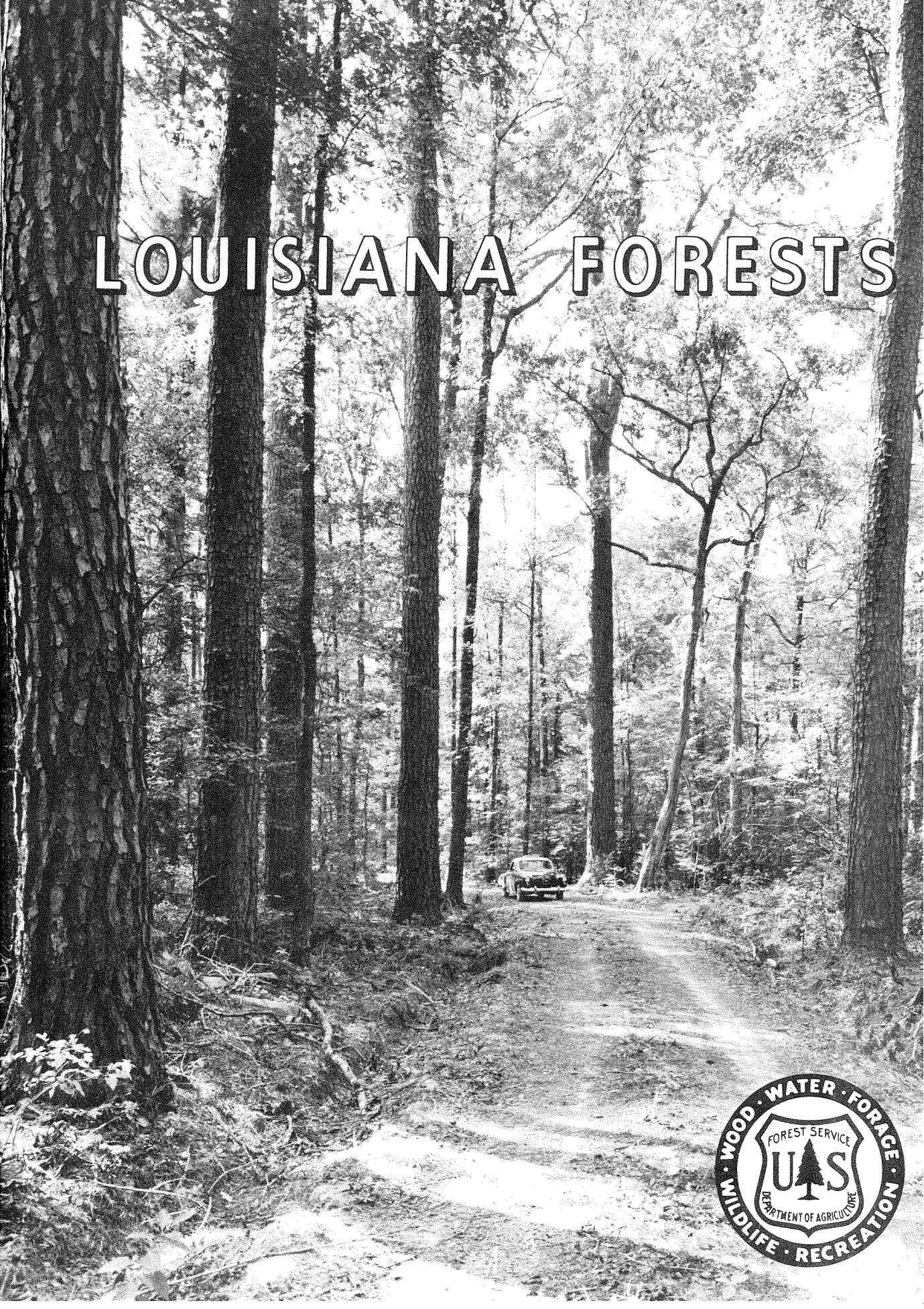
# LOUISIANA FORESTS



# Foreword

This report describes the principal findings of the third Forest Survey of Louisiana, completed in 1964 by the Southern Forest Experiment Station. The survey, which was undertaken as one phase of the continuing nationwide inventory being conducted by the U. S. Forest Service, provides up-to-date information on the kind, amount, and condition of forest resources; the industries they support and the possibilities for improving wood production. Comparison with the previous survey of 1954 helps to clarify timber trends.

Generous assistance from public and private organizations made it possible to keep the field work for the new inventory ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of the organizations listed below, and of the individuals in them, is gratefully acknowledged:

**Louisiana Forestry Commission**

**Louisiana Wild Life and Fisheries Commission**

**The Louisiana Forestry Association**

**Frank Bennett & Associates**

**Calcasieu Paper Company, Inc.**

**Chicago Mill and Lumber Company**

**Central Louisiana Electric Company, Inc.**

**Continental Can Company, Inc.**

**Crown Zellerbach Corporation**

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**Roy O. Martin Lumber Company, Inc.**

**Union Producing Company**

# LOUISIANA FORESTS

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FOREST SERVICE

**SOUTHERN FOREST EXPERIMENT STATION**
New Orleans, Louisiana

1965

*Photos by*
*Louisiana Forestry Commission*

# Contents


Figure 1. *Forest Survey regions in Louisiana.*

# Highlights

The total amount of forest land in Louisiana is virtually the same today as it was a decade ago. But its distribution has changed noticeably. In the Delta, for example, forest acreage is still declining; between 1954 and 1964, it dropped some 7 percent, thus closely paralleling trends in the Delta sections of neighboring Arkansas and Mississippi. Outside the Delta, forest acreage has increased some 3 percent since 1954. Modest losses in the southeast and southwest regions have been overshadowed by woodland expansion in the northwest (fig. 1).

Fire protection, natural reproduction, planting, and direct seeding have all helped to upgrade the deforested and poorly stocked areas in the State. The reduction in denuded acreage is especially evident in the southwestern parishes, which formerly had a vast expanse of cutover longleaf pine acreage. Today only 2 percent of the forest area in this region is nonstocked in the sense that it supports less than 10 percent in growing stock.

Timber volumes found on the millions of forest acres in Louisiana have also changed markedly since the midfifties. Softwood now totals 29 billion board feet, having gained some 43 percent since 1954. This is a continuation of earlier trends. Pine makes up 85 percent, 25 billion board feet, of softwood timber. The rest is largely cypress but includes some eastern redcedar.

All sections of the State have shared in the softwood gain. The southwest has some 50 percent more softwood sawtimber than in 1954. The southeast and northwest regions have a third more. Cypress has gained in the Delta.

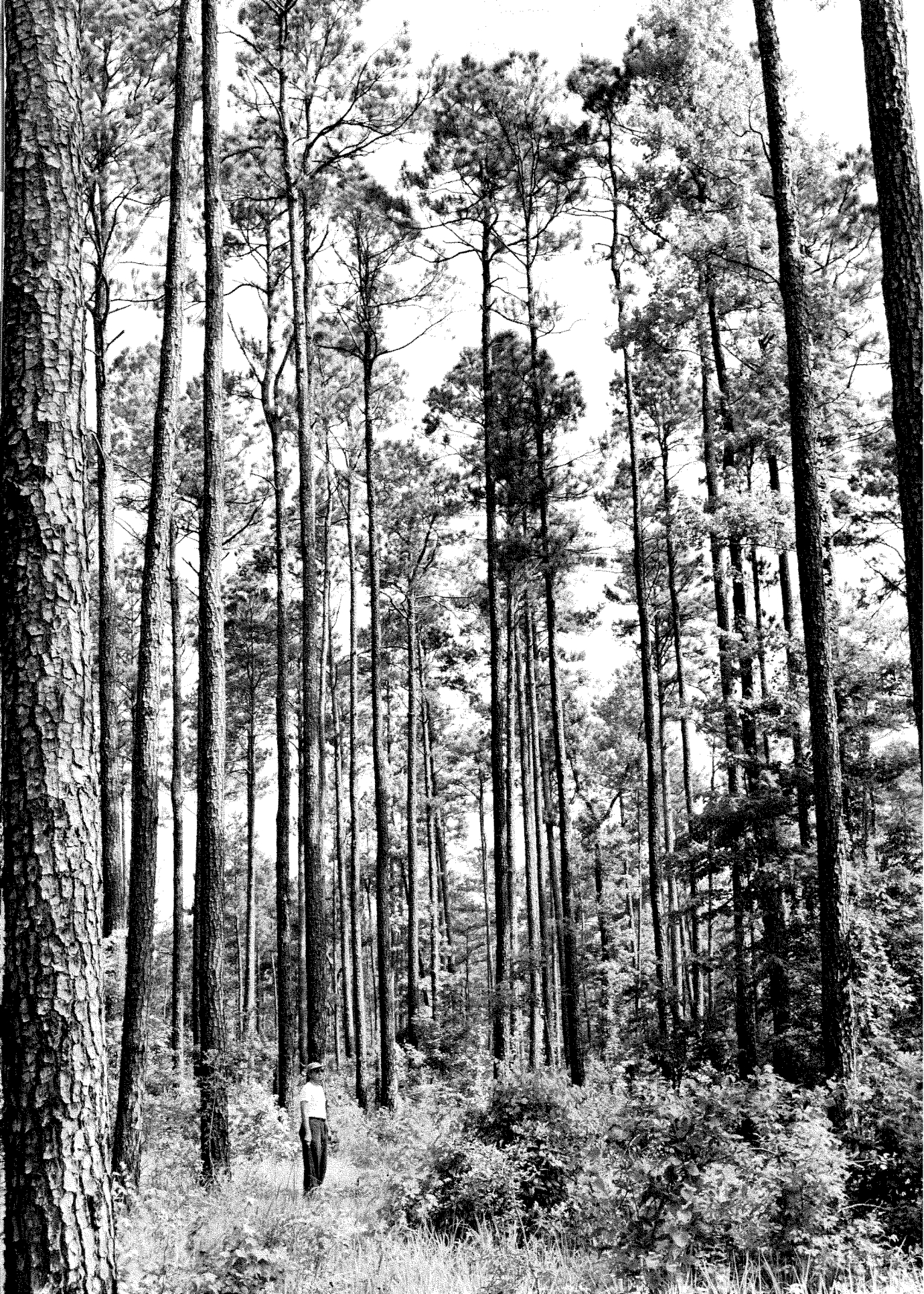
The hardwood situation is much less encouraging. Hardwood has declined over most of the State. The biggest drop was in the North Delta, where land development was most extensive. Statewide, hardwood sawtimber now totals 20 billion board feet, about 23 percent less than in 1954. The decline in high-quality hardwoods—that is, those most suitable for factory lumber and veneer—was especially severe.

Timber harvested from Louisiana forests totaled more than 380 million cubic feet in 1963. This volume supplied roundwood to more than 220 primary wood-using plants within the State, and to about 60 in surrounding States.

All together, the output of timber products has increased slightly since 1953. Production of pulpwood rose considerably and saw logs made modest gains. These increases were more than enough to offset declines in fuelwood, veneer logs, fence posts, piling, hewn ties, and cooperage bolts.

The growth of sawtimber was in excess of the cut for 1963, the year in which the latest harvest statistics were compiled. Growth and cut relationships, however, differ sharply for hardwood and softwood. Hardwood sawtimber is being used faster than it grows. Management of hardwood forests simply must be improved and extended.

Softwood sawtimber growth is double the cut. The continuing buildup in volume and tree size will provide increased opportunities for forest industries. The emergence of a southern pine plywood industry in the State and the current expansion of pulping capacity are largely related to recent gains in inventory and growth. They are but a preview of the industrial growth that is possible if Louisiana's forest resources are wisely managed.



# Resource Trends

## TRENDS IN FOREST AREA

*State More Than Half Forested*

More of Louisiana is devoted to forest growth than to any other type of land use. Today forests cover 56 percent, 16 million acres, of the land. Nearly all are both available and suitable for timber production. Only 38,000 acres are reserved from timber harvesting, mainly because they are within restricted zones on military reservations. Statewide, forest acreage is virtually the same as during the previous survey of 1954. But the total masks noteworthy regional shifts.

Forest acreage is still shrinking in the Louisiana Delta. In fact, Delta forests have steadily declined since at least the mid-1930's, when the first regional timber inventory was made. For example, forest land decreased 8 percent (446,400 acres) between 1935 and 1954 and has since declined another 7 percent (345,200 acres). Land clearing has been heaviest on the rich alluvial soils of the northern Delta. Much of Louisiana's cotton is raised there. Moreover, soybeans developed into an important crop during the past decade, and the bulk of the State's output now comes from this area (table I).

Recent land-use trends in the Delta regions of Arkansas and Mississippi closely parallel Louisiana changes. In the Mississippi Delta, for example, woodland area was reduced some 6 percent between 1948 and 1957. The Arkansas Delta experienced a 7-percent drop between 1951 and 1959. It appears that the brunt o agricultural expansion in the Delta is bein borne by the better hardwood sites, and tha the forests are being increasingly restricte to areas that flooding, poor drainage, and soi conditions render unsuitable for farming. Wit the unusually favorable circumstances for agri culture over much of the Delta, including pub lic participation in flood control and majo drainage projects, and with public support o farm prices, the outlook is for still further ne reduction in forest acreage.

Table I. *Commercial forest land in 1964 and change since 1954*

| Region | Commercial forest | Change |
|---|---|---|
| | *Thousand acres* | *Percent* |
| North Delta | 1,894.8 | — 13 |
| South Delta | 2,750.9 | — 2 |
| Southwest | 4,822.3 | — 1 |
| Southeast | 1,884.4 | — 6 |
| Northwest | 4,684.1 | + 12 |
| Total | 16,036.5 | (1) |

[1] Negligible.

The Delta has long been noted for the quality and quantity of timber yielded by its heterogeneous forests. These forests are generally regarded as the most productive hardwood lands of any size in the entire South or perhaps the Nation. The decade-by-decade attrition of hardwood acreage in the Delta has caused widespread local concern over the long-range future of the region's wood-processing industry. One hopeful development is that this situation appears to be stimulating interest in the lands that are still available for timber development and at the same time generating wider activity in hardwood management research.

Outside of the Delta—that is, in the upland regions—forest acreage has increased some 3 percent since 1954. This increase represents a net gain after allowance is made for forest lost to land clearing, highways, urban areas and other nontimber uses. Acreage lost to nonforest uses, however, frequently supports substantial volumes of timber that are often only partially made available to industry when the area is converted. By contrast, the acreage gained is essentially farmland that has only recently reverted to forest growth and thus as yet bears little, if any, marketable volume.

The gain in the upland regions has followed a well-defined pattern. As between earlier surveys, modest forest acreage losses in most southeastern and southwestern parishes were attributable to continuing expansion of the

major towns and cities and to agricultural development. These losses were overshadowed by woodland expansion in the northwest. Here, forest acreage has risen 12 percent—about 500,000 acres—in the last 10 years (table I), chiefly from extensive planting and natural reseeding of pine on abandoned farms.

The northwest is now the most heavily timbered part of the State. Almost 8 acres in every 10—78 percent, to be exact—are presently in forest. The South Delta is the least wooded section, with 28 percent of its area in forest. A natural prairie extends through the western part of the South Delta; in this prairie the only forest lands are in belts bordering the streams. Moreover, the entire coastal strip is a marshy low-lying area up to 30 or more miles wide. Elsewhere in Louisiana, the proportion of land in forest ranges between these two extremes.

*Industry Holdings Extensive*

All but 6 percent of the forest land—880,000 acres—is privately owned. Public lands are divided among Federal, State, parish, and municipal ownership. The Kisatchie National Forest in central Louisiana makes up the largest share of the public tracts.

Among the major classes of private forest owners, farmers hold the smallest share. All together, their holdings encompass some 15 percent of the forest area. By contrast, farmers own two-fifths of the forest acreage in the Southern States as a whole. The small proportion of such holdings in Louisiana seems at least partially due to change in occupation of many landowners who were formerly farm operators.

Wood-using industries presently hold more than 3 million acres—20 percent of the forest. This acreage is about equally divided between lumber companies and pulp concerns. Very little is held by other kinds of wood-processing firms. The distinction between pulp concerns and other classes of industrial owners has become less and less meaningful in the South, however, as the manufacture of pulp and other wood products has become more closely integrated within large companies. Most of the industrially owned land is in large holdings—that is, in excess of 50,000 acres each.

The bulk of the forest land—59 percent of the total—is in miscellaneous private holdings. The owners represent a great variety of business and professional people, housewives, wage earners, oil companies, and other owner groups. They are largely engaged in occupations not directly connected with timber growing. But there are some notable exceptions consisting of big tracts operated by timber-holding companies that resemble forest industry ownerships in many respects. Such firms may account for a million or more acres, and many have long been strongly interested in forest management.

*Upland Timber Types Gain*

Forests of oak-gum-cypress and other prized lowland species like cottonwood are concentrated on some 6.5 million acres in the Delta and along secondary waterways, such as the Red and Pearl Rivers.

The 9.5 million acres in upland types can be divided into four major zones. Loblolly-shortleaf pine woodlands occupy most of northwest Louisiana. Longleaf pine forests are found in the southwest. East of the Mississippi River, longleaf-slash pine forests extend from the Pearl River to Tangipahoa Parish. The area westward to the edge of the Delta is largely made up of loblolly and shortleaf pines. Intermingled with the pine types are thousands of acres on which oak and hickory are the residual stand left after the pine was cut from mixed pine-hardwood forests.

A few changes have recently taken place in the distribution of major forest types.[1] Forests in which southern pine makes up at least 25 percent of the stand have gained about a tenth in the northwest since 1954. In area, if not in quality of the sites, the losses of hardwood land in the Delta have been nearly balanced by the abandonment and reversion to forest of many fields in smaller river bottoms not so well suited to mechanized agriculture. Gains outside the Delta will not necessarily continue. Reservoir construction may eventually remove a significant proportion of hardwood land from secondary river bottoms, such as the Sabine. The fragmentation of the bottom-land forest in Louisiana and other Midsouth States is likely to make operations more

[1] A map detailing the major forest types in the South is available upon request to the Southern Forest Experiment Station. The scale is 40 miles to the inch.

difficult for timber growers and hardwood industries.

*Stocking Increasing In Some Forests*

Better fire protection, natural regeneration, planting, and direct seeding have all helped to upgrade the deforested and poorly stocked forest areas. The improvement in fire protection has been particularly striking during the past 10 years. For the 4 years ending in 1953 the average annual burn was 2.6 percent of the total forest area. From 1960 to 1963 it was 0.8 percent. This means that some 120,000 acres are now burning annually, as compared to 420,000 a decade ago.

The reduction in denuded acreage is especially evident in the southwest, which formerly had much cutover longleaf pine acreage concentrated in and around Beauregard and Vernon Parishes. Today only 2 percent of the southwest forest area is nonstocked in the sense that it has less than 10 percent growing stock trees.

Despite indications of increasing stand density, only 38 percent of Louisiana's forest land is occupied by trees considered desirable—the kind the land is capable of growing under good management. Another 25 percent is stocked with trees classed as acceptable. That is, they qualify as growing stock but, because of low vigor, rot, excessive forking or limbiness, or other limitations, their yields will not be high in volume and in quality. The remaining 37 percent of the forest area is either nonstocked or else is encumbered with shrubs and cull trees that inhibit stand development.

## TRENDS IN TIMBER VOLUME

*More Pine*

Louisiana is no longer a predominantly hardwood State. Softwood, up 43 percent (table II), now comprises half the total growing stock.

Table II. *Growing stock volume in 1964 and change since 1954*

| Region | Softwood | | Hardwood | |
|---|---|---|---|---|
| | Volume | Change | Volume | Change |
| | *Million cu. ft.* | *Percent* | *Million cu. ft.* | *Percent* |
| North Delta | 141.8 | + 23 | 1,267.6 | — 29 |
| South Delta | 791.3 | + 45 | 2,062.3 | — 15 |
| Southwest | 2,151.8 | + 55 | 1,184.8 | — 22 |
| Southeast | 977.6 | + 32 | 573.2 | — 1 |
| Northwest | 2,307.1 | + 38 | 1,243.8 | — 21 |
| Total | 6,369.6 | + 43 | 6,331.7 | — 20 |

Ten years ago it accounted for little more than a third. All together, southern pines (fig. 2) now add to 86 percent of the softwood inventory. The rest is largely cypress but includes some eastern redcedar (fig. 3).

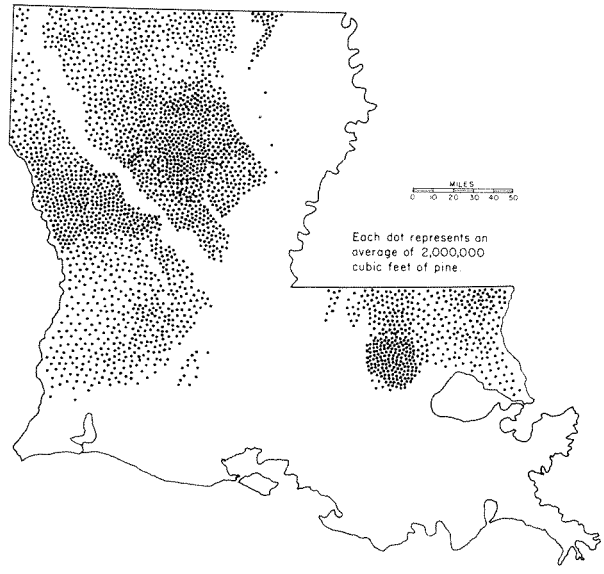



Figure 2. *Generalized distribution of pine growing stock in Louisiana.*

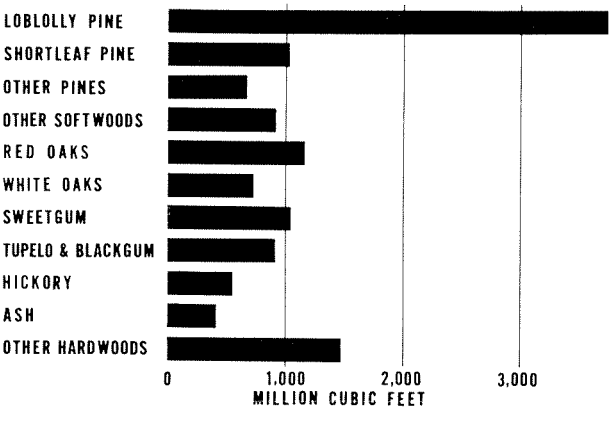



Figure 3. *Growing stock by species.*

Examination of the marked change in numbers of trees by diameter classes helps to reveal the significance of the softwood increase. As shown in figure 4, gains have taken place in all size classes. The number of sapling-size softwoods—2 to 4 inches in diameter—has risen a third. These young pines can be counted on to further improve the growing stock volume as they attain pole size within the next few

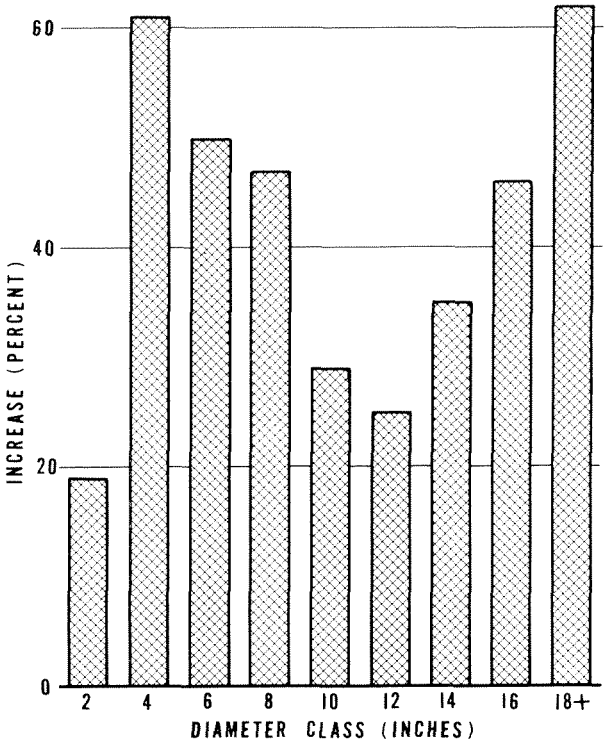



Figure 4. *Percentage change in number of softwood growing stock trees between surveys.*

years. Among the diameters most heavily used by Louisiana's expanding pulp industry—6 to 12 inches—numbers of softwoods have increased 43 percent. To the pine lumber industry and the emerging plywood industry, the even more striking gains in softwoods 16 inches and larger are especially promising. Trees of these sizes make up nearly two-fifths of the softwood volume. Most are in the pine parishes west of the Mississippi River, the rest largely in the Delta.

Softwoods in the Delta are mainly cypress. Louisiana presently has about a fifth of the Nation's supply. Only Florida, with some 1.5 billion cubic feet, has more. Growth on millions of young trees during recent decades has swelled the total to more than 900 million cubic feet, most of it in trees less than 15 inches in diameter. The biggest concentration is in five parishes of the Acadian region—Assumption, Iberville, Lafourche, St. Martin, and Terrebonne.

The board-foot volume in softwoods has risen from 20 to 29 billion. About 9 percent of the total is publicly held. Forest industries own another 34 percent. The rest is distributed among farmers and other miscellaneous private owners.

Much of the recent sawtimber increase is attributable to gains in diameters above 15 inches. As a result of these increases, the distribution of volume by size class has improved somewhat. In 1954, softwood of these diameters comprised 47 percent of the sawtimber. By 1964, they made up 52 percent of an even larger board-footage. The vigorous young stands now developing in response to fire protection and other management practices can be expected not only to sustain existing industrial needs but also permit some further buildup in the diameters generally preferred for lumber and veneer.

Another bright spot is the improvement in timber quality. On both the 1954 and 1964 surveys, softwood trees were rated by the standard log grades for southern pine. Between surveys the volume in trees with upper-grade butt logs—namely, grades 1 and 2—increased some 56 percent. The volume in grade 3 trees rose about the same. All together, trees graded 2 and 3 now make up four-fifths of Louisiana's softwood sawtimber inventory. They are well adapted to the manufacture of lumber and similar products. The developing southern pine plywood industry is expected to rely mainly upon medium- and dense-grained No. 2 and 3 logs.

### *Less Hardwood*

Trends in hardwood contrast sharply with those for pine. The volume of hardwood growing stock now stands at 6.3 billion cubic feet, or 20 percent less than in 1954. Most of the net reduction was in the bottom lands and more than two-thirds of the remaining inventory is in the bottom lands, chiefly the Delta, where desirable species generally prevail. The rest is scattered in the uplands, mainly on pine sites, where it seldom offers an attractive source of industrial timber or an investment opportunity.

Throughout the State, numbers of hardwoods have fallen off in nearly all diameter classes. The declines have been heaviest in the larger sizes, that is, those most suitable for factory lumber and veneer. Land clearing in the bottoms, excessive cutting, and a record drought all contributed to the shrinkage. The biggest

drop in sawtimber trees was in the North Delta, where land development was most extensive. Statewide, hardwood sawtimber volume presently totals 20.3 billion board feet, 23 percent less than in 1954 (table III).

Table III. *Sawtimber volume in 1964 and change since 1954*

| Region | Softwood | | Hardwood | |
|---|---|---|---|---|
| | Volume | Change | Volume | Change |
| | *Million bd. ft.* | *Percent* | *Million bd. ft.* | *Percent* |
| North Delta | 704.3 | + 27 | 4,309.6 | — 34 |
| South Delta | 3,896.1 | + 59 | 6,768.2 | — 14 |
| Southwest | 10,073.4 | + 53 | 3,664.0 | — 28 |
| Southeast | 4,577.6 | + 34 | 1,814.2 | + 1 |
| Northwest | 10,181.7 | + 35 | 3,770.1 | — 26 |
| Total | 29,433.1 | + 43 | 20,326.1 | — 23 |

An important aspect of recent hardwood shifts is the decline in volume of the gums. Gums are preferred for many uses. They make up about 57 percent of the harvest of hardwood pulp bolts. They are the chief reliance of hardwood veneer processors, and lumber manufacturers also regard them with favor. The current volume is 2 billion cubic feet, 20 percent less than a decade ago. One healthy development, however, is the use of cull timber to help extend the available resource. A recent survey of logging operations, for example, found that 12 percent of the hardwood pulpwood was taken from cull trees.

The total volume of hardwood sawtimber in Louisiana includes a variety of tree qualities with a wide range of suitability for forest products. Most producers normally prefer timber with a high proportion of clear material, particularly for such uses as factory lumber and veneer. Between surveys the volume of trees with such material—that is, grades 1 and 2 butt logs—declined about a third. A sixth of the hardwood sawtimber is in class 4 trees that are presently suited only for low-value end uses such as crating and crossties (table IV). It is likely that some traditional hardwood industries dependent upon open-market stumpage may be pressed to maintain current production levels, at least in terms of the size and quality of timber that have long sustained them. At the same time, management efforts are being facilitated by the rising demand for hardwood pulps. This recent development will allow more and more forest managers to thin their hardwoods and to make improvement cuttings without reducing the inventory suitable for more exacting products.

Table IV. *Sawtimber volume by grade and tree diameter, 196*

| Species group and d.b.h. class (inches) | All grades | Grade 1 [1] | Grade 2 | Grade 3 | Lower grades |
|---|---|---|---|---|---|
| | *Million board feet* | | | | |
| Softwood: | | | | | |
| 10 to 12 | 8,426.5 | 3.6 | 616.9 | 6,851.9 | 954.1 |
| 14 to 18 | 14,961.4 | 66.8 | 7,313.9 | 6,385.7 | 1,195.0 |
| 20 and up | 6,045.2 | 1,733.8 | 2,257.3 | 1,668.8 | 385.3 |
| Total | 29,433.1 | 1,804.2 | 10,188.1 | 14,906.4 | 2,534.4 |
| Hardwood: | | | | | |
| 12 | 3,423.5 | . . | 178.7 | 2,512.8 | 732.0 |
| 14 to 18 | 10,771.7 | 889.3 | 3,368.1 | 4,638.2 | 1,876.1 |
| 20 and up | 6,130.9 | 1,747.6 | 1,661.6 | 1,898.8 | 822.9 |
| Total | 20,326.1 | 2,636.9 | 5,208.4 | 9,049.8 | 3,431.0 |

[1] All cedar saw logs were graded as No. 1.

### *Sawtimber Growth Exceeds Cut*

Louisiana's timber loss from fire, insects disease, and other natural causes annually totals about 138 million cubic feet, chiefly hardwood. It is equivalent to about 1 percent of the growing stock. The annual growth after allowing for mortality is 493 million cubic feet of softwood and 144 million of hardwood. This volume equals about a half cord, or 40 cubic feet, per acre. Nevertheless, Louisiana forests are growing timber at under half of their capability.

The significance of recent trends in pine and hardwood volume is further emphasized by current growth-cut relationships. Louisiana's industries are largely dependent on trees of sawtimber size. In such trees, net annual growth amounts to 2,361 million board feet of softwood and 565 million of hardwood. In 1963, cutting totaled 1,056 million board feet of softwood and 623 million of hardwood (fig 5). Thus decadal trends appear to be continuing: softwood sawtimber growth considerably exceeds the cut, while hardwood is being used faster than it is growing.

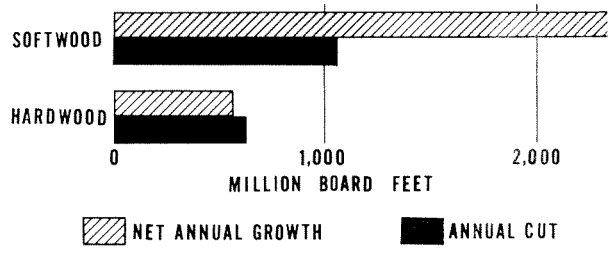



Figure 5. *Growth and cut of sawtimber, 1963.*

# Timber Products Output

In 1963, timber products from Louisiana forests totaled 381 million cubic feet. This harvest supplied roundwood to more than 220 primary wood-using plants within the State, and to about 60 in surrounding States.

Output has increased slightly since 1953. Less fuelwood and fewer veneer logs, fence posts, cooperage bolts, piling, and hewn ties were cut in 1963 than in 1953. But these losses were more than offset by increases in saw logs and pulpwood.

## SAW LOGS MAINLY PINE

The harvest of logs for lumber exceeded a billion board feet in 1963. This volume made up nearly half of the State's total timber output. Most of the saw logs were softwood, almost all pine but including some cypress and redcedar; oak and gum made up three-fourths of the hardwood. A decade ago Louisiana's saw-log harvest was largely made up of hardwoods. The shift in usage reflects in part the recent declines in hardwood sawtimber volume and quality, as well as the rising trend of pine inventory. Pine production is likely to continue to rise.[2]

In all, Louisiana mills processed 86 percent of the 1963 saw-log harvest. The balance, 144 million board feet, was delivered to plants in Arkansas, Mississippi, and Texas. At the same time, some 31 million board feet were brought into Louisiana from neighboring States. More than 90 percent of all the logs sawn in the State were cut by 84 mills, each of which produced at least 3 million board feet of lumber in 1963. Of these establishments, 28 cut more than 10 million apiece. The rest of the lumber was sawn by some 80 small, generally portable mills.

Utilization of sawmill residues for pulp chips has risen sharply in the past decade. Sale of chips has helped Louisiana mills offset the rising costs of lumber production. In 1954 only five mills were equipped to produce bark-free pulp chips from slabs, edgings, and other waste wood. Today more than 40 are making chips. Most are large mills. But at least a half dozen mills that saw less than 3 million board feet annually are also chipping their waste. More than a tenth of Louisiana's pulpwood output now comes from sawmill chips mainly pine.

## RECORD PULPWOOD OUTPUT

Louisiana's pulpwood production is trending up sharply.

The harvest of trees for pulpwood bolts topped more than 2 million cords in 1964. Another 300,000 cords came from residues salvaged at sawmills and other plants. The total volume of 2.4 million cords exceeded 1963 by a comfortable 7 percent.

Although boltwood is mainly pine, the hardwood portion is climbing rapidly. In the past decade it has gone from 16 to 25 percent of the total (fig. 6). More than half of the hardwood is gum. Another seventh is from other soft-textured species, mostly cottonwood, magnolia, maple, willow, and boxelder. The rest is chiefly oak.

Louisiana mills bought more than 90 percent of the wood produced in the State during 1964. The rest went largely to Mississippi. At the same time, Louisiana plants brought in a fourth of their needs from neighboring States, principally Arkansas and Mississippi. The drawing territories of individual mills vary considerably, according to the timber supply and ownership, competition from other users of wood, transportation facilities, and company wood-procurement policies. The typical mill draws the bulk of its wood from within a radius of 100 miles, and few bolts move more than 200 miles.

[2] Row, Clark. Regional competition in softwood lumber. Soc. Amer. Foresters Proc. 1962: 97-103, illus. 1963.

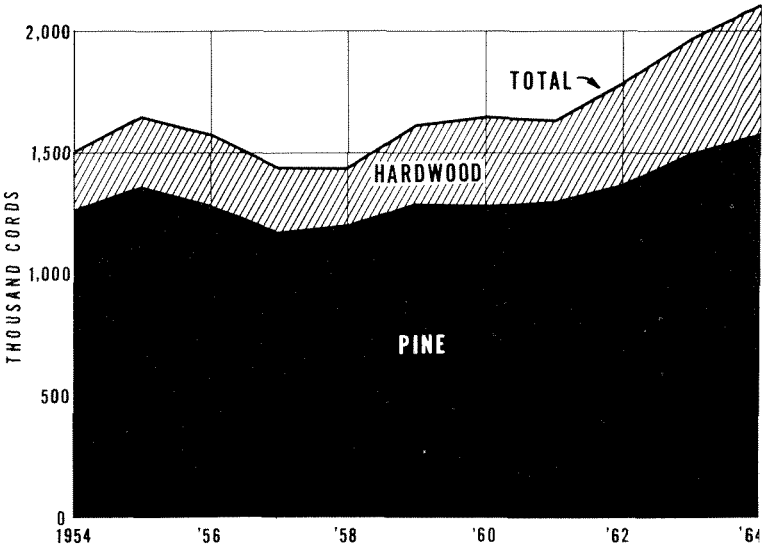



Figure 6.
*Production of pulpwood bolts, 1954-64.*

While 9 of the State's 10 pulpmills have been in operation since before World War II, they have constantly been enlarged. The establishment of a new mill at St. Francisville in 1958, plus expansion of existing mills, boosted the industry's daily capability by 1,030 tons during the past 7 years. The total capability now is 6,300 tons of pulp per day—more than is found in any other Southern State except Georgia and Florida.

The State's eleventh mill is now under construction—also at St. Francisville. Scheduled for completion by the end of 1965, it will have 500 tons of capacity. Expansion of a mill at West Monroe will provide another 350 tons. Still further increases amounting to 800 tons are in the planning stages. These developments all point to continued pulpwood production gains in the decade ahead.

## VENEER ALL HARDWOOD

Louisiana is a leading producer of hardwood veneer logs. In 1963 it ranked eighth in the Nation. More than three-fourths of the 1963 volume was soft-textured, sweetgum, blackgum, and tupelo being by far the leading species. Sweetgum alone contributed 40 percent of the total volume. Most of the firm-textured wood was oak.

The output totaled 48.1 million board feet in 1963, of which 17.6 million were shipped to neighboring States for manufacture. Another 3.5 million were brought into Louisiana for processing. The 11 veneer plants active in 1963 used an average of 3 million board feet apiece (fig. 7).

Historically the veneer industry in Louisiana —as elsewhere in the South—has been based on hardwood. For example, barely 3 percent of the entire veneer-log output in the South was softwood in 1963. Today a pine plywood industry is developing rapidly. At least seven plywood plants are already under construction or planned in Louisiana. Within the next few years, Louisiana may well emerge as the number one producer of southern pine veneer and plywood.

## MISCELLANEOUS PRODUCTS

Louisiana residents burned 376,000 cords of round fuelwood in 1963. A decade ago, the volume was 761,000 cords. The decline will continue, as other fuels are being substituted both in home cooking and heating.

Pine poles and piling accounted for 3 percent—11 million cubic feet—of the 1963 harvest. Most of this material was shipped to local wood-preserving plants for treatment. Of the 29 Louisiana plants that treat roundwood, all but one are of the pressure type. They also treat large quantities of lumber, crossties, and fence posts.

All other products cut in 1963 supplied 2 percent of the total roundwood output. Their volume, 7.7 million cubic feet, was mostly in fence posts and dimension stock.

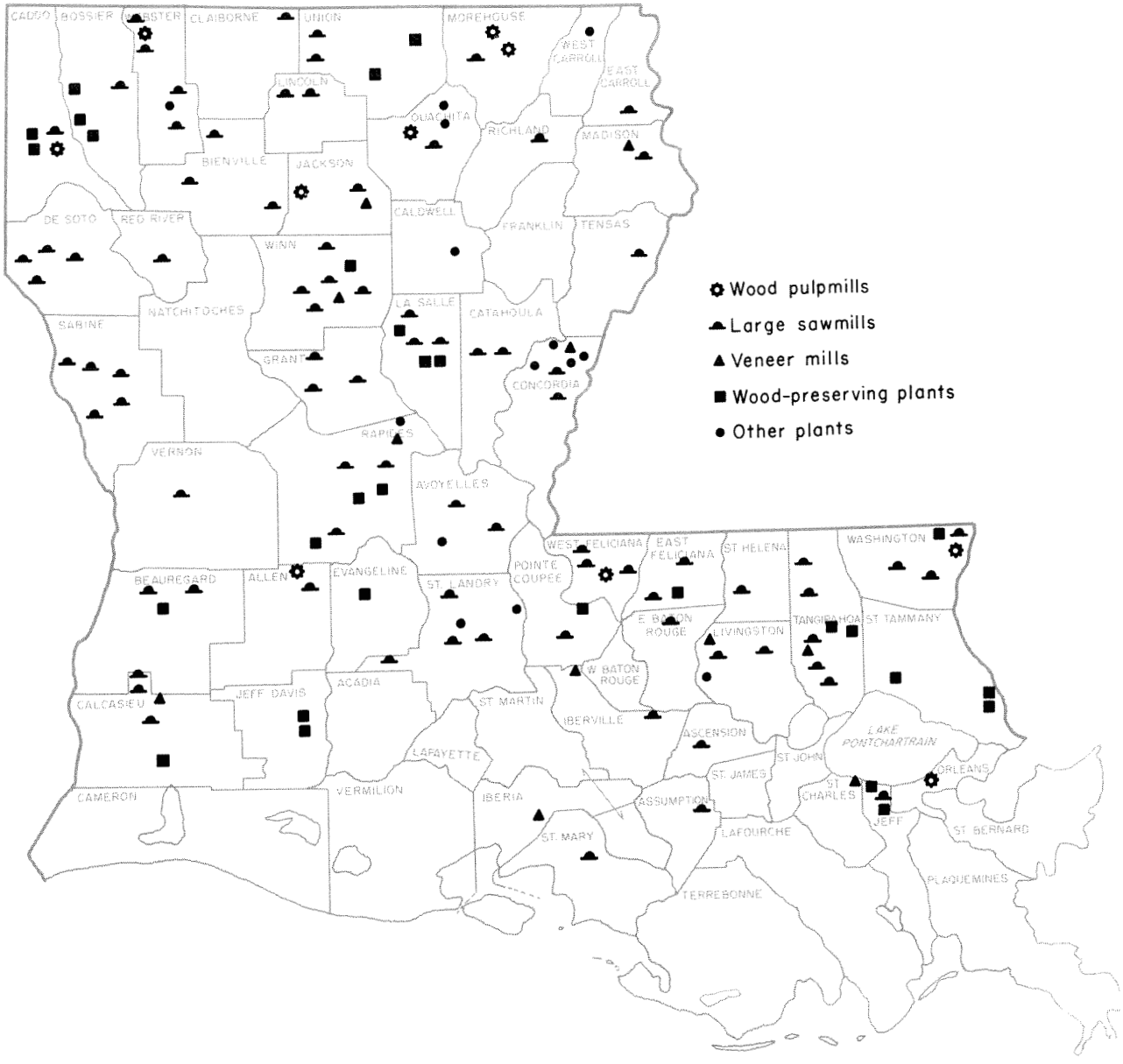



Figure 7. *Location of primary wood-using plants in Louisiana, 1963.*

# Improving Productivity

The current enlargement of pulping capacity and the emergence of a southern pine plywood industry are only a preview of the industrial expansion that is possible if Louisiana's forests are effectively managed. Recent productivity gains are encouraging. But heavy and sustained investment in forest development is essential. The State is presently realizing only half of its timber-growing potential, because many landowners are not taking advantage of the possibilities offered by their woodlands.

Most of the commercial forest land offers opportunities to increase growth. About 2.1 million acres, however, are at least 70 percent stocked with desirable timber—that is, thrifty trees that presently or potentially are capable of yielding high-quality saw logs or other forest products. Virtually all of this area is made up of stands that do not require special treatments of any kind to insure a high level of growth. The largest share of these productive acres consists of pine sites in the western part of the State.

A third of the forest area, or 5.7 million acres, is between 40 to 70 percent stocked with desirable trees. Some 30 percent of this area is expected to attain full stocking without treatment. But the remaining 3.9 million acres will require special efforts to free desirable trees from competition.

Pine sites at least 40 percent stocked with desirable trees offer excellent stand improvement chances. In all, there are 2.6 million acres on which removal of low-quality trees will create openings for pine reproduction and speed the growth of desirable trees already established.

Of the 16 million acres of forest land in Louisiana, 8.2 million are less than 40 percent stocked with desirable trees. Some 6 millio of these acres, however, are 40 percent c better stocked in trees that are still acceptabl as growing stock. Many of these stands, espec ally the ones that are at least 70 percer stocked, would probably justify stand improve ment. Moreover, on some pine sites plantin may be required to improve their productivity

More than 2 million forest acres are present ly contributing very little to Louisiana's timbe growth—they do not even support 40 percen stocking in trees good enough to be accepte as growing stock. In fact, nonstocked area and culls make up fully two-thirds of thi acreage. Most of this unproductive forest lan is in private, nonindustrial holdings. At leas a quarter of these 2 million acres is in pin sites that could be restored to full productivit through site preparation and planting or direc seeding.

The extent to which timber managemen will be intensified in the future must largel depend upon the thousands of owners of farn and other private, nonindustrial woodlands All together, they control three-fourths of th forest acreage, including the bulk of the inher ently most productive timber-growing sites Most of the forestry efforts by landowners an public agencies have up to now been aimed a protecting and regenerating pine. Althoug a great deal remains to be done, it must als be acknowledged that tremendous progress ha been made in improving the pine situation Louisiana's hardwood resources for the mos part have remained comparatively neglected Yet 2 in every 5 forest acres in the State ar better adapted to growing hardwood than pine Greatly intensified efforts to improve the hard wood resource can open new opportunities fo forest industry in Louisiana.

# Appendix

## ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each location, 10 small plots were systematically distributed on an area of about 1 acre.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type it termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold such error to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.4 percent for the estimate of total forest area, 1.7 percent for total cubic volume, and 2.2 percent for total board-foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable, two chances out of three.

| Forest area | Sampling error | Cubic volume | Sampling error | Board-foot volume | Sampling error |
|---|---|---|---|---|---|
| *Thousand acres* | *Percent* | *Million cu. ft.* | *Percent* | *Million bd. ft.* | *Percent* |
| 16,074.7 | 0.4 | .. | .. | .. | .. |
| 2,572.0 | 1.0 | 12,701.3 | 1.7 | .. | .. |
| 643.0 | 2.0 | 9,176.7 | 2.0 | 49,759.2 | 2.2 |
| 285.8 | 3.0 | 4,078.5 | 3.0 | 26,759.4 | 3.0 |
| 160.7 | 4.0 | 2,294.2 | 4.0 | 15,052.2 | 4.0 |
| 102.9 | 5.0 | 1,468.3 | 5.0 | 9,633.4 | 5.0 |
| 25.7 | 10.0 | 367.1 | 10.0 | 2,408.3 | 10.0 |
| 11.4 | 15.0 | 163.1 | 15.0 | 1,070.4 | 15.0 |
| 6.4 | 20.0 | 91.8 | 20.0 | 602.1 | 20.0 |
| 4.1 | 25.0 | 58.7 | 25.0 | 385.3 | 25.0 |
| 1.0 | 50.0 | 14.7 | 50.0 | 96.3 | 50.0 |

Growth estimates were derived from diameter-growth measurements and mortality data taken at sample locations. No attempt was made to calculate sampling error in these estimates.

Estimates of annual timber cut are based on studies conducted during the period of forest inventory. The sampling error to which the estimates are liable, on a probability of two chances out of three, are:

| Cubic volume | Sampling error | Board-foot volume | Sampling error |
|---|---|---|---|
| *Million cu. ft.* | *Percent* | *Million bd. ft.* | *Percent* |
| 422.7 | 2.3 | 1,679.0 | 3.0 |
| 89.4 | 5.0 | 604.4 | 5.0 |
| 22.4 | 10.0 | 151.1 | 10.0 |
| 9.9 | 15.0 | 67.2 | 15.0 |
| 5.6 | 20.0 | 37.8 | 20.0 |
| 3.6 | 25.0 | 24.2 | 25.0 |
| .9 | 50.0 | 6.0 | 50.0 |

In computing changes in timber volumes since 1954, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

## DEFINITIONS OF TERMS

*Forest Land Class*

**Forest land.**—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest use.

**Commercial forest land.**—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

**Productive-reserved forest land.**—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

**Unproductive forest land.**—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

*Tree Species*

**Commercial species.**—Tree species presently or prospectively suitable for industrial wood products; excludes so-called weed species, such as blackjack oak and blue beech.

**Hardwoods.**—Dicotyledonous trees, usually broad-leaved and deciduous.

**Softwoods.**—Coniferous trees, usually evergreen, having needle or scale-like leaves.

*Forest Type*

**Longleaf-slash pine.**—Forests in which 50 percent or more of the stand is longleaf or slash pine, singly or in combination. Common associates include other southern pines, oak, and gum.

**Loblolly-shortleaf pine.**—Forests in which 50 percent or more of the stand is loblolly pine, shortleaf pine, or other southern yellow pines except longleaf or slash pine, singly or in combination. Common associates include oak, hickory, and gum.

**Oak-pine.**—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

**Oak-hickory.**—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

**Oak-gum-cypress.**—Botton-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

**Elm-ash-cottonwood.**—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

*Class of Timber*

**Growing-stock trees.**—Sawtimber trees, poletimber trees, saplings, and seedlings; that is, all live trees except cull trees.

**Desirable trees.**—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

**Acceptable trees.**—Trees meeting the specifica tions for growing stock but not qualifying as desir able trees.

**Sawtimber trees.**—Live trees of commercial spe cies, 9.0 inches and larger in diameter at breas height for softwoods and 11.0 inches and larger fo hardwoods, and containing at least one saw log.

**Poletimber trees.**—Live trees of commercial spe cies, 5.0 to 9.0 inches in d.b.h. for softwoods an 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

**Saplings.**—Live trees of commercial species, 1.( inch to 5.0 inches in d.b.h. and of good form an vigor.

**Cull trees.**—Live trees of sawtimber or poletim ber size that are unmerchantable for saw logs nov or prospectively because of defect, rot, or species

**Salvable dead trees.**—Standing or down dea trees that are considered currently or potentiall merchantable.

*Stand-Size Class*

**Sawtimber stands.**—Stands at least 10 percen stocked with growing-stock trees, and with saw timber trees making up a plurality of this stocking

**Poletimber stands.**—Stands at least 10 percen stocked with growing-stock trees, and with pole timber trees making up a plurality of this stocking

**Sapling-seedling stands.**—Stands at least 10 per cent stocked with growing-stock trees, and witl saplings and/or seedlings making up a plurality o this stocking.

**Nonstocked areas.**—Commercial forest lands les than 10 percent stocked with growing-stock tree

*Stocking*

A measure of area occupancy by trees of specifie classes. Three categories of stocking are considere in the Survey: (1) all live trees, (2) growing-stoc trees, and (3) desirable trees. Stocking in terms c all trees is used in the delineation of forest lan and forest types. Stocking in terms of growing stock trees is used in stand-size and age classifica tions. Stocking in terms of desirable trees is use in delineating area-condition and stand-treatmer classes.

*Volume*

**Volume of sawtimber.**—Net volume of the saw log portion of live sawtimber trees, in board fe of the International rule, ¼-inch kerf.

**Volume of growing stock.**—Volume of soun wood in the bole of sawtimber and poletimber tre from stump to a minimum 4.0-inch top outside bar or to the point where the central stem breaks int limbs.

**Volume of timber.**—The volume of sound wood in the bole of growing stock, cull, and salvable dead trees 5.0 inches and larger in d.b.h., from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

*Tree Grades*

Tree grades are based on the log grade of the butt log graded according to standards presented by the U. S. Forest Service in "Interim Log Grades for Southern Pines," issued by the Southern Forest Experiment Station in 1953, and "Hardwood Log Grades for Standard Lumber," issued by the Forest Products Laboratory under the designation D1737 in 1949.

Hardwood log grades include, in addition to the hardwood log grades for standard lumber, a grade 4 tie and timber log. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

*Area-Condition Class*

**Class 1.**—Areas 70% or more stocked with desirable trees.

**Class 2.**—Areas 40 to 70% stocked with desirable trees, and with 30% or less of the area controlled by acceptable growing-stock trees, cull trees, inhibiting vegetation, slash, or nonstockable conditions.

**Class 3.**—Areas 40 to 70% stocked with desirable trees and with more than 30% of the area controlled by other trees and/or conditions that ordinarily prevent occupancy by desirable trees.

**Class 4.**—Areas less than 40% stocked with desirable trees, but with 70% or more stocking with growing-stock trees.

**Class 5.**—Areas less than 40% stocked with desirable trees, but with 40 to 70% stocking with growing-stock trees.

**Class 6.**—Areas less than 40% stocked with desirable trees and with less than 40% stocking with growing-stock trees.

*Miscellaneous Definitions*

**D.b.h. (Diameter breast high).**—Tree diameter in inches, outside bark, measured at 4½ feet above ground.

**Diameter classes.**—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h

**Site classes.**—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

**Net annual growth of sawtimber.**—The annual change in net board-foot volume of live sawtimber trees during a specified period resulting from natural causes.

**Net annual growth of growing stock.**—The annual change in volume of sound wood in live sawtimber and poletimber trees during a specified period resulting from natural causes.

**Mortality of sawtimber.**—The net board-foot volume of sawtimber trees dying annually from natural causes during a specified period.

**Mortality of growing stock.**—The volume of sound wood in live sawtimber and poletimber trees dying annually from natural causes during a specified period.

**Timber cut from sawtimber.**—The net board-foot volume of live sawtimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

**Timber cut from growing stock.**—The volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified period including both roundwood products and logging residues.

**Timber products.**—Roundwood products and by-products of wood manufacturing plants.

## STANDARD TABLES

Tables similar in format to those that follow will be found in all State reports issued by the Forest Survey. Their purpose is to facilitate compilation of data for various States and regions.

Table 1. *Area by land classes, Louisiana, 1964*

| Land class | Area |
|---|---|
| | *Thousand acres* |
| Forest: | |
| Commercial | 16,036.5 |
| Unproductive | ... |
| Productive-reserved | 38.2 |
| Total forest | 16,074.7 |
| Nonforest [1] | 12,793.2 |
| All land [2] | 28,867.9 |

[1] Includes some acreage of water according to survey standards of area classification but defined by Bureau of the Census as land.

[2] From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

Table 2. *Area of commercial forest land by ownership classes, Louisiana, 1964*

| Ownership class | Area |
|---|---|
| | *Thousand acres* |
| Public: | |
| National forest | 574.8 |
| Miscellaneous federal | 140.7 |
| State | 163.6 |
| County and municipal | 4.1 |
| Total public | 883.2 |
| Private: | |
| Forest industry | 3,180.8 |
| Farmer | 2,419.6 |
| Miscellaneous private | 9,552.9 |
| Total private | 15,153.3 |
| All ownerships | 16,036.5 |

Table 3. *Area of commercial forest land by stand-size and ownership classes, Louisiana, 1964*

| Stand-size class | All ownerships | National forest | Other public | Forest industry | Farmer and miscellaneous private |
|---|---|---|---|---|---|
| | *Thousand acres* | | | | |
| Sawtimber | 9,871.0 | 412.5 | 211.6 | 2,196.2 | 7,050.7 |
| Poletimber | 2,017.6 | 53.9 | 20.7 | 292.6 | 1,650.4 |
| Sapling and seedling | 3,952.4 | 103.2 | 74.7 | 669.7 | 3,104.8 |
| Nonstocked areas | 195.5 | 5.2 | 1.4 | 22.3 | 166.6 |
| All classes | 16,036.5 | 574.8 | 308.4 | 3,180.8 | 11,972.5 |

Table 4. *Area of commercial forest land by stand-volume classes for sawtimber and other stand-size classes, Louisiana, 1964*

| Stand volume per acre | All stands | Sawtimber stands | Other stands |
|---|---|---|---|
| | *Thousand acres* | | |
| Less than 1,500 board feet | 6,642.0 | 1,499.0 | 5,143.0 |
| 1,500 to 5,000 board feet | 6,036.0 | 5,053.3 | 982.7 |
| More than 5,000 board feet | 3,358.5 | 3,318.7 | 39.8 |
| All classes | 16,036.5 | 9,871.0 | 6,165.5 |

Table 5. *Area of commercial forest land by stocking classes based on alternative stand components, Louisiana, 1964*

| Stocking percentage | Stocking classified in terms of | | |
|---|---|---|---|
| | All trees | Growing stock trees | Desirable trees |
| | *Thousand acres* | | |
| 90 to 100 | 7,252.9 | 2,125.3 | 293.2 |
| 80 to 90 | 3,831.7 | 2,546.3 | 671.1 |
| 70 to 80 | 2,178.2 | 2,725.8 | 1,130.4 |
| 60 to 70 | 1,178.2 | 2,676.8 | 1,601.4 |
| 50 to 60 | 644.2 | 2,206.1 | 1,732.9 |
| 40 to 50 | 348.4 | 1,483.5 | 2,350.0 |
| 30 to 40 | 248.2 | 1,072.5 | 2,387.7 |
| 20 to 30 | 153.0 | 660.2 | 2,378.9 |
| 10 to 20 | 114.3 | 344.5 | 2,111.7 |
| Less than 10 | 87.4 | 195.5 | 1,379.2 |
| All areas | 16,036.5 | 16,036.5 | 16,036.5 |

Table 6. *Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, Louisiana, 1964*

| Stocking class | All stands | Sawtimber | Poletimber | Sapling and seedling | Nonstocked |
|---|---|---|---|---|---|
| | *Thousand acres* | | | | |
| 70 percent or more | 7,397.4 | 4,436.3 | 964.9 | 1,996.2 | ... |
| 40 to 70 percent | 6,366.4 | 4,254.0 | 743.7 | 1,368.7 | ... |
| 10 to 40 percent | 2,077.2 | 1,180.7 | 309.0 | 587.5 | ... |
| Less than 10 percent | 195.5 | ... | ... | ... | 195.5 |
| All classes | 16,036.5 | 9,871.0 | 2,017.6 | 3,952.4 | 195.5 |

Table 7. *Area of commercial forest land by area-condition and ownership classes, Louisiana, 1964*

| Area-condition class | All ownerships | National forest | Other public | Forest industry | Farmer and misc. private |
|---|---|---|---|---|---|
| | | | *Thousand acres* | | |
| 1 | 2,094.7 | 149.2 | 16.6 | 645.1 | 1,283.8 |
| 2 | 1,817.5 | 109.0 | 22.5 | 450.0 | 1,236.0 |
| 3 | 3,866.8 | 161.4 | 48.3 | 905.9 | 2,751.2 |
| 4 | 1,471.1 | 41.7 | 42.3 | 299.1 | 1,088.0 |
| 5 | 4,513.7 | 62.1 | 104.8 | 670.7 | 3,676.1 |
| 6 | 2,272.7 | 51.4 | 73.9 | 210.0 | 1,937.4 |
| All classes | 16,036.5 | 574.8 | 308.4 | 3,180.8 | 11,972.5 |

Table 8. *Area of commercial forest land, by area-condition and stocking classes, Louisiana, 1964*

| Area-condition class | All classes | | Stocking class | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Growing stock | | | | Cull trees | | Shrubs | | Nonstocke | |
| | | | Desirable | | Other | | | | | | | |
| | *Thousand acres* | *Percent* | *Thousand acres* | *Percent* | *Thousand acres* | *Percent* | *Thousand acres* | *Percent* | *Thousand acres* | *Percent* | *Thousand acres* | *Pe* |
| 1 | 2,094.7 | 100.0 | 1,638.5 | 78.2 | 209.8 | 10.0 | 93.6 | 4.5 | 5.0 | 0.2 | 147.8 | |
| 2 | 1,817.5 | 100.0 | 1,019.1 | 56.1 | 248.9 | 13.7 | 144.0 | 7.9 | 14.2 | .8 | 391.3 | 2 |
| 3 | 3,866.8 | 100.0 | 1,878.9 | 48.6 | 1,013.4 | 26.2 | 630.2 | 16.3 | 60.7 | 1.6 | 283.6 | |
| 4 | 1,471.1 | 100.0 | 375.0 | 25.5 | 766.8 | 52.1 | 168.3 | 11.4 | 15.9 | 1.1 | 145.1 | |
| 5 | 4,513.7 | 100.0 | 970.4 | 21.5 | 1,411.0 | 31.2 | 1,167.2 | 25.9 | 129.4 | 2.9 | 835.7 | 1 |
| 6 | 2,272.7 | 100.0 | 263.8 | 11.6 | 287.2 | 12.6 | 705.0 | 31.1 | 148.8 | 6.5 | 867.9 | 3 |
| All classes | 16,036.5 | 100.0 | 6,145.7 | 38.3 | 3,937.1 | 24.6 | 2,908.3 | 18.1 | 374.0 | 2.3 | 2,671.4 | 1 |

Table 9. *Area of commercial forest land by site and ownership classes, Louisiana, 1964*

| Site class | All ownerships | National forest | Other public | Forest industry | Farmer and misc. private |
|---|---|---|---|---|---|
| | | | *Thousand acres* | | |
| 120 cu. ft. or more | 2,015.6 | 87.1 | 37.6 | 639.5 | 1,251.4 |
| 85 to 120 cu. ft. | 9,002.9 | 260.3 | 157.4 | 1,624.2 | 6,961.0 |
| 50 to 85 cu. ft. | 3,154.0 | 170.1 | 44.9 | 668.9 | 2,270.1 |
| Less than 50 cu. ft. | 1,864.0 | 57.3 | 68.5 | 248.2 | 1,490.0 |
| All classes | 16,036.5 | 574.8 | 308.4 | 3,180.8 | 11,972.5 |

Table 10. *Area of commercial forest land by forest types and ownership classes, Louisiana, 1964*

| Type | All ownerships | Public | Private |
|---|---|---|---|
| | | *Thousand acres* | |
| Longleaf-slash pine | 1,220.1 | 151.5 | 1,068.6 |
| Loblolly-shortleaf pine | 4,439.3 | 277.9 | 4,161.4 |
| Oak-pine | 2,169.4 | 135.0 | 2,034.4 |
| Oak-hickory | 1,700.5 | 51.3 | 1,649.2 |
| Oak-gum-cypress | 5,820.5 | 243.6 | 5,576.9 |
| Elm-ash-cottonwood | 686.7 | 23.9 | 662.8 |
| All types | 16,036.5 | 883.2 | 15,153.3 |

Table 11. *Area of noncommercial forest land by forest t Louisiana, 1964*

| Type | All areas | Productive-reserved areas | Ur produ are |
|---|---|---|---|
| | | *Thousand acres* | |
| Longleaf-slash pine | 35.0 | 35.0 | . . |
| Loblolly-shortleaf pine | 3.2 | 3.2 | . . |
| All types | 38.2 | 38.2 | . . |

Table 12. *Number of growing-stock trees on commercial forest land by diameter classes and by softwoods and hardwoods, Louisiana, 1964*

| D.b.h. class (inches) | All species | Softwood | Hardwood |
|---|---|---|---|
| | *Thousand trees* | | |
| 1.0- 2.9 | 3,211,536 | 934,737 | 2,276,799 |
| 3.0- 4.9 | 1,185,851 | 514,449 | 671,402 |
| 5.0- 6.9 | 511,772 | 245,880 | 265,892 |
| 7.0- 8.9 | 306,318 | 144,153 | 162,165 |
| 9.0-10.9 | 189,273 | 81,233 | 108,040 |
| 11.0-12.9 | 116,485 | 54,299 | 62,186 |
| 13.0-14.9 | 82,326 | 37,919 | 44,407 |
| 15.0-16.9 | 52,478 | 23,701 | 28,777 |
| 17.0-18.9 | 29,954 | 13,045 | 16,909 |
| 19.0 and larger | 33,206 | 12,359 | 20,847 |
| All classes | 5,719,199 | 2,061,775 | 3,657,424 |

Table 13. *Number of cull and salvable dead trees on commercial forest land by diameter groups and by softwoods and hardwoods, Louisiana, 1964*

| D.b.h. class (inches) | Cull trees | Salvable dead trees |
|---|---|---|
| | *Thousand trees* | |
| Softwood: | | |
| 5.0- 8.9 | 11,354 | 465 |
| 9.0-18.9 | 6,478 | 100 |
| 19.0 and larger | 1,137 | 7 |
| Total | 18,969 | 572 |
| Hardwood: | | |
| 5.0-10.9 | 313,914 | 315 |
| 11.0-18.9 | 89,653 | 227 |
| 19.0 and larger | 18,926 | 50 |
| Total | 422,493 | 592 |
| All species | 441,462 | 1,164 |

Table 14. *Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, Louisiana, 1964*

| Class of timber | All species | Softwood | Hardwood |
|---|---|---|---|
| | *Million cubic feet* | | |
| Sawtimber trees: | | | |
| Saw-log portion | 8,292.0 | 4,646.5 | 3,645.5 |
| Upper-stem portion | 1,438.1 | 638.9 | 799.2 |
| Total | 9,730.1 | 5,285.4 | 4,444.7 |
| Poletimber trees | 2,971.2 | 1,084.2 | 1,887.0 |
| All growing stock | 12,701.3 | 6,369.6 | 6,331.7 |
| Sound cull trees: | | | |
| Sawtimber-size | 1,286.1 | 56.7 | 1,229.4 |
| Poletimber-size | 532.9 | 14.4 | 518.5 |
| Total | 1,819.0 | 71.1 | 1,747.9 |
| Rotten cull trees: | | | |
| Sawtimber-size | 871.8 | 78.6 | 793.2 |
| Poletimber-size | 77.7 | 1.7 | 76.0 |
| Total | 949.5 | 80.3 | 869.2 |
| Salvable dead trees: | | | |
| Sawtimber-size | 11.0 | 3.3 | 7.7 |
| Poletimber-size | 1.8 | 1.2 | .6 |
| Total | 12.8 | 4.5 | 8.3 |
| All timber | 15,482.6 | 6,525.5 | 8,957.1 |

Table 15. *Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1964*

| Ownership class | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Soft-wood | Hard-wood | All species | Soft-wood | Hard-wood |
| | *Million cubic feet* | | | *Million board feet* | | |
| Public: | | | | | | |
| National forest | 595.4 | 482.5 | 112.9 | 2,652.3 | 2,338.1 | 314.2 |
| Other public | 232.8 | 86.6 | 146.2 | 853.3 | 399.3 | 454.0 |
| Total | 828.2 | 569.1 | 259.1 | 3,505.6 | 2,737.4 | 768.2 |
| Private: | | | | | | |
| Forest industry | 3,291.9 | 2,029.6 | 1,262.3 | 14,468.7 | 10,006.2 | 4,462.5 |
| Farmer and misc. private | 8,581.2 | 3,770.9 | 4,810.3 | 31,784.9 | 16,689.5 | 15,095.4 |
| Total | 11,873.1 | 5,800.5 | 6,072.6 | 46,253.6 | 26,695.7 | 19,557.9 |
| All ownerships | 12,701.3 | 6,369.6 | 6,331.7 | 49,759.2 | 29,433.1 | 20,326.1 |

Table 16. *Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, Louisiana, 1964*

| Stand-size class | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Soft-wood | Hard-wood | All species | Soft-wood | Hard-wood |
| | *– – Million cubic feet – –* | | | *– – Million board feet – –* | | |
| Sawtimber | 10,854.4 | 5,332.0 | 5,522.4 | 45,317.7 | 26,411.3 | 18,906.4 |
| Poletimber | 1,160.7 | 571.5 | 589.2 | 2,034.3 | 1,158.2 | 876.1 |
| Sapling and seedling | 683.6 | 464.6 | 219.0 | 2,394.3 | 1,855.3 | 539.0 |
| Nonstocked areas | 2.6 | 1.5 | 1.1 | 12.9 | 8.3 | 4.6 |
| All classes | 12,701.3 | 6,369.6 | 6,331.7 | 49,759.2 | 29,433.1 | 20,326.1 |

Table 17. *Volume of growing stock on commercial forest land by species and diameter classes, Louisiana, 1964*

| Species | Diameter class (inches at breast height) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All classes | 5.0-6.9 | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0 and larger |
| | *– – – – – – – – – – – – – – – – Million cubic feet – – – – – – – – – – – – – – – –* | | | | | | | | |
| Softwood: | | | | | | | | | |
| Longleaf and slash pines | 572.7 | 54.1 | 88.7 | 118.1 | 105.5 | 86.3 | 62.9 | 36.1 | 21.0 |
| Shortleaf and loblolly pines | 4,795.0 | 338.2 | 502.4 | 594.5 | 702.5 | 721.5 | 681.5 | 499.7 | 754.7 |
| Other yellow pines | 88.4 | 4.0 | 8.8 | 7.0 | 10.6 | 12.1 | 13.1 | 11.0 | 21.8 |
| Cypress | 912.2 | 27.0 | 60.5 | 103.8 | 126.7 | 190.7 | 124.2 | 113.0 | 166.3 |
| Other softwoods | 1.3 | .3 | .2 | ... | .6 | .. | .. | .2 | ... |
| Total | 6,369.6 | 423.6 | 660.6 | 823.4 | 945.9 | 1,010.6 | 881.7 | 660.0 | 963.8 |
| Hardwood: | | | | | | | | | |
| Select white oaks [1] | 239.6 | 14.6 | 19.9 | 28.9 | 41.1 | 50.5 | 30.8 | 20.3 | 33.5 |
| Select red oaks [2] | 131.8 | 9.9 | 13.0 | 12.8 | 21.8 | 21.1 | 12.0 | 12.8 | 28.4 |
| Other white oaks | 487.9 | 33.0 | 45.2 | 54.1 | 53.4 | 63.3 | 47.3 | 41.1 | 150.5 |
| Other red oaks | 1,030.7 | 79.9 | 109.8 | 123.1 | 132.7 | 140.2 | 125.9 | 113.8 | 205.3 |
| Hickory | 577.0 | 27.0 | 43.5 | 55.5 | 59.0 | 67.8 | 82.3 | 64.7 | 177.2 |
| Hard maple | 1.2 | .4 | .1 | .3 | ... | ... | .4 | ... | ... |
| Soft maple | 116.7 | 19.4 | 22.1 | 19.7 | 12.4 | 16.1 | 13.7 | 5.5 | 7.8 |
| Beech | 95.4 | 2.6 | 4.8 | 8.7 | 15.4 | 14.0 | 20.3 | 10.8 | 18.8 |
| Sweetgum | 1,048.6 | 94.1 | 131.4 | 157.9 | 159.0 | 176.0 | 132.1 | 82.9 | 115.2 |
| Tupelo and blackgum | 914.4 | 46.4 | 98.5 | 151.4 | 165.8 | 135.9 | 110.2 | 84.0 | 122.2 |
| Ash | 413.3 | 24.2 | 44.2 | 51.7 | 56.9 | 48.4 | 49.2 | 42.8 | 95.9 |
| Cottonwood | 83.6 | 1.4 | 2.4 | 5.5 | 7.3 | 6.6 | 12.4 | 9.3 | 38.7 |
| Basswood | 3.1 | .9 | .6 | 1.0 | ... | ... | .6 | ... | ... |
| Yellow-poplar | 14.4 | 1.3 | 1.1 | 4.3 | 1.8 | 2.8 | .6 | 1.4 | 1.1 |
| Black walnut | .7 | .2 | .2 | .3 | ... | ... | ... | ... | ... |
| Other hardwoods | 1,173.3 | 62.9 | 107.5 | 149.3 | 179.8 | 182.1 | 163.0 | 123.0 | 205.7 |
| Total | 6,331.7 | 418.2 | 644.3 | 824.5 | 906.4 | 924.8 | 800.8 | 612.4 | 1,200.3 |
| All species | 12,701.3 | 841.8 | 1,304.9 | 1,647.9 | 1,852.3 | 1,935.4 | 1,682.5 | 1,272.4 | 2,164.1 |

[1] Includes white, swamp chestnut, swamp white, and burr oaks.

[2] Includes cherrybark, Shumard, and northern red oaks.

Table 18. *Volume of sawtimber on commercial forest land by species and diameter classes, Louisiana, 1964*

| Species | Diameter class (inches at breast height) | | | | | | |
|---|---|---|---|---|---|---|---|
| | All classes | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0 and larger |
| | *Million board feet* | | | | | | |
| Softwood: | | | | | | | |
| Longleaf and slash pines | 2,270.8 | 517.5 | 545.7 | 491.9 | 374.5 | 215.0 | 126.2 |
| Shortleaf and loblolly pines | 22,315.9 | 2,614.7 | 3,653.9 | 4,147.6 | 4,090.7 | 3,050.7 | 4,758.3 |
| Other yellow pines | 434.1 | 29.6 | 62.1 | 76.1 | 79.7 | 56.8 | 129.8 |
| Cypress | 4,407.3 | 411.9 | 587.5 | 998.1 | 717.2 | 661.7 | 1,030.9 |
| Other softwoods | 5.0 | .. | 3.6 | .. | .. | 1.4 | .. |
| Total | 29,433.1 | 3,573.7 | 4,852.8 | 5,713.7 | 5,262.1 | 3,985.6 | 6,045.2 |
| Hardwood: | | | | | | | |
| Select white oaks [1] | 824.6 | .. | 165.7 | 227.8 | 153.0 | 98.7 | 179.4 |
| Select red oaks [2] | 431.3 | .. | 74.4 | 86.2 | 59.1 | 62.3 | 149.3 |
| Other white oaks | 1,661.7 | .. | 208.7 | 272.5 | 228.5 | 198.0 | 754.0 |
| Other red oaks | 3,287.6 | .. | 483.8 | 602.8 | 576.0 | 561.9 | 1,063.1 |
| Hickory | 2,122.1 | .. | 225.0 | 290.6 | 390.5 | 310.6 | 905.4 |
| Hard maple | 1.3 | .. | .. | .. | 1.3 | .. | .. |
| Soft maple | 205.4 | .. | 42.6 | 56.7 | 54.9 | 22.1 | 29.1 |
| Beech | 360.8 | .. | 60.1 | 61.3 | 93.9 | 54.1 | 91.4 |
| Sweetgum | 3,155.8 | .. | 614.2 | 799.4 | 655.8 | 439.8 | 646.6 |
| Tupelo and blackgum | 2,889.3 | .. | 644.1 | 579.6 | 530.6 | 444.5 | 690.5 |
| Ash | 1,231.5 | .. | 193.9 | 191.1 | 219.3 | 187.8 | 439.4 |
| Cottonwood | 346.0 | .. | 22.4 | 27.1 | 59.0 | 45.6 | 191.9 |
| Basswood | 2.8 | .. | .. | .. | 2.8 | .. | .. |
| Yellow-poplar | 35.0 | .. | 8.0 | 12.5 | 3.8 | 4.1 | 6.6 |
| Black walnut | .. | .. | .. | .. | .. | .. | .. |
| Other hardwoods | 3,770.9 | .. | 680.6 | 791.2 | 741.8 | 573.1 | 984.2 |
| Total | 20,326.1 | .. | 3,423.5 | 3,998.8 | 3,770.3 | 3,002.6 | 6,130.9 |
| All species | 49,759.2 | 3,573.7 | 8,276.3 | 9,712.5 | 9,032.4 | 6,988.2 | 12,176.1 |

[1] Includes white, swamp chestnut, swamp white, and burr oaks.

[2] Includes cherrybark, Shumard, and northern red oaks.

Table 19. *Volume of sawtimber on commercial forest land by species and grade, Louisiana, 1964*

| Species | All grades | Grade 1 | Grade 2 | Grade 3 | Lower grades |
|---|---|---|---|---|---|
| | *Million board feet* | | | | |
| Softwood: | | | | | |
| Yellow pines | 25,020.8 | 1,616.2 | 8,807.7 | 12,474.3 | 2,122.6 |
| Cypress | 4,407.3 | 183.0 | 1,380.4 | 2,432.1 | 411.8 |
| Other softwoods | 5.0 | 5.0 | .. | .. | .. |
| Total | 29,433.1 | 1,804.2 | 10,188.1 | 14,906.4 | 2,534.4 |
| Hardwood: | | | | | |
| Select white and red oaks | 1,255.9 | 153.0 | 302.4 | 543.6 | 256.9 |
| Other white and red oaks | 4,949.3 | 383.5 | 962.5 | 2,062.3 | 1,541.0 |
| Hickory | 2,122.1 | 225.3 | 615.7 | 921.6 | 359.5 |
| Hard maple | 1.3 | .. | .. | .. | 1.3 |
| Sweetgum | 3,155.8 | 493.1 | 911.9 | 1,425.7 | 325.1 |
| Ash, black walnut, and black cherry | 1,247.5 | 266.2 | 377.9 | 530.2 | 73.2 |
| Yellow-poplar | 35.0 | 2.2 | 7.5 | 18.9 | 6.4 |
| Other hardwoods | 7,559.2 | 1,113.6 | 2,030.5 | 3,547.5 | 867.6 |
| Total | 20,326.1 | 2,636.9 | 5,208.4 | 9,049.8 | 3,431.0 |
| All species | 49,759.2 | 4,441.1 | 15,396.5 | 23,956.2 | 5,965.4 |

Table 20. *Volume of salvable dead sawtimber-size trees on commercial forest land by softwoods and hardwoods, Louisiana, 1964*

| Species group | Volume |
|---|---|
| | *Million board feet* |
| Softwood | 18.6 |
| Hardwood | 37.2 |
| All species | 55.8 |

Table 21. *Net annual growth and cut of growing stock on commercial forest land by species, Louisiana, 1963*

| Species | Net annual growth | Annual timber cut |
|---|---|---|
| | *– Million cubic feet –* | |
| Softwood: | | |
| Yellow pines | 422.3 | 245.4 |
| Other softwoods | 70.7 | 5.5 |
| Total | 493.0 | 250.9 |
| Hardwood: | | |
| Select white and red oaks | 8.5 | 16.5 |
| Other white and red oaks | 34.6 | 53.8 |
| Hickory | 13.2 | 16.0 |
| Sweetgum | 23.9 | 25.8 |
| Yellow-poplar | .3 | .5 |
| Other hardwoods | 63.9 | 59.2 |
| Total | 144.4 | 171.8 |
| All species | 637.4 | 422.7 |

Table 22. *Net annual growth and cut of growing stock on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

| Ownership class | Net annual growth | | | Annual timber cut | | |
|---|---|---|---|---|---|---|
| | All species | Softwood | Hardwood | All species | Softwood | Hardwood |
| | *– – – – – – – – Million cubic feet – – – – – – – –* | | | | | |
| Public | 49.9 | 44.0 | 5.9 | 22.7 | 18.1 | 4.6 |
| Forest industry | 185.9 | 157.1 | 28.8 | 110.2 | 91.3 | 18.9 |
| Farmer and misc. private | 401.6 | 291.9 | 109.7 | 289.8 | 141.5 | 148.3 |
| All ownerships | 637.4 | 493.0 | 144.4 | 422.7 | 250.9 | 171.8 |

Table 23. *Net annual growth and cut of sawtimber on commercial forest land by species, Louisiana, 1963*

| Species | Net annual growth | Annual timber cut |
|---|---|---|
| | *– Million board feet –* | |
| Softwood: | | |
| Yellow pines | 2,006.6 | 1,024.7 |
| Other softwoods | 353.9 | 31.7 |
| Total | 2,360.5 | 1,056.4 |
| Hardwood: | | |
| Select white and red oaks | 34.9 | 64.8 |
| Other white and red oaks | 137.6 | 205.5 |
| Hickory | 59.0 | 59.1 |
| Sweetgum | 87.7 | 72.2 |
| Yellow-poplar | 1.0 | 1.2 |
| Other hardwoods | 244.9 | 219.8 |
| Total | 565.1 | 622.6 |
| All species | 2,925.6 | 1,679.0 |

Table 24. *Net annual growth and cut of sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

| Ownership class | Net annual growth | | | Annual timber cut | | |
|---|---|---|---|---|---|---|
| | All species | Softwood | Hardwood | All species | Softwood | Hardwood |
| | *Million board feet* | | | | | |
| Public | 240.9 | 219.5 | 21.4 | 100.0 | 81.3 | 18.7 |
| Forest industry | 926.6 | 802.5 | 124.1 | 476.8 | 415.2 | 61.6 |
| Farmer and misc. private | 1,758.1 | 1,338.5 | 419.6 | 1,102.2 | 559.9 | 542.3 |
| All ownerships | 2,925.6 | 2,360.5 | 565.1 | 1,679.0 | 1,056.4 | 622.6 |

Table 25. *Annual mortality of growing stock and sawtimber on commercial forest land by species, Louisiana, 1963*

| Species | Growing stock | Sawtimber |
|---|---|---|
| | *Million cubic feet* | *Million board feet* |
| Softwood: | | |
| Yellow pines | 23.5 | 115.1 |
| Other softwoods | 3.9 | 20.3 |
| Total | 27.4 | 135.4 |
| Hardwood: | | |
| Select white and red oaks | 6.5 | 23.1 |
| Other white and red oaks | 26.6 | 91.1 |
| Hickory | 10.1 | 39.0 |
| Sweetgum | 18.3 | 58.1 |
| Yellow-poplar | .3 | .6 |
| Other hardwoods | 49.0 | 162.1 |
| Total | 110.8 | 374.0 |
| All species | 138.2 | 509.4 |

Table 26. *Annual mortality of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

| Ownership class | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwood | Hardwood | All species | Softwood | Hardwood |
| | *Million cubic feet* | | | *Million board feet* | | |
| Public | 6.9 | 2.4 | 4.5 | 26.7 | 12.6 | 14.1 |
| Forest industry | 30.8 | 8.7 | 22.1 | 128.1 | 46.0 | 82.1 |
| Farmer and misc. private | 100.5 | 16.3 | 84.2 | 354.6 | 76.8 | 277.8 |
| All ownerships | 138.2 | 27.4 | 110.8 | 509.4 | 135.4 | 374.0 |

Table 27. *Annual mortality of growing stock and sawtimber on commercial forest land by causes and by softwoods and hardwoods, Louisiana, 1963*

| Cause of death | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwood | Hardwood | All species | Softwood | Hardwood |
| | *Million cubic feet* | | | *Million board feet* | | |
| Fire | 7.1 | 0.7 | 6.4 | 20.2 | 1.9 | 18.3 |
| Insects | 3.9 | 3.5 | .4 | 21.9 | 21.9 | ... |
| Disease | 4.3 | .2 | 4.1 | 9.0 | .. | 9.0 |
| Other | 30.6 | 5.2 | 25.4 | 100.5 | 16.7 | 83.8 |
| Unknown | 92.3 | 17.8 | 74.5 | 357.8 | 94.9 | 262.9 |
| All causes | 138.2 | 27.4 | 110.8 | 509.4 | 135.4 | 374.0 |

Table 28. *Total output of timber products by product, by type of material used, and by softwoods and hardwoods, Louisiana, 1963*

| Product and species group | Total output in standard units | | Output from roundwood | | Output from plant by-products (standard units) |
|---|---|---|---|---|---|
| | Unit | Number | Standard units | M cubic feet | |
| Saw logs: | | | | | |
| Softwood | M bd. ft. [1] | 673,572 | 673,572 | 110,803 | ... |
| Hardwood | M bd. ft. [1] | 392,316 | 392,316 | 65,399 | ... |
| Total | M bd. ft. [1] | 1,065,888 | 1,065,888 | 176,202 | ... |
| Veneer logs and bolts: | | | | | |
| Softwood | M bd. ft. | ... | ... | ... | ... |
| Hardwood | M bd. ft. | 48,069 | 48,069 | 8,066 | ... |
| Total | M bd. ft. | 48,069 | 48,069 | 8,066 | ... |
| Pulpwood: | | | | | |
| Softwood | Std. cords [2] | 1,745,590 | 1,502,990 | 113,325 | 242,600 |
| Hardwood | Std. cords [2] | 492,631 | 465,531 | 36,218 | 27,100 |
| Total | Std. cords [2] | 2,238,221 | 1,968,521 | 149,543 | 269,700 |
| Piling: | | | | | |
| Softwood | M linear ft. | 4,891 | 4,891 | 3,941 | ... |
| Hardwood | M linear ft. | ... | ... | ... | ... |
| Total | M linear ft. | 4,891 | 4,891 | 3,941 | ... |
| Poles: | | | | | |
| Softwood | M pieces | 473 | 473 | 7,419 | ... |
| Hardwood | M pieces | ... | ... | ... | ... |
| Total | M pieces | 473 | 473 | 7,419 | ... |
| Misc. industrial wood: [3] | | | | | |
| Softwood | M cu. ft. | 381 | 20 | 20 | 361 |
| Hardwood | M cu. ft. | 6,095 | 5,404 | 5,404 | 691 |
| Total | M cu. ft. | 6,476 | 5,424 | 5,424 | 1,052 |
| Posts (round and split): | | | | | |
| Softwood | M pieces | 4,111 | 4,111 | 1,946 | ... |
| Hardwood | M pieces | 514 | 514 | 329 | ... |
| Total | M pieces | 4,625 | 4,625 | 2,275 | ... |
| Fuelwood: | | | | | |
| Softwood | Std. cords | 202,989 | 21,159 | 1,587 | [4] 181,830 |
| Hardwood | Std. cords | 521,684 | 354,777 | 26,608 | [4] 166,907 |
| Total | Std. cords | 724,673 | 375,936 | 28,195 | [4] 348,737 |
| All products: | | | | | |
| Softwood | M cu. ft. | ... | ... | 239,041 | ... |
| Hardwood | M cu. ft. | ... | ... | 142,024 | ... |
| Total | M cu. ft. | ... | ... | 381,065 | ... |

[1] International ¼-inch rule.

[2] Rough wood basis (for example, chips converted to equivalent standard cords).

[3] Includes cooperage logs and bolts, chemical wood, handle stock, furniture and other dimension, shuttleblocks, and miscellaneous domestic use. Additionally, byproducts include material used for livestock bedding, mulch, etc.

[4] Includes plant byproducts used for industrial and domestic fuel.

Table 29. *Total output of roundwood products by source and by softwoods and hardwoods, Louisiana, 1963*

| Source | All species | Softwood | Hardwood |
|---|---|---|---|
| | – – *Thousand cubic feet* – – | | |
| Growing stock trees: [1] | | | |
| Sawtimber | 290,438 | 194,868 | 95,570 |
| Poletimber | 64,986 | 37,217 | 27,769 |
| Total | 355,424 | 232,085 | 123,339 |
| Cull trees [1] | 8,889 | 989 | 7,900 |
| Salvable dead trees [1] | 3,841 | 125 | 3,716 |
| Other sources [2] | 12,911 | 5,842 | 7,069 |
| All sources | 381,065 | 239,041 | 142,024 |

[1] On commercial forest land.

[2] Includes noncommercial forest land, nonforest land such as fence rows, trees less than 5.0 inches in diameter, and treetops and limbs.

Table 30. *Annual timber cut from growing stock on commercial forest land by product and logging residues, and by softwoods and hardwoods, Louisiana, 1963*

| Product and residues | All species | Softwood | Hardwood |
|---|---|---|---|
| | – – *Thousand cubic feet* – – | | |
| Roundwood products: | | | |
| Saw logs | 173,029 | 110,062 | 62,967 |
| Veneer logs and bolts | 7,927 | . . . | 7,927 |
| Pulpwood | 137,009 | 107,914 | 29,095 |
| Piling | 3,924 | 3,924 | . . . |
| Poles | 7,364 | 7,364 | . . . |
| Miscellaneous industrial wood [1] | 5,333 | 20 | 5,313 |
| Posts | 2,067 | 1,770 | 297 |
| Fuelwood | 18,771 | 1,031 | 17,740 |
| All products | 355,424 | 232,085 | 123,339 |
| Logging residues | 51,360 | 18,804 | 32,556 |
| Cultural operations | 15,876 | . . . | 15,876 |
| Timber cut | 422,660 | 250,889 | 171,771 |

[1] Includes 127 M cu. ft. of miscellaneous farm products.

Table 31. *Annual timber cut from live sawtimber on commercial forest land by product and logging residues, and by softwoods and hardwoods, Louisiana, 1963*

| Product and residues | All species | Softwood | Hardwood |
|---|---|---|---|
| | – – *Thousand board feet* – – | | |
| Roundwood products: | | | |
| Saw logs | 1,033,924 | 665,422 | 368,502 |
| Veneer logs and bolts | 46,636 | . . . | 46,636 |
| Pulpwood | 359,100 | 295,787 | 63,313 |
| Piling | 23,272 | 23,272 | . . . |
| Poles | 37,638 | 37,638 | . . . |
| Miscellaneous industrial wood | 28,381 | 109 | 28,272 |
| Posts | 1,076 | 741 | 335 |
| Fuelwood | 16,453 | 842 | 15,611 |
| All products | 1,546,480 | 1,023,811 | 522,669 |
| Logging residues | 106,609 | 32,608 | 74,001 |
| Cultural operations | 25,917 | . . . | 25,917 |
| Timber cut | 1,679,006 | 1,056,419 | 622,587 |

Table 32. *Volume of plant residues by industrial source and type of residue, and by softwoods and hardwoods, Louisiana, 1963*

| Industrial source | All species | | | Softwood | | | Hardwood | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Coarse [1] | Fine [2] | Total | Coarse [1] | Fine [2] | Total | Coarse [1] | Fine [2] |
| | – – – – – – – – – – – – – – – *Thousand cubic feet* – – – – – – – – – – – – – – – | | | | | | | | |
| Lumber industry | 24,335 | 10,630 | 13,705 | 9,622 | 3,643 | 5,979 | 14,713 | 6,987 | 7,726 |
| Veneer and plywood industry | 416 | 345 | 71 | . . . | . . . | . . . | 416 | 345 | 71 |
| Other primary industries | 2,977 | 1,225 | 1,752 | 1,406 | 480 | 926 | 1,571 | 745 | 826 |
| All industries | 27,728 | 12,200 | 15,528 | 11,028 | 4,123 | 6,905 | 16,700 | 8,077 | 8,623 |

[1] Unused material suitable for chipping, such as slabs, edgings, and veneer cores.

[2] Unused material not suitable for chipping, such as sawdust and shavings.

Table 33. *Timber growth projections, Louisiana, 1963 to 1993* [1]

| Period | Assumed cut | | | Projected growth | | |
|---|---|---|---|---|---|---|
| | All species | Soft-wood | Hard-wood | All species | Soft-wood | Hard-wood |
| | GROWING STOCK | | | | | |
| | *Thousand cubic feet* | | | | | |
| 1963 (year of inventory) | 422,700 | 250,900 | 171,800 | 637,400 | 493,000 | 144,400 |
| 1973 (plus 10 years) | 463,000 | 271,000 | 192,000 | 686,900 | 537,800 | 149,100 |
| 1983 (plus 20 years) | 583,600 | 361,300 | 222,300 | 765,300 | 616,200 | 149,100 |
| 1993 (plus 30 years) | 794,700 | 511,800 | 282,900 | 695,300 | 560,200 | 135,100 |
| | SAWTIMBER | | | | | |
| | *Thousand board feet* | | | | | |
| 1963 (year of inventory) | 1,679,000 | 1,056,400 | 622,600 | 2,925,600 | 2,360,500 | 565,100 |
| 1973 (plus 10 years) | 1,934,200 | 1,320,500 | 613,700 | 3,197,700 | 2,625,900 | 571,800 |
| 1983 (plus 20 years) | 2,474,400 | 1,798,400 | 676,000 | 3,603,800 | 3,058,900 | 544,900 |
| 1993 (plus 30 years) | 3,217,300 | 2,452,400 | 764,900 | 3,229,200 | 2,751,600 | 477,600 |

[1] Based on assumptions that timber output in the United States and Louisiana will increase with anticipated gains in population and gross national product and that forestry efforts will continue at recent levels.

Table 34. *Basal area per acre of growing stock and cull trees by forest type, Louisiana, 1964*

| Forest type | All trees | 2- and 4-inch good trees [1] | Growing stock | 2- and 4-inch poor trees | Cull trees |
|---|---|---|---|---|---|
| | *Square feet* | | | | |
| Longleaf-slash pine | 35.1 | 6.4 | 25.3 | 0.9 | 2.5 |
| Loblolly-shortleaf pine | 72.3 | 14.0 | 49.0 | 2.3 | 7.0 |
| Oak-pine | 66.6 | 11.1 | 37.5 | 4.1 | 13.9 |
| Oak-hickory | 62.4 | 9.2 | 30.9 | 4.8 | 17.5 |
| Elm-ash-cottonwood | 79.5 | 8.0 | 45.0 | 4.9 | 21.6 |
| Oak-gum-cypress | 85.2 | 6.8 | 48.2 | 4.6 | 25.6 |
| All types | 72.4 | 9.7 | 43.2 | 3.6 | 15.9 |

[1] Includes only sound, well-formed trees.

## PARISH TABLES

The tables that follow are intended for use in compiling forest resource estimates for groups of parishes. Since the sampling procedure used by the Forest Survey in Louisiana was intended primarily to furnish inventory data for the State as a whole, individual parish estimates have limited and variable accuracy. As parish totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulations on page 14.

Table 35. *Land area and commercial forest by parish, Louisiana, 1964*

| Parish | All land | Commercial forest | |
|---|---|---|---|
| | *Thousand acres* | *Thousand acres* | *Percent* |
| Acadia | 423.7 | 71.5 | 16.9 |
| Allen | 496.0 | 367.2 | 74.0 |
| Ascension | 192.0 | 103.7 | 54.0 |
| Assumption | 228.5 | 143.0 | 62.6 |
| Avoyelles | 528.6 | 313.5 | 59.3 |
| Beauregard | 757.8 | 661.2 | 87.3 |
| Bienville | 526.1 | 437.4 | 83.1 |
| Bossier | 537.0 | 414.0 | 77.1 |
| Caddo | 568.3 | 352.8 | 62.1 |
| Calcasieu | 706.6 | 244.2 | 34.6 |
| Caldwell | 352.0 | 305.0 | 86.6 |
| Cameron | 924.1 | (1) | (1) |
| Catahoula | 467.2 | 345.0 | 73.8 |
| Claiborne | 490.2 | 365.8 | 74.6 |
| Concordia | 453.8 | 313.6 | 69.1 |
| De Soto | 570.9 | 428.4 | 75.0 |
| East Baton Rouge | 295.7 | 130.9 | 44.3 |
| East Carroll | 275.8 | 109.2 | 39.6 |
| East Feliciana | 290.6 | 161.0 | 55.4 |
| Evangeline | 433.3 | 219.6 | 50.7 |
| Franklin | 411.5 | 144.0 | 35.0 |
| Grant | 423.7 | 359.9 | 84.9 |
| Iberia | 376.3 | 115.0 | 30.6 |
| Iberville | 401.9 | 280.8 | 69.9 |
| Jackson | 373.1 | 335.0 | 89.8 |
| Jefferson | 261.8 | . . | . . |
| Jefferson Davis | 421.1 | 81.9 | 19.4 |
| Lafayette | 181.1 | 14.1 | 7.8 |
| Lafourche | 740.5 | 156.0 | 21.1 |
| La Salle | 408.3 | 374.0 | 91.6 |
| Lincoln | 300.2 | 218.4 | 72.8 |
| Livingston | 425.6 | 358.4 | 84.2 |
| Madison | 423.7 | 244.8 | 57.8 |
| Morehouse | 512.7 | 291.5 | 56.9 |
| Natchitoches | 827.5 | 616.0 | 74.4 |
| Orleans | 127.4 | . . | . . |
| Ouachita | 408.3 | 300.8 | 73.7 |
| Plaquemines | 629.8 | . . | . . |
| Pointe Coupee | 361.0 | 194.7 | 53.9 |
| Rapides | 842.2 | 621.6 | 73.8 |
| Red River | 264.3 | 174.0 | 65.8 |
| Richland | 368.6 | 149.1 | 40.5 |
| Sabine | 658.6 | 540.0 | 82.0 |
| St. Bernard | 326.4 | . . | . . |
| St. Charles | 194.6 | 68.8 | 35.4 |
| St. Helena | 268.8 | 203.0 | 75.5 |
| St. James | 159.4 | 85.5 | 53.6 |
| St. John the Baptist | 144.0 | 93.8 | 65.1 |
| St. Landry | 595.2 | 255.0 | 42.8 |
| St. Martin | 461.4 | 310.0 | 67.2 |
| St. Mary | 387.2 | 143.0 | 36.9 |
| St. Tammany | 581.1 | 404.7 | 69.6 |
| Tangipahoa | 513.9 | 345.6 | 67.3 |
| Tensas | 398.7 | 230.1 | 57.7 |
| Terrebonne | 890.2 | 122.4 | 13.7 |
| Union | 579.9 | 489.7 | 84.4 |
| Vermilion | 783.4 | [1] 31.6 | [1] 4.0 |
| Vernon | 867.8 | 736.7 | 84.9 |
| Washington | 425.6 | 280.8 | 66.0 |
| Webster | 397.4 | 295.8 | 74.4 |
| West Baton Rouge | 128.0 | 69.3 | 54.1 |
| West Carroll | 227.8 | 67.5 | 29.6 |
| West Feliciana | 262.4 | 179.2 | 68.3 |
| Winn | 607.3 | 567.0 | 93.4 |
| All parishes | 28,867.9 | 16,036.5 | 55.6 |

[1] Cameron included in Vermilion.

Table 36. *Growing stock volume by species groups and parish, Louisiana, 1964*

| Parish | All species | Softwood | | | Soft hardwood | | | Hard hardwood | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Pine | Other | Total | Gum | Other | Total | Oak | Other |
| | *Thousand cords* | | | | | | | | | |
| Acadia [1] | 1,540 | 313 | 256 | 57 | 884 | 884 | ... | 343 | 198 | 145 |
| Allen | 3,798 | 2,656 | 2,592 | 64 | 666 | 623 | 43 | 476 | 352 | 124 |
| Ascension | 1,296 | 304 | 128 | 176 | 631 | 534 | 97 | 361 | 134 | 227 |
| Assumption | 3,749 | 1,593 | ... | 1,593 | 1,905 | 1,568 | 337 | 251 | 52 | 199 |
| Avoyelles | 3,030 | 589 | 183 | 406 | 493 | 377 | 116 | 1,948 | 657 | 1,291 |
| Beauregard | 3,739 | 2,243 | 2,180 | 63 | 672 | 642 | 30 | 824 | 651 | 173 |
| Bienville | 4,549 | 3,556 | 3,525 | 31 | 554 | 487 | 67 | 439 | 278 | 161 |
| Bossier | 2,949 | 1,888 | 1,852 | 36 | 322 | 280 | 42 | 739 | 548 | 191 |
| Caddo | 1,993 | 968 | 956 | 12 | 358 | 242 | 116 | 667 | 516 | 151 |
| Calcasieu | 1,654 | 987 | 934 | 53 | 358 | 336 | 22 | 309 | 234 | 75 |
| Caldwell | 4,365 | 2,125 | 2,058 | 67 | 627 | 552 | 75 | 1,613 | 1,039 | 574 |
| Cameron [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Catahoula | 3,530 | 692 | 584 | 108 | 331 | 250 | 81 | 2,507 | 1,064 | 1,443 |
| Claiborne | 2,877 | 2,147 | 2,140 | 7 | 348 | 348 | ... | 382 | 281 | 101 |
| Concordia | 4,086 | 44 | ... | 44 | 1,130 | 476 | 654 | 2,912 | 1,039 | 1,873 |
| De Soto | 4,523 | 3,225 | 3,034 | 191 | 346 | 321 | 25 | 952 | 651 | 301 |
| East Baton Rouge | 1,337 | 113 | 54 | 59 | 512 | 473 | 39 | 712 | 521 | 191 |
| East Carroll | 1,444 | 8 | ... | 8 | 630 | 251 | 379 | 806 | 255 | 551 |
| East Feliciana | 1,617 | 932 | 932 | ... | 230 | 196 | 34 | 455 | 416 | 39 |
| Evangeline | 1,485 | 833 | 825 | 8 | 373 | 366 | 7 | 279 | 161 | 118 |
| Franklin | 914 | 113 | 30 | 83 | 300 | 293 | 7 | 501 | 281 | 220 |
| Grant | 5,144 | 3,311 | 3,306 | 5 | 503 | 464 | 39 | 1,330 | 1,046 | 284 |
| Iberia | 1,427 | 491 | ... | 491 | 754 | 216 | 538 | 182 | 46 | 136 |
| Iberville | 4,515 | 785 | ... | 785 | 1,643 | 397 | 1,246 | 2,087 | 430 | 1,657 |
| Jackson | 4,803 | 3,215 | 3,212 | 3 | 533 | 509 | 24 | 1,055 | 849 | 206 |
| Jefferson Davis | 799 | 485 | 485 | ... | 151 | 151 | ... | 163 | 162 | 1 |
| Lafayette [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lafourche | 2,646 | 1,001 | ... | 1,001 | 1,281 | 860 | 421 | 364 | 90 | 274 |
| La Salle | 3,669 | 2,216 | 2,168 | 48 | 313 | 295 | 18 | 1,140 | 591 | 549 |
| Lincoln | 1,234 | 764 | 761 | 3 | 218 | 173 | 45 | 252 | 189 | 63 |
| Livingston | 7,233 | 4,438 | 4,237 | 201 | 1,855 | 1,655 | 200 | 940 | 748 | 192 |
| Madison | 3,588 | ... | ... | ... | 1,001 | 588 | 413 | 2,587 | 621 | 1,966 |
| Morehouse | 2,736 | 975 | 931 | 44 | 243 | 171 | 72 | 1,518 | 918 | 600 |
| Natchitoches | 6,906 | 4,417 | 4,336 | 81 | 722 | 674 | 48 | 1,767 | 1,022 | 745 |
| Ouachita | 3,276 | 1,231 | 994 | 237 | 285 | 282 | 3 | 1,760 | 1,229 | 531 |
| Pointe Coupee | 2,589 | 53 | ... | 53 | 661 | 531 | 130 | 1,875 | 410 | 1,465 |
| Rapides | 6,262 | 3,132 | 3,037 | 95 | 1,033 | 940 | 93 | 2,097 | 1,079 | 1,018 |
| Red River | 1,516 | 668 | 663 | 5 | 436 | 272 | 164 | 412 | 242 | 170 |
| Richland | 1,089 | 59 | 59 | ... | 73 | 73 | ... | 957 | 479 | 478 |
| Sabine | 7,944 | 5,271 | 5,176 | 95 | 952 | 876 | 76 | 1,721 | 1,051 | 670 |
| St. Charles | 936 | 344 | 3 | 341 | 373 | 191 | 182 | 219 | 19 | 200 |
| St. Helena | 2,234 | 1,788 | 1,788 | ... | 201 | 179 | 22 | 245 | 230 | 15 |
| St. James | 1,783 | 701 | ... | 701 | 881 | 650 | 231 | 201 | 46 | 155 |
| St. John the Baptist | 2,109 | 808 | ... | 808 | 1,152 | 974 | 178 | 149 | 31 | 118 |
| St. Landry | 3,417 | 463 | 87 | 376 | 906 | 585 | 321 | 2,048 | 931 | 1,117 |
| St. Martin | 3,416 | 835 | ... | 835 | 2,045 | 628 | 1,417 | 536 | 45 | 491 |
| St. Mary | 1,978 | 629 | ... | 629 | 1,215 | 963 | 252 | 134 | 61 | 73 |
| St. Tammany | 3,473 | 1,992 | 1,817 | 175 | 1,100 | 937 | 163 | 381 | 265 | 116 |
| Tangipahoa | 2,818 | 1,631 | 1,523 | 108 | 703 | 590 | 113 | 484 | 390 | 94 |
| Tensas | 2,801 | ... | ... | ... | 734 | 353 | 381 | 2,067 | 749 | 1,318 |
| Terrebonne | 2,393 | 955 | ... | 955 | 1,057 | 800 | 257 | 381 | 64 | 317 |
| Union | 5,387 | 3,079 | 2,910 | 169 | 778 | 751 | 27 | 1,530 | 1,043 | 487 |
| Vermilion [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vernon | 4,974 | 3,140 | 3,069 | 71 | 797 | 643 | 154 | 1,037 | 772 | 265 |
| Washington | 2,878 | 2,141 | 2,076 | 65 | 403 | 275 | 128 | 334 | 176 | 158 |
| Webster | 2,361 | 1,553 | 1,506 | 47 | 357 | 339 | 18 | 451 | 327 | 124 |
| West Baton Rouge | 2,318 | 33 | ... | 33 | 758 | 219 | 539 | 1,527 | 315 | 1,212 |
| West Carroll | 621 | ... | ... | ... | 122 | 122 | ... | 499 | 369 | 130 |
| West Feliciana | 2,189 | 652 | 261 | 391 | 537 | 418 | 119 | 1,000 | 343 | 657 |
| Winn | 9,494 | 6,343 | 6,080 | 263 | 1,106 | 1,055 | 51 | 2,045 | 1,503 | 542 |
| All parishes | 179,431 | 84,928 | 72,748 | 12,180 | 39,552 | 29,298 | 10,254 | 54,951 | 28,209 | 26,742 |

[1] Cameron, Lafayette, and Vermilion included in Acadia.

Table 37. *Sawtimber volume by species groups and parish, Louisiana, 1964*

| Parish | All species | Softwood | | | Soft hardwood | | | Hard hardwood | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Pine | Other | Total | Gum | Other | Total | Oak | Other |
| | *Million board feet* | | | | | | | | | |
| Acadia [1] | 398.4 | 112.5 | 95.5 | 17.0 | 201.8 | 201.8 | ... | 84.1 | 52.8 | 31.3 |
| Allen | 1,362.0 | 1,086.4 | 1,065.0 | 21.4 | 169.9 | 155.1 | 14.8 | 105.7 | 75.5 | 30.2 |
| Ascension | 273.9 | 107.7 | 48.9 | 58.8 | 101.2 | 89.5 | 11.7 | 65.0 | 45.2 | 19.8 |
| Assumption | 951.6 | 586.7 | .. | 586.7 | 314.4 | 243.1 | 71.3 | 50.5 | 11.4 | 39.1 |
| Avoyelles | 792.1 | 176.7 | 62.8 | 113.9 | 113.4 | 89.5 | 23.9 | 502.0 | 189.8 | 312.2 |
| Beauregard | 1,084.4 | 748.8 | 721.6 | 27.2 | 146.4 | 142.9 | 3.5 | 189.2 | 155.5 | 33.7 |
| Bienville | 1,524.3 | 1,283.0 | 1,269.1 | 13.9 | 137.1 | 127.9 | 9.2 | 104.2 | 67.8 | 36.4 |
| Bossier | 791.5 | 610.6 | 603.0 | 7.6 | 44.4 | 39.1 | 5.3 | 136.5 | 110.8 | 25.7 |
| Caddo | 527.8 | 294.1 | 292.1 | 2.0 | 81.0 | 57.1 | 23.9 | 152.7 | 126.2 | 26.5 |
| Calcasieu | 503.9 | 343.8 | 325.7 | 18.1 | 91.0 | 84.7 | 6.3 | 69.1 | 52.8 | 16.3 |
| Caldwell | 1,365.9 | 832.3 | 804.2 | 28.1 | 150.2 | 144.9 | 5.3 | 383.4 | 242.6 | 140.8 |
| Cameron [1] | .. | ... | ... | ... | ... | ... | ... | ... | .. | .... |
| Catahoula | 964.9 | 284.8 | 250.0 | 34.8 | 81.6 | 59.1 | 22.5 | 598.5 | 269.2 | 329.3 |
| Claiborne | 740.6 | 614.1 | 612.1 | 2.0 | 52.2 | 52.2 | ... | 74.3 | 49.1 | 25.2 |
| Concordia | 1,033.0 | 26.8 | .. | 26.8 | 269.2 | 104.9 | 164.3 | 737.0 | 254.3 | 482.7 |
| De Soto | 1,152.1 | 903.7 | 830.9 | 72.8 | 55.9 | 53.6 | 2.3 | 192.5 | 140.8 | 51.7 |
| East Baton Rouge | 301.7 | 43.2 | 26.1 | 17.1 | 101.2 | 95.1 | 6.1 | 157.3 | 115.6 | 41.7 |
| East Carroll | 276.2 | 2.7 | .. | 2.7 | 138.1 | 36.0 | 102.1 | 135.4 | 39.4 | 96.0 |
| East Feliciana | 487.9 | 317.0 | 317.0 | .. | 51.7 | 46.1 | 5.6 | 119.2 | 112.5 | 6.7 |
| Evangeline | 418.0 | 271.3 | 271.3 | .. | 86.3 | 83.0 | 3.3 | 60.4 | 41.5 | 18.9 |
| Franklin | 224.3 | 35.9 | 7.8 | 28.1 | 64.9 | 64.9 | ... | 123.5 | 63.6 | 59.9 |
| Grant | 1,778.8 | 1,355.6 | 1,352.1 | 3.5 | 130.4 | 123.6 | 6.8 | 292.8 | 221.8 | 71.0 |
| Iberia | 337.7 | 151.4 | ... | 151.4 | 157.8 | 39.2 | 118.6 | 28.5 | 12.6 | 15.9 |
| Iberville | 1,200.5 | 308.0 | ... | 308.0 | 428.3 | 105.4 | 322.9 | 464.2 | 120.5 | 343.7 |
| Jackson | 1,346.9 | 1,060.6 | 1,060.6 | ... | 110.4 | 109.5 | .9 | 175.9 | 130.7 | 45.2 |
| Jefferson Davis | 221.6 | 150.2 | 150.2 | ... | 37.7 | 37.7 | ... | 33.7 | 33.7 | ... |
| Lafayette [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lafourche | 689.6 | 394.9 | .. | 394.9 | 237.4 | 169.3 | 68.1 | 57.3 | 33.1 | 24.2 |
| La Salle | 1,187.3 | 848.4 | 833.2 | 15.2 | 73.1 | 67.7 | 5.4 | 265.8 | 137.8 | 128.0 |
| Lincoln | 306.9 | 229.2 | 229.2 | .. | 35.3 | 28.4 | 6.9 | 42.4 | 27.9 | 14.5 |
| Livingston | 2,248.5 | 1,640.9 | 1,568.8 | 72.1 | 390.0 | 358.8 | 31.2 | 217.6 | 177.5 | 40.1 |
| Madison | 850.2 | .. | .. | .. | 225.5 | 111.0 | 114.5 | 624.7 | 143.7 | 481.0 |
| Morehouse | 682.9 | 332.4 | 316.3 | 16.1 | 44.6 | 33.4 | 11.2 | 305.9 | 190.3 | 115.6 |
| Natchitoches | 1,892.7 | 1,429.5 | 1,402.2 | 27.3 | 113.5 | 105.0 | 8.5 | 349.7 | 176.5 | 173.2 |
| Ouachita | 742.8 | 383.5 | 314.0 | 69.5 | 44.6 | 44.6 | ... | 314.7 | 209.3 | 105.4 |
| Pointe Coupee | 629.6 | 22.6 | .. | 22.6 | 123.8 | 98.1 | 25.7 | 483.2 | 98.9 | 384.3 |
| Rapides | 1,743.1 | 1,057.7 | 1,028.3 | 29.4 | 216.4 | 211.3 | 5.1 | 469.0 | 217.9 | 251.1 |
| Red River | 392.2 | 227.2 | 227.2 | .. | 78.4 | 47.1 | 31.3 | 86.6 | 53.5 | 33.1 |
| Richland | 240.4 | 21.7 | 21.7 | ... | 12.6 | 12.6 | ... | 206.1 | 103.1 | 103.0 |
| Sabine | 2,225.3 | 1,803.5 | 1,768.5 | 35.0 | 123.6 | 112.7 | 10.9 | 298.2 | 185.2 | 113.0 |
| St. Charles | 267.5 | 133.2 | 1.6 | 131.6 | 99.7 | 63.7 | 36.0 | 34.6 | 5.5 | 29.1 |
| St. Helena | 759.8 | 684.8 | 684.8 | .. | 22.2 | 18.8 | 3.4 | 52.8 | 51.6 | 1.2 |
| St. James | 477.9 | 275.9 | .. | 275.9 | 159.1 | 102.4 | 56.7 | 42.9 | 10.7 | 32.2 |
| St. John the Baptist | 561.8 | 308.2 | .. | 308.2 | 231.4 | 200.6 | 30.8 | 22.2 | 7.3 | 14.9 |
| St. Landry | 853.3 | 179.5 | 40.5 | 139.0 | 175.8 | 107.2 | 68.6 | 498.0 | 247.9 | 250.1 |
| St. Martin | 839.0 | 315.6 | .. | 315.6 | 407.5 | 103.2 | 304.3 | 115.9 | 13.1 | 102.8 |
| St. Mary | 475.1 | 198.8 | .. | 198.8 | 247.9 | 205.4 | 42.5 | 28.4 | 17.7 | 10.7 |
| St. Tammany | 963.8 | 663.8 | 590.3 | 73.5 | 217.9 | 188.6 | 29.3 | 82.1 | 58.7 | 23.4 |
| Tangipahoa | 775.5 | 535.7 | 513.3 | 22.4 | 133.6 | 118.9 | 14.7 | 106.2 | 88.1 | 18.1 |
| Tensas | 626.5 | ... | .. | .. | 181.4 | 94.0 | 87.4 | 445.1 | 160.4 | 284.7 |
| Terrebonne | 722.9 | 355.2 | .. | 355.2 | 272.0 | 222.1 | 49.9 | 95.7 | 16.6 | 79.1 |
| Union | 1,352.2 | 879.3 | 820.9 | 58.4 | 175.2 | 168.3 | 6.9 | 297.7 | 202.9 | 94.8 |
| Vermilion [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vernon | 1,320.3 | 978.2 | 954.7 | 23.5 | 159.7 | 138.4 | 21.3 | 182.4 | 134.0 | 48.4 |
| Washington | 854.6 | 692.2 | 664.0 | 28.2 | 91.7 | 70.4 | 21.3 | 70.7 | 38.6 | 32.1 |
| Webster | 594.2 | 440.8 | 440.8 | .. | 65.5 | 62.8 | 2.7 | 87.9 | 64.8 | 23.1 |
| West Baton Rouge | 567.4 | 15.8 | .. | 15.8 | 143.6 | 49.5 | 94.1 | 408.0 | 88.4 | 319.6 |
| West Carroll | 115.5 | ... | .. | .. | 17.7 | 17.7 | .. | 97.8 | 76.9 | 20.9 |
| West Feliciana | 626.0 | 253.4 | 93.3 | 160.1 | 129.4 | 95.7 | 33.7 | 243.2 | 90.1 | 153.1 |
| Winn | 3,114.4 | 2,423.3 | 2,341.2 | 82.1 | 237.3 | 231.5 | 5.8 | 453.8 | 341.5 | 112.3 |
| All parishes | 49,759.2 | 29,433.1 | 25,020.8 | 4,412.3 | 8,203.9 | 6,045.1 | 2,158.8 | 12,122.2 | 6,205.2 | 5,917.0 |

[1] Cameron, Lafayette, and Vermilion included in Acadia.

Table 38. *Sawtimber volume by diameter classes and parish, Louisiana, 1964*

| Parish | All species | Softwood | | | Soft hardwood | | | Hard hardwood | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | 9.0-14.9 inches | 15.0 inches and up | Total | 11.0-14.9 inches | 15.0 inches and up | Total | 11.0-14.9 inches | 15.0 inches and up |
| | *Million board feet* | | | | | | | | | |
| Acadia [1] | 398.4 | 112.5 | 70.3 | 42.2 | 201.8 | 127.9 | 73.9 | 84.1 | 27.8 | 56.3 |
| Allen | 1,362.0 | 1,086.4 | 597.0 | 489.4 | 169.9 | 62.3 | 107.6 | 105.7 | 47.9 | 57.8 |
| Ascension | 273.9 | 107.7 | 53.4 | 54.3 | 101.2 | 84.8 | 16.4 | 65.0 | 15.1 | 49.9 |
| Assumption | 951.6 | 586.7 | 289.5 | 297.2 | 314.4 | 147.4 | 167.0 | 50.5 | 24.8 | 25.7 |
| Avoyelles | 792.1 | 176.7 | 96.4 | 80.3 | 113.4 | 28.4 | 85.0 | 502.0 | 121.2 | 380.8 |
| Beauregard | 1,084.4 | 748.8 | 383.6 | 365.2 | 146.4 | 52.3 | 94.1 | 189.2 | 53.1 | 136.1 |
| Bienville | 1,524.3 | 1,283.0 | 639.4 | 643.6 | 137.1 | 64.8 | 72.3 | 104.2 | 50.2 | 54.0 |
| Bossier | 791.5 | 610.6 | 381.5 | 229.1 | 44.4 | 22.0 | 22.4 | 136.5 | 77.1 | 59.4 |
| Caddo | 527.8 | 294.1 | 187.0 | 107.1 | 81.0 | 32.1 | 48.9 | 152.7 | 71.0 | 81.7 |
| Calcasieu | 503.9 | 343.8 | 177.8 | 166.0 | 91.0 | 39.7 | 51.3 | 69.1 | 29.0 | 40.1 |
| Caldwell | 1,365.9 | 832.3 | 366.6 | 465.7 | 150.2 | 53.0 | 97.2 | 383.4 | 118.3 | 265.1 |
| Cameron [1] | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Catahoula | 964.9 | 284.8 | 79.8 | 205.0 | 81.6 | 29.9 | 51.7 | 598.5 | 137.7 | 460.8 |
| Claiborne | 740.6 | 614.1 | 363.0 | 251.1 | 52.2 | 37.0 | 15.2 | 74.3 | 26.7 | 47.6 |
| Concordia | 1,033.0 | 26.8 | 1.2 | 25.6 | 269.2 | 59.3 | 209.9 | 737.0 | 164.3 | 572.7 |
| De Soto | 1,152.1 | 903.7 | 527.1 | 376.6 | 55.9 | 28.5 | 27.4 | 192.5 | 92.2 | 100.3 |
| East Baton Rouge | 301.7 | 43.2 | 8.1 | 35.1 | 101.2 | 61.7 | 39.5 | 157.3 | 32.6 | 124.7 |
| East Carroll | 276.2 | 2.7 | .. | 2.7 | 138.1 | 34.5 | 103.6 | 135.4 | 44.3 | 91.1 |
| East Feliciana | 487.9 | 317.0 | 158.8 | 158.2 | 51.7 | 41.2 | 10.5 | 119.2 | 53.0 | 66.2 |
| Evangeline | 418.0 | 271.3 | 143.9 | 127.4 | 86.3 | 29.4 | 56.9 | 60.4 | 23.9 | 36.5 |
| Franklin | 224.3 | 35.9 | 14.6 | 21.3 | 64.9 | 24.9 | 40.0 | 123.5 | 39.6 | 83.9 |
| Grant | 1,778.8 | 1,355.6 | 550.1 | 805.5 | 130.4 | 29.0 | 101.4 | 292.8 | 115.7 | 177.1 |
| Iberia | 337.7 | 151.4 | 85.4 | 66.0 | 157.8 | 72.2 | 85.6 | 28.5 | 17.3 | 11.2 |
| Iberville | 1,200.5 | 308.0 | 155.1 | 152.9 | 428.3 | 154.5 | 273.8 | 464.2 | 103.7 | 360.5 |
| Jackson | 1,346.9 | 1,060.6 | 570.1 | 490.5 | 110.4 | 44.3 | 66.1 | 175.9 | 84.7 | 91.2 |
| Jefferson Davis | 221.6 | 150.2 | 53.2 | 97.0 | 37.7 | 20.2 | 17.5 | 33.7 | 13.8 | 19.9 |
| Lafayette [1] | ... | ... | ... | .. | .. | .. | .. | .. | .. | .. |
| Lafourche | 689.6 | 394.9 | 147.9 | 247.0 | 237.4 | 81.9 | 155.5 | 57.3 | 15.7 | 41.6 |
| La Salle | 1,187.3 | 848.4 | 301.8 | 546.6 | 73.1 | 32.8 | 40.3 | 265.8 | 94.5 | 171.3 |
| Lincoln | 306.9 | 229.2 | 140.8 | 88.4 | 35.3 | 18.4 | 16.9 | 42.4 | 15.7 | 26.7 |
| Livingston | 2,248.5 | 1,640.9 | 518.5 | 1,122.4 | 390.0 | 119.5 | 270.5 | 217.6 | 59.3 | 158.3 |
| Madison | 850.2 | ... | .. | .. | 225.5 | 93.8 | 131.7 | 624.7 | 159.4 | 465.3 |
| Morehouse | 682.9 | 332.4 | 92.7 | 239.7 | 44.6 | 19.9 | 24.7 | 305.9 | 99.5 | 206.4 |
| Natchitoches | 1,892.7 | 1,429.5 | 726.4 | 703.1 | 113.5 | 58.4 | 55.1 | 349.7 | 157.3 | 192.4 |
| Ouachita | 742.8 | 383.5 | 185.8 | 197.7 | 44.6 | 29.3 | 15.3 | 314.7 | 101.7 | 213.0 |
| Pointe Coupee | 629.6 | 22.6 | 10.4 | 12.2 | 123.8 | 69.4 | 54.4 | 483.2 | 109.2 | 374.0 |
| Rapides | 1,743.1 | 1,057.7 | 559.4 | 498.3 | 216.4 | 91.7 | 124.7 | 469.0 | 163.1 | 305.9 |
| Red River | 392.2 | 227.2 | 107.2 | 120.0 | 78.4 | 22.2 | 56.2 | 86.6 | 29.3 | 57.3 |
| Richland | 240.4 | 21.7 | ... | 21.7 | 12.6 | .9 | 11.7 | 206.1 | 47.3 | 158.8 |
| Sabine | 2,225.3 | 1,803.5 | 750.0 | 1,053.5 | 123.6 | 76.9 | 46.7 | 298.2 | 145.2 | 153.0 |
| St. Charles | 267.5 | 133.2 | 42.6 | 90.6 | 99.7 | 31.3 | 68.4 | 34.6 | 13.1 | 21.5 |
| St. Helena | 759.8 | 684.8 | 426.0 | 258.8 | 22.2 | 16.7 | 5.5 | 52.8 | 21.1 | 31.7 |
| St. James | 477.9 | 275.9 | 91.9 | 184.0 | 159.1 | 84.1 | 75.0 | 42.9 | 18.4 | 24.5 |
| St. John the Baptist | 561.8 | 308.2 | 93.8 | 214.4 | 231.4 | 125.8 | 105.6 | 22.2 | 4.4 | 17.8 |
| St. Landry | 853.3 | 179.5 | 93.5 | 86.0 | 175.8 | 62.0 | 113.8 | 498.0 | 151.1 | 346.9 |
| St. Martin | 839.0 | 315.6 | 163.5 | 152.1 | 407.5 | 157.0 | 250.5 | 115.9 | 64.8 | 51.1 |
| St. Mary | 475.1 | 198.8 | 121.5 | 77.3 | 247.9 | 107.9 | 140.0 | 28.4 | 9.2 | 19.2 |
| St. Tammany | 963.8 | 663.8 | 359.4 | 304.4 | 217.9 | 77.8 | 140.1 | 82.1 | 38.3 | 43.8 |
| Tangipahoa | 775.5 | 535.7 | 326.8 | 208.9 | 133.6 | 59.5 | 74.1 | 106.2 | 41.3 | 64.9 |
| Tensas | 626.5 | .. | .. | .. | 181.4 | 59.3 | 122.1 | 445.1 | 119.2 | 325.9 |
| Terrebonne | 722.9 | 355.2 | 148.1 | 207.1 | 272.0 | 95.0 | 177.0 | 95.7 | 27.7 | 68.0 |
| Union | 1,352.2 | 879.3 | 474.1 | 405.2 | 175.2 | 66.3 | 108.9 | 297.7 | 127.8 | 169.9 |
| Vermilion [1] | ... | .. | ... | .. | ... | ... | .. | .. | .. | .. |
| Vernon | 1,320.3 | 978.2 | 609.8 | 368.4 | 159.7 | 91.1 | 68.6 | 182.4 | 83.1 | 99.3 |
| Washington | 854.6 | 692.2 | 429.1 | 263.1 | 91.7 | 28.6 | 63.1 | 70.7 | 22.2 | 48.5 |
| Webster | 594.2 | 440.8 | 246.0 | 194.8 | 65.5 | 39.1 | 26.4 | 87.9 | 32.7 | 55.2 |
| West Baton Rouge | 567.4 | 15.8 | ... | 15.8 | 143.6 | 101.8 | 41.8 | 408.0 | 92.7 | 315.3 |
| West Carroll | 115.5 | ... | ... | ... | 17.7 | 17.7 | ... | 97.8 | 40.4 | 57.4 |
| West Feliciana | 626.0 | 253.4 | 92.6 | 160.8 | 129.4 | 49.2 | 80.2 | 243.2 | 72.8 | 170.4 |
| Winn | 3,114.4 | 2,423.3 | 927.7 | 1,495.6 | 237.3 | 84.3 | 153.0 | 453.8 | 208.9 | 244.9 |
| All parishes | 49,759.2 | 29,433.1 | 14,140.2 | 15,292.9 | 8,203.9 | 3,450.9 | 4,753.0 | 12,122.2 | 3,971.4 | 8,150.8 |

[1] Cameron, Lafayette, and Vermilion included in Acadia.

Table 39. *Annual cut of growing stock and sawtimber by parish, Louisiana, 1963*

| Parish | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Soft-wood | Hard-wood | All species | Soft-wood | Hard-wood |
| | – *Million cubic feet* – | | | – *Million board feet* – | | |
| Acadia [1] | 2.2 | 0.5 | 1.7 | 4.3 | 1.9 | 2.4 |
| Allen | 8.8 | 5.8 | 3.0 | 29.6 | 22.6 | 7.0 |
| Ascension | 1.6 | .2 | 1.4 | 6.9 | 1.0 | 5.9 |
| Assumption | .8 | .1 | .7 | 2.1 | .4 | 1.7 |
| Avoyelles | 8.7 | .6 | 8.1 | 38.4 | 2.4 | 36.0 |
| Beauregard | 5.5 | 4.0 | 1.5 | 21.6 | 16.2 | 5.4 |
| Bienville | 16.4 | 11.9 | 4.5 | 55.1 | 46.1 | 9.0 |
| Bossier | 10.2 | 7.7 | 2.5 | 35.3 | 29.5 | 5.8 |
| Caddo | 3.2 | 1.6 | 1.6 | 7.6 | 4.5 | 3.1 |
| Calcasieu | 3.6 | 1.5 | 2.1 | 14.2 | 6.8 | 7.4 |
| Caldwell | 9.6 | 5.0 | 4.6 | 38.8 | 21.2 | 17.6 |
| Cameron [1] | ... | ... | ... | ... | ... | ... |
| Catahoula | 5.8 | 1.5 | 4.3 | 19.5 | 6.4 | 13.1 |
| Claiborne | 7.2 | 6.1 | 1.1 | 21.8 | 18.2 | 3.6 |
| Concordia | 12.0 | .3 | 11.7 | 52.3 | 2.7 | 49.6 |
| De Soto | 11.2 | 7.0 | 4.2 | 36.5 | 27.0 | 9.5 |
| East Baton Rouge | 3.2 | .6 | 2.6 | 13.0 | 3.2 | 9.8 |
| East Carroll | 1.5 | (2) | 1.5 | 5.1 | (2) | 5.1 |
| East Feliciana | 5.4 | 2.5 | 2.9 | 23.8 | 12.2 | 11.6 |
| Evangeline | 3.8 | 1.9 | 1.9 | 16.3 | 8.9 | 7.4 |
| Franklin | 2.5 | .1 | 2.4 | 10.0 | .3 | 9.7 |
| Grant | 12.3 | 10.1 | 2.2 | 56.9 | 48.3 | 8.6 |
| Iberia | .5 | (2) | .5 | 1.3 | (2) | 1.3 |
| Iberville | 4.8 | .3 | 4.5 | 22.1 | 1.6 | 20.5 |
| Jackson | 22.9 | 15.6 | 7.3 | 89.4 | 66.2 | 23.2 |
| Jefferson Davis | .9 | .5 | .4 | 3.2 | 2.2 | 1.0 |
| Lafayette [1] | ... | ... | ... | ... | ... | ... |
| Lafourche | 1.6 | .3 | 1.3 | 5.5 | 1.6 | 3.9 |
| La Salle | 10.0 | 7.8 | 2.2 | 40.8 | 33.6 | 7.2 |
| Lincoln | 7.0 | 5.3 | 1.7 | 19.6 | 15.3 | 4.3 |
| Livingston | 22.4 | 17.3 | 5.1 | 100.3 | 78.8 | 21.5 |
| Madison | 5.0 | ... | 5.0 | 22.6 | ... | 22.6 |
| Morehouse | 15.5 | 9.5 | 6.0 | 65.3 | 44.0 | 21.3 |
| Natchitoches | 9.6 | 6.0 | 3.6 | 35.0 | 22.1 | 12.9 |
| Ouachita | 7.4 | 4.3 | 3.1 | 26.9 | 16.1 | 10.8 |
| Pointe Coupee | 4.4 | .1 | 4.3 | 19.8 | .3 | 19.5 |
| Rapides | 11.1 | 7.2 | 3.9 | 39.4 | 26.2 | 13.2 |
| Red River | 4.9 | 3.9 | 1.0 | 20.4 | 17.4 | 3.0 |
| Richland | .8 | (2) | .8 | 3.1 | .1 | 3.0 |
| Sabine | 22.9 | 15.5 | 7.4 | 95.4 | 67.8 | 27.6 |
| St. Charles | .5 | (2) | .5 | .8 | .1 | .7 |
| St. Helena | 9.1 | 7.6 | 1.5 | 41.8 | 36.8 | 5.0 |
| St. James | 1.9 | .5 | 1.4 | 7.8 | 2.5 | 5.3 |
| St. John the Baptist | .8 | (2) | .8 | 3.0 | .3 | 2.7 |
| St. Landry | 4.4 | .1 | 4.3 | 15.5 | .6 | 14.9 |
| St. Martin | 3.7 | (2) | 3.7 | 13.3 | .2 | 13.1 |
| St. Mary | .4 | (2) | .4 | .6 | (2) | .6 |
| St. Tammany | 8.2 | 6.5 | 1.7 | 36.1 | 29.9 | 6.2 |
| Tangipahoa | 10.9 | 8.2 | 2.7 | 46.1 | 36.9 | 9.2 |
| Tensas | 4.6 | ... | 4.6 | 18.9 | ... | 18.9 |
| Terrebonne | 1.5 | .3 | 1.2 | 5.8 | 1.9 | 3.9 |
| Union | 26.5 | 20.4 | 6.1 | 103.6 | 82.2 | 21.4 |
| Vermilion [1] | ... | ... | ... | ... | ... | ... |
| Vernon | 5.4 | 3.8 | 1.6 | 23.1 | 16.9 | 6.2 |
| Washington | 11.7 | 10.4 | 1.3 | 44.1 | 40.4 | 3.7 |
| Webster | 7.8 | 5.2 | 2.6 | 28.8 | 19.4 | 9.4 |
| West Baton Rouge | 1.1 | (2) | 1.1 | 4.9 | (2) | 4.9 |
| West Carroll | .7 | (2) | .7 | 2.4 | ... | 2.4 |
| West Feliciana | 3.7 | .3 | 3.4 | 15.9 | 1.4 | 14.5 |
| Winn | 32.6 | 25.0 | 7.6 | 147.3 | 113.8 | 33.5 |
| All parishes | 422.7 | 250.9 | 171.8 | 1,679.0 | 1,056.4 | 622.6 |

[1] Cameron, Lafayette, and Vermilion included in Acadia.
[2] Negligible.

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