341	–	–	–	–
<b>West Coast</b>								
Blue elderberry	1.4	7	4.2	17	2.3	7	–	–
Jeffrey pine	3.1	15	10.1	57	10.3	58	–	–
Mugwort	0.8	5	0.0	0	0.0	0	–	–
Pacific ninebark	0.0	0	0.0	0	0.0	0	–	–
Ponderosa pine	9.1	92	8.7	97	16.8	181	–	–
Quaking aspen	0.0	0	0.0	0	0.0	0	–	–
Red alder	0.0	0	0.0	0	0.0	0	–	–
Red elderberry	0.0	0	0.0	0	0.0	0	–	–
Scouler's willow	0.0	0	0.0	0	0.0	0	–	–
Skunk bush	0.0	0	0.0	0	3.1	8	–	–
Snowberry	0.0	0	0.0	0	0.0	0	–	–
Western wormwood	0.0	0	0.0	0	0.0	0	–	–

**Table 52.** Mean weight per acre of down woody material by material category and EPA Level II Ecological Region<sup>a</sup>, 2001–2006.

Level II Ecological Region (n)	1-hr Fuels		10-hr Fuels		100-hr Fuels		1000-hr Fuels		Duff		Litter		Slash Piles		Total Tons all Fuels	
	+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.	
<i>Tons per acre</i>																
<b>Northern Forests and Lakes</b>																
Mixed Wood Shield (336)	0.23	0.02	0.75	0.05	2.06	0.15	4.02	0.27	27.80	4.47	2.14	0.15	0.54	0.18	37.00	4.50
Atlantic Highlands (300)	0.41	0.03	1.26	0.35	3.22	0.62	9.16	2.14	28.09	6.09	3.09	0.19	0.73	0.55	45.24	6.55
<b>Northwestern Forested Mountains</b>																
Western Cordillera (1041)	0.27	0.01	1.03	0.05	2.13	0.08	9.27	0.53	10.75	0.72	4.94	0.53	0.76	0.33	28.39	1.15
<b>Marine West Coast Forests</b>																
Marine West Coast Forest (184)	0.34	0.02	1.11	0.07	2.71	0.22	18.32	2.32	28.34	3.97	5.61	0.50	0.30	0.18	56.39	5.05
<b>Eastern Temperate Forests</b>																
Mixed Wood Plains (437)	0.37	0.03	1.06	0.09	2.31	0.13	4.36	0.86	16.68	3.32	1.96	0.15	0.37	0.24	26.73	3.47
Central USA Plains (78)	0.39	0.05	1.15	0.13	2.27	0.31	4.89	1.45	2.30	0.69	1.18	0.14	0.07	0.06	12.22	1.73
Southeastern USA Plains (1172)	0.22	0.01	0.88	0.04	2.01	0.08	4.36	0.89	5.49	0.19	3.15	0.11	1.01	0.31	16.08	0.92
Ozark, Dauchita, Appalachian Forests (705)	0.27	0.01	0.86	0.03	2.29	0.11	7.74	1.90	7.40	0.33	2.69	0.12	3.83	1.48	21.25	1.93
Mississippi Alluvial and Southeast USA Coastal Plain (268)	0.19	0.01	0.92	0.05	1.56	0.14	3.61	1.04	25.65	6.44	5.06	0.74	0.62	0.33	36.97	7.00
<b>Great Plains</b>																
Temperate Prairies (115)	0.24	0.02	0.85	0.13	1.80	0.23	3.00	0.50	2.02	0.30	1.44	0.19	0.19	0.11	9.33	0.77
West Central Semi-Arid Prairies (45)	0.10	0.03	0.40	0.08	0.83	0.15	1.97	0.57	3.90	0.63	2.32	0.44	0.24	0.24	9.49	1.31
South Central Semi-Arid Prairies (183)	0.08	0.01	0.41	0.05	0.74	0.11	0.70	0.48	1.38	0.22	1.04	0.15	0.32	0.22	4.29	0.65
Texas-Louisiana Coastal Plain (15)	0.14	0.04	0.62	0.17	1.41	0.41	0.97	0.47	2.76	0.90	1.68	0.50	2.79	2.79	7.60	1.44
Tamaulipas-Texas Semi-Arid Plain (18)	0.04	0.01	0.54	0.29	0.90	0.28	0.02	0.02	0.12	0.06	0.21	0.03	0.06	0.04	1.89	0.49
<b>North American Deserts</b>																
Cold Deserts (346)	0.21	0.01	0.85	0.06	1.28	0.12	1.42	0.14	1.92	0.26	1.29	0.11	0.04	0.03	6.97	0.49
Warm Deserts (38)	0.08	0.04	0.43	0.15	1.20	0.63	0.13	0.11	0.40	0.30	0.34	0.17	–	–	2.47	1.15
<b>Mediterranean California</b>																
Mediterranean California (91)	0.22	0.03	0.47	0.06	1.11	0.17	1.25	0.42	1.34	0.41	1.21	0.25	0.30	0.30	5.58	0.81
<b>Southern Semi-Arid Highlands</b>																
Western Sierra Madre Piedmont (36)	0.16	0.03	0.53	0.16	0.63	0.21	0.54	0.28	2.51	1.22	1.27	0.53	0.01	0.01	5.56	2.15

**Table 52. (cont.)** Mean weight per acre of down woody material by material category and EPA Level II Ecological Region<sup>a</sup>, 2001–2006.

Level II Ecological Region (n)	1-hr	+/- 1	10-hr	+/- 1	100-	+/- 1	1000-	+/- 1	Duff	+/- 1	Litter	+/- 1	Slash	+/- 1	Total	+/- 1
	Fuels	s.e.	Fuels	s.e.	hr	s.e.	hr	s.e.	s.e.	s.e.	s.e.	s.e.	Piles	s.e.	Tons	s.e.
<i>Tons per acre</i>																
<b>Temperate Sierras</b>																
Upper Gila Mountains (94)	0.16	0.02	0.43	0.04	1.00	0.12	2.15	0.42	2.63	0.47	1.28	0.17	0.10	0.06	7.68	0.95
<b>Tropical Wet Forests</b>																
Everglades (3)	0.06	0.02	1.10	0.67	0.48	0.48	0.65	0.65	10.43	2.04	8.08	6.99	–	–	21.00	5.00

Note: All estimates are tons/acre unless otherwise indicated.

<sup>a</sup> EPA Level 2 ecological regions may be found at <http://www.epa.gov/bioiweb1/html/usecoregions.html>.



**Table 53.** Mean carbon per hectare and number of pieces per acres of down woody material by size-class and EPA Level II Ecological Region<sup>a</sup>, 2001–2006

Level II Ecological Region (n)	FWD Carbon (Mg/Ha)		CWD Carbon (Mg/ha)		CWD (ft <sup>3</sup> /ac)		3.0-7.9		8.0-12.9		13.0-17.9		18.0+	
	+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.	+/- 1 s.e.		+/- 1 s.e.		+/- 1 s.e.
<b>Northern Forests and Lakes</b>														
Mixed Wood Shield (336)	3.19	0.22	4.56	0.31	500.98	32.80	165.82	8.22	22.93	1.89	2.15	0.41	0.85	0.26
Atlantic High-lands (300)	5.08	1.09	10.39	2.43	1071.94	205.63	181.78	8.62	26.33	2.08	3.26	0.54	3.30	0.92
<b>Northwestern Forested Mountains</b>														
Western Cordillera (1041)	3.58	0.12	10.51	0.60	1176.29	59.79	153.58	5.41	31.83	1.52	9.76	0.72	6.99	0.59
<b>Marine West Coast Forests</b>														
Marine West-Coast Forest (184)	4.33	0.30	20.78	2.63	2328.29	277.94	197.35	16.46	56.45	5.64	18.26	2.46	17.98	2.03
<b>Eastern Temperate Forests</b>														
Mixed Wood Plains (437)	3.82	0.21	4.95	0.98	562.33	151.39	142.63	7.97	19.00	2.48	1.37	0.26	2.17	0.65
Central USA Plains (78)	3.89	0.41	5.54	1.65	610.88	200.12	77.07	12.27	7.00	2.01	1.83	0.76	4.82	3.18
Southeastern USA Plains (1172)	3.27	0.12	4.94	1.01	468.48	98.69	67.92	2.82	8.09	0.58	1.09	0.16	1.04	0.26
Ozark, Ouachita, Appalachian Forests (705)	3.58	0.14	8.78	2.16	870.01	240.37	104.39	4.49	12.57	0.89	1.83	0.33	1.88	0.43
Mississippi Alluvial and Southeast USA Coastal Plain (268)	2.82	0.19	4.10	1.18	399.92	103.06	50.39	5.60	7.76	1.73	1.11	0.40	1.53	0.53
<b>Great Plains</b>														
Temperate Prairies (115)	3.00	0.31	3.40	0.57	350.14	62.27	97.13	11.34	14.53	3.17	1.64	0.71	2.85	1.18
West Central Semi-Arid Prairies (45)	1.40	0.24	2.23	0.65	239.68	67.14	49.09	11.07	7.14	1.73	0.98	0.48	3.96	2.76
South Central Semi-Arid Prairies (183)	1.31	0.15	0.79	0.54	58.18	33.27	21.54	4.46	1.67	0.58	0.42	0.34	–	–
Texas-Louisiana Coastal Plain (15)	2.30	0.49	1.10	0.54	102.30	47.33	62.45	25.15	4.40	2.41	–	–	–	–
Tamaulipas-Texas Semi-Arid Plain (18)	1.63	0.52	0.02	0.02	1.62	1.62	3.30	3.30	–	–	–	–	–	–

**Table 53. (cont.)** Mean carbon per hectare and number of pieces per acres of down woody material by size-class and EPA Level II Ecological Region<sup>a</sup>, 2001–2006

Level II Ecological Region (n)	FWD Carbon (Mg/Ha)	+/- 1 s.e.	CWD Carbon (Mg/ha)	+/- 1 s.e.	CWD (ft <sup>3</sup> /ac)	+/- 1 s.e.	3.0-7.9	+/- 1 s.e.	8.0-12.9	+/- 1 s.e.	13.0-17.9	+/- 1 s.e.	18.0+	+/- 1 s.e.
<b>North American Deserts</b>														
Cold Deserts (346)	2.42	0.18	1.61	0.16	171.04	17.49	69.01	6.77	10.20	1.50	1.69	0.42	0.56	0.23
Warm Deserts (38)	1.86	0.88	0.15	0.13	21.63	19.53	10.18	7.62	1.56	1.56	–	–	0.35	0.35
<b>Mediterranean California</b>														
Mediterranean California (91)	1.80	0.23	1.42	0.48	154.08	59.57	42.47	7.27	5.30	1.73	2.47	0.97	0.84	0.80
<b>Southern Semi-Arid Highlands</b>														
Western Sierra Madre Piedmont (36)	1.31	0.38	0.62	0.32	59.59	31.53	15.70	7.04	4.79	2.65	0.56	0.56	0.55	0.55
<b>Temperate Sierras</b>														
Upper Gila Mountains (94)	1.63	0.16	2.44	0.48	279.10	57.06	75.91	13.08	10.30	2.50	1.07	0.39	1.70	0.66
<b>Tropical Wet Forests</b>														
Everglades (3)	1.79	0.84	0.73	0.73	45.79	45.79	–	–	1.98	1.98	–	–	–	–

Note: Diameters collected at transect crossing

<sup>a</sup> EPA Level 2 ecological regions may be found at <http://www.epa.gov/bioiweb1/html/usecoregions.html>.

**Table 54.** Area burned and number of fires in the United States, 1960-2006

Year	Area burned acres	Fires number
2006	9,873,745	96,385
2005	8,689,389	66,753
2004	8,097,880	65,461
2003	3,960,842	63,629
2002	7,184,712	73,457
2001	3,570,911	84,079
2000	7,393,493	92,250
1999	5,626,093	92,487
1998	2,329,704	81,043
1997	2,856,959	66,196
1996	6,065,998	96,363
1995	1,840,546	82,234
1994	4,073,579	79,107
1993	1,797,574	58,810
1992	2,069,929	87,394
1991	2,953,578	75,754
1990	5,452,874	122,763
1989	3,264,126	121,714
1988	7,398,888	154,573
1987	4,152,561	143,877
1986	3,308,095	139,980
1985	4,434,736	133,840
1984	2,266,106	118,636

Year	Area burned acres	Fires number
1983	5,080,553	161,649
1982	2,382,036	174,755
1981	4,814,206	249,370
1980	5,260,825	234,892
1979	2,986,826	163,196
1978	3,910,913	218,842
1977	3,152,644	173,998
1976	5,109,926	241,699
1975	1,791,327	134,872
1974	2,879,095	145,868
1973	1,915,273	117,957
1972	2,641,166	124,554
1971	4,278,472	108,398
1970	3,278,565	121,736
1969	6,689,081	113,273
1968	4,231,996	125,075
1967	4,658,586	125,301
1966	4,574,389	122,174
1965	2,652,122	113,976
1964	4,197,309	117,230
1963	7,120,768	165,430
1962	4,078,894	116,418
1961	3,036,219	99,554
1960	4,478,188	104,120

Source: National Interagency Fire Center, Boise ID.  
<http://www.nifc.gov/stats/index.html>

**Table 55.** Plant species harvested for nontimber forest products

Craft products			
bigleaf maple ( <i>Acer macrophyllum</i> )	redosier dogwood ( <i>Cornus sericea</i> )	clubmoss ( <i>Lycopodium spp</i> )	sassafras ( <i>Sassafras albidum</i> )
red alder ( <i>Alnus rubra</i> )	alternatleaf dogwood ( <i>Cornus stolonifera</i> )	kolea lau nui ( <i>Myrsine lessertiana</i> )	American black nightshade ( <i>Solanum americanum</i> )
Indianhemp ( <i>Apocynum cannabinum</i> )	black ash ( <i>Fraxinus nigra</i> )	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	sphagnum moss ( <i>Sphagnum spp.</i> )
pipevine ( <i>Aristolochia macrophylla</i> )	beetleweed ( <i>Galax urceolata</i> )	white oak ( <i>Quercus alba</i> )	American basswood ( <i>Tilia americana</i> )
whitestem milkweed ( <i>Asclepias spp.</i> )	Remy's gardenia ( <i>Gardenia remyi</i> )	amaumau fern ( <i>Sadleria cyatheoides</i> )	slippery elm ( <i>Ulmus rubra</i> )
paper birch ( <i>Betula papyrifera</i> )	tuliptree ( <i>Liriodendron tulipifera</i> )	willow ( <i>Salix spp.</i> )	mapleleaf grape ( <i>Vitis spp.</i> )
Alaska cedar ( <i>Chamaecyparis nootkatensis</i> )	alpine clubmoss ( <i>Lycopodium selago</i> )		
Cullinary products			
sugar maple ( <i>Acer saccharum</i> )	black crowberry ( <i>Empetrum nigrum</i> )	Hawai'i hawthorn ( <i>Osteomeles anthyllidifolia</i> )	thimbleberry ( <i>Rubus parviflorus</i> )
harvestlice ( <i>Agrimonia parviflora</i> )	strawberry ( <i>Fragaria spp.</i> )	Tahitian screwpine ( <i>Pandanus tectorius</i> )	salmonberry ( <i>Rubus spectabilis</i> )
nodding onion ( <i>Allium cernuum</i> )	fragrant bedstraw ( <i>Galium triflorum</i> )	smallflower phacelia ( <i>Phacelia dubia</i> )	garden dewberry ( <i>Rubus spp.</i> )
wild leek ( <i>Allium tricoccum</i> )	cape jasmine ( <i>Gardenia taihensis</i> )	tepany bean ( <i>Phaseolus acutifolius</i> )	California blackberry ( <i>Rubus ursinus</i> )
giant taro ( <i>Alocasia macrorrhizos</i> )	alpine spicewintergreen ( <i>Gaultheria humifusa</i> )	Mexican groundcherry ( <i>Physalis philadelphica</i> )	cutleaf coneflower ( <i>Rudbeckia laciniata</i> )
Saskatoon serviceberry ( <i>Amelanchier alnifolia</i> )	western teaberry ( <i>Gaultheria ovatifolia</i> )	American pokeweed ( <i>Phytolacca americana</i> )	common sheep sorrel ( <i>Rumex acetosella</i> )
Canadian serviceberry ( <i>Amelanchier canadensis</i> )	salal ( <i>Gaultheria shallon</i> )	Sitka spruce ( <i>Picea sitchensis</i> )	garden sorrel ( <i>Rumex spp.</i> )
American hogpeanut ( <i>Amphicarpaea bracteata</i> )	black huckleberry ( <i>Gaylussacia spp.</i> )	Mexican pinyon ( <i>Pinus cembroides</i> )	sugarcane ( <i>Saccharum officinarum</i> )
groundnut ( <i>Apios americana</i> )	upland cotton ( <i>Gossypium hirsutum</i> )	twoneedle pinyon ( <i>Pinus edulis</i> )	broadleaf arrowhead ( <i>Sagittaria latifolia</i> )
spikenard ( <i>Aralia nudicalis</i> )	Hen of the woods mushroom ( <i>Grifola frondosa</i> )	singleleaf pinyon ( <i>Pinus monophylla</i> )	chia ( <i>Salvia columbariae</i> )
kinnikinnick ( <i>Arctostaphylos uva-ursi</i> )	American false pennyroyal ( <i>Hedeoma pulegioides</i> )	Oyster mushroom ( <i>Pleurotus ostreatus</i> )	dwarf elderberry ( <i>Sambucus canadensis</i> )
breadfruit ( <i>Artocarpus altilis</i> )	common sunflower ( <i>Helianthus annuus</i> )	Hawai'i air fern ( <i>Pneumatopteris sandwicensis</i> )	red elderberry ( <i>Sambucus racemosa</i> )
spear saltbush ( <i>Atriplex patula</i> )	Jerusalem artichoke ( <i>Helianthus tuberosus</i> )	smooth Solomon's seal ( <i>Polygonatum biflorum</i> )	sassafras ( <i>Sassafras albidum</i> )
early yellowrocket ( <i>Barbarea verna</i> )	giant hogweed ( <i>Heracleum lanatum</i> )	licorice fern ( <i>Polypodium glycyrrhiza</i> )	lettuceleaf saxifrage ( <i>Saxifraga micranthidifolia</i> )
Vancouver groundcone ( <i>Boschniakia hookeri</i> )	tanglehead ( <i>Heteropogon contortus</i> )	western swordfern ( <i>Polystichum munitum</i> )	false Solomons seal ( <i>Smilacina racemosa</i> )
giant puffball ( <i>Calvatia gigantea</i> )	elecampane inula ( <i>Inula helenium</i> )	little hogweed ( <i>Portulaca oleracea</i> )	Black cohosh ( <i>Solanum viride</i> )
large camas ( <i>Camassia leichtlinii</i> )	sweetpotato ( <i>Ipomoea batatas</i> )	tapertip cinquefoil ( <i>Potentilla pacifica</i> )	alkali sacaton ( <i>Sporobolus spp.</i> )
small camas ( <i>Camassia quamash</i> )	butternut ( <i>Juglans cinerea</i> )	Hawai'i pritchardia ( <i>Pritchardia spp.</i> )	common chickweed ( <i>Stellaria media</i> )
Pacific Golden Chanterelle ( <i>Cantharellus formosus</i> )	black walnut ( <i>Juglans nigra</i> )	doubleclaw ( <i>Proboscidea parviflora</i> )	claspleaf twistedstalk ( <i>Streptopus roseus</i> )
cayenne pepper ( <i>Capsicum annuum</i> )	Shiitake mushroom ( <i>Lentinus edodes</i> )	honey mesquite ( <i>Prosopis glandulosa</i> )	California dandelion ( <i>Taraxacum spp.</i> )
pecan ( <i>Carya illinoensis</i> )	cascade desertparsley ( <i>Lomatium martindalei</i> )	screwbean mesquite ( <i>Prosopis pubescens</i> )	Virginia spiderwort ( <i>Tradescantia virginiana</i> )

**Table 55. (cont.)** Plant species harvested for nontimber forest products

Culinary products (cont.)			
mockernut hickory ( <i>Carya spp.</i> )	American skunkcabbage ( <i>Lysichitum americanus</i> )	velvet mesquite ( <i>Prosopis velutina</i> )	matsutake mushroom ( <i>Tricholoma magnivelare</i> )
American chestnut ( <i>Castanea dentata</i> )	Cascade barberry ( <i>Mahonia nervosa</i> )	Allegheny plum ( <i>Prunus spp.</i> )	African clover ( <i>Trifolium wormskjoldii</i> )
lambquarters ( <i>Chenopodium album</i> )	Canada mayflower ( <i>Maianthemum dilatatum</i> )	western brackenfern ( <i>Pteridium aquilinum</i> )	western hemlock ( <i>Tsuga heterophylla</i> )
pitseed goosefoot ( <i>Chenopodium berlandieri</i> )	Oregon crabapple ( <i>Malus fusca</i> )	mapleleaf oak ( <i>Quercus spp.</i> )	stinging nettle ( <i>Urtica dioica</i> )
manfern ( <i>Cibotium spp.</i> )	Hawai'i potato fern ( <i>Marattia douglasii</i> )	fragrant sumac ( <i>Rhus typhina</i> )	lowbush blueberry ( <i>Vaccinium alaskaense</i> )
coconut palm ( <i>Cocos nucifera</i> )	water mint ( <i>Mentha peperita</i> )	mapleleaf currant ( <i>Ribes bracteosum</i> )	dwarf bilberry ( <i>Vaccinium caespitosum</i> )
tiplant ( <i>Cordyline fruticosa</i> )	morel mushroom ( <i>Morchella spp.</i> )	mapleleaf currant ( <i>Ribes lacustre</i> )	lowbush blueberry ( <i>Vaccinium deliciosum</i> )
bunchberry dogwood ( <i>Cornus canadensis</i> )	white mulberry ( <i>Morus spp.</i> )	trailing black currant ( <i>Ribes laxiflorum</i> )	thinleaf huckleberry ( <i>Vaccinium membranaceum</i> )
American hazelnut ( <i>Corylus spp.</i> )	edible banana ( <i>Musa paradisiaca</i> )	mapleleaf currant ( <i>Ribes oxacanthoides</i> )	oval-leaf blueberry ( <i>Vaccinium ovalifolium</i> )
may hawthorn ( <i>Crataegus spp.</i> )	Watercress ( <i>Nasturtium officinale</i> )	mapleleaf currant ( <i>Ribes sanguinimum</i> )	red huckleberry ( <i>Vaccinium parvifolium</i> )
Black trumpet mushroom ( <i>Craterellus cornucopioides</i> )	buckhorn cholla ( <i>Opuntia acanthocarpa</i> )	red currant ( <i>Ribes triste</i> )	ohelo 'ai ( <i>Vaccinium reticulatum</i> )
common turmeric ( <i>Curcuma longa</i> )	cactus apple ( <i>Opuntia engelmannii</i> )	dwarf rose ( <i>Rosa gymnocarpa</i> )	lowbush blueberry ( <i>Vaccinium spp.</i> )
mabolo ( <i>Diospyros spp.</i> )	jumping cholla ( <i>Opuntia fulgida</i> )	prickly rose ( <i>Rosa spp.</i> )	lowbush blueberry ( <i>Vaccinium uliginosum</i> )
common persimmon ( <i>Diospyros virginiana</i> )	tulip pricklypear ( <i>Opuntia phaeacantha</i> )	Hawai'i blackberry ( <i>Rubus hawaiiensis</i> )	small cranberry ( <i>Vaccinium oxycoccos</i> )
royal twinsorus fern ( <i>Diplazium meyerianum</i> )	walkingstick cactus ( <i>Opuntia spinosior</i> )	whitebark raspberry ( <i>Rubus leucodermis</i> )	squashberry ( <i>Viburnum edule</i> )
pointed woodfern ( <i>Dryopteris expansa</i> )	staghorn cholla ( <i>Opuntia versicolor</i> )	'akala ( <i>Rubus macraei</i> )	mapleleaf grape ( <i>Vitis spp.</i> )
Landscape products			
common yarrow ( <i>Achillea millefolium</i> )	Sierra shootingstar ( <i>Dodecatheon jeffreyi</i> )	Sitka clubmoss ( <i>Lycopodium sitchense</i> )	licorice fern ( <i>Polypodium glycyrrhiza</i> )
western columbine ( <i>Aquilegia formosa</i> )	roundleaf sundew ( <i>Drosera rotundifolia</i> )	pink mountainheath ( <i>Phyllodoce empetriformis</i> )	red elderberry ( <i>Sambucus racemosa</i> )
livid sedge ( <i>Carex livida</i> )	salal ( <i>Gaultheria shallon</i> )	slash pine ( <i>Pinus ellioti</i> )	common snowberry ( <i>Symphoricarpos albus</i> )
bunchberry dogwood ( <i>Cornus canadensis</i> )	common juniper ( <i>Juniperus communis</i> )	longleaf ( <i>Pinus palustris</i> )	hookedspur violet ( <i>Viola adunca</i> )
purple foxglove ( <i>Digitalis purpurea</i> )	arctic lupine ( <i>Lupinus arcticus</i> )	loblolly pine ( <i>pinus taeda</i> )	marsh violet ( <i>Viola palustris</i> )
Medicinal and dietary supplements			
common yarrow ( <i>Achillea millefolium</i> )	Pacific bleeding heart ( <i>Dicentra formosa</i> )	California lomatium ( <i>Lomatium californicum</i> )	white oak ( <i>Quercus alba</i> )
sweetflag ( <i>Acorus acalamus</i> )	purple foxglove ( <i>Digitalis purpurea</i> )	cascade desertparsley ( <i>Lomatium martindalei</i> )	alderleaf buckthorn ( <i>Rhamnus purshiana</i> )
sweetflag ( <i>Acorus americanus</i> )	wild yam ( <i>Dioscorea villosa</i> )	western white honeysuckle ( <i>Lonicera involucrata</i> )	fragrant sumac ( <i>Rhus aromatica</i> )
chamise ( <i>Adenostoma fasciculatum</i> )	eastern purple coneflower ( <i>Echinacea purpurea</i> )	peyote ( <i>Lophophora williamsii</i> )	smooth sumac ( <i>Rhus glabra</i> )

**Table 55. (cont.)** Plant species harvested for nontimber forest products

Medicinal and dietary supplements (cont.)			
northern maidenhair ( <i>Adiantum pedatum</i> )	false daisy ( <i>Eclipta prostrata</i> )	stiff clubmoss ( <i>Lycopodium annotinum</i> )	Hawai'i blackberry ( <i>Rubus hawaiensis</i> )
white colicroot ( <i>Aletris farinosa</i> )	goldenhills ( <i>Encelia farinosa</i> )	running clubmoss ( <i>Lycopodium clavatum</i> )	American red raspberry ( <i>Rubus idaeus</i> )
Indian walnut ( <i>Aleurites moluccana</i> )	clapweed ( <i>Ephedra antisiphilitica</i> )	alpine clubmoss ( <i>Lycopodium selago</i> )	garden dewberry ( <i>Rubus macreii</i> )
red alder ( <i>Alnus rubra</i> )	pimpernel willowherb ( <i>Epilobium angustifolium</i> )	American skunkcabbage ( <i>Lysichiton americanus</i> )	common sheep sorrel ( <i>Rumex acetosella</i> )
yerba mansa ( <i>Amenopsis californica</i> )	field horsetail ( <i>Equisetum arvense</i> )	hollyleaved barberry ( <i>Mahonia aquifolium</i> )	Scouler's willow ( <i>Salix scouleriana</i> )
western pearly everlasting ( <i>Anaphalis margaritacea</i> )	Indian Knob mountainbalm ( <i>Eriodictyon californica</i> )	Cascade barberry ( <i>Mahonia nervosa</i> )	Sitka willow ( <i>Salix sitchensis</i> )
pond apple ( <i>Annona glabra</i> )	California poppy ( <i>Eschscholzia californica</i> )	Mexican star ( <i>Milla biflora</i> )	felteaf willow ( <i>Salix spp</i> )
California spikenard ( <i>Aralia californica</i> )	common boneset ( <i>Eupatorium perfoliatum</i> )	partridgeberry ( <i>Mitchella repens</i> )	chia ( <i>Salvia columbariae</i> )
wild sarsaparilla ( <i>Aralia nudicaulis</i> )	sweetscented joepeyweed ( <i>Eupatorium purpureum</i> )	wild bergamot ( <i>Monarda fistulosa</i> )	black sage ( <i>Salvia mellifera</i> )
American spikenard ( <i>Aralia racemosa</i> )	Mexican kidneywood ( <i>Eysenhardtia polystachya</i> )	Indian mulberry ( <i>Morinda citrifolia</i> )	dwarf elderberry ( <i>Sambucus canadensis</i> )
smooth pricklypoppy ( <i>Argemone glauca</i> )	ocotillo ( <i>Fouquieria splendens</i> )	deergrass ( <i>Muhlenbergia rigens</i> )	bloodroot ( <i>Sanguinaria canadensis</i> )
Virginia snakeroot ( <i>Aristolochia serpentaria</i> )	Virginia strawberry ( <i>Fragaria virginiana</i> )	water parsely ( <i>Oenanthe sarmentosa</i> )	Canadian burnet ( <i>Sanguisorba canadensis</i> )
common leopardbane ( <i>Arnica amplexifolia</i> )	California buckthorn ( <i>Frangula californica</i> )	devilsclub ( <i>Oplopanax horridus</i> )	sassafras ( <i>Sassafras albidum</i> )
broadleaf arnica ( <i>Arnica latifolia</i> )	Pursh's buckthorn ( <i>Frangula purshiana</i> )	tree cholla ( <i>Opuntia imbricata</i> )	beach naupaka ( <i>Scaevola sericea</i> )
Oahu wormwood ( <i>Artemisia australis</i> )	fragrant bedstraw ( <i>Galium triflorum</i> )	American ginseng ( <i>Panax quinquefolius</i> )	blue skullcap ( <i>Scutellaria lateriflora</i> )
white sagebrush ( <i>Artemisia ludoviciana</i> )	eastern teaberry ( <i>Gaultheria procumbens</i> )	arctic sweet coltsfoot ( <i>Petasites frigidus</i> )	saw palmetto ( <i>Serenoa repens</i> )
Canadian wildginger ( <i>Asarum canadense</i> )	swamp gentian ( <i>Gentiana douglasiana</i> )	American pokeweed ( <i>Phytolacca americana</i> )	llima ( <i>Sida cordifolia</i> )
Hawai'i birdnest fern ( <i>Asplenium nidus</i> )	king's scepter gentian ( <i>Gentiana sceptrum</i> )	eastern white pine ( <i>Pinus strobus</i> )	jojoba ( <i>Simmondsia chinensis</i> )
cutleaf spleenwort ( <i>Asplenium viride</i> )	spotted geranium ( <i>Geranium maculatum</i> )	kava ( <i>Piper methysticum</i> )	mescal bean ( <i>Sophora secundiflora</i> )
sweet birch ( <i>Betula lenta</i> )	arrasa con todo ( <i>Gomphrena serrata</i> )	monkeypod ( <i>Pithecellobium dulce</i> )	western mountain ash ( <i>Sorbus sitchensis</i> )
red spiderling ( <i>Boerhavia diffusa</i> )	sharpleaf gumweed ( <i>Grindelia spp</i> )	Hawai'i poisonberry tree ( <i>Pittosporum spp.</i> )	common chickweed ( <i>Stellaria media</i> )
elephant tree ( <i>Bursera microphylla</i> )	bastardcedar ( <i>Guazuma ulmifolia</i> )	common plantain ( <i>Plantago major</i> )	skunk cabbage ( <i>Symplocarpus foetidus</i> )
Alexandrian laurel ( <i>Calophyllum inophyllum</i> )	American witchhazel ( <i>Hamamelis virginiana</i> )	mayapple ( <i>Podophyllum peltatum</i> )	Pacific yew ( <i>Taxus brevifolia</i> )
love in a puff ( <i>Cardiospermum halicacabum</i> )	scorpion's-tail ( <i>Heliotropium angiospermum</i> )	Seneca snakeroot ( <i>Polygala senega</i> )	western red cedar ( <i>Thuja plicata</i> )
blue cohosh ( <i>Caulophyllum thalictroides</i> )	giant hogweed ( <i>Heracleum lanatum</i> )	smooth Solomon's seal ( <i>Polygonatum biflorum</i> )	desert horsepurslane ( <i>Trianthema portulacastrum</i> )
fairyrwand ( <i>Chamaelirium luteum</i> )	oceanspray ( <i>Holodiscus discolor</i> )	licorice fern ( <i>Polypodium glycyrrhiza</i> )	red clover ( <i>Trifolium pratense</i> )
pillpod sandmat ( <i>Chamaesyce hirta</i> )	wild hydrangea ( <i>Hydrangea arborescens</i> )	balsam poplar ( <i>Populus balsamifera</i> )	red trillium ( <i>Trillium erectum</i> )
variable sandmat ( <i>Chamaesyce multiformis</i> )	goldenseal ( <i>Hydrastis canadensis</i> )	lanceleaf cottonwood ( <i>Populus trichocarpa</i> )	damiana ( <i>Turnera diffusa</i> )
prostrate sandmat ( <i>Chamaesyce prostrata</i> )	tinker's penny ( <i>Hypericum anagalloides</i> )	little hogweed ( <i>Portulaca oleracea</i> )	slippery elm ( <i>Ulmus rubra</i> )
Mexican tea ( <i>Chenopodium ambrosioides</i> )	sharpleaf St. Johnswort ( <i>Hypericum formosum</i> )	longleaf pondweed ( <i>Potamogeton nodosus</i> )	stinging nettle ( <i>Urtica dioica</i> )

**Table 55. (cont.)** Plant species harvested for nontimber forest products

Medicinal and dietary supplements (cont.)			
alaweo ( <i>Chenopodium oahuense</i> )	common St. Johnswort ( <i>Hypericum perforatum</i> )	smooth mesquite ( <i>Prosopis laevigata</i> )	ohelo kau la'au ( <i>Vaccinium calycinum</i> )
pipsissewa ( <i>Chimaphila umbellata</i> )	butternut ( <i>Juglans cinerea</i> )	screwbean mesquite ( <i>Prosopis pubescens</i> )	Sitka valerian ( <i>Valeriana sitchensis</i> )
yerba buena ( <i>Clinopodium douglasii</i> )	black walnut ( <i>Juglans nigra</i> )	common selfheal ( <i>Prunella vulgaris</i> )	white false hellebore ( <i>Veratrum viride</i> )
richweed ( <i>Collinsonia canadensis</i> )	common juniper ( <i>Juniperus communis</i> )	bitter cherry ( <i>Prunus emarginata</i> )	blackhaw ( <i>Viburnum prunifolium</i> )
dove weed ( <i>Croton setigerus</i> )	creosote bush ( <i>Larrea tridentata</i> )	black cherry ( <i>Prunus serotina</i> )	hookedspur violet ( <i>Viola spp.</i> )
kauna'oa ( <i>Cuscuta sandwichiana</i> )	Indian-tobacco ( <i>Lobelia inflata</i> )	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	bitter ginger ( <i>Zingiber zerumbet</i> )
American wild carrot ( <i>Daucus pusillus</i> )	false calico ( <i>Loeselia mexicana</i> )		
Pacific silver fir ( <i>Abies amabilis</i> )	American bittersweet ( <i>Celastrus scandens</i> )	mountain laurel ( <i>Kalmia latifolia</i> )	western swordfern ( <i>Polystichum munitum</i> )
balsam fir ( <i>Abies balsamea</i> )	Port Orford cedar ( <i>Chamaecyparis lawsoniana</i> )	coastal doghobble ( <i>Leucothoe spp.</i> )	iron fern ( <i>Rumohra adiantiformis</i> )
Fraser fir ( <i>Abies fraseri</i> )	pipsissewa ( <i>Chimaphila umbellata</i> )	fan clubmoss ( <i>Lycopodium digitatum</i> )	Canada goldenrod ( <i>Solidago canadensis</i> )
grand fir ( <i>Abies grandis</i> )	greycreeper reindeer lichen ( <i>Cladonia rangiferina</i> )	rare clubmoss ( <i>Lycopodium obscurum</i> )	anisescented goldenrod ( <i>Solidago odora</i> )
subalpine fir ( <i>Abies lasiocarpa</i> )	may hawthorn ( <i>Crataegus spp.</i> )	partridgeberry ( <i>Mitchella repens</i> )	sphagnum ( <i>Sphagnum spp.</i> )
noble fir ( <i>Abies nobilis</i> )	rattlebox ( <i>Crotalaria spp.</i> )	Boston swordfern ( <i>Nephrolepis exaltata</i> )	delicate thuidium moss ( <i>Thuidium delicatulum</i> )
common yarrow ( <i>Achillea millefolium</i> )	intermediate woodfern ( <i>Dryopteris intermedia</i> )	wild quinine ( <i>Parthenium integrifolium</i> )	western red cedar ( <i>Thuja plicata</i> )
northern maidenhair ( <i>Adiantum pedatum</i> )	beetleweed ( <i>Galax urceolata</i> )	Canby's mountain-lover ( <i>Paxistima myrsinifolia</i> )	reflexed airplant ( <i>Tillandsia usneoides</i> )
sugarstick ( <i>Allotropa virgata</i> )	eastern teaberry ( <i>Gaultheria procumbens</i> )	goldenfruit mistletoe ( <i>Phoradendron spp.</i> )	western hemlock ( <i>Tsuga heterophylla</i> )
western pearly everlasting ( <i>Anaphalis margaritacea</i> )	salal ( <i>Gaultheria shallon</i> )	lodgepole pine ( <i>Pinus contorta</i> )	eastern hemlock ( <i>Tsuga mertensiana</i> )
American spikenard ( <i>Aralia racemosa</i> )	curveleaf hypnum moss ( <i>Hypnum curvifolium</i> )	sugar pine ( <i>Pinus lambertiana</i> )	California huckleberry ( <i>Vaccinium ovatum</i> )
pipevine ( <i>Aristolochia macrophylla</i> )	hypnum moss ( <i>Hypnum imponens</i> )	western white pine ( <i>Pinus monticola</i> )	mapleleaf grape ( <i>Vitis spp.</i> )
sweet birch ( <i>Betula lenta</i> )	possumhaw ( <i>Ilex decidua</i> )	eastern white pine ( <i>Pinus strobus</i> )	common beargrass ( <i>Xerophyllum tenax</i> )
deer fern ( <i>Blechnum spicant</i> )	common winterberry ( <i>Ilex verticillata</i> )	Christmas fern ( <i>Polystichum acrostichoides</i> )	coontie ( <i>Zamia pumila</i> )

**Table 56.** Caribbean and Pacific Islands population, land area, population per square mile, forest area, percent forest cover and date of latest forest inventory

Region and island group	Population	Land area	Population per square mile	Forest area	Percent forest cover	Number of field plots	Inventory date
	<i>persons</i>	<i>acres</i>	<i>persons</i>	<i>acres</i>			
<b>Caribbean<sup>a</sup></b>							
Puerto Rico	3,808,610	2,191,816	1,112	1,261,332	58	317	2003
U.S. Virgin Islands	108,612	85,591	812	52,478	61	66	2004
<b>Pacific<sup>b</sup></b>							
American Samoa	57,663	48,434	762	43,631	90	20	2001
Guam	173,456	135,660	818	63,833	47	46	2002
Republic of Palau	20,842	111,544	120	96,688	87	55	1985
Commonwealth of the Northern Mariana Islands <sup>c</sup>	84,546	73,536	736	53,665	73	n/a	1979
Federated States of Micronesia	107,862	149,804	461	76,527	51	n/a	1983
Republic of the Marshall Islands	61,815	44,478	889	43,144	97	n/a	n/a
Hawaii <sup>d</sup>	1,211,537	4,127,337	188	1,490,901	43	n/a	1980s
<b>Islands Total</b>	<b>5,634,943</b>	<b>6,951,340</b>	<b>519</b>	<b>3,439,298</b>	<b>67</b>		

<sup>a</sup> Population figures are from the 2000 United States Census.

<sup>b</sup> Population figures are from the CIA World Fact Book, 2007.

<sup>c</sup> Area figures are preliminary estimates based on satellite imagery.

<sup>d</sup> Area figures are from RPA 2002.



**Table 57.** Number of live trees on the Caribbean and Pacific Islands by diameter class

Region and island group	Total	Diameter (inches)					
		1.0-4.9	5.0-8.9	9.0-12.9	13.0-16.9	17.0-20.9	21.0+
<i>Thousand trees</i>							
<b>Caribbean</b>							
Puerto Rico	1,183,006	1,079,699	70,243	21,339	6,571	2,767	2,387
U.S. Virgin Islands	70,775	69,288	1,162	233	49	20	23
<b>Pacific</b>							
American Samoa	17,905	11,445	3,944	1,555	565	212	184
Guam	76,771	66,799	7,558	1,800	454	102	58
Republic of Palau	94,598	74,114	14,105	3,778	1,374	539	688
Commonwealth of the Northern Mariana Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federated States of Micronesia	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Republic of the Marshall Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hawaii	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Islands Total</b>							

**Table 58.** Caribbean and Pacific Islands growing stock volume by diameter class

Region and island group	Total	Diameter (inches)					
		1.0-4.9	5.0-8.9	9.0-12.9	13.0-16.9	17.0-20.9	21.0+
<i>Thousand cubic feet</i>							
<b>Caribbean</b>							
Puerto Rico	370,842	75,718	114,625	70,735	64,353	22,682	22,729
U.S. Virgin Islands	1,083	544	471	68	0	0	0
<b>Pacific</b>							
American Samoa	72,291	5,592	16,850	17,860	11,505	6,296	14,189
Guam	91,375	31,438	24,827	19,863	8,521	3,726	3,001
Republic of Palau	302,386	34,366	65,404	54,915	39,078	26,054	82,571
Commonwealth of the Northern Mariana Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federated States of Micronesia	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Republic of the Marshall Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hawaii	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Islands Total</b>							

**Table 59.** Caribbean and Pacific Islands aboveground live tree biomass

Region and island group	Total	Diameter (inches)					
		1.0-4.9	5.0-8.9	9.0-12.9	13.0-16.9	17.0-20.9	21.0+
<i>Thousand dry tons</i>							
<b>Caribbean</b>							
Puerto Rico	34,084	9,661	7,156	6,045	3,436	2,567	5,218
U.S. Virgin Islands	713	508	99	44	21	12	28
<b>Pacific<sup>a</sup></b>							
American Samoa	1,101	51	282	265	171	95	237
Guam	1,008	8	417	336	142	59	47
Republic of Palau	5,259	573	1,117	953	683	439	1,495
Commonwealth of the Northern Mariana Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federated States of Micronesia	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Republic of the Marshall Islands	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hawaii	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Islands Total</b>							

<sup>a</sup> Estimated aboveground dry stem weight biomass

**Table 60.** Area and number of owners of private forests in the United States by region, subregion, and State, 2006

Region, subregion, and State	Acres	Sampling error	Owners	Sampling error
	<i>Thousands</i>	<i>Percent</i>	<i>Thousands</i>	<i>Percent</i>
<b>North</b>				
<b>Northeast</b>				
Connecticut	1,383	7.4	108	21.7
Delaware	351	11.6	55	57.1
Maine	16,575	1.3	252	13.1
Maryland	1,957	4.8	157	24.5
Massachusetts	2,179	5.8	293	18.8
New Hampshire	3,646	3.8	128	23.8
New Jersey	1,322	5.7	122	28.1
New York	14,438	1.9	687	12.9
Pennsylvania	11,738	1.7	497	6.8
Rhode Island	303	10.8	38	29.8
Vermont	3,864	2.7	88	19.2
West Virginia	10,418	1.6	251	22.4
<b>Northeast Total</b>	<b>68,175</b>	<b>0.7</b>	<b>2,677</b>	<b>5.5</b>
<b>North Central</b>				
Illinois	3,730	3.6	184	13.3
Indiana	3,888	3.2	225	10.8
Iowa	2,552	4.5	150	17.6
Michigan	12,117	1.2	498	9.1
Minnesota	7,114	1.8	202	8.5
Missouri	12,393	1.6	359	7.2
Ohio	6,973	2.6	345	10.0
Wisconsin	11,117	1.2	362	6.8
<b>North Central Total</b>	<b>59,885</b>	<b>0.7</b>	<b>2,325</b>	<b>3.5</b>
<b>North Total</b>	<b>128,060</b>	<b>0.5</b>	<b>5,002</b>	<b>3.4</b>
<b>South</b>				
<b>Southeast</b>				
Florida	11,427	2.4	509	22.6
Georgia	22,440	1.1	524	10.9
North Carolina	15,497	1.9	525	12.1
South Carolina	11,189	1.8	301	13.9
Virginia	13,000	1.2	410	13.3
<b>Southeast Total</b>	<b>73,553</b>	<b>0.7</b>	<b>2,269</b>	<b>7.0</b>
<b>South Central</b>				
Alabama	21,264	1.1	412	11.5
Arkansas	15,156	1.4	346	22.7
Kentucky	10,647	1.6	473	14.5
Louisiana	12,512	1.8	131	17.9

**Table 60. (cont.)** Area and number of owners of private forests in the United States by region, subregion, and State, 2006

Region, subregion, and State	Acres	Sampling error	Owners	Sampling error
	<i>Thousands</i>	<i>Percent</i>	<i>Thousands</i>	<i>Percent</i>
Mississippi	17,320	1.3	370	48.6
Oklahoma	7,000	2.8	71	13.9
Tennessee	12,310	1.6	534	11.6
Texas	16,204	1.2	354	12.0
<b>South Central Total</b>	<b>112,412</b>	<b>0.6</b>	<b>2,690</b>	<b>9.8</b>
<b>South Total</b>	<b>185,965</b>	<b>0.4</b>	<b>4,960</b>	<b>5.4</b>
<b>Rocky Mountain</b>				
<b>Great Plains</b>				
Kansas	1,994	5.1	103	18.9
Nebraska	1,092	7.2	57	33.1
North Dakota	510	10.7	24	48.6
South Dakota	492	10.9	12	37.4
<b>Great Plains Total</b>	<b>4,088</b>	<b>3.7</b>	<b>196</b>	<b>15.2</b>
<b>Intermountain</b>				
Arizona	7,381	3.5	45	40.5
Colorado	5,360	5.0	186	39.1
Idaho	2,553	10.2	34	54.6
Montana	7,026	5.1	40	22.9
Nevada	212	36.8	15	64.1
New Mexico	6,331	3.1	81	81.7
Utah	3,013	5.5	66	59.5
Wyoming	1,942	5.4	24	47.5
<b>Intermountain Total</b>	<b>33,819</b>	<b>1.8</b>	<b>491</b>	<b>22.5</b>
<b>Rocky Mountain Total</b>	<b>37,906</b>	<b>1.7</b>	<b>687</b>	<b>16.7</b>
<b>Pacific Coast</b>				
<b>Alaska</b>				
Alaska	35,875	2.5	82	89.3
<b>Alaska Total</b>	<b>35,875</b>	<b>2.5</b>	<b>82</b>	<b>89.3</b>
<b>Pacific Northwest</b>				
Oregon	11,059	2.6	149	16.8
Washington	9,806	3.0	215	18.9
<b>Pacific Northwest Total</b>	<b>20,864</b>	<b>2.0</b>	<b>364</b>	<b>13.1</b>
<b>Pacific Southwest</b>				
California	13,202	2.4	202	19.1
Hawaii	1,155	0.2	25	53.5
<b>Pacific Southwest Total</b>	<b>14,357</b>	<b>2.2</b>	<b>227</b>	<b>18.0</b>
<b>Pacific Coast Total</b>	<b>71,097</b>	<b>1.5</b>	<b>673</b>	<b>14.3</b>
<b>U.S. Total</b>	<b>423,029</b>	<b>0.4</b>	<b>11,322</b>	<b>3.1</b>

**Table 61.** Area and number of owners of private forests in the United States by size of forest landholdings and region, 2006

Region	Size of forest landholdings	Area		Ownerships	
		Acres	Sampling error	Number	Sampling error
		<i>Acres</i>	<i>Thousands</i>	<i>Percentage</i>	<i>Thousands</i>
<b>North</b>					
	1-9	9,183	7.2	3,040	5.6
	10-19	8,344	7.8	671	4.4
	20-49	20,391	3.7	713	3.1
	50-99	21,580	3.8	335	3.0
	100-199	18,890	4.2	156	3.1
	200-499	15,726	5.3	64	4.2
	500-999	6,190	10.8	12	10.9
	1,000-4,999	6,658	10.8	6	18.9
	5,000-9,999	1,588	28.7	<1	33.3
	10,000+	19,509	3.3	6	69.2
	Total	128,060	0.5	5,002	3.4
<b>South<sup>a</sup></b>					
	1-9	8,303	9.8	2,909	9.5
	10-19	8,301	9.3	669	6.1
	20-49	17,159	5.2	590	4.1
	50-99	19,150	4.9	297	3.9
	100-199	20,350	5.2	180	9.3
	200-499	24,972	4.5	98	6.2
	500-999	14,009	7.2	25	7.2
	1,000-4,999	21,649	5.4	14	5.7
	5,000-9,999	5,573	15.4	1	11.7
	10,000+	39,081	2.5	2	56.8
	Total	178,547	0.4	4,786	5.7
<b>Rocky Mountain<sup>b</sup></b>					
	1-9	1,436	43.6	451	25.3
	10-19	648	62.0	54	24.1
	20-49	2,940	22.9	94	15.1
	50-99	1,798	28.3	28	13.8
	100-199	2,479	23.5	21	14.4
	200-499	3,903	20.0	14	15.8
	500-999	3,353	24.1	5	18.2

**Table 61. (cont.)** Area and number of owners of private forests in the United States by size of forest landholdings and region, 2006

Region	Size of forest landholdings	Area		Ownerships	
		Acres	Sampling error	Number	Sampling error
		<i>Acres</i>	<i>Thousands</i>	<i>Percentage</i>	<i>Thousands</i>
	1,000-4,999	9,014	17.0	4	14.2
	5,000-9,999	4,005	36.4	1	35.7
	10,000+	8,118	19.0	<1	26.9
	Total	37,694	1.8	672	17.0
<b>Pacific Coast<sup>a</sup></b>					
	1-9	1,740	48.3	421	22.4
	10-19	1,182	37.2	102	17.7
	20-49	2,100	22.3	69	12.2
	50-99	1,491	31.2	23	16.1
	100-199	2,050	24.8	16	15.3
	200-499	2,698	19.4	10	13.5
	500-999	2,027	21.4	3	15.9
	1,000-4,999	4,907	11.3	3	27.8
	5,000-9,999	1,511	53.7	<1	29.7
	10,000+	15,909	5.9	<1	27.7
	Total	35,616	2.3	648	14.8
<b>United States<sup>a,b,c</sup></b>					
	1-9	20,661	7.2	6,821	5.2
	10-19	18,475	6.3	1,496	3.7
	20-49	42,591	3.4	1,465	2.5
	50-99	44,020	3.2	683	2.4
	100-199	43,770	3.5	372	4.8
	200-499	47,300	3.6	185	3.8
	500-999	25,578	5.9	45	5.4
	1,000-4,999	42,229	5.0	28	6.3
	5,000-9,999	12,677	15.2	2	13.6
	10,000+	82,617	2.6	9	47.9
	Total	379,917	0.4	11,108	3.2

<sup>a</sup> Excluding western Texas, and western Oklahoma.<sup>b</sup> Excluding Nevada.<sup>c</sup> Excluding interior Alaska and Hawaii.**Note:** Totals may not add due to rounding.









# RPA Data Wiz 2007 CD

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The included CD contains RPA Data Wiz 2007, a computer desktop application that allows custom summaries of Resource Planning Act (RPA) Assessment forest information. Summary tables, graphs, and choropleth maps can be produced with this software. A number of variables can be analyzed. Volumes for growing stock, live cull, dead salvable, net growth, and mortality can be estimated. Acreage, biomass, and tree count estimates are also available. Currently, removals are not available in this software. There is an English and a metric version of the RPA Data Wiz.

Your computer must have one of the following operating systems:

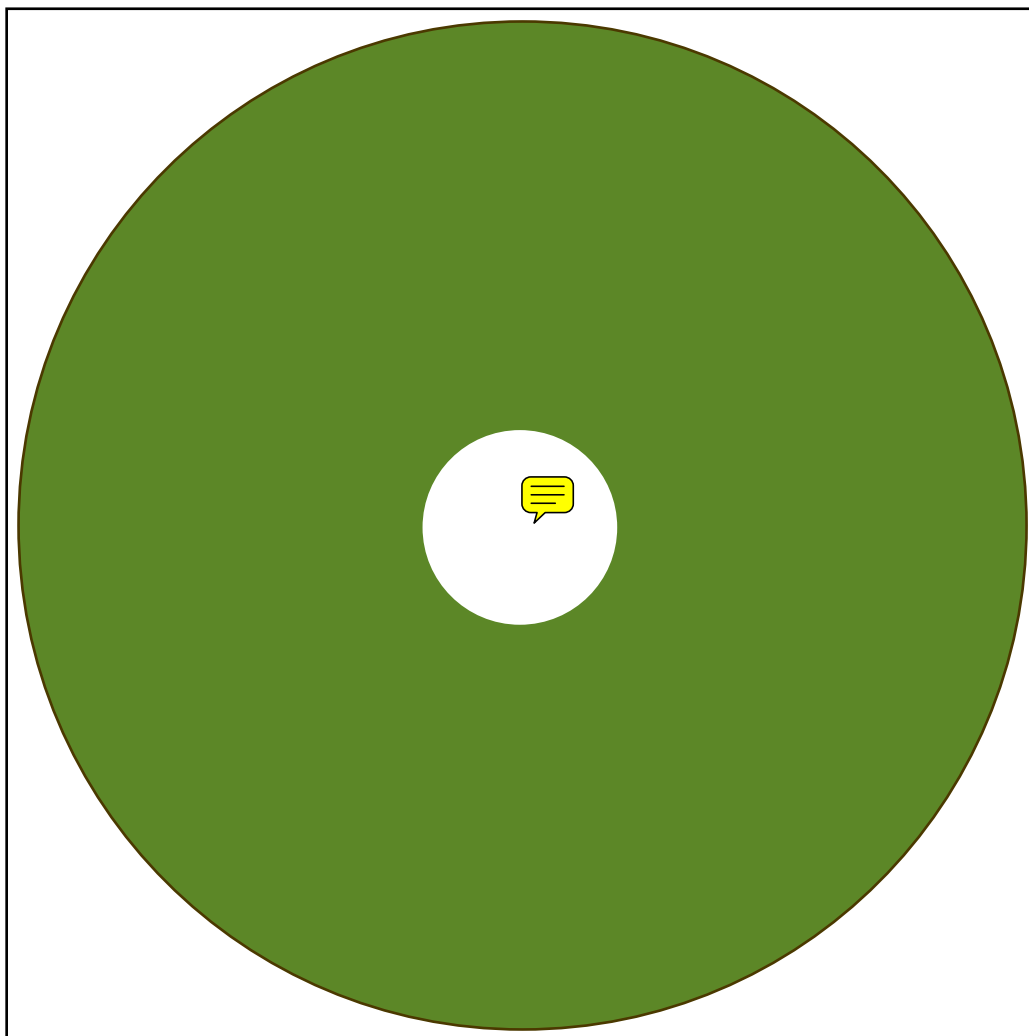
- Windows 95 or 98
- Windows NT 4.0
  - System administrator privileges for installation
- Windows 2000
  - System administrator privileges for installation
  - Service Pack 2 or higher
- Windows XP or Vista
  - System administrator privileges for installation

Your computer must have the following:

- CD-ROM or DVD-ROM drive
- Color monitor with 256 or more colors
- Microsoft Internet Explorer Version 5.0 or higher
- A minimum of 300 MB of disk space is required for installation of one version or 450 MB for both the English and metric versions.
- More space is required for temporary working files during operation of the application. This requirement depends on the operation performed. The application may require another 200+ MB of working space.

The following items are recommendations, but are not essential:

- Minimum of 200 MB of virtual memory
- Minimum of 512 MB of RAM
- Minimum of a Pentium III processor
- Minimum of a 14 inch computer monitor





United States Department of Agriculture



Forest Service



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# RPA Data Wiz 2007

Forest Resources of the United States

GTR WO-78



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