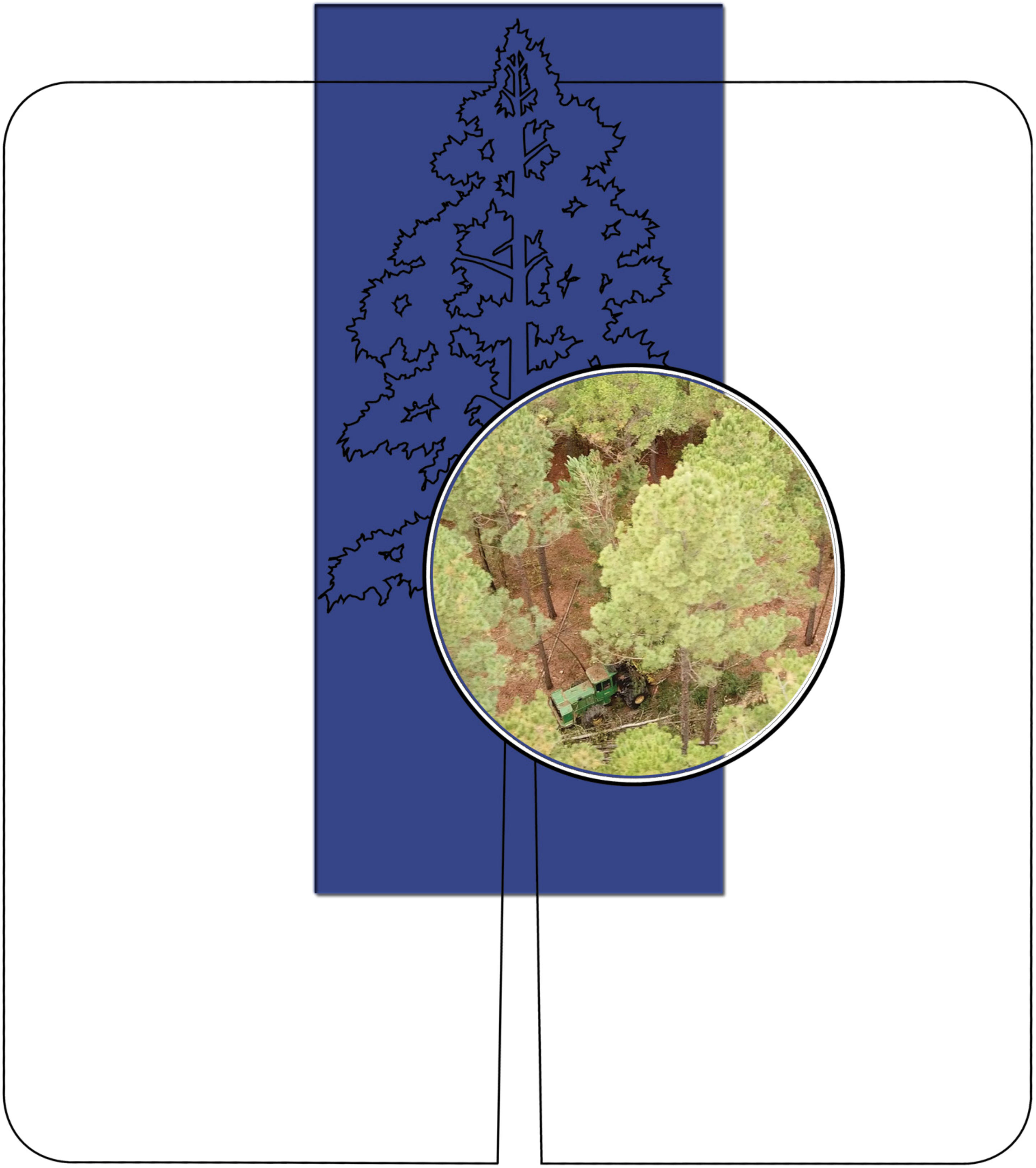
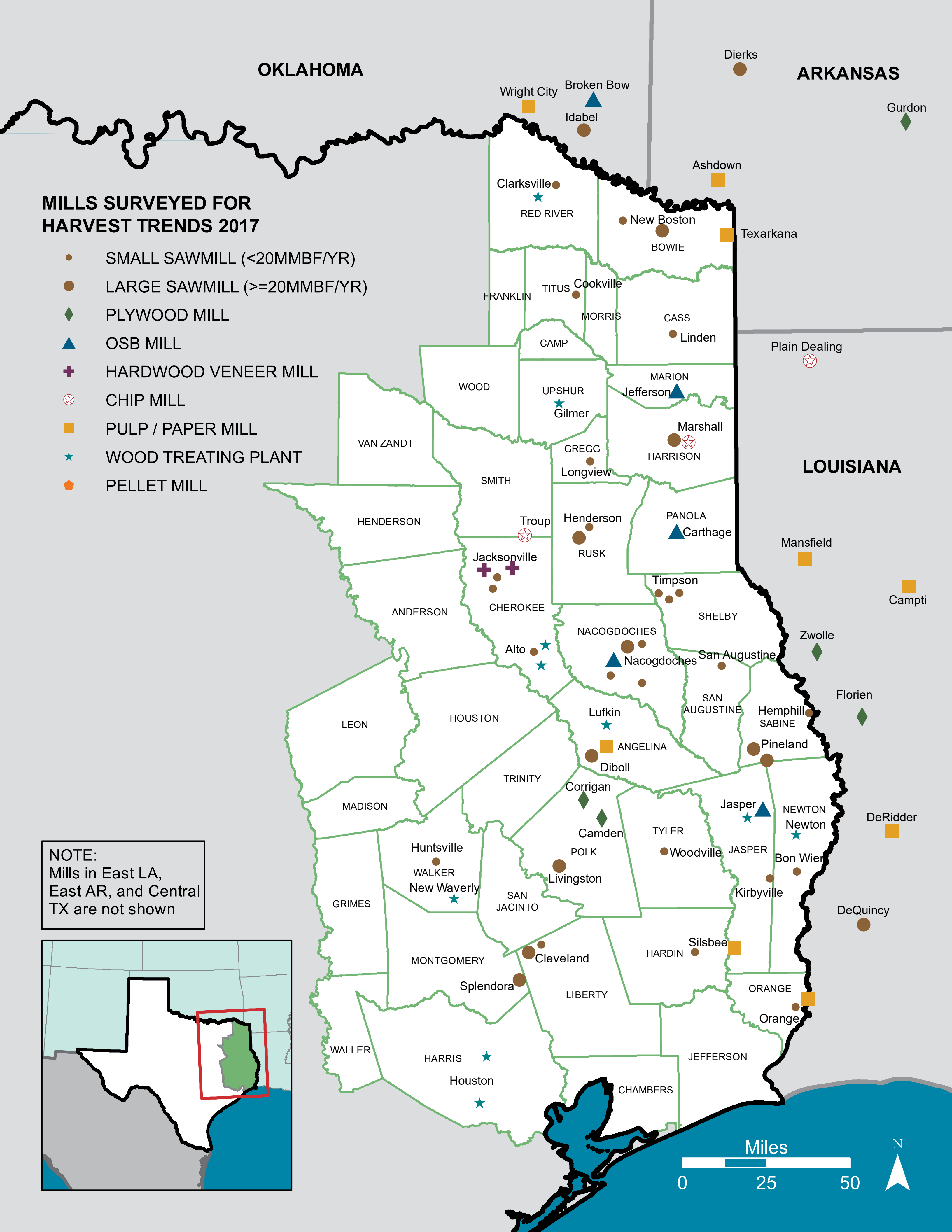


Harvest Trends 2017

January 2019

Texas A&M Forest Service



MILLS SURVEYED FOR HARVEST TRENDS 2017
SMALL SAWMILL (<20MMBF/YR)
LARGE SAWMILL (>=20MMBF/YR)
PLYWOOD MILL
OSB MILL
HARDWOOD VENEER MILL
CHIP MILL
PULP / PAPER MILL
WOOD TREATING PLANT
PELLET MILL
NOTE:
Mills in East LA, East AR, and Central TX are not shown
OKLAHOMA
ARKANSAS
LOUISIANA
Wright City
Broken Bow
Idabel
Dierks
Gurdon
Ashdown
Texarkana
Clarksville
RED RIVER
New Boston
BOWIE
FRANKLIN
TITUS
Cookville
MORRIS
CASS
Linden
CAMP
Plain Dealing
WOOD
UPSHUR
Gilmer
MARION
Jefferson
VAN ZANDT
Marshall
HARRISON
GREGG
Longview
SMITH
HENDERSON
Troup
Henderson
RUSK
PANOLA
Carthage
Mansfield
Jacksonville
CHEROKEE
ANDERSON
Timpson
SHELBY
Campti
NACOGDOCHES
Alto
Nacogdoches
San Augustine
Zwolle
SAN AUGUSTINE
Hemphill
SABINE
Florien
LEON
HOUSTON
Lufkin
ANGELINA
Diboll
Pineland
TRINITY
Corrigan
MADISON
Jasper
NEWTON
Newton
DeRidder
Camden
TYLER
Huntsville
WALKER
POLK
Woodville
JASPER
Bon Wier
Livingston
New Waverly
SAN JACINTO
Kirbyville
GRIMES
DeQuincy
MONTGOMERY
Cleveland
HARDIN
Silsbee
Splendora
LIBERTY
ORANGE
Orange
WALLER
HARRIS
Houston
JEFFERSON
CHAMBERS
Miles
0
25
50
N

Harvest Trends 2017

Aaron Stottlemyer, Ph.D.
Edward Dougal, Ph.D.
Nana Tian, Ph.D.
Rebekah Zehnder, M.En.
Eric Taylor, Ph.D.
Burl Carraway, MFR
Forest Resource Development and Forest Analytics
College Station, Texas

TEXAS A&M FOREST SERVICE

January 2019

HIGHLIGHTS

Harvest Trends 2017

TIMBER REMOVAL

♦ Total growing stock timber removal was 481.5 million cubic feet, a decrease of 8.7 percent from last year.

- Pine removal was 415.1 million cubic feet, down 7.3 percent from last year.
- Hardwood removal was down 16.4 percent to 66.4 million cubic feet.

♦ Harvest of timber for industrial use in the production of wood products was 498.8 million cubic feet.

- 432.3 million cubic feet of pine were harvested for industrial consumption.
- 66.5 million cubic feet of hardwood were harvested for industrial consumption.

♦ Stumpage value decreased 18.3 percent to $244.8 million, and delivered value was down 13.5 percent to $597.6 million.

♦ Harvest of sawlogs was down 7.4 percent from last year to 1.1 billion board feet.

♦ Harvest for veneer and structural panel production decreased 0.2 percent from last year to 130.8 million cubic feet.

♦ Pulpwood and pellet roundwood harvest was 2.3 million cords, a decrease of 15.1 percent from last year.

♦ Total timber volume imported from other states was 90.7 million cubic feet while the total volume exported was 60.9 million cubic feet. The net import was 29.8 million cubic feet.

PRIMARY FOREST PRODUCTS

♦ Production of primary wood products included:

- 1.5 billion board feet of lumber, an increase of 2.3 percent from last year.
- 2.4 billion square feet (3/8-inch basis) of structural panel products, a decrease of 10.5 percent.
- 2.4 million tons of pulp and paperboard, up 2.9 percent from last year.

MILL AND LOGGING RESIDUES

♦ Total production of mill residue was 5.5 million green tons, a decrease of 1.9 percent.

♦ Total production of logging residue was 2.5 million green tons, down 9.6 percent from last year.

Harvest Trends 2017

INTRODUCTION

Forests are vital economic and environmental assets in East Texas. The wood-based industry employed more than 66,000 people in 2015.[1] The wood-based sector ranked fifth among manufacturing sector employers in the state in 2015.[2] In 28 of 43 East Texas counties, the wood-based sector was among the top five manufacturing employers in 2015.[1] The value of harvested timber ranked ninth in 2015 among Texas' top agricultural commodities, behind cattle and calves, broilers, milk, miscellaneous crops, cotton lint, corn, chicken eggs, and sorghum grain.[3]

To gather the most current information on the status of this valuable resource, Texas A&M Forest Service conducts an annual survey of the state's primary forest products industries. This 52nd annual report provides information on the volume and value of timber harvested in East Texas during 2017 and reports the production of primary wood products, logging residue, and mill residue. Data on forest management activities are also presented. Information for this report comes from a survey of 64 mills in Texas and 17 mills in surrounding states. Texas A&M Forest Service appreciates the cooperation of these companies, without which this report would not be possible.

2017 ECONOMIC CONDITIONS

The United States (U.S.) economy remained steady in 2017. The real Gross Domestic Product (GDP) increased 2.3 percent, which was higher than the 2016 annual increase of 1.6 percent.[4] In 2017, the business sector added a real gross value of $13.1 trillion to the U.S. GDP. The total real GDP amounted to about $17.1 trillion in 2017. The economy was on a path of recovery with a drop in the rate of unemployment to 4.4 percent in 2017, from 4.9 percent in 2016.[5] Given the considerable improvement in realized and expected labor market conditions and inflation, the Federal Reserve lowered the target range for the federal funds rate to 1/4-1/2 percent in December 2017. The target range was 1/2-3/4 percent in 2016.[6]

The Consumer Price Index (CPI), the most closely watched indicator for U.S. inflation, increased 2.5 percent in 2017, a larger increase than the 2.3 percent rise in 2016. This was the largest 12-month increase since March 2012. The energy index increased 6.9 percent, with all of its major component indexes rising during 2017.[7] The gasoline index increased 10.7 percent in 2017 and the food index rose 1.6 percent over the past year.

The U.S. housing market continued to improve at a modest rate in 2017. Compared to 2016, housing starts rose 2.4 percent to 1,202,100 units in 2017, the highest annual total since 2007.[8] Single-family housing starts increased 13.0 percent to 848,300 units. The share of single-family starts was 70.6 percent, higher than the 66.6 percent the previous year. Multi-family housing starts declined 10.1 percent. National residential housing permits, the best indicator of future housing starts activity, rose 4.7 percent to 1,263,400 units in 2017. A large share of this gain (64.7 percent) was contributed by single-family permits. Multi-family building permits decreased 2.5 percent to 410,300 units in 2017.[8]

The housing affordability index was 157.9 in 2017, meaning that a family earning the median family income has 157.9 percent of the income necessary to qualify for a conventional loan covering 80 percent of a median priced existing single-family house, assuming a 20 percent down payment.[9] The median sale price of existing homes averaged $248,800 in 2017, up 11.3 percent from 2016.[9] Total existing home sales in 2017 were 5.51 million, up 1.1 percent over 2016.[9]

The average annual 30-year fixed mortgage rate was 3.99 percent in 2017, which was higher than the 2016 average annual rate of 3.65 percent. The national monthly average 30-year fixed mortgage rate ranged from 3.81 percent in September to 4.20 percent in March.[10]

The Texas economy continued to improve in 2017. Real GDP (GDP-State) in Texas grew 2.7 percent in 2017 compared to 0.4 percent in 2016.[11] The Texas economy added 306,900 seasonally adjusted nonfarm jobs over the year with additions in major sectors, including construction, mining and logging, professional and business, leisure and hospitality, trade, transportation and utilities, education and health services, financial activities, information, and government.[12] The unemployment rate in Texas dropped to 4.3 percent in 2017, which was 0.2 percent lower than in 2016.[5]

Compared to 2016, the total number of residential building permits in Texas decreased 5.2 percent in 2017 to 157,227 units. Building permits for single-family housing increased 9.6 percent to 116,766. Multi-family building permits decreased 1.7 percent to 58,346 units in 2017.[13]

Given a 13.0 percent rise in U.S. housing starts, the domestic softwood lumber market in the U.S. posted an up-

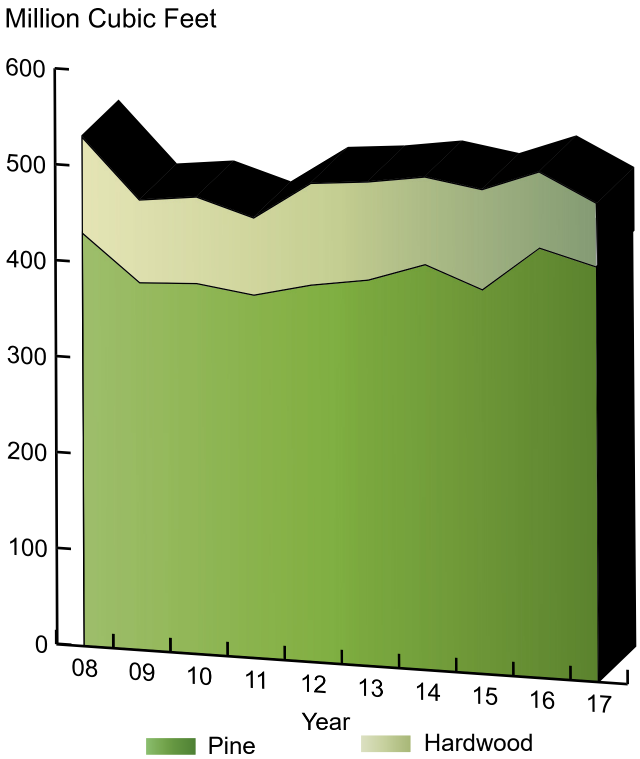


Figure 1. Total Timber Removal, 2008-2017

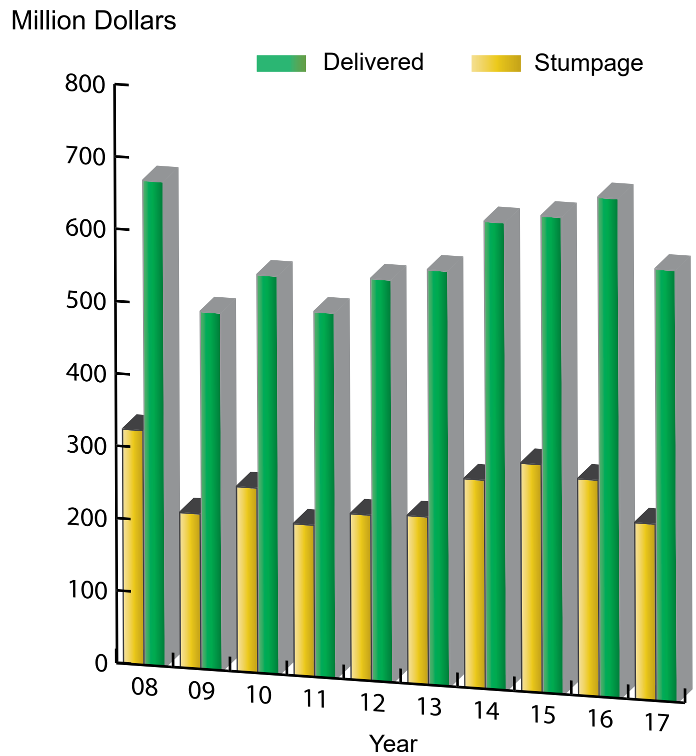


Figure 2. Value of Timber Harvest, 2008-2017

ward trend in 2017. U.S. softwood lumber production posted a seventh consecutive annual gain in 2017, up 4.2 percent to 33.9 billion board feet (bbf), but still about 15.8 percent less than the production in 2005. Lumber production in the U.S. South accounted for 53.4 percent, or 13.4 bbf of the U.S. total, a 19.4 percent decrease from 2016.[14]

Structural panel production in the U.S. was 17.7 billion square feet (bsf) (3/8-inch basis)[14], including 6.9 bsf of plywood and 10.9 bsf of oriented strand board (OSB). This was about a 21.9 percent decrease from a year ago. Combined southern OSB and plywood production was at 17.4 bsf in 2017, which was up 5.5 percent from 2016.

U.S. lumber prices rebounded in 2017. The average annual Random Lengths framing lumber composite price in 2017 was $413 per thousand board feet (mbf), a 19.4 percent increase from 2016.[14] Similarly, the average annual Random Lengths structural panel composite price increased 18.1 percent to $437 per thousand square feet (msf) in 2017.[14] While U.S. total exports of softwood lumber dropped slightly to 1.2 bbf, U.S. imports of softwood lumber from Canada decreased 20.8 percent to 11.8 bbf in 2017. Since the expiration of the 2006 U.S.-Canada Softwood Lumber Agreement in October 2015, the everlasting softwood lumber trade debate between the U.S. and Canada has been active once again. In response to surging Canadian softwood lumber shipments to the U.S., the U.S. recently announced company-specific varying rates of countervailing duties and antidumping tariffs against Canadian lumber flows to the U.S.

U.S. paper and paperboard production posted a slight decline in 2017, dropping 0.3 percent to 78.1 million short tons. It was 5.9 percent lower than in 2010, and down 12.6 percent from 2005. A lower level of paper production was considered the primary reason behind this decline.[15]

STUMPAGE PRICES

Across the U.S. South, average annual prices for pine sawtimber and chip-n-saw in 2017 decreased 4.6 percent and 2.2 percent, respectively. Average annual pulpwood prices decreased 7.2 percent.[16] Likewise, average south-wide hardwood sawtimber prices were down 6.1 percent in 2017. Hardwood pulpwood prices experienced the greatest drop (14.6 percent) over the past year. Along with usual demand and supply factors, weather, competition, mill inventories, tract size and location, and tree size and quality are the major causes of stumpage price variation in the U.S. South.[17]

According to the Texas Timber Price Trends bimonthly timber market report, the average annual pine sawtimber price in Texas dropped 7.3 percent to $197.8 per mbf, Doyle scale, in 2017, from the previous year's average annual price of $213.3 per mbf. The average annual mixed hardwood sawtimber price decreased 22.6 percent from a year earlier to $287.2 per mbf. Pine pulpwood price decreased 13.5 percent to $21.3 per cord. Mixed hardwood pulpwood price dropped

11.7 percent to $26.3 per cord. Table 6 provides historic data on stumpage prices.

TIMBER REMOVALS

Growing Stock Removals

Total removals of growing stock in East Texas, including pine and hardwood, decreased 8.7 percent from the previous year (Figure 1). The total volume of growing stock removed was 481.5 million cubic feet, compared to 527.3 million cubic feet a year earlier. Included in the total growing stock removals are timber harvested for industrial use and an estimate of logging residue. Growing stock removals are based on the latest East Texas Harvest and Utilization Study by the USDA Forest Service.

By species group, growing stock removals were comprised of 415.1 million cubic feet of pine and 66.4 million cubic feet of hardwood. Pine removals were down 7.3 percent and hardwood removals were down 16.4 percent from a year earlier. Figure 3 and Table 14 illustrate the harvest volume by species group and year.

Industrial Roundwood Harvest

Industrial roundwood harvest in Texas, the portion of the total removals that was subsequently utilized in the manufacture of wood products, totaled 432.3 and 66.5 million cubic feet for pine and hardwood, respectively. Pine industrial roundwood harvest was down 7.5 percent, and hardwood roundwood harvest was down 16.2 percent from a year earlier. The combined harvest decreased 8.7 percent to 498.8 million cubic feet. Ninety-three percent of the industrial roundwood was from growing stock and 7 percent of the industrial roundwood was from non-growing stock (Table 13).

Table 1 lists the harvest of pine and hardwood by county. The top five timber producing counties were Polk, Newton, Jasper, Harrison, and Angelina.

Figure 4 on the next page illustrates the intensity of timber harvest expressed in cubic feet of harvest per acre of timberland. Camp, Bowie, Harrison, Angelina, and San Augustine Counties had the five highest relative timber harvesting intensities.

Value of Timber Harvest

Stumpage value of East Texas timber harvest decreased 18.3 percent to $244.8 million (Figure 2). Lower stumpage prices produced the decrease in stumpage value. The delivered value was down 13.5 percent to $597.6 million. Pine timber accounted for 86 percent of the total stumpage value. Figure 3 depicts the value of harvest by product. Table 7 lists stumpage and delivered value by product category.

Sawlogs

Harvest of sawlogs for lumber production decreased 7.4 percent to 1.1 billion board feet, which accounted for 36.0 percent of the total timber harvest. The pine sawlog cut totaled 1.0 billion board feet, down 6.0 percent. Hardwood sawlog harvest was down 23.0 percent to 73.1 million board feet. Newton, Polk, Angelina, Cherokee, and Jasper Counties were the top five producers of sawlogs. Table 2 lists sawlog harvest by county.

Veneer and Panel Roundwood

Harvest of timber for the production of structural panels, including plywood, OSB, and hardwood veneer, was 130.8 million cubic feet, a 0.2 percent decrease from a year earlier. The timber harvest for structural panels was 26.2 percent of the total timber harvest. Almost all of the veneer and panel roundwood was pine. Harrison, Polk, Angelina, Nacogdoches, and Panola Counties were the top five producers of veneer and panel roundwood. Table 3 lists the harvest of veneer and panel roundwood by county.

Pulpwood and Pellet Roundwood

Harvest of timber for pulp and paper products and pellets was 2.3 million cords, a decrease of 15.1 percent from a year earlier. Pulpwood and pellet roundwood harvest accounted for 37.0 percent of the total timber harvest. Pine made up 70 percent of the total production. Jasper, Cass, Hardin, Newton, and Tyler Counties were the top five producers. Table 4 lists the pulpwood and pellet roundwood harvest by county.

Other Roundwood

Other roundwood harvest included posts, poles, and pilings that totaled 3.9 million cubic feet. Table 5 lists harvest of these products by county.

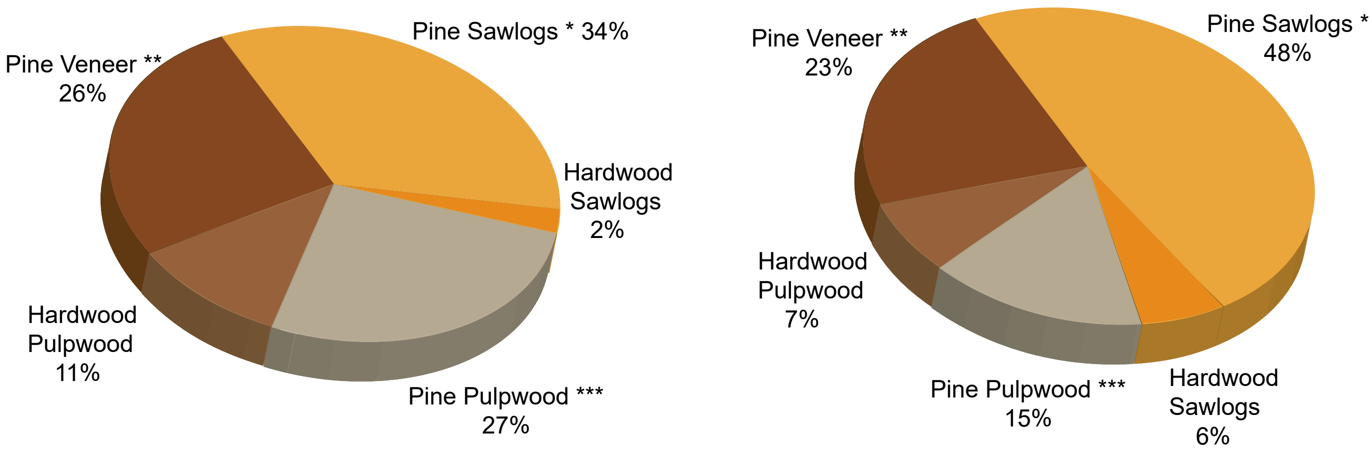
Import-Export Trends

Texas imported more timber from surrounding states than exported to surrounding states. Exports of roundwood from Texas were 60.9 million cubic feet, while imports totaled 90.7 million cubic feet. The net import of roundwood was 29.8 million cubic feet. Table 8 details the interstate movement of roundwood.

Texas mills utilized 87.8 percent of the timber harvested in the state. The remainder was processed mainly by mills in Arkansas, Louisiana, and Oklahoma. Details are listed in Table 8.

Harvest Volume (498.8 Million Cubic Feet)

Stumpage Value ** ($244.8 Million)**



* Includes chip-n-saw
** Includes panel roundwood (pulpwood sized material chipped for panel production)
*** Includes pellet roundwood, posts, poles, and pilings
**** Products with stumpage value less than 1% of total are not included

Figure 3. Volume and Value of Timber Harvest, 2017

Cubic Feet Harvested Per Acre of Timberland

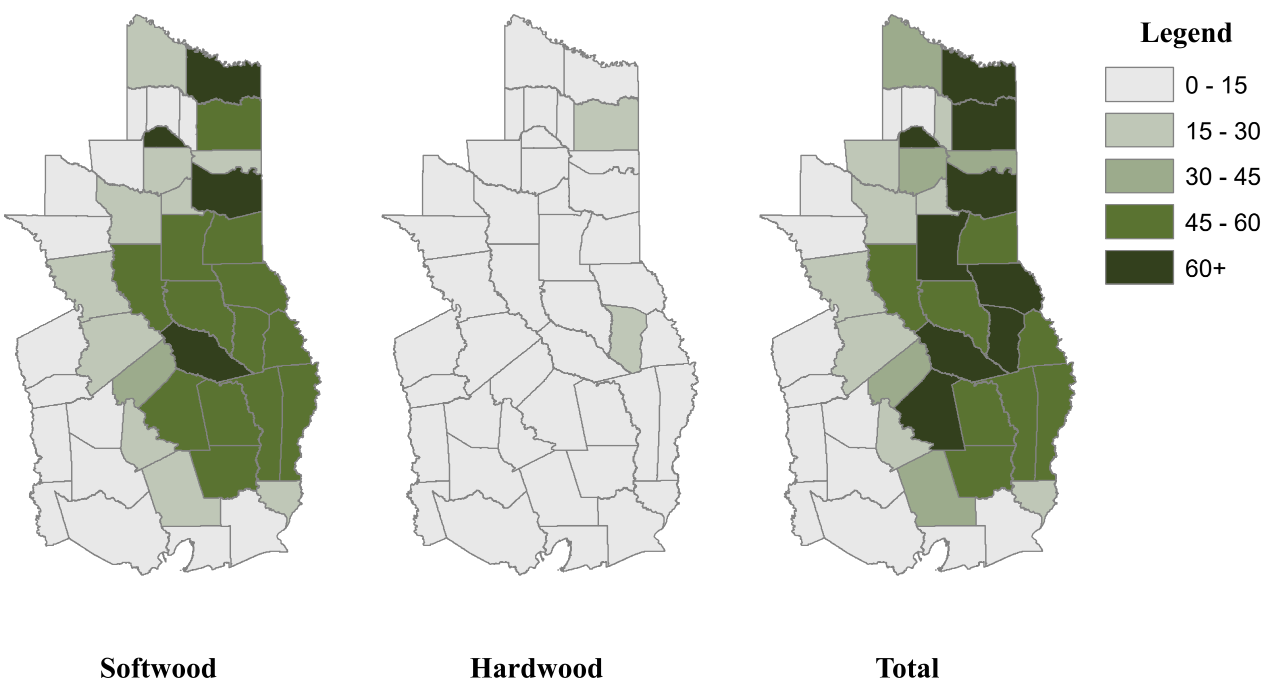


Figure 4. Intensity of Timber Harvest by County, 2017

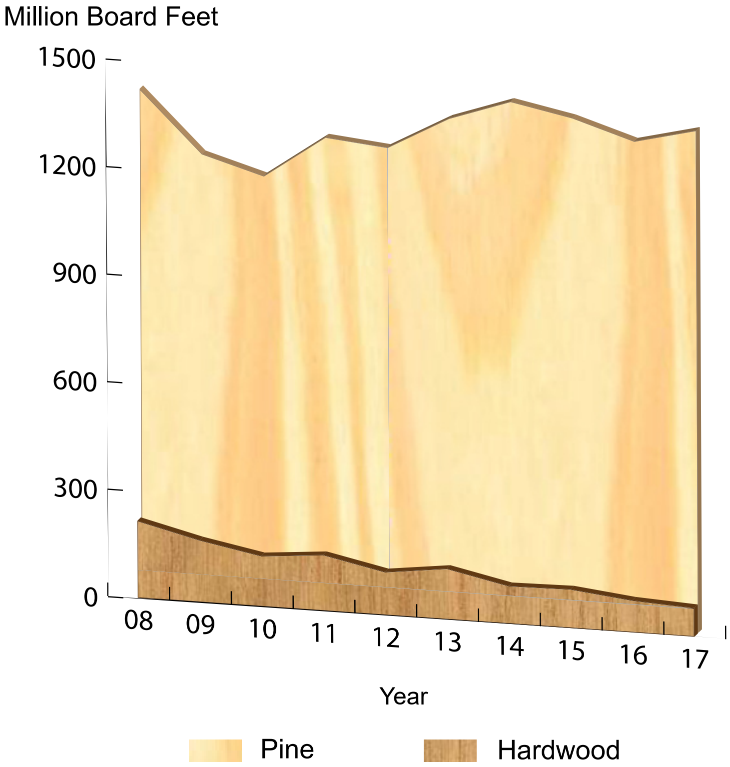


Figure 5. Texas Lumber Production, 2008-2017

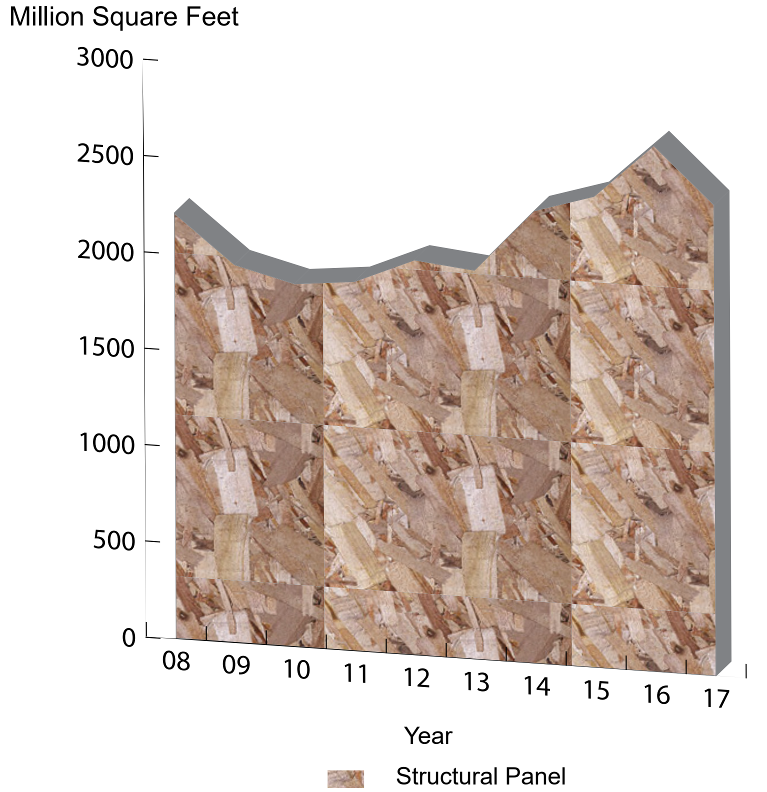


Figure 6. Texas Structural Panel Production, 2008-2017

PRODUCTION OF FOREST PRODUCTS

Lumber

Texas sawmills produced 1.5 billion board feet of lumber, an increase of 2.3 percent from a year earlier. Production of pine lumber was 1.4 billion board feet, up 3.1 percent from last year, and hardwood lumber production decreased 10.1 percent to 79.1 million board feet. Table 9 and Figure 5 present a 10-year trend in lumber production.

Structural Panel Products

Production of structural panels, including plywood and OSB, was down 10.5 percent to 2.4 billion square feet (3/8-inch basis). Table 9 and Figure 6 show the recent trend in structural panel output.

Paper Products

Production of paperboard, fiberboard, and market pulp totaled 2.4 million tons, up 2.9 percent from a year earlier. There has not been any major paper production in Texas since 2003. Table 10 and Figure 7 summarize recent trends in paper product output.

Treated Wood Products

The total volume of wood treated by Texas wood treaters was 40.3 million cubic feet, a decrease of 4.5 percent from a year earlier. Among major treated products, lumber accounted for 61.1 percent of the total volume, ties 14.0 percent, and poles and pilings 9.2 percent. Table 11 contains treated volume by product for the past two years.

Primary Mill Residue

Total mill residue, including chips, sawdust, shavings, and bark in primary mills such as sawmills, panel mills, and chip mills was 5.5 million tons (Table 12). Eighty-nine percent of the mill residue was from pine species and 11.0 percent was from hardwood species. Chips accounted for 48.9 percent of mill residue, followed by bark (31.7 percent), sawdust (13.3 percent), and shavings (6.1 percent) (Figure 8).

Logging Residue

Logging residue includes stumps, tops, limbs, and unutilized cull trees. Total logging residue produced was 2.5 million green tons. For this year, 24.2 percent of the logging residue was from growing stock, and 75.8 percent was from non-growing stock trees. Seventy-six percent of the residue was from pine and 24 percent was from hardwood (Table 13, Figure 9).

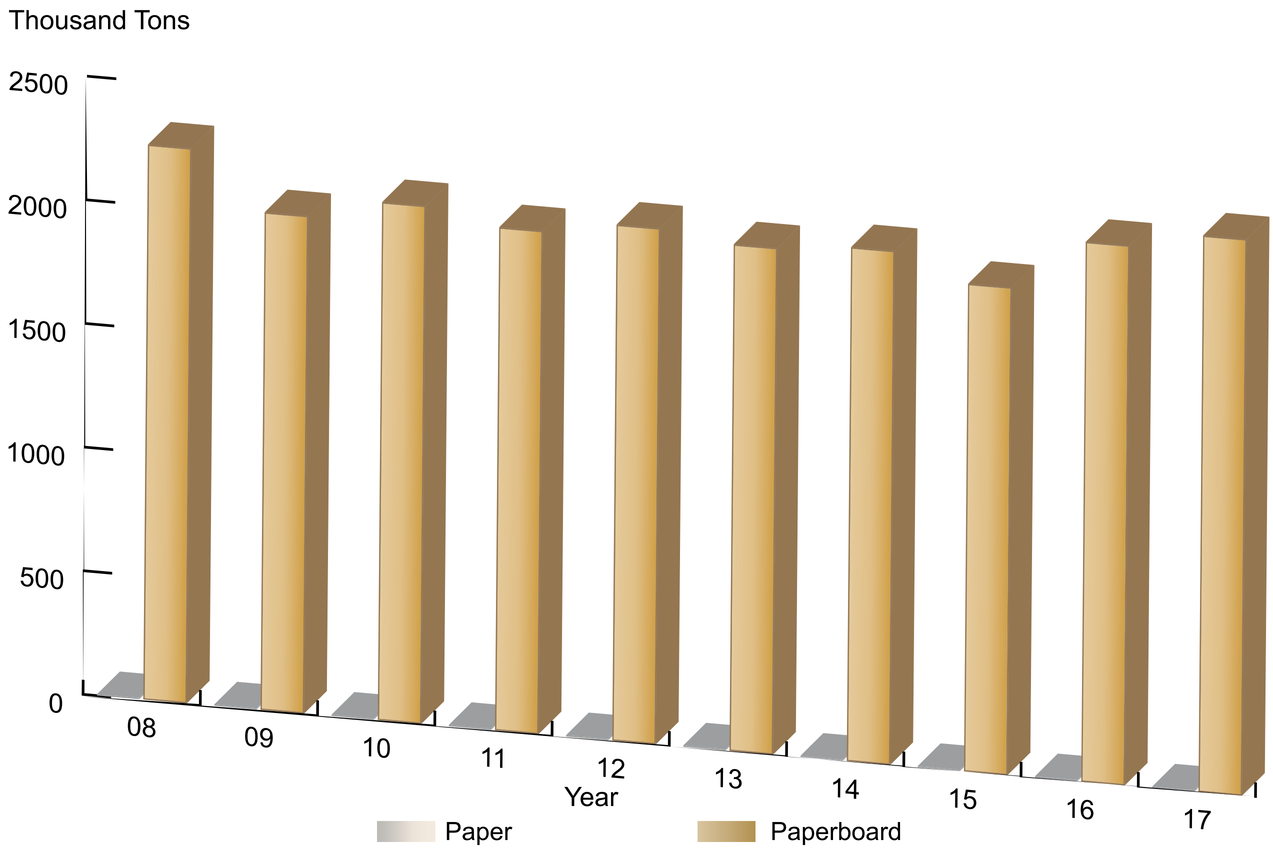


Figure 7. Texas Paper and Paperboard Production, 2008-2017

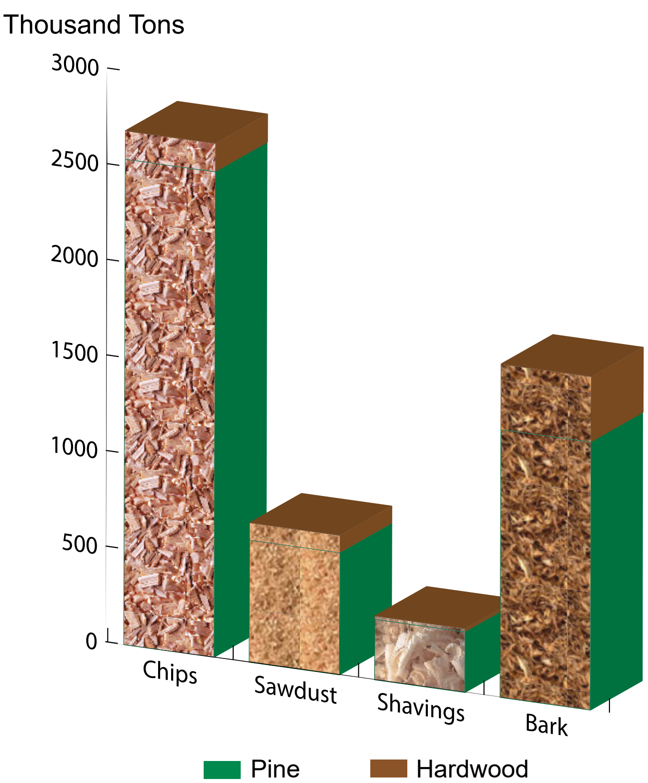


Figure 8. Texas Primary Mill Residue, 2017

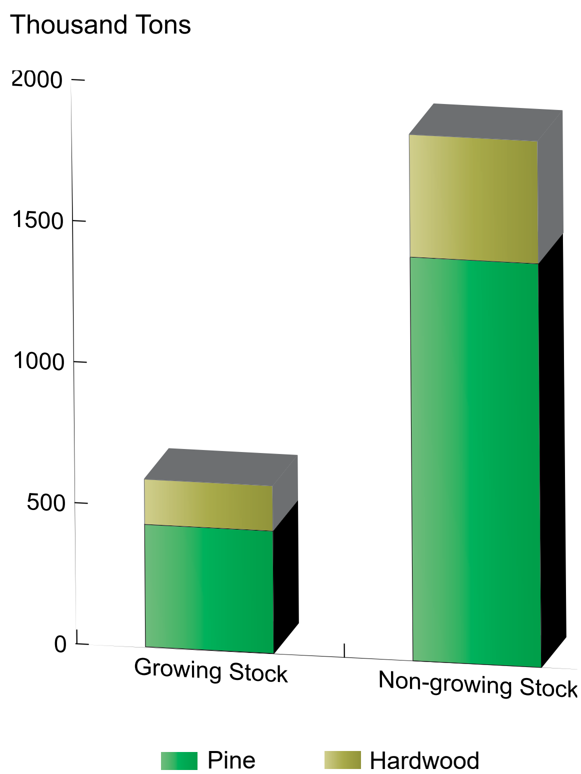


Figure 9. Texas Logging Residue, 2017

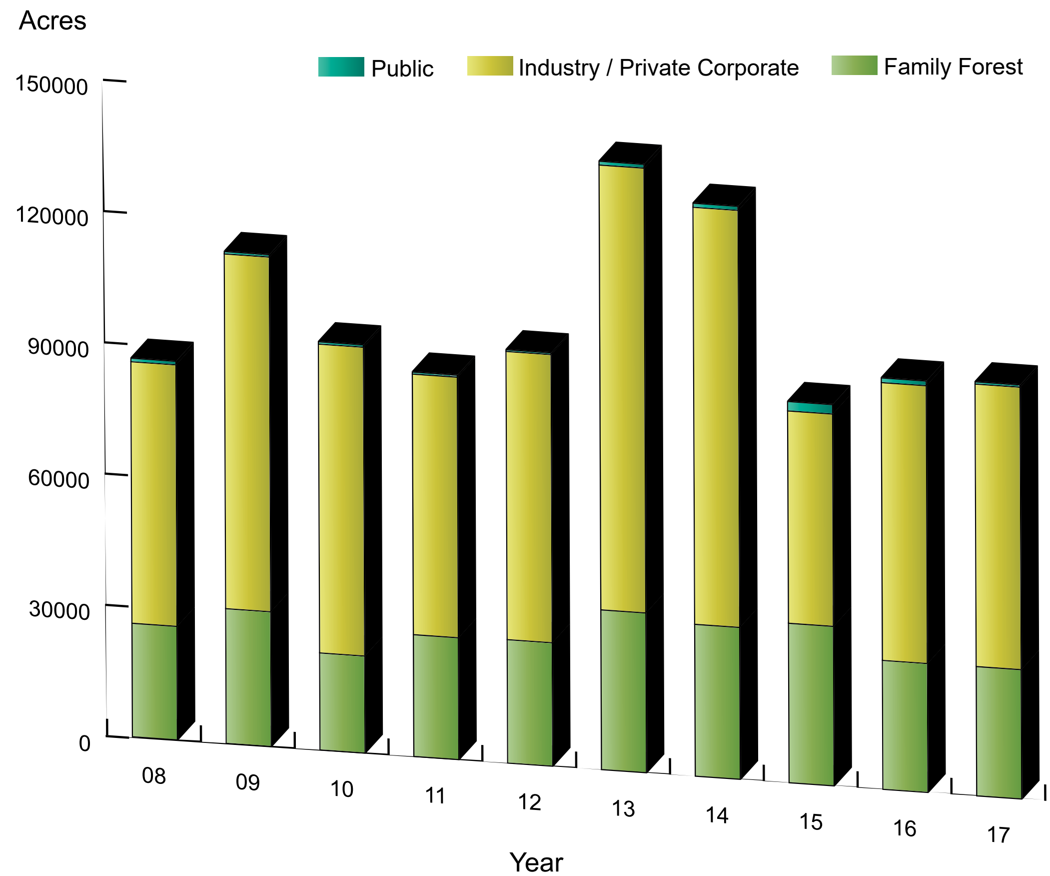


Figure 10. Reforestation Acreage by Ownership in Texas, 2008-2017

REFORESTATION

Accomplishments in reforestation by funding source and ownership are presented in Table 15. A total of 94,655 acres was planted during the winter 2016/spring 2017 planting season. Industrial landowners planted 64,551 acres, 1.7 percent more than the previous year. Family forest owners planted 29,575 acres. Public landowners planted 530 acres. Family forest owners received $1.8 million in cost share assistance for reforestation through federal cost share programs.

REFERENCES

[1]Texas A&M Forest Service. 2015. Texas Forest Sector Economic Impact. Texas Forest Information Portal. www.texasforestinfo.com

[2]MIG, Inc. 2000. IMPLAN professional version 3.0. Minnesota IMPLAN group, Stillwater, MN

[3]USDA Economic Research Service. U.S. and State Farm Income and Wealth Statistics. Annual cash receipts by commodity groups and selected commodities, by state

[4]https://www.bea.gov/news/2017/gross-domestic-product-4th-quarter-and-annual-2016-third-estimate-corporate-profits-4th

[5]http://www.bls.gov/lau/lastrk16.htm#

[6]http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm

[7]https://www.bls.gov/news.release/archives/cpi_01122018.pdf

[8]http://www.census.gov/construction/nrc/historical_data/index.html

[9]http://www.realtor.org/topics/housing-affordability-index

[10]http://www.freddiemac.com/pmms/pmms30.htm

[11]https://www.bea.gov/news/2018/gross-domestic-product-state-4th-quarter-2017-and-annual-2017-preliminary

[12]https://twc.texas.gov/texas-adds-306900-jobs-over-year

[13]https://www.recenter.tamu.edu/data/building-permits/

[14]Random Lengths, Year Book, 2017

[15]https://www.imfa.org/afpa-releases-58th-annual-survey-of-paper-paperboard-and-pulp-capacity/

[16]Timber-Mart South

[17]https://blog.forest2market.com/5-causes-of-price-variation-stumpage-costs-for-wood-consuming-industries

Table 1. Total Industrial Timber Harvest Volume and Value by County in Texas, 2017

County	Volume Harvested			Value of Harvest	
	Pine	Hardwood	Total	Stumpage Value	Delivered Value
	– – – – – – – – – – – cubic feet – – – – – – – – – – –			– – – – – thousand dollars – – – – –	
Anderson	6,580,699	952,137	7,532,836	3,844	9,187
Angelina	25,168,511	2,164,874	27,333,385	15,358	34,554
Bowie	16,778,852	4,036,595	20,815,447	11,379	26,339
Camp	3,290,217	285,724	3,575,941	1,922	4,458
Cass	19,546,669	6,301,672	25,848,341	12,258	30,744
Chambers	15,997	0	15,997	12	23
Cherokee	18,508,081	2,607,540	21,115,621	12,633	27,824
Franklin	17,424	47,990	65,414	67	121
Gregg	1,636,273	707,712	2,343,985	1,217	2,917
Grimes	797,697	0	797,697	561	1,135
Hardin	20,842,153	1,322,089	22,164,242	8,775	24,106
Harris	1,458,189	9,785	1,467,974	1,184	2,256
Harrison	23,160,805	4,448,801	27,609,606	13,800	33,442
Henderson	394,304	256,480	650,784	257	723
Houston	9,251,192	674,102	9,925,294	5,210	12,220
Jasper	29,616,777	727,314	30,344,091	12,215	33,140
Jefferson	484,694	0	484,694	248	587
Leon	296,680	1,487,600	1,784,280	669	2,000
Liberty	10,137,986	2,863,572	13,001,558	6,913	16,255
Madison	18,357	560	18,917	13	26
Marion	6,356,975	2,046,534	8,403,509	3,520	9,479
Montgomery	3,873,234	84,231	3,957,465	2,003	4,781
Morris	324,962	584,411	909,373	454	1,134
Nacogdoches	20,962,401	3,587,858	24,550,259	12,489	29,944
Newton	30,619,922	403,284	31,023,206	15,015	36,630
Orange	1,664,997	85,120	1,750,117	631	1,837
Panola	18,408,681	2,778,619	21,187,300	9,928	24,886
Polk	32,917,848	1,398,012	34,315,860	17,535	41,574
Red River	7,689,356	2,561,886	10,251,242	4,188	11,470
Rusk	17,200,228	2,788,424	19,988,652	11,237	25,558
Sabine	13,321,843	1,115,360	14,437,203	6,808	16,927
San Augustine	15,055,046	4,299,495	19,354,541	9,003	22,770
San Jacinto	4,547,032	235,117	4,782,149	2,490	5,857
Shelby	17,219,308	3,546,321	20,765,629	9,305	23,970
Smith	4,138,187	1,604,591	5,742,778	2,774	6,897
Titus	435,802	328,019	763,821	537	1,113
Trinity	12,095,995	2,246,270	14,342,265	7,288	17,455
Tyler	24,490,827	1,184,079	25,674,906	11,206	29,045
Upshur	5,850,593	2,226,138	8,076,731	3,536	9,309
Van Zandt	159,895	104,560	264,455	108	298
Walker	2,229,219	108,960	2,338,179	1,292	2,941
Waller	686,032	0	686,032	515	1,012
Wood	2,551,990	1,848,928	4,400,918	2,040	5,236
Other Counties	1,472,453	2,447,143	3,919,596	2,396	5,393
Total Production	432,274,383	66,507,907	498,782,290	244,834	597,576

Table 2. Sawlog Harvest by County in Texas, 2017

County	Pine	Hardwood	Total
	––––––––thousand board feet[1]––––––––		
Anderson	15,974	1,067	17,041
Angelina	64,244	5,287	69,531
Bowie	58,207	2,851	61,058
Camp	10,572	120	10,692
Cass	44,168	4,414	48,582
Chambers	68	0	68
Cherokee	59,978	6,755	66,733
Franklin	91	248	339
Gregg	4,381	1,043	5,424
Grimes	3,822	0	3,822
Hardin	29,670	1,923	31,593
Harris	8,800	24	8,824
Harrison	59,691	2,431	62,122
Henderson	754	0	754
Houston	14,419	1,104	15,523
Jasper	62,412	1,199	63,611
Jefferson	1,135	0	1,135
Leon	302	0	302
Liberty	22,890	6,593	29,483
Madison	30	0	30
Marion	8,491	755	9,246
Montgomery	9,151	217	9,368
Morris	920	604	1,524
Nacogdoches	48,679	3,306	51,985
Newton	91,428	146	91,574
Orange	1,893	0	1,893
Panola	36,589	1,057	37,646
Polk	83,387	4,105	87,492
Red River	6,907	4,525	11,432
Rusk	54,365	3,213	57,578
Sabine	35,433	0	35,433
San Augustine	39,075	1,524	40,599
San Jacinto	11,589	145	11,734
Shelby	32,014	478	32,492
Smith	11,880	482	12,362
Titus	2,471	605	3,076
Trinity	30,329	1,479	31,808
Tyler	40,524	4,550	45,074
Upshur	8,756	2,989	11,745
Van Zandt	358	0	358
Walker	3,159	0	3,159
Waller	3,746	0	3,746
Wood	7,743	453	8,196
Other Counties	310	7,441	7,751
Total Production	1,030,805	73,133	1,103,938

[1]International ¼-inch rule.

Table 3. Veneer and Panel Roundwood Harvest by County in Texas, 2017			
County	Pine	Hardwood	Total
	– – – – – – – – – – – – – – – cubic feet – – – – – – – – – – – – – – –		
Anderson	3,563,548	*	3,563,548
Angelina	9,242,365	*	9,242,365
Bowie	402,170	*	402,170
Camp	1,098,114	*	1,098,114
Cass	3,146,922	*	3,146,922
Chambers	3,921	*	3,921
Cherokee	6,822,201	*	6,822,201
Franklin	0	*	0
Gregg	791,815	*	791,815
Grimes	36,400	*	36,400
Hardin	2,869,082	*	2,869,082
Harris	23,925	*	23,925
Harrison	11,508,252	*	11,508,252
Henderson	243,812	*	243,812
Houston	6,443,506	*	6,443,506
Jasper	3,582,652	*	3,582,652
Jefferson	81,770	*	81,770
Leon	247,645	*	247,645
Liberty	2,242,985	*	2,242,985
Madison	13,412	*	13,412
Marion	3,207,452	*	3,207,452
Montgomery	217,161	*	217,161
Morris	99,044	*	99,044
Nacogdoches	9,237,053	*	9,237,053
Newton	3,533,413	*	3,533,413
Orange	21,837	*	21,837
Panola	8,389,044	*	8,389,044
Polk	9,540,145	*	9,540,145
Red River	2,509,898	*	2,509,898
Rusk	7,357,243	*	7,357,243
Sabine	3,576,825	*	3,576,825
San Augustine	3,890,785	*	3,890,785
San Jacinto	659,129	*	659,129
Shelby	7,050,623	*	7,050,623
Smith	2,006,045	*	2,006,045
Titus	9,655	*	9,655
Trinity	5,448,229	*	5,448,229
Tyler	7,396,037	*	7,396,037
Upshur	2,442,660	*	2,442,660
Van Zandt	75,134	*	75,134
Walker	1,179,155	*	1,179,155
Waller	882	*	882
Wood	460,457	*	460,457
Other Counties	96,208	*	96,208
Total Production	130,768,611	*	130,768,611

*Data suppressed to avoid disclosure of individual company information.

Table 4. Pulpwood and Pellet Roundwood Harvest by County in Texas, 2017

County	Pine	Hardwood	Total
	– – – – – – – – – – – – – – – cords	– – – – – – – – – – – – – – –	
Anderson	4,921	9,665	14,586
Angelina	51,970	15,978	67,948
Bowie	85,697	44,481	130,178
Camp	5,906	3,320	9,226
Cass	114,078	69,518	183,596
Chambers	13	0	13
Cherokee	20,600	18,434	39,034
Franklin	33	80	113
Gregg	1,658	6,660	8,318
Grimes	1,750	0	1,750
Hardin	161,946	12,495	174,441
Harris	96	72	168
Harrison	24,403	50,514	74,917
Henderson	349	3,206	3,555
Houston	5,635	6,112	11,747
Jasper	196,234	6,578	202,812
Jefferson	2,703	0	2,703
Leon	1	18,595	18,596
Liberty	51,662	21,974	73,636
Madison	1	7	8
Marion	21,891	23,999	45,890
Montgomery	26,824	598	27,422
Morris	948	6,039	6,987
Nacogdoches	42,198	37,918	80,116
Newton	147,378	4,735	152,113
Orange	16,498	1,064	17,562
Panola	50,077	32,517	82,594
Polk	121,739	8,870	130,609
Red River	48,713	22,538	71,251
Rusk	12,721	28,120	40,841
Sabine	46,600	13,942	60,542
San Augustine	56,741	50,549	107,290
San Jacinto	24,807	2,635	27,442
Shelby	58,673	43,327	102,000
Smith	2,548	19,047	21,595
Titus	316	2,832	3,148
Trinity	21,376	24,978	46,354
Tyler	129,346	5,263	134,609
Upshur	24,551	21,561	46,112
Van Zandt	330	1,307	1,637
Walker	6,642	1,362	8,004
Waller	962	0	962
Wood	10,326	22,162	32,488
Other Counties	9,294	14,991	24,285
Total Production	1,611,155	678,043	2,289,198

Table 5. Other Roundwood Harvest by County in Texas, 2017[1]

County	Pine	Hardwood	Total
	– – – – – – – – – – – – – – – – cubic feet	– – – – – – – – – – – – – – – –	
Anderson	29,160	0	29,160
Angelina	1,302,679	0	1,302,679
Bowie	0	0	0
Camp	0	0	0
Cass	0	0	0
Chambers	0	0	0
Cherokee	294,840	0	294,840
Franklin	0	0	0
Gregg	0	0	0
Grimes	0	0	0
Hardin	46,253	0	46,253
Harris	0	0	0
Harrison	0	0	0
Henderson	0	0	0
Houston	13,932	0	13,932
Jasper	22,548	0	22,548
Jefferson	0	0	0
Leon	0	0	0
Liberty	0	0	0
Madison	0	0	0
Marion	0	0	0
Montgomery	0	0	0
Morris	0	0	0
Nacogdoches	416,493	0	416,493
Newton	328,646	0	328,646
Orange	0	0	0
Panola	32,400	0	32,400
Polk	0	0	0
Red River	114,178	0	114,178
Rusk	0	0	0
Sabine	226,800	0	226,800
San Augustine	234,269	0	234,269
San Jacinto	0	0	0
Shelby	226,800	0	226,800
Smith	0	0	0
Titus	0	0	0
Trinity	0	0	0
Tyler	49,062	0	49,062
Upshur	0	0	0
Van Zandt	0	0	0
Walker	0	0	0
Waller	0	0	0
Wood	0	0	0
Other Counties	573,199	0	573,199
Total Production	3,911,259	0	3,911,259

[1]Including posts, poles and pilings.

Table 6. Timber Stumpage Price in East Texas by Product, 2008-2017

Year	Sawtimber/Veneer		Pulpwood		Pine Chip-N-Saw	Pine Poles
	Pine	Mixed Hardwood	Pine	Mixed Hardwood		
	– – – $/MBF-Doyle – – –		– – – $/cord – – –		$/cord	$/ton
2008	241.71	217.87	25.90	22.31	41.80	54.28
2009	180.62	177.34	17.27	18.42	32.66	57.75
2010	200.60	270.49	21.99	31.75	38.66	55.06
2011	186.44	234.94	15.70	16.93	25.55	52.00
2012	185.87	237.93	17.45	23.32	30.00	52.50
2013	177.84	266.43	18.88	23.88	29.01	52.13
2014	217.10	319.55	24.42	27.27	34.68	51.50
2015	235.26	372.15	25.33	45.56	39.23	50.34
2016	213.29	371.21	24.65	29.76	34.29	50.31
2017	197.82	287.17	21.32	26.28	26.32	49.00

SOURCE: *Texas Timber Price Trends* bi-monthly market report, with pine pole price from *Timber Mart-South.*

Table 7. Value of East Texas Timber Harvest, 2017

Product	Unit	Stumpage		Delivered	
		Price[1] ($/unit)	Value (million $)	Price[2] ($/unit)	Value (million $)
PINE					
Sawlogs/Chip-n-Saw	MBF[3]	–	118	–	238
Sawlogs	MBF[3]	131.86	107	250.35	202
Chip-n-Saw	MBF[3]	52.64	12	160.65	36
Veneer/Panel Roundwood	MCF	–	56	–	147
Veneer Logs	MCF	813.47	32	1,544.41	61
Panel Roundwood	MCF	263.21	24	939.14	86
Pulpwood	cords	21.32	34	76.07	123
Others	MCF	–	3	–	6
All pine products			212		513
HARDWOOD					
Sawlogs	MBF[3]	211.17	15	358.24	26
Veneer	MCF	1,587.69	0	3,217.77	0
Pulpwood	cords	26.28	18	86.53	59
All hardwood products			33		85
ALL PRODUCTS			245		598

[1]Average annual statewide prices as published in *Texas Timber Price Trends*, Texas A&M Forest Service.

[2]Average annual statewide prices, obtained by adding the difference between the standing timber prices and the delivered prices published in *Timber Mart-South* to the stumpage prices published in *Texas Timber Price Trends*, Texas A&M Forest Service.

[3]International ¼-inch rule.

Table 8. Interstate Movement of Roundwood by Species Group and Product in Texas, 2017

Product	Units	Imports	Produced & Utilized in State	Exports	Texas Mill Receipts	Texas Roundwood Production
PINE						
Sawlogs	MBF[1]	123,609	1,004,244	26,561	1,127,853	1,030,805
Veneer/Panel Roundwood	MCF	7,751	120,879	9,890	128,630	130,769
Pulpwood	cords	476,985	1,099,925	511,230	1,576,910	1,611,155
Posts, Poles, Pilings	MCF	1,715	3,911	0	5,626	3,911
All Pine Products	MCF	68,138	376,671	55,604	444,809	432,274
HARDWOOD						
Sawlogs	MBF[1]	4,242	73,133	0	77,375	73,133
Veneer	MCF	0	0	0	0	0
Pulpwood	cords	273,363	611,250	66,793	884,613	678,043
All Hardwood Products	MCF	22,580	61,164	5,343	83,745	66,508
TOTAL						
Sawlogs	MBF[1]	127,851	1,077,377	26,561	1,205,228	1,103,938
Veneer/Panel Roundwood	MCF	7,751	120,879	9,890	128,630	130,769
Pulpwood	cords	750,348	1,711,175	578,023	2,461,523	2,289,198
Posts, Poles, Pilings	MCF	1,715	3,911	0	5,626	3,911
ALL PRODUCTS	MCF	90,718	437,835	60,947	528,553	498,782

[1]International ¼-inch rule.

Table 9. Texas Industrial Roundwood Products, 2008-2017

Year	Lumber			Structural Panel
	Pine	Hardwood	Total	
	– – – – – m. bd. ft[1] – – – – –			m. sq. ft.
2008	1,406,103	213,191	1,619,293	2,204,544
2009	1,237,801	171,514	1,409,315	1,958,794
2010	1,188,294	139,389	1,327,683	1,881,763
2011	1,308,427	154,593	1,463,020	1,915,605
2012	1,291,578	118,823	1,410,401	2,049,084
2013	1,385,043	140,427	1,525,470	2,017,406
2014	1,444,203	104,089	1,548,292	2,348,023
2015	1,410,472	107,029	1,517,501	2,444,464
2016	1,357,409	88,001	1,445,410	2,729,569
2017	1,399,502	79,090	1,478,592	2,443,043

[1]Lumber tally.

Table 10. Texas Pulp and Paperboard Production, 2008-2017

Year	Pulp and Paperboard Products[1]
	tons
2008	2,239,347
2009	2,050,681
2010	2,089,521
2011	2,071,405
2012	2,081,521
2013	2,168,403
2014	2,213,026
2015	2,106,412
2016	2,317,537
2017	2,384,711

[1]Includes fiberboard, paperboard, market pulp, and miscellaneous products.

Table 11. Products Treated by Texas Wood Preserving Plants, 2016-2017

Product	Unit of Measure	Volume by Specific Unit		Volume by Cubic Feet	
		2016	2017	2016	2017
Poles and pilings[1]	CF	3,709,745	3,707,169	3,709,745	3,707,169
Fence posts	number	2,027,590	2,344,274	1,784,993	2,063,786
Ties[2]	CF	8,673,540	5,647,530	8,673,540	5,647,530
Lumber	MBF	288,539	295,094	24,044,895	24,591,147
Plywood/OSB	MSF	11,732	11,124	366,637	347,631
Other	CF	3,557,939	3,900,136	3,557,939	3,900,136
Total	CF	–	–	42,137,749	40,257,399

[1]Includes utility poles, construction poles, and pilings.

[2]Includes cross ties, switch ties, and cross arms.

Table 12. Texas Primary Mill Residue, 2017[1]

Residue Type	Pine	Hardwood	Total
	– — – – – – tons – — – – – –		
Chips[2]	2,538,489	148,804	2,687,293
Sawdust	638,400	90,737	729,137
Shavings	316,710	17,505	334,215
Bark[3]	1,401,460	342,440	1,743,900
Total	4,895,059	599,486	5,494,545

[1]Primary mills include sawmills, structural panel mills, and chip mills.

[2]Does not include chips produced in chip mills.

[3]Includes bark from sawmills, panel mills, and chip mills.

Table 13. Industrial Roundwood Removal and Logging Residue by Product in East Texas, 2017

Product	Industrial Roundwood			Logging Residue			Total Volume		
	Pine	Hardwood	Total	Pine	Hardwood	Total	Pine	Hardwood	Total
	– – – – – – thousand tons – – – – – –			– – – – – – thousand tons – – – – – –			– – – – – – thousand tons – – – – – –		
Growing Stock									
Sawtimber	6,705.3	475.3	7,180.6	399.1	68.6	467.8	7,104.4	543.9	7,648.4
Poletimber	6,113.2	1,634.2	7,747.4	34.7	91.7	126.4	6,147.9	1,725.9	7,873.8
Sub-total	12,818.5	2,109.5	14,928.0	433.9	160.4	594.2	13,252.3	2,269.9	15,522.2
Non-growing Stock									
Sawtimber	127.7	8.7	136.4	790.5	112.7	903.2	918.2	121.4	1,039.6
Poletimber	818.0	145.7	963.7	640.7	322.2	962.9	1,458.7	467.8	1,926.5
Sub-total	945.7	154.4	1,100.1	1,431.2	434.9	1,866.0	2,376.9	589.2	2,966.1
All									
Sawtimber	6,833.0	484.0	7,317.0	1,189.6	181.3	1,370.9	8,022.6	665.4	8,688.0
Poletimber	6,931.2	1,779.9	8,711.1	675.4	413.9	1,089.3	7,606.6	2,193.8	9,800.4
Total	13,764.2	2,263.9	16,028.1	1,865.0	595.3	2,460.3	15,629.2	2,859.1	18,488.3

Note: Sawtimber includes sawlogs, chip-n-saw, veneer logs, and poles; poletimber includes pulpwood, panel roundwood, post, and piling. See documents from the Forest Inventory and Analysis (FIA) Program for definition of growing stock. The separation of industrial roundwood harvest by source was based upon wood utilization rates from the *East Texas Harvest and Utilization Study, 2008*.

Table 14. Removals of Industrial Roundwood and Growing Stock in East Texas, 1998-2017

Year	Pine		Hardwood		All	
	Industrial Roundwood	Growing Stock	Industrial Roundwood	Growing Stock	Industrial Roundwood	Growing Stock
	– —— – – – – – – —— – – – – MMCF – —— – – – – – – —— – – – –					
1998	542.4	533.9	127.9	129.5	670.3	663.3
1999	541.4	532.9	157.9	159.8	699.3	692.7
2000	508.9	500.9	116.7	118.1	625.6	619.0
2001	488.5	480.8	111.6	113.0	600.1	593.8
2002	537.0	528.5	130.6	132.2	667.6	660.7
2003	542.1	533.6	126.1	127.6	668.2	661.2
2004	517.7	509.5	133.5	135.1	651.2	644.7
2005	564.3	555.4	137.2	138.9	701.5	694.3
2006	500.0	492.1	148.3	150.1	648.3	642.2
2007	501.2	490.7	127.6	128.6	628.8	619.3
2008	440.3	430.2	97.7	100.1	538.0	530.2
2009	396.4	382.6	83.4	86.3	479.8	468.8
2010	401.2	385.9	89.4	90.3	490.6	476.1
2011	392.7	378.0	78.6	80.5	471.3	458.5
2012	408.9	392.6	106.1	106.1	515.0	498.7
2013	419.6	402.0	102.0	102.4	521.5	504.4
2014	439.8	422.3	91.5	91.4	531.3	513.7
2015	418.2	400.2	105.2	104.5	523.4	504.7
2016	467.2	447.9	79.4	79.4	546.6	527.3
2017	432.3	415.1	66.5	66.4	498.8	481.5

Note: Total industrial roundwood harvest includes harvest from both growing stock and non-growing stock. The growing stock removal was calculated using wood utilization rates from the *East Texas Harvest and Utilization Study, 2008*.

Table 15. Tree Planting by Ownership and Funding Source in Texas, 2009-2017

Year[1]	Family Forest				Industry[3]	Public	Total
	Federal Cost Share Programs[2]		Non-Cost Share	Total Acres	Acres	Acres	Acres
	Acres	Cost Share $	Acres				
2009	17,152	746,763	13,639	30,791	81,067	564	112,422
2010	16,255	1,569,178	5,919	22,174	70,577	555	93,306
2011	22,338	2,060,568	5,522	27,860	59,554	473	87,887
2012	23,299	2,172,624	4,913	28,212	65,867	402	94,481
2013	29,818	3,130,118	6,709	36,527	101,671	872	139,070
2014	27,008	2,750,446	7,716	34,724	95,306	941	130,971
2015	18,941	2,245,453	17,526	36,467	48,530	2,153	87,150
2016	16,585	2,108,513	12,886	29,471	63,498	1,075	94,044
2017	15,590	1,782,048	13,985	29,575	64,551	530	94,655

[1]Federal fiscal year. For example, fiscal year 2017 begins on October 1, 2016 and ends on September 30, 2017.

[2]Includes Environmental Quality Incentives Program (EQIP).

[3]Acres for industry tree planting includes acres planted by Timberland Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (RE-ITs).