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HIGHLIGHTS

in the history of

FOREST CONSERVATION

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CONTENTS

Introduction	1
In colonial days	2
The young republic	3
Federal forest work begins	6
The conservation movement grows	11
A period of rapid progress	17
World War II period	23
Since World War II	24
Conclusion	31
National Forests	31
Early U.S. Forestry Leaders and Chiefs of the Forest Service	37

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Introduction

Forestry in the United States was still mostly in its dark ages at the beginning of the current century. Not until 1902 was "forestry" listed as a subject in the Encyclopaedia Britannica. A few farsighted and public-spirited men had tried from time to time to arouse realization of the dangers that lay ahead if wasteful destruction of forests were not checked, but they were as voices crying in the wilderness. To most people it seemed the forests would last forever.

The earliest laws passed by Congress regarding forests, between 1799 and 1831, were intended to insure supplies of live oak for shipbuilding. During the 19th century several States inquired into the possibilities of action to protect their forest resources, and laws for the encouragement of tree planting were passed in a few States.

Not until 1891, however, when the National Forest System was started, did the conservation movement get underway on a nationwide scale. The establishment of the Forest Service, U.S. Department of Agriculture, in its present form in 1905 marked the real beginning of a national forest-conservation and management policy.

Although much has been accomplished in recent years, there is no reason for complacency. Fire still burns millions of acres of forest land every year. Although not as spectacular or impressive, insects and disease take an even greater toll than fire. A large acreage of private forest land, especially smaller tracts, is not well managed, and some wasteful methods of cutting and utilization still occur in the woods. But there are signs that more widespread conservation in America is on the way. It is to be hoped that soon all the Nation's forests will be managed for sustained yields so that their products, benefits, and services will be available to the people forever.

The following pages give in chronological order some highlights of the forest conservation movement in the United States.

In Colonial Days

1607-1782

When the earliest settlers landed on American shores, forests covered nearly all the land from the eastern seaboard to the Great Plains. Wood was abundant and free for the taking. The colonial period was characterized by a gradual pushing back of the forests to make room for settlement. Because transportation facilities were poor, local wood shortages sometimes arose near the larger towns, and these occasionally led to restrictions on cutting. But most people felt, in the words of Gifford Pinchot, that "the thing to do with the forest was to get rid of it."

1626 Plymouth Colony passed an ordinance prohibiting cutting timber on colony lands without official consent.

1681 William Penn's ordinance for the Pennsylvania colony required that in clearing land, 1 acre be left in trees for every 5 acres cleared. So far as is known, this provision was not long enforced.

1691 Massachusetts colony charter reserved to the King, to provide masts for the British Navy, all white pine trees 2 feet thick or more (at one foot above the ground) growing on land not previously granted to a private person. Later similar provisions applied from Maine to New Jersey. Violators were tried in admiralty courts.

1710 The first community forest in the United States was established at Newington, N.H. A 110-acre forest owned by the town has yielded continuing benefits to the community for more than two centuries, helping to build the village church, parsonage, town hall, and library; furnishing planks for bridges; and fuel to heat public buildings.

1728 British Navigation Acts prohibited the colonies from shipping pitch, tar, and crude gum direct to foreign countries. Measures for the regulation of the naval stores industry and for the payment of bounties were introduced by the Royal Governor of North Carolina.

1760 Another of America's earliest community forests was established at Danville, N.H. A committee was appointed to manage the town's 75-acre woodland "to keep the parson warm." Over the years the forest has yielded some \$10,000 worth of products.

1777 North Carolina law prohibited unlawful firing of woods and declared that forest fires are extremely destructive to the soil.

The Young Republic

1783-1875

In the first century of American independence, settlement spread over most of the country. The forests were drawn upon heavily to make new farms, to supply the growing industries, to extend the railroad lines, and to build the many new towns and cities that sprang up. This was a period of forest exploitation, gradual at first, but rapidly increasing after about 1850. Only a few were beginning to think about the future of the forests.

1799 The Federal Timber Purchases Act appropriated \$200,000 to buy timber for naval purposes—early recognition of the need for husbanding timber supplies.

1817 The Federal Timber Reservation Act established the Santa Rosa live oak timber reserve in Florida for the Navy—the first reservation of public land for timber supplies.

1822 An act for “the preservation of timber of the United States in Florida,” was passed to prevent the destruction and theft of Government timber.

1828 Santa Rosa, a peninsula jutting into the Bay of Pensacola, Fla., was established as our first forest experiment station. It contained 30,000 acres. Live oaks and live oak acorns were planted, brush was cleared, fire lanes were opened, selective cutting was done, and trespassers were kept out. Plans were made to make the forest pay for itself in forest products. Unfortunately the forest became a political football and work was ordered dropped after 2 years.

1830 Missouri’s forest cultivation petition asked Congress for a township for experiments in raising forest timber.

1831 The Timber Trespass Act, related to live oak, became the basis for the present-day law for the prevention of timber trespass on Government land.

1837 The Massachusetts Legislature authorized a survey of forest conditions, with a view to inducing landowners to consider the importance of “continuing, improving, and enlarging the forests of the State.”

1844 New York Association for the Protection of Game, one of the earliest wildlife conservation organizations, was founded.

1849 U.S. Department of the Interior was created.

1850 First Federal timber agents appointed by Secretary of Interior to protect public timberlands. (They were discontinued in 1855 and their duties added to the district land registers and receivers.)

1851 Utah law limited timber cutting in Great Salt Lake County, with \$100 fine for anyone who wastes, burns, or otherwise destroys timber.

1858 The southern pine petition, from the Georgia Legislature, asked Congress to appoint a Federal commission to inquire into the extent and duration of the southern pine belt.

1860 "Forest Trees of North America," a 30-page section of the annual report of the Agricultural Division of the Patent Office, was issued. It listed kinds of trees found here, and discussed effect of trees on soil, climate, and health. An interesting theory set forth was that forests helped to prevent malaria.

1861-70 Iowa, Kansas, Dakota Territory, Nebraska, Minnesota, and Missouri passed laws encouraging planting of forest trees.

1864 Publication of the classic scientific work, "Man and Nature; or Physical Geography as Modified by Human Action," by George Perkins Marsh. This book sounded a warning about man's waste of the land and helped lead to the establishment of the U.S. forest reserves and the U.S.D.A. Forest Service to manage them for the people.

1867 Michigan and Wisconsin Legislatures provided for inquiries into forest conditions and needs, and set up tree-growing bounties and tax exemptions.

1869 A forestry committee was appointed under the State board of agriculture in Maine to develop a State forest policy.

1870 U.S. Census included a survey of forest resources for the first time.

1871 A Federal act provided \$5,000 for "protection of timberlands." Primarily this was intended for the protection of naval timber reservations. It was the first appropriation made directly for the protection from spoliation of publicly owned timber in the United States. The next year, \$10,000 was made available for the protection of public lands in general.

The great Peshtigo fire in Wisconsin was one of the most calamitous in American history. Homes, towns, and settlements were swept away by the flames, 1,500 persons lost their lives, and 1,280,000 acres were burned over.

1872 Arbor Day was instituted in Nebraska on April 10, to stimulate tree planting in the prairie country. The observance of Arbor Day has since spread to every State and to many foreign countries.

Yellowstone National Park was reserved as a "pleasuring ground," the beginning of the National Park system.

A tree-planting tax law in Maine provided for 20-year tax exemption for land planted to trees.

A wild land commission was created in New York to consider State ownership of wild lands lying north of the Mohawk River.

1873 Congress passed the first timber culture act, which granted a homesteader a patent to 160 acres of land in the Great Plains if he agreed to plant one-fourth of the land to trees. Later laws changed and finally eliminated the tree-planting provision; but many early-day tree groves and shelterbelts were established by homesteaders under this act.

The American Association for the Advancement of Science at its annual meeting at Portland, Maine, appointed a committee "to memorialize Congress and the several State legislatures upon the importance of promoting the cultivation of timber and the preservation of forests and to recommend proper legislation for securing these objects."

Lectures on forestry were started at Yale University, perhaps the earliest offered by an American university. Courses of instruction in forestry were instituted in the following year (1874) at Cornell, and in 1881 at the University of Michigan. By 1887, according to the Annual Report of the Chief of the Division of Forestry, U.S. Department of Agriculture, instruction in forestry was being given at New Hampshire, Massachusetts, Michigan, Missouri, and Iowa Agricultural Colleges, the Universities of Pennsylvania and North Carolina, and Cornell and Yale. It was not until the late 1890's, however, that full professional training in forestry was offered by an American university.

1875 The American Forestry Association was organized for public promotion of forestry and timber culture.

Federal Forest Work Begins

1876-1897

The real beginning of forestry work by the Federal Government came just 100 years after the Declaration of Independence, when Congress in 1876 authorized the appointment of a special forestry agent. During the next quarter century, the forestry movement was mainly a campaign of public education. Toward the end of the period a forestry policy for Government timberlands was established. Meanwhile, large-scale exploitation of timber resources continued.

1876 A special agent, Dr. Franklin B. Hough, was appointed by Frederick Watts, U.S. Commissioner of Agriculture, to gather data on the supply and demand for timber and other forest products for the present and future; to report on means successfully used abroad to manage forests, and means that may be used in this country to preserve and renew forests; and to investigate the influence of forests on climate.

A bill was introduced in Congress to insure preservation of forests of the public domain adjacent to the sources of navigable rivers and other streams.

1877 Congress granted its first appropriation, \$6,000, to obtain information before establishing a Division of Forestry in the Department of Agriculture. Carl Schurz, German immigrant, statesman, and student, who became Secretary of the Interior in 1877, was among the first to propose and urge the establishment of Federal forest reservations, and the scientific handling of forests. In his native Germany forests were managed so that there was always a supply of wood. Trees were regularly and constantly replaced. He believed the same could be done in his adopted country.

Secretary Schurz and J. A. Williamson, a militant advocate of public forest control who had just become Commissioner of the General Land Office, completely reorganized the system of protecting and caring for public timberlands. District land registers and receivers were relieved of their timberland protection responsibilities. A force of special timber agents was organized and a drive was started against timber thievery and deprecations on public lands. A new circular of instructions for timber agents was issued.

Connecticut set up a forest inquiry commission.

1877-83 Three comprehensive reports by Dr. Hough were submitted to Congress.

1878 The Free Timber Act and the Timber and Stone Act were passed by Congress. Until then there was no legal distinction between timberlands and other lands, and also no honest way to acquire public timberlands. The Free Timber Act gave the people of nine western States the right to cut timber at will on mineral lands both for domestic and mining purposes.

The Timber and Stone Act authorized the sale of public land chiefly valuable for timber but unfit for agriculture and not previously offered for sale; the minimum price to be \$2.50 per acre and the maximum area sold to one person, association or corporation, 160 acres. The impractical and unenforceable provisions in these laws resulted in unprecedented fraud and opened the door wide to wholesale forest cutting and destruction. For example, in 1885, the Government sought to recover the value of 60 million board feet of high-grade lumber stolen from public forests by a single California company.

A bill was introduced in Congress embodying the ideas of Schurz and Williamson, providing for the disposition and management of public timber and timberlands. All public lands bearing timber of commercial value would be withdrawn from sale or other disposal, and lands valuable chiefly for timber would be held by the Government to prevent waste and destruction by fire, and to assure continuous restoration and reproduction of the forests, with a gradual sale only of such trees as were most valuable as timber. An office of Forester would be set up in the Department of Interior, and the President authorized to appoint as many foresters at \$2,500 per year as he deemed necessary for the proper care, custody, preservation and appraisalment of the timber on the public lands. Fines of up to \$1,000 and one year in prison were provided, plus double the amount of damage caused, for anyone convicted of willfully or negligently setting fire to any woods, prairie or ground in the public lands, or who permits any fire to pass from his property to that of another. The bill failed to pass.

The first State game commissions were established in California and New Hampshire.

1879 Congress created a Public Lands Commission to codify public land laws, classify public lands, and recommend wise disposal and management of these lands. The Commission proposed a law to correct abuses in public lands disposal and management. It advised withdrawal from disposal of public lands chiefly valuable for timber, or setting aside portions of these lands as forest reserves. The Commission's report to Congress in 1880 contributed greatly to the Forest Reserve Act finally passed in 1891.

1881 The forest agency in the Department of Agriculture was made a Division of Forestry. It had no forests or forest lands under its control—it served only to find facts about forests and forestry. An agent was sent to Europe to study forestry there. In 1884, the duty of making experiments with timber was added to the work of the Division.

New Hampshire set up a forest inquiry commission.

1882 An American Forestry Congress was organized, and held in Cincinnati, with Dr. Bernard E. Fernow as secretary.

Vermont set up a forest inquiry commission.

1884 The Senate Standing Committee on Agriculture became the Committee on Agriculture and Forestry.

1885 The Biological Survey in the U.S. Department of Agriculture began as the Division of Economic Ornithology and Mammalogy. (In 1940 it became the Fish and Wildlife Service of the Department of the Interior. Cooperation with the Forest Service has been very close because of the relation of wildlife to the forests.)

New York was the first State to undertake public forest administration. It created the huge Adirondack State Forest Reserve in this year and set up a State forest commission which has continued in operation uninterrupted since then.

Six bills were introduced in Congress for creation of forest reserves; none passed.

California created a State board of forestry. Colorado and Ohio took similar action later in the year.

1886 The Division of Forestry under Dr. Bernard E. Fernow, a Prussian expert on forestry and the first formal chief of the Division, was given permanent statutory rank, in the U.S. Department of Agriculture.

1887 The Division of Forestry issued a "Report on the Relation of Railroads to Forest Supplies and Forestry." It estimated the vast amount of timber used in building and maintaining the railroads, and warned against exhaustion of our bountiful supply by wasteful cutting.

Pennsylvania set up a forest inquiry commission.

1888 An Irrigation Division of the U.S. Geological Survey was established and the Secretary of the Interior was given authority to withdraw from private entry reservoir sites and other public land areas that in the future would be necessary for irrigation purposes.

Another comprehensive bill was introduced in Congress for the protection and administration of forests in the public domain. It provided for a Commissioner of Forests who would subdivide forest reserves into divisions and districts, organize a "forest service," appoint forest inspectors or forest rangers, "establish a practical system of forestry," and make reasonable rules and regulations for the prevention of trespass, the control of forest fires, and the "conservation of the forest growth." This bill also failed to pass, but was another important step toward sound and progressive forestry legislation.

A law was enacted forbidding trespass on Indian reservations.

1889 A law regarding the use of timber on Indian lands, plus later amendments, was an important practical development in American forestry.

The American Forestry Congress presented a resume of timber trespass and timber thievery on the public lands to President Benjamin Harrison, showing that between 1881-87 over \$36 million worth of timber was unlawfully taken from public lands and only about \$475,000 worth recovered by the Government.

1890 The cutting of 20 million board feet of green timber annually on the Menominee Indian Reservation in Wisconsin was authorized by an

act of Congress. This was the first Federal law regulating cutting of timber on Government-managed lands.

Sequoia, Yosemite, and General Grant National Parks were created, all in the Sierra Mountains of California. Total area at first was 838,770 acres; eventually this was nearly doubled by addition of lands from adjacent forest reserves and national forests. (The General Grant Park was later changed to Kings Canyon National Park, which was finally combined with Sequoia National Park in 1940.)

1891 Beginning of the National Forest System: By act of Congress, approved March 3, the President was given power to establish forest reserves from the public domain (26 Stat. 1103). The provision was attached as a rider to a bill revising the land laws. On March 30, President Harrison created the first reserve—the Yellowstone Timberland Reserve, an area of 1,239,040 acres in Wyoming. These reserved lands are now in the Shoshone and Teton National Forests. On October 16, President Harrison signed a proclamation withdrawing 1,198,080 acres in Colorado, known as the White River Plateau Timberland Reserve, now the White River National Forest. Before his term had expired, President Harrison set aside forest reservations totaling 13 million acres. No plan of operation was passed by Congress and the reserves were simply closed areas.

North Carolina set up a forest inquiry commission.

Maine authorized its State land agent to serve also as State forest commissioner with the duty to collect data on forest fire losses, forest waste, and on the reduction of forest area and its effect on watersheds.

1892 President Harrison proclaimed eight more Timberland Reserves: Pikes Peak, Plum Creek, South Platte, and Battlement Mesa, all in Colorado; Pecos River, New Mexico; Bull Run in Oregon; San Gabriel in California, and Afognak in Alaska.

Gifford Pinchot was employed as the first professional American forester, on the Biltmore Estate of George W. Vanderbilt in the mountains of western North Carolina.

1893 New Hampshire set up a State forestry commission with responsibility for forestry education as well as authority to purchase land for public purposes.

Five more timberland reserves were set aside by President Harrison: Sierra, San Bernardino, and Trabuco Canyon in California; Pacific in Washington, and Grand Canyon in Arizona, for a total of almost 13.5 million acres during his administration. President Grover Cleveland created the Cascade Range and Ashland Timberland Reserves in Oregon, aggregating over 4.5 million acres.

1895 Pennsylvania created the office of a State Commissioner of Forestry.

Dr. Carl A. Schenck succeeded Pinchot as forester on the Biltmore Estate.

1897 President Cleveland, just before the close of his term, proclaimed more than 20 million acres of new reserves. Soon after, Congress passed an act of organization and management for those public forests. It authorized the hiring of employees to administer the forests and made possible the opening of the reserves for use. This act of June 4, with later amendments, is the one under which the National Forests are now being administered. (Until 1905, the General Land Office in the Department of the Interior was in charge. The Division of Forestry gave technical advice. The Geological Survey was assigned the surveying and mapping of the forests.)

Pennsylvania law provided the State acquisition of tax-delinquent lands for State forest reserves.

The Conservation Movement Grows

1898-1917

Around 1900, the forest conservation movement began to expand greatly under the dynamic leadership of Gifford Pinchot. Pinchot brought the word "conservation" into popular usage in its application to natural resources. The next two decades saw the establishment of a forestry profession. The U.S.D.A. Forest Service came into being. The National Forest System was developed and expanded.

1898 Gifford Pinchot was named head of the Forestry Division in the Department of Agriculture with a staff of 12 persons, 6 for clerical and 6 for scientific work. Within 7 years the number of employees had increased to more than 700, many of them graduates of the newly established forestry schools. It was in 1898 that the first fieldwork was done by U.S. forestry employees. The fieldwork consisted of special investigations in connection with lumbering. Mr. Pinchot, with great energy and leadership, enlarged and extended the scope of the Division of Forestry beyond the confines of the office to make it a vital and useful service.

The first 4-year professional course in forestry was started at Cornell University in New York. In the same year the Biltmore School of Forestry, a private school, was started in North Carolina. The Yale Forest School was established in 1900, offering graduate courses in forestry leading to a master's degree. During the next 5 years, regular forestry courses were started at the Universities of Michigan, Maine, Nebraska, and Minnesota, the State Forest Academy at Mont Alto, Pa., and Colorado College. Harvard University set up an undergraduate course in 1903, but later moved its forest work to the graduate school. Before 1905, Michigan and Iowa State Colleges also were offering nonprofessional courses that later were expanded into full professional curricula.

The first farmers' bulletin on forestry was issued, entitled "Forestry for the Farmers."

The General Land Office grouped the forest reserves into 11 districts, each headed by a superintendent. Each reserve was under the direction of a supervisor, who was assisted by rangers who conducted forest patrols, forest protection, and other work.

1899 The act of February 28 provided for recreational use of the reserves. This was the first of such laws to recognize the value of the forests for recreation. Later laws extended the uses permitted and provided for regulations to keep the facilities always available to the people.

Minnesota set up a State forestry board, and designated as forest reserves all tracts set aside or acquired by the State or donated to the State for forestry purposes.

Michigan set up a State forestry commission.

Mt. Rainier National Park was established in Washington State on 239,892 acres taken from the Pacific Forest Reserve.

1900 The Society of American Foresters, a professional organization of technically trained foresters, was founded.

1901 The Division of Forestry in the Department of Agriculture became the Bureau of Forestry with authority to engage in a variety of work, including the making of forest plans for private timberland owners, tree planting, and forest investigations (act of March 2, 31 Stat. 929).

A Forestry Division was set up in the General Land Office, headed by Filibert Roth, who had served for some time under Dr. Fernow in the Department of Agriculture's Division of Forestry. Mr. Roth was the first trained forester employed regularly in the Department of the Interior. He was assisted by three other trained foresters. However, all four resigned in 1903.

At the special request of the Secretary of the Interior, a trained forester was detailed from the Department of Agriculture to the Interior Department. He prepared the first Government timber sale contract in the United States covering the proper removal of timber from Federal forest reserves, in the Black Hills of South Dakota. He then was a special agent of the Secretary of the Interior for about a year inspecting and reporting on forest conditions and activities on other forest reserves throughout the West.

A special act was passed by Congress authorizing the Grand Portage Indians to sell timber from their allotted lands. Similar acts were passed in rapid succession for other Indian lands. The next year an act of Congress specified that 5 percent of the timber on the Chippewa Indian Reservation be left standing for forest renewal purposes, and that cutting be restricted to pine.

The annual report of Secretary of the Interior Hitchcock recommended placing the forest reserves in the Department of Agriculture under the control of the Bureau of Forestry.

Walter Mulford was appointed State Forester of Connecticut, first State forester in the United States.

1902 The first forest reserve created by Congress and not by Presidential proclamation, the Minnesota Forest Reserve, was set up.

Crater Lake National Park was created in Oregon from 156,850 acres of the Cascade Forest Reserve.

1901-05 Agitation for transfer of the forest reserves to the Department of Agriculture was continued. President Theodore Roosevelt sent messages to Congress urging the transfer. The American Forestry Congress, meeting in Washington in 1905, passed a resolution calling upon Congress

to unify all forest work of the Government, including the National Forests, in the Department of Agriculture. At this meeting, President Roosevelt declared that the object of forestry is not to "lock up" forests but to consider "how best to combine use with preservation."

1904 Louisiana became the first southern State to set up a State Department of Forestry and a forest fire warden system.

1905 The act of February 1 (33 Stat. 626) provided for the transfer of forest reserves from the Department of the Interior to the Department of Agriculture. The present Forest Service dates from this act. The Agricultural Appropriation Act of March 3 (33 Stat. 872), effective July 1, designated the old Bureau of Forestry as the Forest Service. When the Forest Service took charge of the forest reserves they numbered 60, with a net acreage of some 56 million acres of land actually owned by the Government. Forest Service personnel numbered 734, of whom 268 were in the Washington office and 466 in the field service.

North Carolina created the office of Forester.

Tennessee established the Department of Game, Fish and Forestry.

1906 The act of June 11 (34 Stat. 233) provided that those lands within forest reserves chiefly valuable for agriculture be listed for homestead and entry purposes. Under this act a huge program of land classification was carried out and several million acres of land withdrawn from the National Forest reserves. Under earlier homestead acts there had been a great deal of fraud and much land was taken for homesteads that should have been left in forest.

The area of forest reserves was increased to 106,999,138 acres; timber sales tripled over the previous year; and grazing permits were issued. An act was passed June 8, to preserve American antiquities or features of scientific or historical interest situated upon land owned or controlled by the Government. These areas are known as National Monuments, and are administered by the Department of the Interior. Many of these areas were under Forest Service control until transferred to the Department of the Interior in 1933.

Maryland set up a State Board of Forestry empowered to employ a trained forester to head the State forest fire protection system and direct all State forestry interests. Maryland also provided for purchase of State forest reserves.

Kentucky set up a State Board of Agriculture, Forestry and Immigration.

1907 A western element in Congress, opposed to the National Forest enterprise, succeeded in attaching to the agricultural appropriations bill a rider prohibiting any further additions by Presidential proclamation to the forest reserves in Oregon, Washington, Idaho, Montana, Colorado, and Wyoming. President Theodore Roosevelt signed the bill carrying the rider to be effective March 4, but before he did so on March 1 and 2 he signed 33 proclamations by which new reserves were created and areas added to already established reserves so that a total of 15,645,631 acres was

added to the forest reserve system. California, Arizona, and New Mexico were added to the list of restricted States a few years later. Addition to the National Forests or creation of new ones in these States can be only by action of Congress.

The name "forest reserves" was changed to "National Forests." The word "reserve" implies that the area is withdrawn from use, which has not been true of these areas since 1897.

President Roosevelt appointed the Inland Waterways Commission. In its first report it emphasized the interlocking character of the problems of natural resources. It pointed out that the control and use of water would conserve coal, iron, and the soil, and in order to control water, it is necessary to preserve the forests.

Alabama set up a State Commission of Forestry.

1908 To bring administration of fieldwork closer to the forests, six district offices of the Forest Service were created, each under a district forester. Headquarters are at Missoula, Mont., Denver, Colo., Albuquerque, N. Mex., Ogden, Utah, San Francisco, Calif., and Portland, Oreg. District offices were created later at Philadelphia, Atlanta, Milwaukee, and Juneau, Alaska.

The first forest experiment station was established on the Coconino Plateau in Arizona. Other stations were soon established in Colorado, Idaho, Washington, California, and Utah.

The act of May 23 (35 Stat. 251) provided that 25 percent of all money received by National Forests (for grazing permits, sale of timber, or other special uses or products) should be paid to the States for the benefit of the public schools and public roads of the counties containing the National Forests.

President Theodore Roosevelt held the White House conference of governors to consider that our natural resources were being consumed, wasted, and destroyed at a rate that threatened them with exhaustion. Means of saving our resources were discussed, and a commission was appointed to study them. This National Conservation Commission was divided into four sections—minerals, waters, forests, and soils—with Gifford Pinchot as chairman. An inventory was published in 1909.

1909 The North American Conservation Conference was held in Washington. Statements of principles of conservation for the North American Continent were adopted.

The Western Forestry and Conservation Association was established.

By this year, 11 States owned and administered nearly 3 million acres of State forests: Connecticut, Indiana, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, and Wisconsin. Of this total, 1,611,817 acres were in New York State, 863,000 in Pennsylvania, and 253,573 in Wisconsin.

1901-09 During President Theodore Roosevelt's administration more than 148 million acres were added to the National Forests.

1910 In June the Forest Products Laboratory was established by the Forest Service in cooperation with the University of Wisconsin at Madison, Wis. This laboratory was the first of its kind, and has become the world's outstanding institution for the scientific study of wood and its uses. Studies are constantly in progress to find new products to be made from wood; to solve problems of manufacture of wood products; to find ways to make use of wood material now wasted and to use the less favored trees; to improve methods of sawing, drying, and preserving lumber; and to find the answers to many other problems concerning wood.

An act was passed authorizing the President to reserve public lands for waterpower sites or irrigation. Permits for waterpower development on Government land had been issued since 1898, but this law recognized that some areas should be set aside particularly for their water.

The great forest fires in Idaho and Montana burned over 2 million acres and cost the lives of 85 men, 74 of whom were firefighters. The worst came on August 20, when a hurricane arose and fanned and drove the raging flames at great speed. Settlers were hastily loaded on trains and carried to safety, sometimes over bridges and trestles already afire. Many feats of heroism were performed, but the most outstanding was that of Ranger Edward Pulaski, who saved all but 6 of his crew of 45 firefighters when they were trapped by the fire.

The Indian Forest Service was set up in the Department of the Interior with three technically trained men to oversee commercial forest and woodland on Indian lands. The name was later changed to Branch of Forestry. Congress enacted the first general law authorizing the sale of live timber from tribal and allotted Indian lands.

Glacier National Park was established in Montana with 957,365 acres from the Blackfoot National Forest.

1911 In the Weeks law (act of March 1, 36 Stat. 961) a new national policy was established—the purchase by the Federal Government of forest lands necessary to the protection of the flow of navigable streams. Most of the National Forests east of the Great Plains, where there was little land left in the public domain, were acquired by purchase of lands under this act and acts amending it. Certain National Forests in Alabama, Arkansas, Michigan, Minnesota, and Florida originally were established from land still in the public domain, but additions were made by purchase. The Weeks law also established a program of Federal-State cooperation in fire protection, later expanded under the Clarke-McNary law of 1924.

1912 An act (37 Stat. 269, 288) provided that 10 percent of all forest receipts for the fiscal year 1912 should be used for roads and trails within the National Forests in the States from which the receipts came. The next year (37 Stat. 828, 843) this arrangement was made permanent.

The need for roads and trails was tragically shown by the terrible fires of 1910, many of which might have been stopped before they became dangerous if there had been roads by which the firefighters could reach the fires quickly.

1914 The Eastern National Forest District was established by the Forest Service. Headquarters were at Washington, D.C., but were moved to Philadelphia in 1941. Agitation for forest reserves in the East had begun as early as 1899.

1915 The term lease law was passed by Congress, authorizing issuance of term permits on National Forests for summer homes, hotels, stores, and other structures needed for recreation or public convenience.

Rocky Mountain National Park created in Colorado from 217,091 acres of the Arapaho and Colorado National Forests.

1916 The act of July 11 appropriated \$10 million "for the survey, construction, and maintenance of roads and trails within or only partly within the National Forests, when necessary for the use and development of resources upon which communities within and adjacent to the National Forests are dependent." This was in addition to the 10 percent of receipts set aside by the law passed in 1912.

Congress passed the act creating the National Park Service in the Department of the Interior.

Congress passed the Revestment Act, sometimes called the Chamberlain-Ferris Act, providing for the revestment to the Federal Government of title in 2,830, 182 acres of land held by the Oregon and California Railroad granted to it for the purpose of aiding in the construction of a railroad from Portland, Oreg., to the northern boundary of California.

The Red Lake Indian Forest of almost 110,000 acres was created within the Red Lake Indian Reservation in Minnesota.

A Period of Rapid Progress

1918-1941

After World War I, cooperation in forestry work between the Federal Government, the States, and private forest-land owners developed rapidly. State forestry departments were expanded and strengthened. The period was marked by an increasing interest in forestry on the part of private owners. The National Forest System was further developed.

1918 First National Forests established in the East: Shenandoah (later changed to George Washington) National Forest in Virginia, and White Mountain National Forest in New Hampshire.

1919 The National Parks Association was organized to promote the welfare of the National Park System and safeguard high standards in the development of National Parks.

1920 Senate Resolution 311 called for a report on timber depletion, lumber prices, lumber exports, and timber ownership in the United States. The report prepared by the Forest Service, known as the "Capper Report," gave the most complete nationwide data on the forest situation up to that time.

The Forest Service made a cooperative agreement with the War Department for airplane forest patrol in California during the fire season.

The Association of State Foresters was established to promote cooperation in forestry matters between the States, as well as with the Federal Government.

1921 President Harding proclaimed the first nationwide Forest Protection Week.

The National Forest district of Alaska was established, with headquarters at Juneau.

The Highway Act made separate appropriations for roads of general public importance and roads of primary forest importance in the National Forests.

The Appalachian (later renamed the southeastern) and the southern regional forest experiment stations of the U.S.D.A. Forest Service were established.

1922 The Izaak Walton League of America was founded.

Under the act of March 20 (42 Stat. 465), National Forest land could be exchanged for privately owned land within the boundaries of National Forests. The act of March 3, 1925 (43 Stat. 1215), authorized exchange of National Forest timber for private land.

Congress also appropriated \$10,000, the first money appropriated for the improvement of public campgrounds on the National Forests.

Congress authorized the Secretary of the Interior to protect and preserve from fire, disease, or the ravages of beetles or other insects, timber owned by the United States upon public lands, national parks, national monuments, Indian reservations, and other public lands. It also provided for cooperation with other Federal agencies, with States, and with private owners of timber.

1924 The Clarke-McNary law (act June 7, 43 Stat. 653) extended the Federal land purchase policy under the Weeks law of 1911. Lands necessary for the production of timber, as well as for the protection of navigation, within the watersheds of navigable streams could be purchased. Only headwaters of navigable streams were included under the Weeks law.

Section 2 of the Clarke-McNary law authorized the Secretary of Agriculture to enter into cooperative agreements with the States for the protection of State and private forests against fire. State and private owners were to contribute not less than half the total costs. Other sections of the act provided for studies of forest taxation; cooperation with the States in the production and distribution of forest planting stock for windbreaks, shelterbelts, and farm woodlands; and cooperative work in farm forestry extension. This law greatly expanded Federal-State cooperation in forest work, and gave a big impetus to the establishment and development of State forestry agencies. It was one of the important milestones in the advance of American forestry.

Under acts of June 7, 1924, and March 3, 1925, donations of land could be made to the National Forests.

The first Wilderness Area was set aside, in the Gila National Forest, New Mexico. Many others were added later throughout the West and in the East as well, for a total of more than 9 million acres dedicated to remain in their natural wild state, visited by man only on horseback, foot or by canoe.

1926 American foresters attended First World Forestry Congress in Paris.

1927 A Forestry Division was created in the National Park Service.

A cooperative board, called the Forest Protection Board, was established. It was composed of representatives of the National Park Service, the General Land Office, the Bureau of Indian Affairs, the Bureau of Biological Survey, the Weather Bureau, and the Forest Service. It was another advance in cooperation for the prevention and suppression of forest fires.

1928 The Woodruff-McNary Act was approved, authorizing a series of yearly appropriations up to a total of \$8 million to carry out the provisions of section 7 of the Weeks Act of 1911 for the protection of watersheds of navigable rivers. Under this and various other acts, some additional land was placed in National Forests.

The McSweeney-McNary Act (45 Stat. 699) authorized a program of forest research to "insure adequate supplies of timber and other forest products . . . to promote the full use of timber growing and other purposes

of forest lands in the United States, including farm woodlots and those abandoned areas not suitable for agricultural production, and to secure the correlation and the most economical conduct of forest research in the Department of Agriculture. . . ." This act provided a charter for a broad program of forest research. It authorized a nationwide survey of forest resources.

1929 The North Central National Forest District was established, with headquarters at Milwaukee, Wis. (Name was later changed to Lake States.) In 1930 all districts were changed to regions.

A Timber Conservation Board was appointed by President Hoover to find a remedy for the lumber industry, troubled by the business depression.

1930 The first Primitive Area was set aside in the National Forest System. Within 9 years 5.5 million acres of such wilderness-type lands were designated by the Chief of the Forest Service.

Great Smokies National Park was established in mountains of North Carolina and Tennessee.

The Knutson-Vandenberg Act (46 Stat. 527) authorized the expansion of tree-planting operations on the National Forests.

The Forest Service began the first complete survey ever undertaken of forest resources and conditions on the Nation's 648 million acres of forest land. When we entered World War II in 1941, about half the area had been inventoried. After the war ended, the survey was resumed.

1932 George Washington Memorial Forests were sponsored by the Wisconsin Federated Women's Clubs on the Nicolet National Forests in May and by the Minnesota Federation of Women's Clubs on the Superior National Forest in October. These were among the first memorial plantings within National Forests sponsored by women's organizations.

1933 On March 21, President Franklin D. Roosevelt sent to Congress his message on legislation to relieve distress, to build men, and to build up the Nation's forest resources. Ten days later Congress enacted legislation for the establishment of Emergency Conservation work, later called the Civilian Conservation Corps. On April 10 the first quota of 25,000 men was called, and on April 17, the first camp, Camp Roosevelt in the George Washington National Forest near Luray, Va., was occupied. During the 9 years the CCC program was continued, more than 2 million young men participated, and a vast amount of forest protection, tree planting, watershed restoration, erosion control, and other improvement work was accomplished. About $2\frac{1}{4}$ billion tree seedlings were planted. At the peak of the program in 1935, the Corps had 520,000 enrollees and 2,652 camps, of which 1,303 camps were assigned to forestry projects. The CCC program was ended in 1942, after the United States entered World War II.

Senate resolution 175 (72d Cong., 1st sess., 1932) introduced by Sen. Royal S. Copeland of New York, called for a plan that would insure the economic and social benefits that could and should be derived from well-managed forest lands. Previous reports revealed the state of the forest

without offering a plan for improving it. The Forest Service therefore prepared and sent to the Senate "A National Plan for American Forestry." This monumental report, printed by Senate order, is popularly known as the Copeland Report. The main recommendations for a satisfactory solution of the Nation's forest problem were: (1) A large extension of public ownership of forest lands, and (2) more intensive management on all forest lands.

The Soil Erosion Service (which in 1935 became Soil Conservation Service) and the Agricultural Adjustment Administration were established. These agencies developed large-scale programs for conservation of land and soil resources and helped many farmers improve management of soils.

1934 The Eastern National Forest Region was divided and a new region, the Southern, was created with headquarters at Atlanta, Ga.

The Taylor Grazing Act was passed June 28 "to stop injury to public grazing lands by preventing overgrazing and soil deterioration, to provide for orderly use, improvement and development, to stabilize the livestock industry dependent upon the public range." It applied to rangelands in the public domain that had not been taken up for homesteads or reserved in national forests. These lands had had no management or protection, and were becoming progressively poorer. Administration was placed under the Department of the Interior.

Congress directed the Secretary of the Interior to make rules and regulations for the operation and management of Indian forestry units on the principle of sustained-yield management and to restrict grazing and take other measures necessary to protect the range on Indian lands.

1935 The National Resources Committee was established to investigate the country's natural resources and plan for their development and use.

The Soil Conservation Service was established in the Department of Agriculture to succeed the Soil Erosion Service of the Interior Department.

Congress passed the Fulmer Act to extend Federal aid to the States in acquiring State forests.

The first tree in the shelterbelt program of the prairie plains region was planted near Mangum, Okla. This was the start of the Prairie States Forestry Project, to lessen drought conditions, protect crops and livestock, reduce duststorms, and provide useful employment for drought-stricken people. Under this project the Forest Service cooperated with prairie farmers in planting strips of trees at right angles to the prevailing winds on farms in the Dakotas, Nebraska, Kansas, Oklahoma, and northern Texas. The work was begun under Executive order of President Roosevelt, and later (1937) Congress passed covering legislation in the Norris-Doxey Cooperative Farm Forestry Act. In 7 years, more than 217 million trees were planted; 30,000 farmers participated in the program. In 1942, the project was transferred to the Soil Conservation Service to be continued

as an activity of the soil conservation districts. Many benefits have been derived from the program. Other countries have set up similar projects.

1936 Complying with a resolution of Sen. George Norris of Nebraska (S. Res. 289, 74th Cong., 2d sess.), the Forest Service prepared a report on the western range and methods of improvement. It incorporated information obtained by many years of research on range and watershed problems, by special surveys, and by 30 years' administration of National Forests.

The Omnibus Flood Control Act provided for surveys and improvements of watersheds for flood control. It recognized that proper forest and range management stabilizes streamflow and reduces flood and erosion damage. The watershed work was to be done by the Department of Agriculture.

The Naval Stores Conservation Program was authorized under the Soil Conservation and Domestic Allotment Act. The program provides payments to turpentine producers who work their timber according to approved conservation practices.

1937 The Norris-Doxey Cooperative Farm Forestry Act (50 Stat. 188) provided for increased technical aid to farm owners to manage their woodlands.

An act to provide for sustained yield management of the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands in the State of Oregon was approved (50 Stat. 874). (When these lands, comprising 2,681,000 acres, had been repossessed by the Government, the Revestment Act of 1916 and subsequent legislation provided for the timber assets to be sold without any provision for maintaining timber productivity.)

The Secretary of Agriculture set aside the northern part of the Superior National Forest in Minnesota, 640,000 acres, as a Roadless Area, part of the National Forest Wilderness system. Later the size was increased to 886,000 acres, and renamed the Boundary Waters Canoe Area. It adjoins the huge Quetico Provincial Park of Canada.

1938 President Franklin D. Roosevelt, in a special message to Congress, requested a study of the forest situation in the United States, particularly with reference to privately owned forest lands. Congress then authorized a Joint Committee on Forestry to conduct such a study. Its report was issued in 1941.

Olympic National Park created in western Washington with 648,000 acres of Olympic National Forest, greatly expanding size of the original National Monument. Later, over 200,000 acres were added to the Park from the Forest.

The New England hurricane in September 1938 blew down millions of trees. A Northeastern Timber Salvage Administration was promptly set up, under the supervision of the Forest Service, to salvage as much as possible of the blown-down timber. By 1941 more than 700 million board feet of timber had been salvaged. The large amount of down timber greatly

increased the fire hazard, and the U.S. Forest Service and the State forestry agencies also cooperated in the huge job of reducing this danger.

1940 The Lea Act authorized the Secretary of Agriculture to provide for the nationwide coordinated control of white pine blister rust.

1941 Following a 3-year study, chiefly of private forests, the Joint Congressional Committee on Forestry, under the chairmanship of Senator John H. Bankhead of Alabama, issued a report on "Forest Lands of the United States." The report cited deplorable conditions in the forest areas of many sections of the country, and recommended "the establishment of a real forest economy in this country which . . . will put to constructive use one-third of our total land area." The report recommended various cooperative aids to private forest-land owners, expansion of public ownership, and a Federal-State system of regulation of forestry practices.

The "Tree Farm" program, sponsored by forest industries, was started in the Pacific Northwest.

This year marked the 50th milestone in the National Forest System.

World War II Period

1941-1945

World War II caused heavy inroads on the Nation's forests, as wood became a critical war material needed for barracks and cantonments, ships and docks, war plants and war housing, gunstocks, explosives, airplanes, boxes and crates for war supplies, and hundreds of other essential uses. The Armed Forces used a greater tonnage of wood than of steel. Many peacetime activities were curtailed, such as the nationwide forest survey, reforestation work, and land acquisition under the Weeks law. The Forest Service, however, was called upon for numerous special war jobs; surveys of war requirements and supplies of forest products; an emergency rubber project for production of guayule and other rubber-bearing plants; a large-scale logging project in Alaska for production of urgently needed aircraft spruce; constant manning of lookout stations as part of the Army aircraft warning system; surveys of quinine, balsa, and other special forest-product resources in Latin America; emergency fire protection measures; numerous important studies and tests at the Forest Products Laboratory; and much other war work.

To help stimulate output of wood for war needs, a special Timber Production War Project was launched. This boosted logging production and at the same time encouraged logging methods that left trees for future use and wasted as little as possible.

With so many men serving in the armed services, regular fire protection forces were severely depleted. The Office of Civilian Defense established a volunteer Forest Fire Fighters Service to aid Federal and State forestry agencies. Some 185,000 citizens enrolled. Conservation agencies cooperated in special fire prevention campaigns to make the public more aware of the great need for individual carefulness in fire prevention. The Japanese made numerous attempts to fire west coast forests with incendiary bombs carried by balloons, but were unsuccessful. Paratroopers and Army ground personnel were of great assistance in fighting fires.

Although winning the war was the most important objective, the cause of conservation was not entirely forgotten. The demand for more lumber showed the need for more forestry legislation. Some laws passed by the 78th Congress were:

Public Law 273 of March 29, 1944 (58 Stat. 132), authorized cooperative agreements for joint operation of public and private timber under sustained yield plans.

Public Law 296 of May 5, 1944 (58 Stat. 216), amended the Clarke-McNary Act to authorize increased appropriations for cooperative fire protection.

Public Law 321 of May 31, 1944 (58 Stat. 265), authorized appropriations to keep forest surveys up to date.

Several States passed laws permitting the establishment of State, county, city, town, and school forests. Many States increased their appropriations for forestry and for fire protection.

Since World War II

1944-66 An international organization for forestry was started under the auspices of the United Nations Food and Agriculture Organization. At the first meeting of the FAO in 1944, a technical committee on forestry and primary forest products was set up, with nine nations represented, under the chairmanship of Henry S. Graves, dean emeritus of the Yale School of Forestry and former Chief of the U.S.D.A. Forest Service. A report of this committee called attention to the fact that "in the face of . . . rapidly multiplying uses for wood which create ever-mounting wood needs, the world is confronted by the inescapable fact that the forests—sole source of wood—are steadily diminishing."

At a meeting of the FAO in Quebec in the fall of 1945, a strongly united group representing 21 nations made up the Forestry Committee. In 1946, a Branch of Forestry and Forest Products was set up as a permanent organization under FAO, and Marcel LeLoup, formerly Director General of the Department of Forests and Waters of France, was named Director. S. B. Show, Deputy Director, came from the U.S.D.A. Forest Service. The organization undertook to set up worldwide forestry statistical services, assist governments with advice on forest policy, send out missions to make scientific studies, promote research and circulate findings among nations, and facilitate exchange of scientific personnel.

1946 An American Forest Congress was held in Washington, D.C., by the American Forestry Association. Representatives of forest industries, labor, Federal and State forestry agencies, and various civic and conservation organizations participated. Out of the discussions the AFA formulated a Program calling for effective protection of all forest and watershed lands from fire, intensified control of destructive forest insects and diseases, expansion of technical assistance to owners of small forest properties, increased forest planting, more research in timber growing and harvesting and in wood utilization, and regulation of timber-cutting practices by the several States.

The General Land Office, Department of the Interior, established a forestry division responsible for managing forests on the public domain. The General Land Office and the Grazing Service were combined to form the new Bureau of Land Management in July of this year.

1945-47 The Forest Service completed a postwar reappraisal of the forest situation in the U.S. Several reappraisal reports were published. The reappraisal showed that the volume of sawtimber in the country's forests had declined some 43 percent in 36 years, that sawtimber was being drained from the forests one and a half times as fast as it was being replaced by growth, and that there had been a marked deterioration in quality as well as quantity of timber. It showed that cutting practice on 64 percent of all private forest land was poor to destructive; 28 percent was fair; only

8 percent was good or better. The reports said there is ample forest land in the U.S. to grow all the timber we are likely to need, but that if prospective future requirements are to be met, sawtimber growing stock should be built up to double the present volume.

A separate, independent appraisal of the Nation's forest resources was completed by the American Forestry Association in 1946. Although there were some minor differences in details, the overall findings of both appraisals were basically in agreement.

1947 Congress passed a Forest Pest Control Act (61 Stat. 177), which recognized the Federal concern and responsibility in the control of forest insects and diseases on a nationwide basis, and on lands in all classes of ownership. It paved the way for more adequate services and facilities for prompt detection and suppression, and authorized Federal cooperation with States and private owners to combat outbreaks.

1948 Delegates from 21 countries at an Inter-American Conference on Conservation of Renewable Natural Resources in Denver, Colo., adopted a declaration which said in part: "The crucial problem of our generation is to safeguard, maintain, develop, increase, and wisely use for the common benefit of mankind the natural resources of the earth."

1949 Congress gave its consent and the President approved a north-eastern interstate forest fire protection compact on June 25 (63 Stat. 271). The States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York banded together to promote effective prevention and control of forest fires through development of integrated fire protection plans, provision for mutual aid in fighting fires, etc. During the next few years, interstate forest fire protection compacts also were authorized by Congress for the Southeastern, South Central, and Middle Atlantic States.

The Anderson-Mansfield Reforestation and Revegetation Act (63 Stat. 762) was approved. It provides for more rapid reforestation and revegetation of forest and range lands in the National Forests.

The Clarke-McNary Act was supplemented and amended (63 Stat. 909), to increase from \$9 million to \$20 million, by successive yearly increases, the annual authorization for Federal cooperation with the States in forest fire protection. The new act extended the authority for cooperation with the States in distributing forest planting stock to owners of all forest lands instead of to farmers alone, and increased from \$100,000 to \$2,500,000 the yearly authorization for this work. The annual appropriation authorization for the Federal-State extension program for farmers in the management of small woodlands was increased to \$500,000.

The Third World Forestry Congress met in Helsinki, Finland, under auspices of the United Nations Food and Agriculture Organization. The Congress adopted a report affirming the belief that each nation should develop a sound forest policy for the proper management of its forest resources.

Forestry had a prominent part in the United Nations Scientific Conference on the Conservation and Utilization of Resources, held at Lake Success, N.Y. This conference brought together technicians, including many foresters, from many nations for exchange of ideas and discussions on the conservation and use of natural resources for human welfare.

1950 Congress passed the Granger-Thye Act, approved April 24, to facilitate and simplify the administration of the National Forests. It provided for the constitution and election of local advisory boards for each National Forest or administrative subdivision thereof whenever a majority of the grazing permittees so petition. Appropriation authorization for range improvements was provided for on a per-animal-month use basis; and for purposes of controlling grazing on National Forest lands, the act limited issuance of grazing permits to periods of 10 years and renewals thereof. In addition, the act clarified the intent and extended certain authorities of existing statutes.

The Cooperative Forest Management Act was approved (64 Stat. 473). It authorized Federal cooperation with the States to provide on-the-ground technical services to private forest-land owners and operators and processors of primary forest products for forest management and the harvesting, marketing, and processing of forest products. This superseded the Norris-Doxey Act of 1937.

1943-50 Comprehensive interagency river basin planning, in which forestry plays an important part, began with the establishment of the Federal Inter-Agency River Basin Committee in 1943. This committee was formed to permit agencies of the Departments of War, Interior, and Agriculture, and the Federal Power Commission (and later the Department of Commerce and Federal Security Agency) to cooperate more effectively in river basin projects. Its first move was to establish the Columbia River Basin Inter-Agency Committee. Later a Missouri Basin Inter-Agency Committee and a Pacific Southwest Inter-Agency Technical Committee were established. In 1950 the President asked also for comprehensive interagency participation in river basin plans for the New England-New York region and the Arkansas-White and Red River basins. Early in 1944, the Departments of War and Interior presented a plan for the Missouri River basin. The approval of this plan, commonly called the "Pick-Sloan Plan," in the Flood Control Act of 1944 focused attention on the need for watershed improvement. The Department of Agriculture prepared the Missouri River Basin Agricultural Program, described in House Document No. 373, 81st Congress (Oct. 5, 1949).

1951 The American Forestry Association published a survey of progress in forestry for 1945-50. The adoption of forestry practices by private industry, particularly some of the larger, more progressive companies, was called significant, although in 1949 more than half of the Nation's private forest land was still without management. The "tree farm" program, industry-sponsored, spread rapidly in this period. Conservation

education in schools and colleges became more prominent, and women's clubs and other public-spirited organizations became more active in the movement. State forestry departments were strengthened, showing a gain in employment of professional foresters of 125 percent, with 1,087 in 1949. Six States in this period enacted control measures, raising to 16 the number of States with laws regulating cutting practices in greater or less degree. Between 1944 and 1950 the number of colleges and universities offering forestry degrees increased by 8, to a total of 34, with an enrollment of 8,000.

The first of several scattered forest districts were set up by the Bureau of Land Management to provide management and protection for public domain forest and watershed lands in the West.

1952 A nationwide Forest Research Advisory Committee was established to advise the Forest Service on its research program.

A new checklist of native and naturalized trees of the U.S., published by the Forest Service, listed 1,027 species, varieties, and hybrids.

1953 The Forest Service was assigned the management of some 7 million acres of "land utilization project" lands acquired by the Federal Government during the depression years of the 1930's. These lands were purchased under provisions of Title III of the Bankhead-Jones Farm Tenant Act of 1937 and other acts in a program to retire submarginal farmlands from agricultural use. The lands were previously administered by the Soil Conservation Service. Long-term policy of the Department of Agriculture looked to ultimate disposal of these lands according to their best use, either through additions to National Forests, transfer to other Federal or State agencies for conservation uses, or return to private ownership. (See paragraph on National Grasslands, p. 29.)

Research and control work on forest insects and diseases, formerly handled by other agencies of the Department of Agriculture, was transferred to the Forest Service.

1954 The first pulpmill in Alaska began operation, as a result of a long-term sale of timber from the Tongass National Forest. This was the fruition of years of effort by the Forest Service to bring about the development of a pulp and paper industry in southeastern Alaska based on a sustained yield of timber from National Forest lands.

The Watershed Protection and Flood Prevention Act (68 Stat. 666) authorized the Department of Agriculture to cooperate with States and with local agencies in planning and carrying out works of improvement on small watersheds. Earlier, in the Agriculture Appropriation Act for the fiscal year 1954, the Department was authorized to undertake 5-year programs for the improvement of a number of "pilot" watersheds.

1955 The multiple-use mining law (69 Stat. 367) was an important conservation measure affecting National Forests and other public lands. While safeguarding legitimate development of mineral resources, it was a large step toward preventing abuses of the mining laws and interference between mining claims and the management of National Forest resources.

This year marked the 50th anniversary of the establishment of the Forest Service in the U.S. Department of Agriculture.

1956 Annual receipts from sales of timber, grazing fees, and other uses of the National Forests passed the \$100 million mark.

The first practical application of techniques for dropping water or chemicals on going fires was made by the Forest Service and cooperating agencies in California. Specially designed airplane-tankers were used.

The Agricultural Act of 1956 (Soil Bank) included provisions for Federal financial assistance to farmers for converting general cropland to conservation uses, including the planting of trees. By the spring of 1957, 536,000 acres were under conservation reserve contract for tree planting.

1957 Operation Outdoors, a 5-year program to improve and expand recreation facilities in the National Forests, was started by the Forest Service with the approval of Congress.

This was the first year in which total planting by all agencies, public and private, passed the million-acre, or billion-acre, mark. About three-fourths of the planting was done by farmers and other landowners with trees procured from State forestry agencies under the Federal-State cooperative tree-distribution program authorized by the Clarke-McNary Act of 1924.

1958 The Timber Resource Review. This nationwide study was conducted by the Forest Service and cooperating Federal, State, and private agencies, in the mid-1950's. The report showed that timber growth was increasing; on a national basis, annual sawtimber growth was nearly 9 percent more than that estimated a decade earlier. The quality of timber growth, however, was reported to be declining; the more desirable trees were losing ground to poorer quality trees.

National forests and other public holdings comprised 27 percent of the country's commercial forest land. Of the private commercial forest land, 13 percent was in industrial holdings, and 60 percent was divided among 4½ million farmers and other private owners, mostly in small holdings averaging less than 100 acres. Forest productivity was reported to be generally lowest, and forest management least advanced, on these small holdings.

The report showed that substantial increases in timber growth would be necessary to meet the greatly increased requirements of the future. Best possibilities for permanently adding to timber supplies mentioned were improved stocking, accelerated reforestation, expanded control of forest insects, diseases, and fire, and more complete utilization of the timber grown.

In November the U.S. Treasury received the one billionth dollar of National Forest receipts from the Forest Service. Most came from carefully supervised timber sales.

The first commemorative postage stamp honoring forest conservation was issued by the Post Office Department.

1959 A "Program for the National Forests," a comprehensive, long-term plan for improvement and development of these public forests, was submitted to the Congress by the Secretary of Agriculture.

1960 The Multiple Use-Sustained Yield Act (Public Law 86-517), signed June 12 by President Eisenhower, declared that National Forests are to be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. It gave congressional confirmation of the long-established policy of the Secretary of Agriculture to develop and administer renewable surface resources of the National Forests for multiple use and sustained yield of their several products and services. It stressed that consideration be given relative values of resources in particular areas and in established wildernesses.

Multiple use is management of all renewable surface resources of the forests so that they are used in the combination that will best meet the needs of the American people. It provides for judicious use of the several land resources with adjustments and coordinated management to conform with changing needs and conditions. *Sustained yield* is continuous achievement and maintenance of a high-level output of forest resources without impairing the productivity of the land.

National Grasslands were established within the National Forest System June 20 when an order of the Secretary of Agriculture gave 22 land utilization projects in 11 Great Plains and other Western States the new status of National Grasslands. Multiple-use sustained-yield management of these lands was prescribed for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The projects, containing 3,822,000 acres of land suited to grassland agriculture, were purchased by the Government in the 1930's as part of a land-use adjustment program. The new status provided a stable form of management, especially needed for resource conservation in erosion-prone areas.

The Fifth World Forestry Congress assembled at Seattle, Wash. The 2,000 participants represented 68 countries and 9 international organizations; the meeting was the largest ever devoted to forestry. The central theme was "multiple use of forest lands." About 450 addresses and technical papers were presented. By resolution, the Congress called "on all governments to study, develop, and encourage sound concepts of multiple-use management as a means of providing optimum satisfaction of human needs from forest and related lands."

About 2 billion trees were planted on 2.1 million acres in the United States, equaling the high record of 1959. Nearly a third of this planting was due to a Conservation Reserve program with payments to retire unneeded cropland from production. Almost nine-tenths of the land planted was privately owned. The Department of Agriculture estimated in 1962, however, that 70 million acres still needed tree planting.

1961 President Kennedy transmitted to Congress a 10-year "Development Program for the National Forests." This broadened the 1959 program, including higher estimates for recreation resource management and development; intensified timber resource management and increased timber harvests; expanded road and trail construction to serve recreation,

timber harvest, and protection; and purchase of selected private tracts inside National Forests, especially those of key recreational value.

1962 Recreational visits to the National Forests and National Grasslands totaled 113 million—four times those in 1950. Visits to State forests and parks also continued to increase rapidly.

1963 The Nation's forests were designated to play an increasingly important role in the Department of Agriculture's Rural Areas Development Program and the war on poverty. The allocation of over \$60 million to the U.S.D.A. Forest Service for accelerated public works projects in fiscal years 1963 and 1964 promoted many conservation improvements.

1964 The "third wave" of conservation began in the Kennedy administration and was enlarged in the Johnson administration.

The Forest Service's publication, "Timber Trends in the United States," gave a comprehensive analysis of the forest situation nationwide. The report showed that for the first time annual growth of timber in the United States, both in the East and in the West, is exceeding the annual cut, although average quality of available timber continues to decline.

Congress passed the Wilderness Act, classifying 9.1 million acres of National Forest land as Wilderness and 5.5 million acres as Primitive Areas. Some of the latter have since been approved by Congress for the Wilderness classification. The act gave legislative endorsement to long-standing Forest Service policy.

1965 President Johnson delivered his message on Natural Beauty to Congress, and led the first White House Conference on Natural Beauty.

The 89th Congress may be known as the "Conservation Congress," since it passed 51 conservation measures. Congress became increasingly aware of man's contamination of his environment and started corrective action. Water pollution, air pollution, the acquisition and designation of lands for recreation purposes, and the rapidly continuing conversion of farms and forests into manmade facilities (urban sprawl) were the leading conservation problems of the day.

The area burned by forest fires dropped to a record low of 2.6 million acres, demonstrating the effectiveness of continuing improvements made in forest fire control equipment and techniques. In comparison, losses 10 years earlier were nearly three times this amount. One-half of the acreage burned in 1965 was on the 3 percent of the land that lacked organized fire protection.

1966 President Johnson asked Congress to act to sustain an environment suitable for man. At a National Youth Conference on Conservation and Natural Beauty, he called for a national effort to blend economics with esthetics, and natural beauty with practicality.

The first year of full operation for the Job Corps program on National Forests was completed. During the year, this joint endeavor of the Forest Service and the Office of Economic Opportunity saw 6,500 Corpsmen in 47 camps successfully complete a program of upgrading both environmental and human resources. These young men from deprived backgrounds received

basic schooling, skills training, and job experience which permitted them to take a better part in American life.

The Nation's 154 National Forests and 19 National Grasslands, covering 187 million acres in 42 States and Puerto Rico, reported 150 million visitor-days of use.

On March 1 the U.S. Treasury received the two-billionth dollar of National Forest receipts from the Forest Service.

1967 The "Quality of Environment" continued to dominate legislation and conservation activities. The "Air Quality Act of 1967" was passed by Congress without a dissenting vote. An omnibus Water Pollution Bill was passed by the Senate. This was designed to strengthen and amend the Federal Water Pollution Control Act already in effect.

The Secretary of Agriculture issued a document, "Resources in Action—Agriculture/2000," which outlined new policies for the Forest Service and other USDA agencies to conserve "man's total environment."

Conclusion

This short history of conservation gives some of the important steps in our evolution from the belief that forests were something to be exploited and gotten rid of as quickly as possible, to the realization that forests are necessary to human welfare. And that by good management they can be kept permanently productive. As tall oaks from little acorns grow, the work of conservation has grown from a tiny beginning to a great movement, extending its benefits in all directions. It is a living movement, its parts mutually interdependent. Let us keep it growing healthily.

National Forests

Many of the National Forests existed as Forest Reserves prior to the act of March 4, 1907, which changed the name to National Forests. On July 1, 1967, there were 154 National Forests, with an area of 182.7 million acres. The figures change frequently with establishment of new forests and consolidations for economy of administration. Small areas are sometimes added to others, thus reducing the number of National Forests, or a very large forest may be divided into two forests. Sometimes names are changed, usually when a consolidation has taken place. In several of the regions listed below, two or more forests are grouped for administrative purposes under one supervisor. Thus, on July 1, 1967 there were 154 forests, but only 130 forest supervisors.

The research organization of the Forest Service includes 8 Forest and Range Experiment Stations, the Institute of Tropical Forestry, and the Forest Products Laboratory.

Dates Established and Location of Headquarters
REGION 1—NORTHERN REGION
 (Montana, northern Idaho, northwestern South Dakota,
 northeastern Washington)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Beaverhead	July 1, 1908	Dillon, Mont.
Bitterroot	Feb. 22, 1897	Hamilton, Mont.
Clearwater	July 1, 1908	Orofino, Idaho
Coeur d'Alene	Nov. 6, 1906	Coeur d'Alene, Idaho
Colville	Mar. 1, 1907	Colville, Wash.
Custer	July 2, 1908	Billings, Mont.
Deerlodge	July 1, 1908	Butte, Mont.
Flathead	Feb. 22, 1897	Kalispell, Mont.
Gallatin	Feb. 10, 1899	Bozeman, Mont.
Helena	Apr. 12, 1906	Helena, Mont.
Kaniksu	July 1, 1908	Sandpoint, Idaho.
Kootenai	Aug. 13, 1906	Libby, Mont.
Lewis and Clark	Feb. 22, 1897	Great Falls, Mont.
Lolo	Sept. 20, 1906	Missoula, Mont.
Nezperce	July 1, 1908	Grangeville, Idaho
St. Joe	June 29, 1911	St. Maries, Idaho

REGION 2—ROCKY MOUNTAIN REGION
 (Colorado, Kansas, Nebraska, South Dakota, Wyoming)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Arapaho	July 1, 1908	Golden, Colo.
Bighorn	Feb. 22, 1897	Sheridan, Wyo.
Black Hills (includes former Harney National Forest, established May 16, 1911).	Feb. 22, 1897	Custer, S. Dak.
Grand Mesa (established Dec. 24, 1892, as Battlement Mesa Forest Reserve).	July 1, 1908	Delta, Colo.
Gunnison	May 12, 1905	Gunnison, Colo.
Medicine Bow (includes part of former Hayden National Forest, added in 1929).	May 22, 1902	Laramie, Wyo.
Nebraska	July 2, 1908	Lincoln, Nebr.
Pike	Feb. 11, 1892	Colorado Springs, Colo.
Rio Grande	July 1, 1908	Monte Vista, Colo.
Roosevelt (original name "Colo- rado").	July 1, 1910	Fort Collins, Colo.
Routt (includes part of former Hayden National Forest).	June 12, 1905	Steamboat Springs, Colo.
San Isabel	Apr. 11, 1902	Pueblo, Colo.
San Juan (includes former Monte- zuma, established June 13, 1905).	June 3, 1905	Durango, Colo.
Shoshone (originally Yellowstone Timberland Reserve, established Mar. 30, 1891. Also includes former Washakie).	July 1, 1908	Cody, Wyo.

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Uncompahgre.....	June 14, 1905.....	Delta, Colo.
White River (includes former Holy Cross National Forest).	Oct. 16, 1891.....	Glenwood Springs, Colo.

REGION 3—SOUTHWESTERN REGION (Arizona, New Mexico)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Apache.....	July 1, 1908.....	Springerville, Ariz.
Carson.....	July 1, 1908.....	Taos, N. Mex.
Cibola (includes former Manzano National Forest).	Dec. 3, 1931.....	Albuquerque, N. Mex.
Coconino.....	July 2, 1908.....	Flagstaff, Ariz.
Coronado.....	July 2, 1908.....	Tucson, Ariz.
Gila.....	Mar. 2, 1899.....	Silver City, N. Mex.
Kaibab (includes part of former Grand Canyon National Forest).	July 2, 1908.....	Williams, Ariz.
Lincoln.....	July 26, 1902.....	Alamogordo, N. Mex.
Prescott.....	May 10, 1898.....	Prescott, Ariz.
Santa Fe (includes Pecos River Forest Reserve, established Jan. 11, 1892).	Mar. 27, 1918.....	Sante Fe, N. Mex.
Sitgreaves.....	July 1, 1908.....	Holbrook, Ariz.
Tonto.....	Oct. 3, 1905.....	Phoenix, Ariz.

REGION 4—INTERMOUNTAIN REGION (Utah, southern Idaho, western Wyoming, Nevada, a small part of California)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Ashley.....	July 1, 1908.....	Vernal, Utah
Boise (includes original Payette National Forest, established June 3, 1905).	July 1, 1908.....	Boise, Idaho
Bridger (formerly Wyoming National Forest).	July 1, 1908.....	Kemmerer, Wyo.
Cache.....	May 26, 1908.....	Logan, Utah
Caribou.....	Jan. 15, 1907.....	Pocatello, Idaho
Challis.....	July 1, 1908.....	Challis, Idaho
Dixie.....	Sept. 25, 1905.....	Cedar City, Utah
Fishlake.....	Feb. 10, 1899.....	Richfield, Utah
Humboldt (includes former Nevada National Forest, established Feb. 10, 1909).	July 2, 1908.....	Elko, Nev.
Manti-La Sal (includes former La Sal, established Jan. 24, 1906).	May 29, 1903.....	Price, Utah
Payette (former Weiser National Forest, established May 25, 1905, and Idaho National Forest, established July 1, 1908).	Apr. 1, 1944.....	McCall, Idaho
Salmon.....	Nov. 5, 1906.....	Salmon, Idaho
Sawtooth (includes former Minidoka National Forest, established July 2, 1908).	May 29, 1905.....	Twin Falls, Idaho

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Targhee.....	July 1, 1908.....	St. Anthony, Idaho
Teton.....	Feb. 22, 1897.....	Jackson, Wyo.
Toiyabe.....	Mar. 1, 1907.....	Reno, Nev.
Uinta.....	Feb. 22, 1897.....	Provo, Utah
Wasatch (includes former Salt Lake National Forest).	Aug. 16, 1906.....	Salt Lake City, Utah

REGION 5—CALIFORNIA REGION

(California, western Nevada, a small part of Oregon)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Angeles (San Gabriel Timberland Reserve established Dec. 20, 1892).	July 1, 1908.....	Pasadena, Calif.
Calaveras Bigtree.....	May 11, 1954.....	Sonora, Calif.
Cleveland.....	July 2, 1908.....	San Diego, Calif.
Eldorado.....	July 28, 1910.....	Placerville, Calif.
Inyo.....	May 25, 1907.....	Bishop, Calif.
Klamath.....	May 6, 1905.....	Yreka, Calif.
Lassen.....	June 2, 1905.....	Susanville, Calif.
Los Padres (formerly Santa Barbara National Forest).	Dec. 22, 1903.....	Santa Barbara, Calif.
Mendocino (formerly California National Forest).	July 2, 1908.....	Willows, Calif.
Modoc.....	Nov. 29, 1904.....	Alturas, Calif.
Plumas.....	Mar. 27, 1905.....	Quincy, Calif.
San Bernardino.....	Feb. 25, 1893.....	San Bernardino, Calif.
Sequoia.....	July 2, 1908.....	Porterville, Calif.
Shasta.....	Oct. 3, 1905.....	Redding, Calif.
Sierra.....	Feb. 14, 1893.....	Fresno, Calif.
Six Rivers.....	June 3, 1947.....	Eureka, Calif.
Stanislaus.....	Feb. 22, 1897.....	Sonora, Calif.
Tahoe.....	Apr. 13, 1899.....	Nevada City, Calif.
Trinity.....	Apr. 26, 1905.....	Redding, Calif.

REGION 6—PACIFIC NORTHWEST REGION

(Oregon, Washington, a small part of California)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Gifford Pinchot (formerly Columbia National Forest).	July 1, 1908.....	Vancouver, Wash.
Deschutes.....	July 1, 1908.....	Bend, Oreg.
Fremont.....	Sept. 17, 1906.....	Lakeview, Oreg.
Malheur.....	July 1, 1908.....	John Day, Oreg.
Mount Baker (formerly Washington National Forest).	Feb. 22, 1897.....	Bellingham, Wash.
Mount Hood (formerly Oregon National Forest).	June 30, 1911.....	Portland, Oreg.
Ochoco.....	June 30, 1911.....	Prineville, Oreg.
Okanogan (formerly Chelan National Forest).	July 1, 1908.....	Okanogan, Wash.
Olympic.....	Feb. 22, 1897.....	Olympia, Wash.
Rogue River (formerly Crater National Forest).	July 1, 1908.....	Medford, Oreg.

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Siskiyou.....	Oct. 5, 1906.....	Grants Pass, Oreg.
Siuslaw.....	July 1, 1908.....	Corvallis, Oreg.
Snoqualmie.....	July 1, 1908.....	Seattle, Wash.
Umatilla.....	June 13, 1908.....	Pendleton, Oreg.
Umpqua.....	Mar. 2, 1907.....	Roseburg, Oreg.
Wallowa.....	May 6, 1905.....	Baker, Oreg.
Wenatchee.....	July 1, 1908.....	Wenatchee, Wash.
Whitman.....	July 1, 1908.....	Baker, Oreg.
Willamette (includes former San- tiam and Cascade National Forests).	Apr. 6, 1933.....	Eugene, Oreg.
Winema.....	July 1, 1961.....	Klamath Falls, Oreg.

REGION 8—SOUTHERN REGION

(Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Oklahoma, Tennessee, Texas)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Angelina.....	Oct. 13, 1936.....	Lufkin, Tex.
Apalachicola.....	May 13, 1936.....	Tallahassee, Fla.
Bienville.....	June 15, 1936.....	Jackson, Miss.
William B. Bankhead (formerly Black Warrior National Forest).	Jan. 15, 1918.....	Montgomery, Ala.
Chattahoochee.....	July 9, 1936.....	Gainesville, Ga.
Cherokee.....	July 14, 1920.....	Cleveland, Tenn.
Conecuh.....	July 17, 1936.....	Montgomery, Ala.
Croatan.....	July 29, 1936.....	Asheville, N.C.
Daniel Boone (formerly Cumber- land National Forest).	Feb. 23, 1937.....	Winchester, Ky.
Davy Crockett.....	Oct. 13, 1936.....	Lufkin, Tex.
Delta.....	Jan. 12, 1961.....	Jackson, Miss.
De Soto.....	June 17, 1936.....	Jackson, Miss.
Francis Marion.....	July 10, 1936.....	Columbia, S.C.
George Washington (formerly Shenandoah National Forest).	May 16, 1918.....	Harrisonburg, Va.
Holly Springs.....	June 15, 1936.....	Jackson, Miss.
Homochitto.....	July 20, 1936.....	Jackson, Miss.
Jefferson.....	Apr. 21, 1936.....	Roanoke, Va.
Kisatchie.....	June 10, 1930.....	Alexandria, La.
Nantahala.....	Jan. 29, 1920.....	Asheville, N.C.
Ocala.....	Nov. 24, 1908.....	Tallahassee, Fla.
Oconee.....	Nov. 27, 1959.....	Gainesville, Ga.
Osceola.....	July 10, 1931.....	Tallahassee, Fla.
Ouachita (formerly Arkansas Na- tional Forest).	Dec. 18, 1907.....	Hot Springs, Ark.
Ozark.....	Mar. 6, 1908.....	Russellville, Ark.
Pisgah.....	Oct. 17, 1916.....	Asheville, N.C.
Sabine.....	Oct. 13, 1936.....	Lufkin, Tex.
St. Francis.....	Nov. 8, 1960.....	Russellville, Ark.
Sam Houston.....	Oct. 13, 1936.....	Lufkin, Tex.
Sumter.....	July 13, 1936.....	Columbia, S.C.
Talladega.....	July 17, 1936.....	Montgomery, Ala.
Tombigbee.....	Nov. 27, 1959.....	Jackson, Miss.

REGION 9—EASTERN REGION

(Connecticut, Delaware, Illinois, Iowa, Indiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin.)

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Allegheny.....	Sept. 24, 1923.....	Warren, Pa.
Chequamegon.....	Nov. 13, 1933.....	Park Falls, Wis.
Chippewa (formerly Minnesota National Forest).	May 23, 1908.....	Cass Lake, Minn.
Clark.....	Sept. 11, 1939.....	Rolla, Mo.
Green Mountain.....	Apr. 25, 1932.....	Rutland, Vt.
Hiawatha (includes former Marquette National Forest, established Feb. 10, 1909).	Jan. 16, 1931.....	Escanaba, Mich.
Hoosier.....	Oct. 1, 1951.....	Bedford, Ind.
Huron (formerly Michigan National Forest).	Feb. 11, 1909.....	Cadillac, Mich.
Manistee.....	Oct. 25, 1938.....	Cadillac, Mich.
Mark Twain.....	Sept. 11, 1939.....	Springfield, Mo.
Marquette.....	Feb. 10, 1909.....	Escanaba, Mich.
Monongahela.....	Apr. 28, 1920.....	Elkins, W. Va.
Nicolet.....	Mar. 2, 1933.....	Rhineland, Wis.
Ottawa.....	Jan. 27, 1931.....	Ironwood, Mich.
Shawnee.....	Sept. 6, 1939.....	Harrisburg, Ill.
Superior.....	Feb. 13, 1909.....	Duluth, Minn.
Wayne (Ohio).....	Oct. 1, 1951.....	Bedford, Ind.
White Mountain.....	May 16, 1918.....	Laconia, N.H.

REGION 10—ALASKA REGION

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Chugach.....	July 23, 1907.....	Anchorage, Alaska
Tongass, North.....	Sept. 10, 1907.....	Juneau, Alaska
Tongass, South.....	Sept. 10, 1907.....	Ketchikan, Alaska

Puerto Rico

<i>National Forest</i>	<i>When established</i>	<i>Headquarters</i>
Caribbean (formerly Luquillo National Forest).	Jan. 17, 1903.....	Rio Piedras, P.R.

FOREST AND RANGE EXPERIMENT STATIONS

Intermountain, Ogden, Utah	Pacific Southwest, Berkeley, Calif.
North Central, St. Paul, Minn.	Rocky Mountain, Fort Collins, Colo.
Northeastern, Upper Darby, Pa.	Southeastern, Asheville, N.C.
Pacific Northwest, Portland, Oreg.	Southern, New Orleans, La.

Research in wood utilization is done at the Forest Products Laboratory, Madison, Wis.

Research in tropical forestry is done at the Institute of Tropical Forestry, Rio Piedras, Puerto Rico.

Early U.S. Forestry Leaders and Chiefs of the Forest Service

Franklin B. Hough (1822–85). First Federal official assigned by the Commissioner of Agriculture under a mandate from Congress to gather data and present reports on forestry in the U.S. (1876–83). A physician who served in the Civil War, he was superintendent of the New York State census and had a keen interest in nature, history, forest conservation, and statistics, and was a prolific writer of letters, speeches, and articles. His reports to Congress, based on his extensive trips around the country, had far-reaching effects in building public sentiment for forest conservation. His office was made a Division of Forestry in 1881.

Carl Schurz (1829–1906). German statesman, one of the earliest and most effective advocates of forestry in the U.S. He served as Secretary of the Interior (1877–81), and organized a force of special timber agents to conduct a strong drive against widespread raiding and destruction of forests on public lands. Schurz tried hard to strengthen the Interior Department's control over disposition and management of public timber and timberlands. Although his efforts were not very successful at the time, he contributed greatly to changing the public attitude toward forest conservation.

Nathaniel H. Egleston (1822–1912). Became Chief of the Division of Forestry in U.S. Department of Agriculture after Mr. Hough (1883–86). A Congregational minister and teacher, he helped organize the American Forestry Association in 1875.

Bernard E. Fernow (1851–1923). First professional forester in the U.S. He was Chairman, American Forestry Association (1884–98), and Chief, U.S.D.A. Division of Forestry (1886–98). He delivered the first course of forestry lectures in the U.S., in 1887 at Massachusetts Agricultural College, and was Director and Dean of the first 4-year professional forestry school, at Cornell University, starting in 1898. Like Carl Schurz, he was a native of Germany. The two were most influential in passage of the Forest Reserve Act of 1891 which established the first forest reserves (later called National Forests).

Filibert Roth (1858–1925). One of the pioneers in forestry teaching in America, he was an instructor under Mr. Fernow at Cornell (1898–1901), and started the Forestry Department at the University of Michigan in 1903, which he headed for 20 years until his retirement. He was the first forester to have charge of the Federal forest reserves, serving as Chief of the Forest

Reserve Division in the old General Land Office (now the Bureau of Land Management), U.S. Department of the Interior, from 1901–03. Like Fernow and Schurz, he was a native of Germany. After 8 years of study at the University of Michigan he became a timber expert for the U.S. Department of Agriculture (1893–98). During this period and while Chief of the Forest Reserve Division, Mr. Roth wrote several booklets and bulletins on forestry and wood technology, including the first manual on managing the reserves.

Gifford Pinchot (1865–1946). One of America's most renowned conservation leaders. Chief, U.S.D.A. Division of Forestry (1898–1901); Chief, U.S.D.A. Bureau of Forestry (1901–05); first Chief, U.S.D.A. Forest Service (1905–10). He was an organizer and first president of the Society of American Foresters (1900). All his life he was an outspoken crusader for Federal protection of forest lands. Mr. Pinchot was influential in persuading Congress to transfer the vast forest reserves from the Department of the Interior to the Department of Agriculture.

This was done Feb. 1, 1905, and the Bureau of Forestry was changed to the Forest Service on July 1 of that year. The forest reserves were renamed the National Forests in 1907. During his period in office, the Forest Service and the Forests grew spectacularly. In 1905 the forest reserves numbered 60 units covering 56 million acres; in 1910 there were 150 National Forests covering 172 million acres. The pattern of effective organization and management was set during Pinchot's administration, and "conservation" of natural resources in the broad sense of wise use became a widely known concept and an accepted national goal.

Henry S. Graves (1871–1951). Second Chief of the Forest Service (1910–20). In 1900 he was an organizer and the first vice-president of the Society of American Foresters, and in the same year he headed the newly established School of Forestry at Yale University, where he remained as Dean until called to head the Forest Service. During his tenure as Chief, the Forest Products Laboratory was established at Madison, Wis.; the Weeks Law was enacted (1911) allowing Federal purchase of forest lands necessary to protect the flow of navigable streams and providing for Federal-State cooperation in forest fire protection; and the Research Branch of the Forest Service was organized.

William B. Greeley (1879–1955). During his administration (1920–28) the Clarke-McNary Act became law, extending Federal authority to purchase forest lands necessary for timber production, and authorizing cooperative agreements with the various States to help protect State and private forests from wildfire. National Forest administration was further strengthened.

Robert Y. Stuart (1883–1933). While he was Chief of the Forest Service (1928–33), the McSweeney-McNary Act to promote forest research, and the

Knutson-Vandenberg Act to expand tree planting on National Forests became law. The Civilian Conservation Corps began its valuable work in forestry and conservation, enrolling 2 million young unemployed men in the 9 years of its existence.

Ferdinand A. Silcox (1882–1939). While he was Chief (1933–39), the Forest Service made a study of western range use, recommending methods for improvement, and surveyed forested watersheds for flood control through restoration and proper management of forests. Under the Prairie States Forestry Project, 217 million trees were planted by 33,000 plains farmers. The CCC grew to full size. Mr. Silcox renewed the fight Mr. Pinchot had started to bring about public regulation of timber cutting on private forest lands.

Earle H. Clapp (1887–). During his tenure as “Acting Chief” (1939–43), the Forest Service helped to mobilize the Nation’s forest resources behind the war effort (World War II). Cutting of National Forest timber was stepped up, including a special project in Alaska to provide spruce for military aircraft; extensive surveys were made of production, supplies, and needs for wood products; special studies and tests were made for the armed forces, and forest lookout stations were manned along both East and West Coasts as part of the year-round aircraft warning system.

Lyle F. Watts (1890–1962). During his period as Chief (1943–52) the Forest Service wound up its expanded wartime activities and undertook a planned effort to shift administration of the National Forests from a custodial to a managed-property basis. There was also considerable expansion of the Federal role of cooperator with the various States and with private industry—in the fields of forest fire protection, pest control, tree planting, woodland management and harvesting, wood-product marketing and processing, grazing, etc., through various acts and amendments, including the Cooperative Forest Management Act of 1950.

Richard E. McArdle (1899–). As 11th Chief (1952–62) he helped set up a Forest Research Advisory Committee. The “Timber Resource Review,” a comprehensive report on timber resources in the U.S., was published. The landmark Multiple Use-Sustained Yield Act was passed by Congress, confirming long-established policy for broad development and administration of National Forests in the public interest. The Forest Service was assigned management of 7 million acres of western plains lands acquired by the Federal Government in the Depression years. The Forest Service organized these lands as National Grasslands.

Edward P. Cliff (1909–). Present Chief of the Forest Service, he has devoted much time to promoting better understanding of public forest management problems with stockmen, timbermen, and the general public. Recreation has become the major use in many National Forest areas, and

facilities are being expanded to take care of the greatly increased public demand. The Forest Service has undertaken a role in the Job Corps to operate nearly 50 rurally located camps which have given thousands of deprived youth a new start and have accomplished much important conservation work throughout the country. The Forest Service has actively participated in the nationwide Natural Beauty campaign, Rural Areas Development, and the War on Poverty. With enactment of the National Wilderness Preservation System law in 1964, 9.1 million acres of National Forest areas previously designated as "Wild" or "Wilderness" became the core of the new System. Additional National Forest acreage has been added to the System since then.

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