



Central & West Texas **Forestlands** **2007 Report**

T E X A S
FOREST  **SERVICE**
The Texas A&M University System

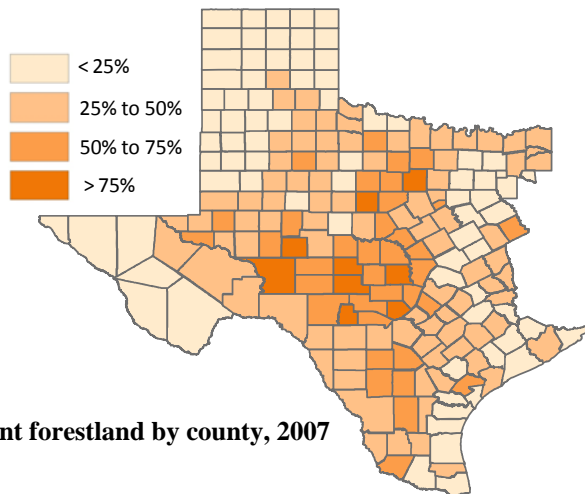
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Texas Forest Service Forest Inventory and Analysis Program

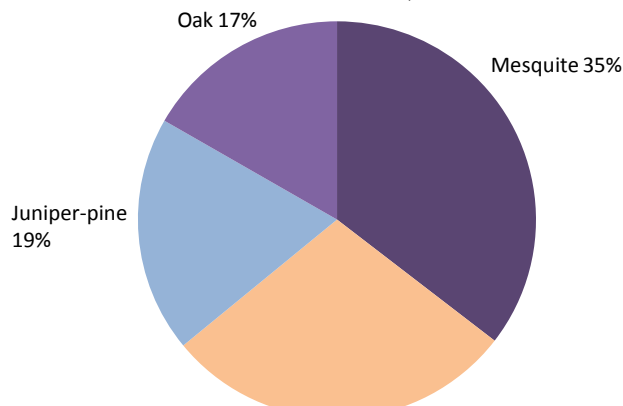
In 2004, Texas Forest Service, in cooperation with the Southern Research Station's Forest Inventory and Analysis (FIA) Program, initiated an inventory of 211 counties in Central and West Texas.

The information contained in the FIA database is based on the first cycle of inventory data collected in Central and West Texas and represents just four of the 10 panels. The data was based on the measurement of 10,062 plots. For the sake of brevity, the term Central and West Texas generalizes all regions of the state outside East Texas.



Percent forestland by county, 2007

Area of forestland, 2007



Area

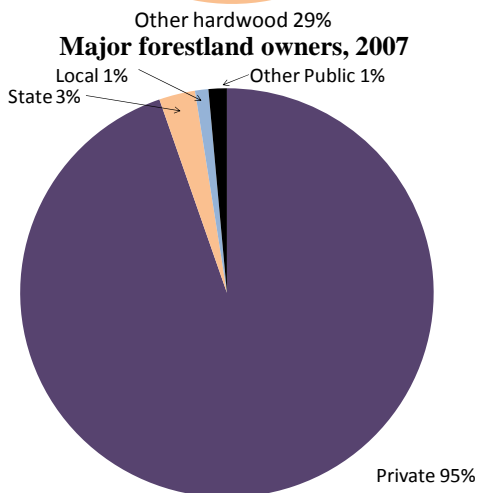
Forest type

Mesquite woodland is the dominant forest type and comprises nearly 35 percent of the forestland area. It is located throughout Central and West Texas, but heavily concentrated in more southwesterly counties. The majority of acres of juniper-pine can be found in southwestern counties while oaks are more predominant in more easterly counties.

Forestland

Estimates show forestland makes up about 35 percent of the Central and West Texas region. There are an estimated 48,074,726 acres of forestland in the region.

Major forestland owners, 2007



Ownership

Ninety-five percent of the forestland is controlled by private owners while 5 percent is operated by a public agency. Private owners include family forest owners as well as private companies such as limited liability companies (LLC) and land conservation groups.

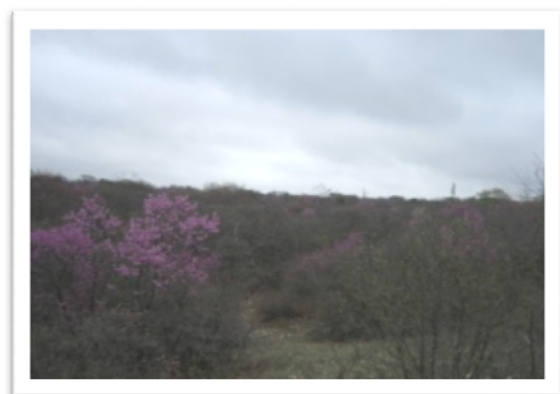
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Questionnaires focusing on tree removal operations and property size were delivered during 2007 to an area-weighted sample of 1,255 land owners. There was a 37 percent return rate.

According to results from the survey, Central and West Texas boasts 37.4 million acres of family forest land. Forty-seven percent of family forests were associated with some sort of tree removal, according to the survey. The questionnaire also found that most people own small tracts of land, with large acreage being owned by just a few people.

Response by family forest owner (formerly NIPF), 2006

Tree removal activity	Area		Size of forest	Area		Owners	
	million acres	percent	Acres	thousand Acres	percent	thousand Number	percent
Tree removal			1-9	305	1	115	48
Yes	17.4	47	10-19	170	<1	15	6
No	19.1	51	20-49	1240	3	46	19
No answer	0.8	2	50-99	885	2	12	5
Harvested past 5 years	12.6	34	100-1000	11689	31	43	18
			> 1000	23106	62	8	3



Stand structure by forest type

Estimates show the majority of mesquite forests are comprised of small- and medium-diameter trees while the majority of juniper-pine, oak and other hardwood forests contain medium sized trees.

Stand-diameter class by forest type, forestland, 2007

Forest type	Area	Not Determined	Stand-diameter class (inches)			
			0 to < 5	5 to < 9	9 to < 20	20 to < 40
Mesquite	17039.3	16.7	6796.2	9043.9	1157.5	24.9
Juniper-pine	9256.1	-	792.7	6392.6	2066.7	4.2
Oak	8025.1	10.4	710.5	5431.1	1800.9	72.1
Other hardwood	13754.3	109.8	3481.3	8580.0	1569.8	13.4
Total	48074.7	136.9	11780.6	29447.7	6594.9	114.5

thousand acres

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Trees per acre

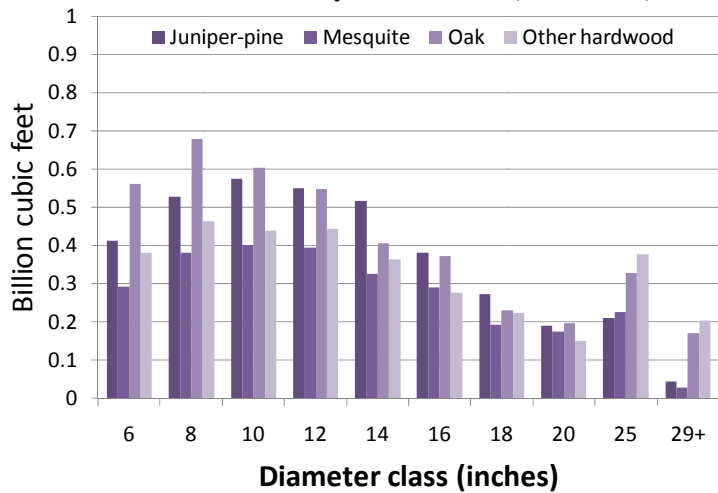
When examining tree density, mesquite is distributed throughout the region while juniper, oak and other hardwood densities are generally greatest in the eastern region of Central and West Texas. Across all forest types, the Northcentral region has the greatest density per acre while the West region has the lowest density per acre.

Volume

Stand structure by forest type

Oak forests have the greatest live tree volume with 4.1 billion cubic feet. There are 3.7 billion cubic feet of juniper-pine forests and 2.7 billion cubic feet of mesquite forests. Other hardwoods have a volume of 3.3 billion cubic feet. The total amount of volume across all species is 13.8 billion cubic feet.

Volume in live trees by diameter class, forestland, 2007



Forest type

The majority of mesquite and juniper volume is concentrated in the central part of Central and West Texas while most of the oak volume is in more easterly counties. Other hardwood volume is scattered throughout the state.

When combining all forest types, the largest volume of trees are in the Westcentral region while only a relatively small volume exists in far westerly counties. The Northcentral region also contains a relatively large amount of volume.

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Standing Biomass Supply

For the purposes of this report, standing biomass is defined as the oven-dry weight (tons) of all aboveground wood and bark in all live trees that are one-inch or greater in diameter on forestland. Thus, foliage and roots are excluded.

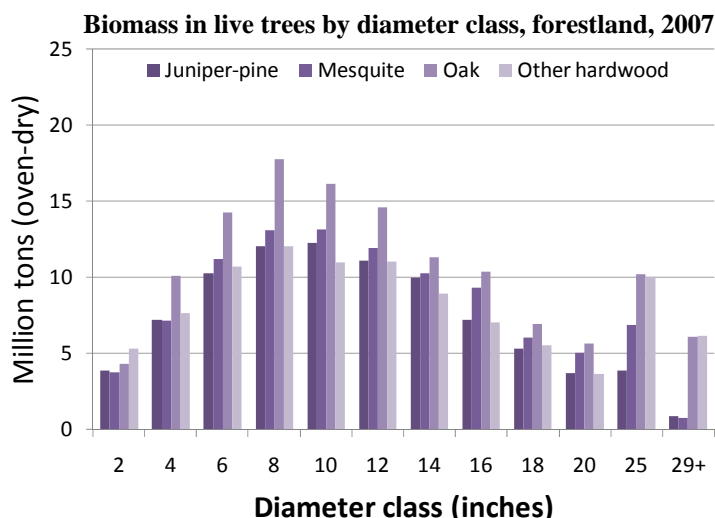
Stand structure by forest type

Biomass in juniper-pine trees is 87.9 million tons (oven-dry), mesquite biomass is 98.8 million tons and the other hardwoods biomass is 99.3 million tons. The greatest biomass (128.0 million tons) can be found in oaks.

Forest type

The majority of mesquite and juniper biomass is concentrated in the central part of Central and West Texas while most of the oak biomass is in more easterly counties. Other hardwood biomass is scattered throughout the region.

When combining all forest types, the majority of biomass is in the Westcentral region. In fact, the biomass in this region is greater than the summation of the Northwest, South and West regions. Total biomass (oven-dry) across all species is 414 million tons. This amount is comparable to the total amount of biomass in East Texas (476.3 million tons) and demonstrates the potential use of Central and West Texas trees for biomass/bioenergy.



Precautions

Estimates presented in this publication are calculated using a sample obtained from forestlands in the Central and West Texas regions. Although this publication presents useful information, all estimates have error associated with them.

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Definition of Terms

Diameter (non-woodland species): Tree stem diameter in inches measured outside the bark and 4.5 feet above the ground (breast height), commonly referred to as DBH.

Diameter (woodland species): For those woody species that have clumps of stems rather than a single stem, the definition of diameter differs from the traditional DBH measure. Diameter is calculated as the square root of the sum of the squared stem diameters that are at least one foot in length, and one inch in diameter one foot up from the stem diameter measurement point. FIA refers to this diameter as the Diameter at Root Collar (DRC). Notable species include juniper, pinyon pine and mesquite.

Forestland: Land that is at least 10 percent stocked by trees of any size, or land that has been at least 10 percent stocked in the past, and is not currently developed for nonforest use. Minimum dimensions require the land to be at least one acre in size and 120 feet in width.

Forest type: Forestland classification of the species forming a plurality of live tree stocking, and largely based on an algorithm of tallied trees.

Hardwoods: Dicotyledonous trees, usually broadleaf and deciduous.

Softwoods: Coniferous trees, usually evergreen, having needles or scale-like leaves.

Volume: The amount of sound wood in live trees at least five inches in diameter from a one-foot stump to a minimum four-inch top diameter outside bark of the central stem.

For additional information, contact:

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Users can conduct their own analysis by going to the FIA web site:

<http://www.fia.fs.fed.us/tools-data/default.asp>