

**Louisiana's Forests  
and Forest Products Industries**

Working Paper # 11  
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December 19, 1995

## Introduction

The forested land mass of the United States is about 742 million acres about 1/3 of the total. About 66% or approximately 490 million acres are considered timberland capable of producing 20 cubic feet or more of timber per acre per year. Of the total timberland in the U.S. about 70% or 343 million acres are located east of the Mississippi River.

Since 1952 total timberland has decreased by about 4%, due primarily to the reclassification of public lands so that these lands are not longer available for commercial timber harvesting.

Hardwood forests make up about 40% of the unreserved eastern forests with oak hickory as the predominant hardwood forest type. Unreserved forests are those not withdrawn by administrative or statutory regulation. However, most of the 32 million acres of oak-pine forest are located in the south. Oak-gum-cypress forests comprise another 29 million acres and elm-ash-cottonwood bottomland forests account for another 14 million acres. Of the hardwood species the oaks (*Quercus sp.*), white ash (*Fraxinus americana*), gum (*Liquidambar sp.*) and cypress (*Taxodium sp.*) are counted as the most commercially important hardwood species. Eastern softwood forest cover about 96 million acres with about 61 million acres of the total found in the longleaf (*Pinus palustris*)-slash pine (*Pinus elliottii*) and loblolly (*Pinus taeda*)-slash pine (*Pinus elliottii*) forests of the South.

During the 1920's U.S. timber was being harvested at about twice the rate of growth. Improvements in forest management slowed this trend so that by the 1940's harvest rates and renewal rates were in balance. However, by the early 1950's harvesting had begun to outpace growth, beginning a national trend which continues to this day. In fact, for the entire South, the first decline of softwood inventories since 1952 occurred from 1987 - 1992 (Powell et al. 1992). This trend begs the questions, "What specifically happened in Louisiana?" and "What does the future hold for Louisiana's forest sectors?"

### Louisiana's Forests

Louisiana ranks 10th nationally in total production of sawn timber compared to a national production ranking of 8th in 1981 (Foster 1981). The state ranks 7th in total production in the eastern United States and 7th in the south (U.S. Census 1990). During Governor Buddy Roemer's administration, from 1988 - 1992, a short-lived economic development initiative found that 47 of Louisiana's 64 parishes reported forestry as their number one economic base.

According to Forest Resources of Louisiana, 1991, the state has a total of about 13,783,000 acres of timberland of a total land mass of 29,312,500 acres. Nineteen parishes in Louisiana have 61% to 80% of there area in forests, eight have greater than 80% forested areas and only nine have less than 20% forest coverage. Since 1936 when the first forest inventory was conducted, Louisiana has lost a total of 2,372,900 acres of forest land, primarily to agricultural uses. Since 1984 the state has lost 89,600 acres of timberland; largely to non-agricultural uses. The South Delta Region lost 166,500 acres in forest land between 1984 and 1992. However, the North Delta region,

a nine parish area in northeast Louisiana bordering the Mississippi River actual gained over 30,000 acres of new forest land.

Ownership

Nonindustrial private forest (NIPF) ownership is the dominant land ownership in Louisiana. Over 8.5 million acres are of the NIPF classification; a 4% decrease since 1984. The second largest group of forest land ownership is the forest industry which controls nearly 3.9 million acres, while combined public sector holdings account for another 1.3 million acres. Federal government holding occur in the western part of Louisiana with state owned lands occurring throughout the state in the form of wildlife management and public recreation areas (USDA-FS 1991).

Forests Types

Like much of the South, in Louisiana the predominant forest type is the oak-gum cypress. However, loblolly-shortleaf pine, located primarily in the western portions of the state, rank second in volume. The longleaf-slash pine forest type continues to decline with a net loss of over 63,000 acres since 1984. Oak-hickory forest acreage also declined by about 63,000 acres during the same period. While some sections of the state registered net losses of commercial forestland, others reported net gains which offset the losses. An example of this loss-gain occurred in the oak-pine forest mix where losses in the southeast were offset by gains in the northwest. Loblolly pine continues to be the dominant volume of softwood species in Louisiana with about 7,006.4 million ft<sup>3</sup> of growing inventory while ubiquitous sweetgum is the most common hardwood with 2,144.8 million ft<sup>3</sup> growing inventory.

Growth vs. Removals

As in other regions of the South, Louisiana's yellow-pine inventory continues to be overharvested. In addition to overcutting of pine, hickory and sweetgum are also under pressure from logging. Table 1 shows that in 1990 average annual removal of yellow-pine exceeded growth by 29.7%. Likewise hickory and sweetgum were overcut by 9.56% and 6.94%, respectively.

Softwood growth in Louisiana forests represent 63.1 % of total average annual growth in total timber volume. Hardwoods account for the remaining 36.9% average annual growth volume. Because of the large difference in total volume between softwood and hardwood inventories, the nearly thirty percent overcutting of yellow pine results in a net loss of timber inventories of just over 10.14%. However, removals of other softwoods, including cypress, and most hardwood species remain below the rate of regeneration.

Although, relative to the total volume of growing inventory, hardwood and other softwoods account for only 39.8% of the total timber volume in Louisiana, there is further room for utilization in these groups. Table 1 provides a breakdown by species of average annual growth and removals in Louisiana's forests based on 1990 data.

Table 1. Average Net Annual Growth and Removals by Species (Million Cu. Ft.)

Species	Growth	Removals	Difference	Difference
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Yellowpine	503.1	652.5	-149.4	-29.70%
Other softwoods	23.7	6.7	17.0	71.73%
----- Total softwoods	526.8	----- 659.2 -132.4 -25.13%		
Select white-red oaks	35.3	24.2	11.1	31.44%
Other white-red oaks	98.6	86.3	12.3	12.47%
Hickory	13.6	14.9	-1.3	-9.56%
Hard maple	0.4	0.1	0.3	75.00%
Sweetgum	59.1	63.2	-4.1	-6.94%
Ash-walnut-black cherry	14.4	9.5	4.9	34.03%
Yellow-poplar	3.7	1.6	2.1	56.76%
Other hardwoods	83.1	60.8	22.3	26.84%
Total Hardwoods	308.3	260.6	47.7	15.47%
Tot. Growth & Removals	835.1	919.8	-84.7	-10.14%

Source: Forest Statistics for Louisiana Parishes, 1990

### Trends in Louisiana Timber Prices

While timber production in Louisiana may have dropped in national ranking, the value of Louisiana timber has shown real growth during the last decade. As seen in Table 2, the mean value of softwood and hardwood smvtimber has experienced real prices increases. Likewise, Table 3 depicts the real growth in pulpwood prices for the same ten year period.

Table 2. Growth of Timber Prices in Real 1993 Dollars (\$/MBF)

YEAR	MEAN PINE SAWTIMBER PRICE 1993\$	PPI 1993	REAL PINE SAWTIMBER PRICE 1993\$	YEAR	MEAN HARDWOOD SAWTIMBER PRICE 1993\$	PPI 1993	REAL HARDWOOD SAWTIMBER PRICE 1993\$
1985	\$118.15	0.868	\$102.55	1985	\$54.59	0.8680	\$47.38
1986	\$112.30	0.842	\$94.64	1986	\$52.76	0.8427	\$44.46
1987	\$147.33	0.864	\$127.38	1987	\$55.48	0.8646	\$47.97
1988	\$160.95	0.899	\$144.71	1988	\$67.55	0.8991	\$60.73
1989	\$165.05	0.943	\$155.75	1989	\$67.09	0.9437	\$63.31
1990	\$183.45	0.978	\$179.44	1990	\$78.01	0.9781	\$76.31
1991	\$188.80	0.979	\$184.99	1991	\$73.94	0.9798	\$72.45
1992	\$222.55	0.985	\$219.37	1992	\$108.58	0.9857	\$107.03
1993	\$273.34	1.000	\$273.34	1993	\$155.25	1.0000	\$155.25
1994	\$330.53	1.001	\$331.08	1994	\$177.52	1.0017	\$177.81

Table 3. Growth of Pulpwood Prices in Real 1993 Dollars (Word)

YEAR	MEAN SOFTWOOD PULPWOOD PRICE 1993\$	PPI 1993	REAL SOFTWOOD PULPWOOD PRICE 1993\$	YEAR	MEAN HARDWOOD PULPWOOD PRICE 1993\$	PPI 1993	REAL HARDWOOD PULPWOOD PRICE 1993\$
1985	\$12.09	0.8680	\$10.49	1985	\$4.39	0.8680	\$3.81
1986	\$12.02	0.8427	\$10.13	1986	\$4.66	0.8427	\$3.93
1987	\$13.83	0.8646	\$11.95	1987	\$5.36	0.8646	\$4.64
1988	\$15.95	0.8991	\$14.34	1988	\$5.19	0.8991	\$4.66
1989	\$17.62	0.9437	\$16.63	1989	\$5.25	0.9437	\$4.95
1990	\$18.11	0.9781	\$17.71	1990	\$6.03	0.9781	\$5.90
1991	\$19.26	0.9798	\$18.87	1991	\$7.46	0.9798	\$7.31
1992	\$23.50	0.9857	\$23.16	1992	\$7.84	0.9857	\$7.72
1993	\$25.07	1.0000	\$25.07	1993	\$10.47	1.0000	\$10.47
1994	\$23.51	1.0017	\$23.55	1994	\$10.22	1.0017	\$10.23

### Softwood Pulpwood/ Hardwood Pulpwood

Table 4 indicates that with increasing timber prices, timber severance taxes paid to the state and local governments have also increased. In real 1993 U.S. dollars severance tax collections have increased 213% during the 1985 - 1994 time period.

In Louisiana, severance taxes collected are divided between state and local governing bodies, with local government receiving 75% and state level agencies receiving 25% of the total taxes collected. Local government agencies further divide taxes received between police jury/parish councils and school boards (Lejuene 1995).

Table 4. Louisiana Timber Severance Tax Collections in Nominal and Real US Dollars

<b>Year</b>	<b>Total taxes collected</b>	<b>PPI 1993\$</b>	<b>Real Tax \$ in 1993 \$</b>
1985	\$7,508,200.68	0.867956266	\$6,516,789.82
1986	\$7,727,187.91	0.842724979	\$6,511,894.27
1987	\$7,113,589.53	0.864592094	\$6,150,353.27
1988	\$7,384,293.51	0.899074853	\$6,639,032.60
1989	\$7,837,425.84	0.943650126	\$7,395,787.88
1990	\$8,889,126.28	0.978132885	\$8,694,746.73
1991	\$9,472,228.21	0.979814971	\$9,281,031.00
1992	\$10,654,246.88	0.985702271	\$10,501,915.34
1993	\$12,280,915.37	1.000000000	\$12,280,915.37
1994	\$13,857,716.00	1.001682086	\$13,881,025.87

Source: Louisiana Timber and Pulpwood Production 1985 - 1994, Louisiana Department of Agriculture and Forestry

### **Louisiana's Forest Industries**

#### Primary

In a recent study (Vlosky 1995), the primary solid wood products industry in Louisiana was found to consist of about 81 companies. The primary industry is defined as those industry sectors in which the principle raw material remains basically unprocessed and/or is used as the principle raw material input for other products or value adding processes. The majority of these companies (approximately 45%) produce softwood products. Another 30% produce hardwood products and just over 24% produce products from both hardwoods and softwoods.

The importance of this forest industry sector to Louisiana's economic cannot be overstated. The study found that nearly 50% of the primary forest products companies in Louisiana have sales of \$10 million or more in 1993. However, 47% of total sales were made to companies outside Louisiana with an additional 12% of sales made to export markets.

Louisiana's primary solid wood forest products industry is comprised of relatively large companies. Just over 36% of those companies participating in the survey reported 50 or more employees and over 18% reported more than 200 employees. Interestingly, the 81 participating primary industry companies hiring intentions, when extrapolated to the statewide industry, indicate this sector will hire 1940 new employees in Louisiana by 1999. The research did not indicate how many of these new hires would be

replacement workers and how many would be new jobs created.

### Secondary Forest Industries

The secondary forest products industry is defined as that forest products sector which utilizes the output from the primary forest products industry as well as output from other industries to create further value added forest products. The secondary forest products industry is comprised of nearly 750 primarily small companies (Chance and Chang 1992). Over 75% of these companies have 10 or fewer employees (Vlosky et al. 1994). This segment of the industry indicated it will add about 1,941 new employees by 1999. With over 9 times as many companies represented, the number of secondary industry new employees is very near to the number of new jobs projected by the primary forest industry.

The secondary forest products industry is estimated to have just over \$485 million in annual sales. However, over 62% of Louisiana's secondary forest products companies report \$250,000 or less in annual sales. In fact, 50% of the companies surveyed indicated sales of no more than \$150,000. Only 13 companies participating in a 1994 survey indicated sales in excess of \$1 million annually (Vlosky, et al. 1994).

In light of the fragmented nature of the secondary forest products industry in Louisiana and the small size of most of the state's secondary forest products companies, one should not be too surprised to find that Louisiana ranks last, relative to the other Southern states, in value added with about \$.11 of value added for every one dollar of lumber produced in the state (Chance and Chang 1992). However, the furniture industry (Standard Industry Code 25) was ranked 12th in growth potential of all industry segments and represents an area where Louisiana may find opportunity for further utilization of its hardwood timber resources (ARS 1990).

The secondary forest products sector in Louisiana has significant potential for industrial growth, particularly in supporting rural economic development. The industry is relatively small in number of employees per company and in relative value of products produced with most companies are located in rural areas surrounding major metropolitan areas (Chance and Chang 1992). Because many companies are located in rural areas the employment they generate is important to the small communities in which they exist. In addition, because many companies are so small, the loss of one or more companies in a given area does not have the severe economic impact that the loss of a single large employer might have. Further, these companies are deeply rooted in the communities in which they are based and are less likely to be lured away to other states (ARS 1990).

Louisiana's secondary forest products industry consists of a large number of companies. Future development of this industry sector may well be able to utilize the existing industry base and not necessarily rely heavily on recruitment of companies to the state. Such recruitment efforts usually rely on the awarding of favorable tax status, training incentives and other packages designed to bring new business into the state, often with significant costs.

### The Future

Louisiana's primary and secondary forest products industries will likely continue to be an important source of employment and income for the state. A recent study found

numerous states are beginning to focus on the forest products industry and its economic development potential (Vlosky and Chance 1995). Typically the focus of these states' development efforts are aimed at existing forest products companies. Forest products companies located in rural areas provide jobs with wages competitive with other industries and in places where jobs are scarce forest products jobs are often provide alternatives to forced migration of commuting (Skog 1991).

Pine planting on private lands is expected to continue in the south (USDA 1995). With increases in paper and pulp recovery and recycling, expected to exceed a recovery rate of 40% by the year 2000, the growing timber resources should last longer. Increasing the rate of recycled materials utilization will remain a major focus of research for the pulp and paper industry (USDA 1995). However, as the availability of national forest produced timber declines, raw material prices are expected to increase for the remainder of the nineties (USDA 1995).

The United States has 7.4% of the world's forest land. However, this country is second only to Canada as a forest products exporter and remains the world's leading importer of forest products. The United States accounts for 40% of the world's expenditure on forest management and 20% on forest research (USDA 1995).

## **Conclusion**

Louisiana is currently realizing a net removal in total forest inventory. However, hardwoods available in Louisiana are significantly under utilized with only two species, both utility woods, experiencing overcutting. The remainder of Louisiana's hardwood inventory, including the higher grade woods, represent a huge potential in today's environment of higher timber prices.

The potential for jobs creation in the existing primary and secondary forest products industries is significant. Revenues generated in the form of severance taxes play an important role in financing local and state governing functions. Improvements and increases in forest regeneration and increased recycling research will perpetuate Louisiana's forest resources into the future. The primary and secondary forest products industries will continue to be an important part of the states economy.



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