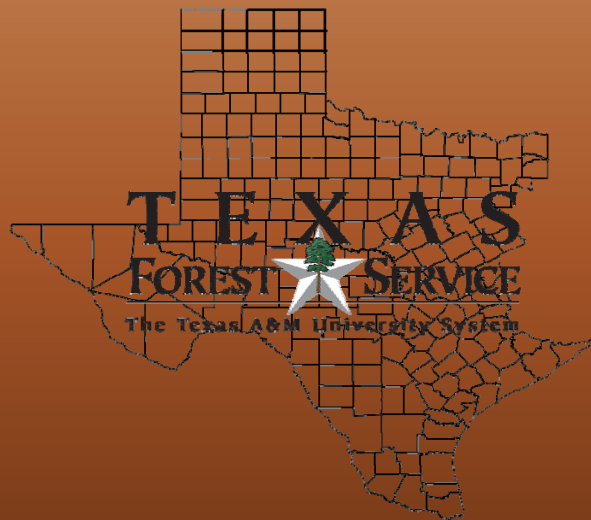
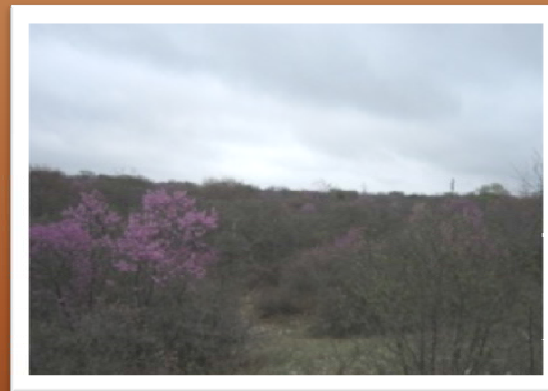
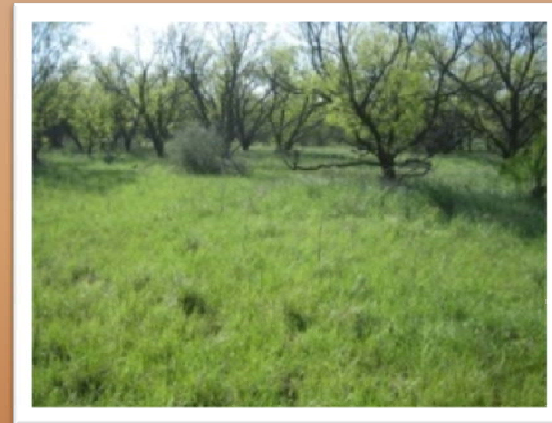


# Central & West Texas Forestlands



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A copy of the West Texas Forestlands factsheet can be downloaded from:

<http://txforests.tamu.edu/EconDev/Pubs>

# Central & West Texas Forestlands

Two sources of data were used to produce the Central and West Texas Forestlands factsheet and slide presentation:

FIA – Forest Inventory and Analysis

NWOS – National Woodland Owner Survey

Central and West Texas is the region outside of East Texas.



# Central & West Texas Forestlands

## Forest Inventory and Analysis

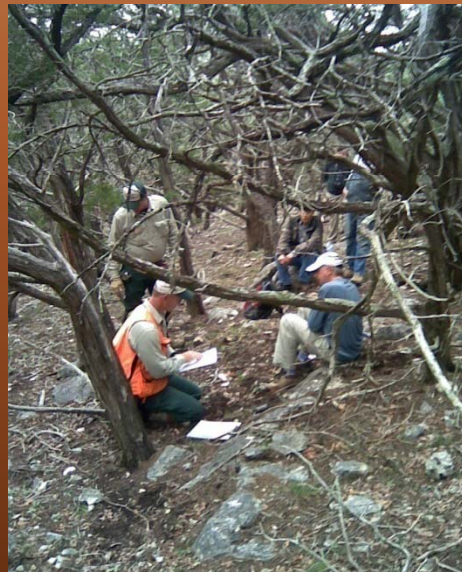
The FIA is a national program designed to quantify the amount of resources in forestlands.

Texas Forest Service in conjunction with the USDA Forest Service annually measures 10% of all plots to be established in West Texas.

Variables include total height, diameter, volume, biomass, etc.

At the time this report was developed, only 40% of the plots to be established were measured.

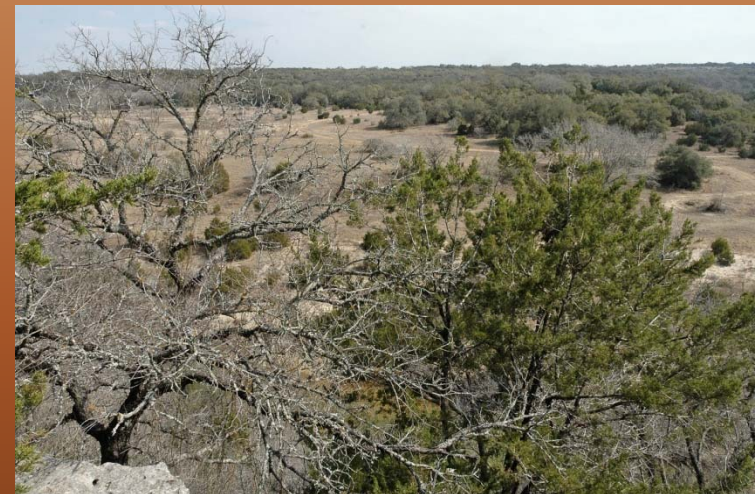
All FIA plots in West Texas will be measured over a 10-year period.



# Central & West Texas Forestlands

## NWOS

National Woodland Owner Survey – NWOS assesses forestland owner characteristics. Data were obtained from questionnaires delivered during 2007 to an area weighted sample of 1,255 Central and West Texas family forest land owners. There was a 37 percent return rate.



# Central & West Texas Forestlands

## Forestland versus Timberland

Forestland – land that is at least 10 percent stocked by forest trees of any size or that has been at least 10% stocked in the past, and not currently developed for a nonforest use

Timberland – forestland that is producing or capable of producing in excess of 20 cubic feet per acre per year

All timberland is forestland.

Examples of forestland that **WOULD NOT BE** classified as timberland are rocky, shallow soils and other areas of low rainfall resulting in less than 20 cubic feet/acre/yr of woody volume growth.

Failing to be classified as timberland does not relate to current stocking but rather potential stocking and site productivity.

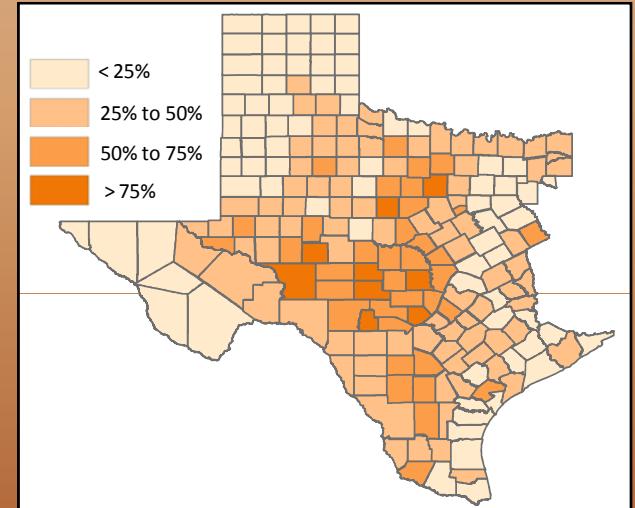
# Forestland Acres

Forestland makes up about 35 percent of the Central and West Texas region.

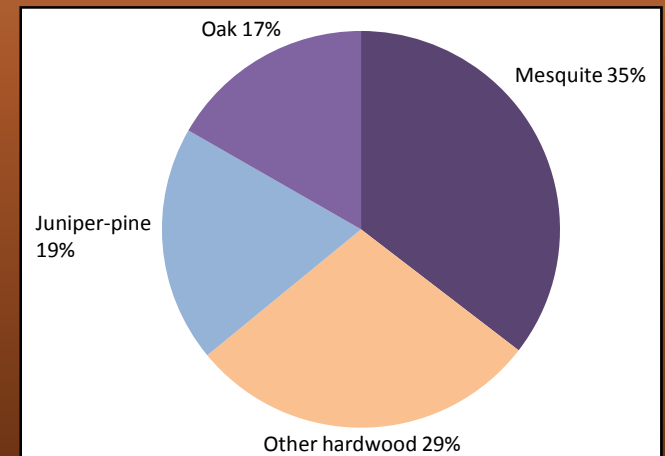
There were 48,074,726 acres of forestland estimated in 2007.



**Percent forestland by county, 2007**



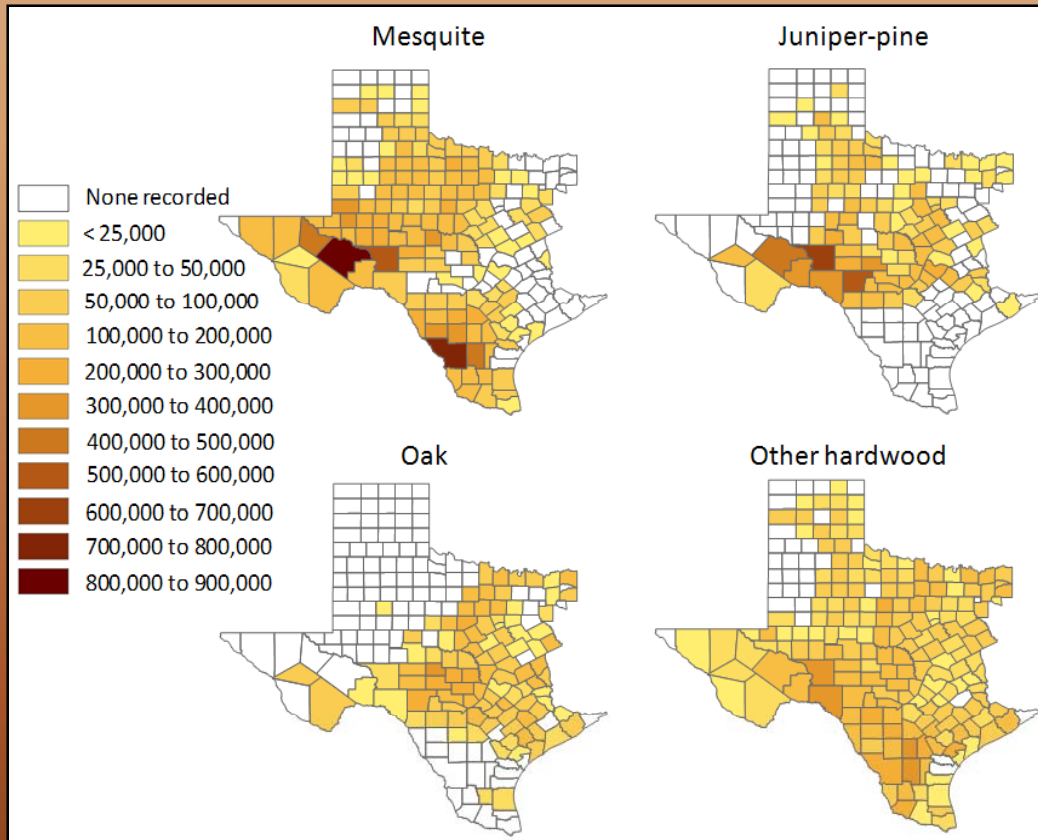
**Area of forestland, 2007**



# Forestland

## Acres

Area of forestland by forest type and county, 2007

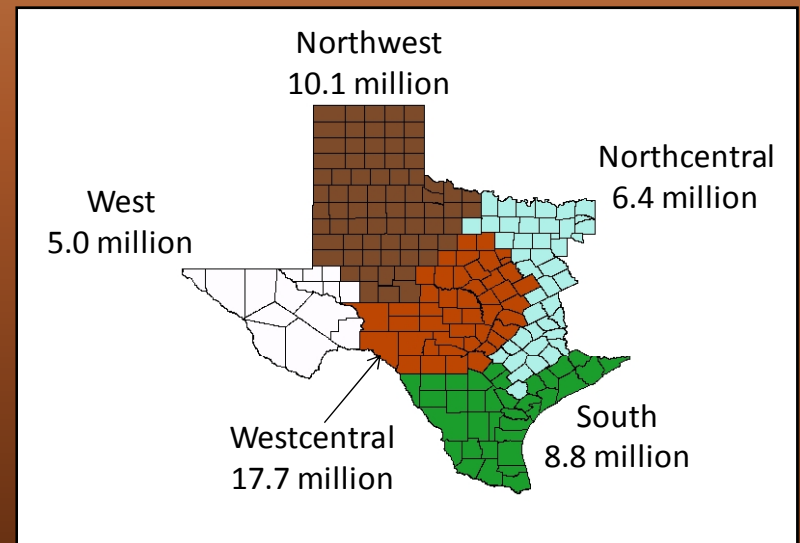


Mesquite woodlands is the dominant forest type comprising nearly 35 percent of the forestland area, most heavily concentrated in more southwesterly counties.

The majority of juniper-pine acres are found in southwestern counties.

Oaks are more predominant in more easterly counties.

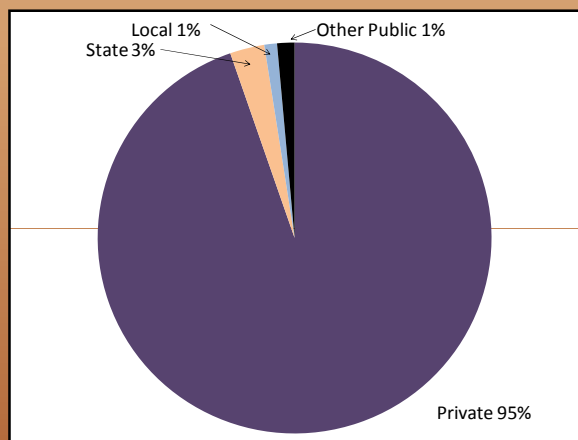
Area of forestland by region, 2007



# Forestland Ownership

Ninety-five percent of the forestland is controlled by private owners while 5 percent is operated by a public agency.

**Major forestland owners, 2007**



Private owners include family forest owners (formerly NIPF) and private companies such as limited liability companies (LLC) and land conservation groups.

Questionnaires were sent out in 2007 in an area weighted sample of 1,255 family forest owners. There was a 37 percent return rate.

According to survey results, some sort of tree removal occurred on 47 percent of the family forest acreage.

The vast majority of owners possess small tracts of land while just a few people hold large tracts.

**Response by family forest owner (formerly Non-Industrial Private Forest, or NIPF), 2007**

Tree removal activity	Area	
	million acres	percent
Tree removal		
Yes	17.4	47
No	19.1	51
No answer	0.8	2
Harvested past 5 years	12.6	34

Size of forest	Area		Owners	
	thousand Acres	percent	thousand Number	percent
1-9	305	1	115	48
10-19	170	<1	15	6
20-49	1240	3	46	19
50-99	885	2	12	5
100-1000	11689	31	43	18
> 1000	23106	62	8	3



# Forestland

## Stand Structure

### 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
thousand acres						
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

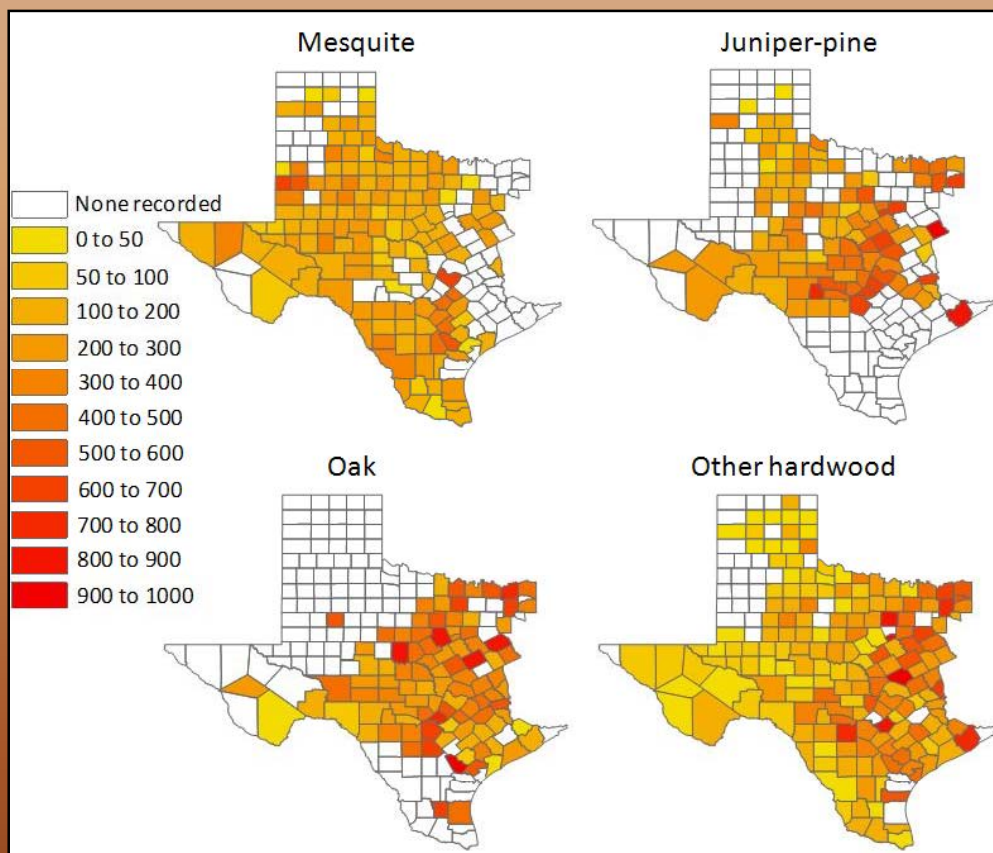


The majority of mesquite forests are comprised of small- and medium-diameter trees.

The majority of juniper-pine, oak and other hardwood forests contain medium sized trees.

# Trees Per Acre

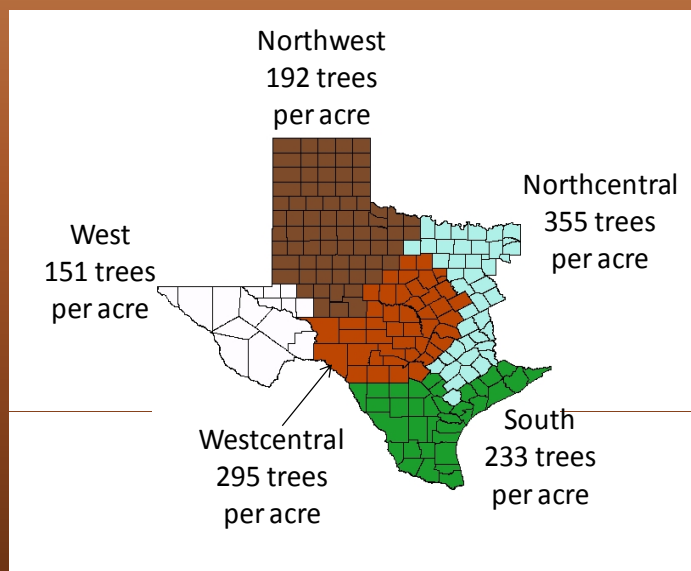
Trees per acre on forestland by forest type and county, 2007



Mesquite is distributed throughout the region.

Juniper, oak, and other hardwood densities are generally greatest in the eastern region.

Trees per acre on forestland by region, 2007



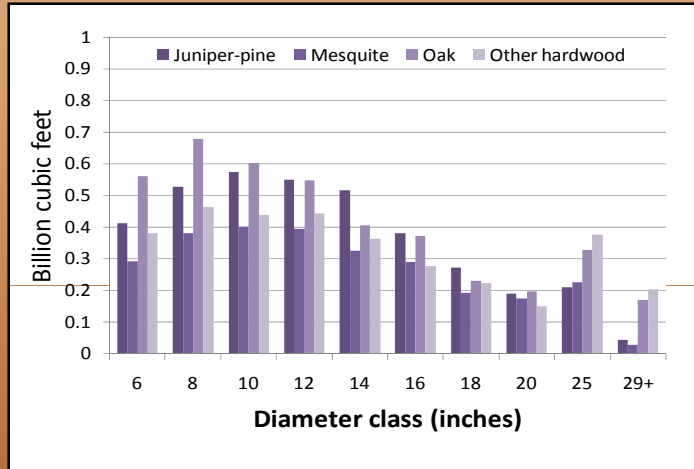
Across all forest types, the Northcentral region has the greatest density.

The West region has the lowest density.

# Volume

## Stand Structure and Amount

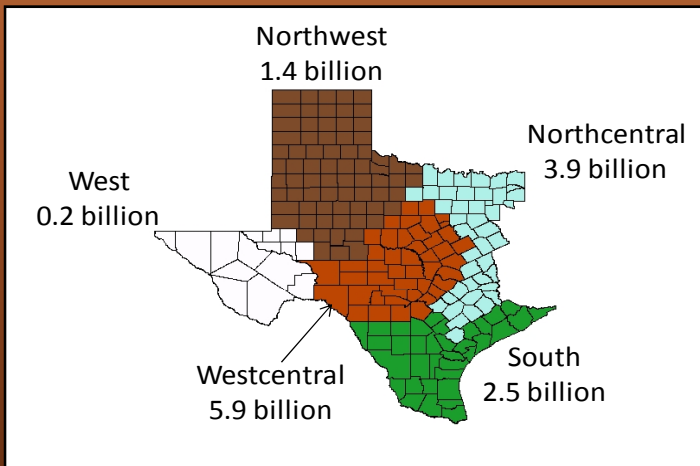
**Volume in live trees by diameter class, forestland, 2007**



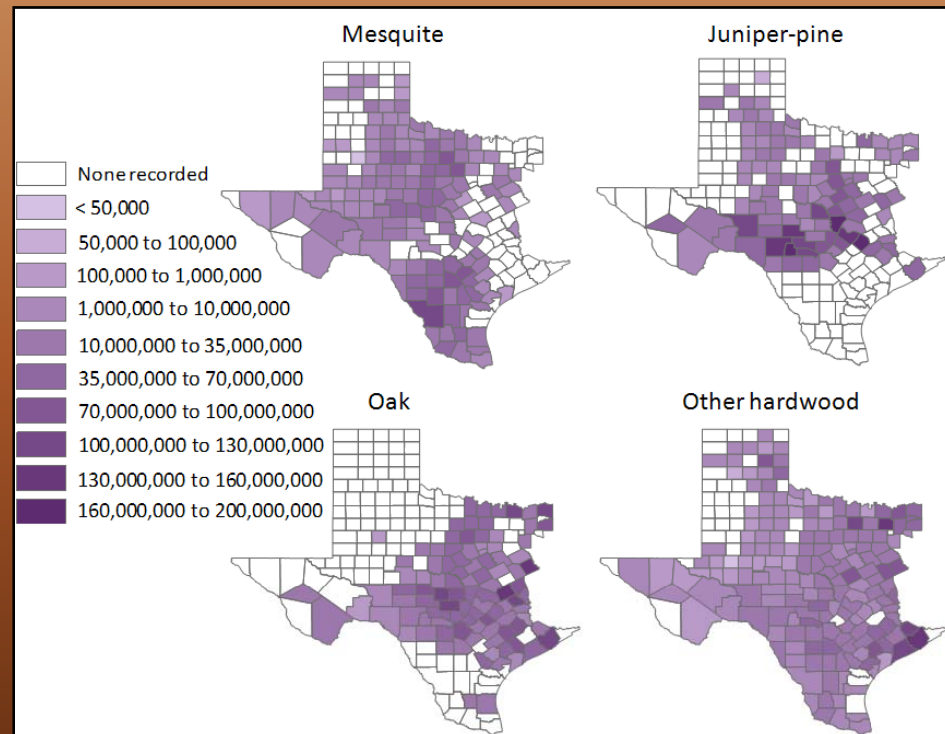
Oak volume is 4.1 billion cubic feet for live trees, juniper-pine volume is 3.7 billion cubic feet, and mesquite volume is 2.7 billion cubic feet.

The total amount of volume across all species is 13.8 billion cubic feet.

**Growing stock volume on forestland by region, 2007**



**Growing stock volume (ft<sup>3</sup>) on forestland by forest type and county, 2007**



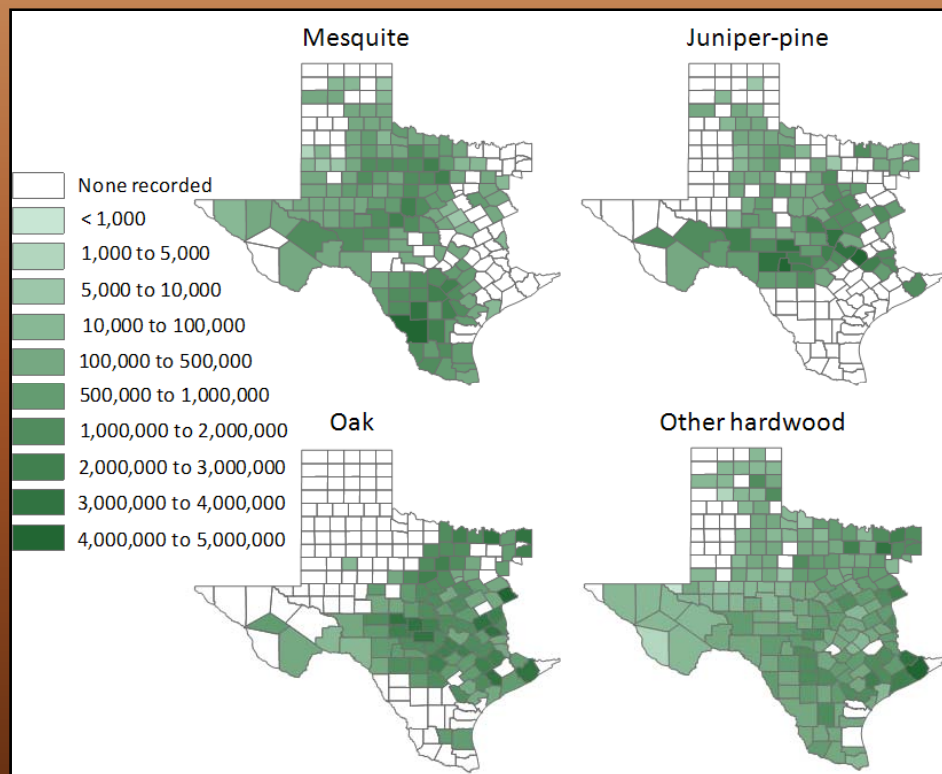
# Biomass

## Standing Biomass (oven-dry tons) – Aboveground Wood and Bark

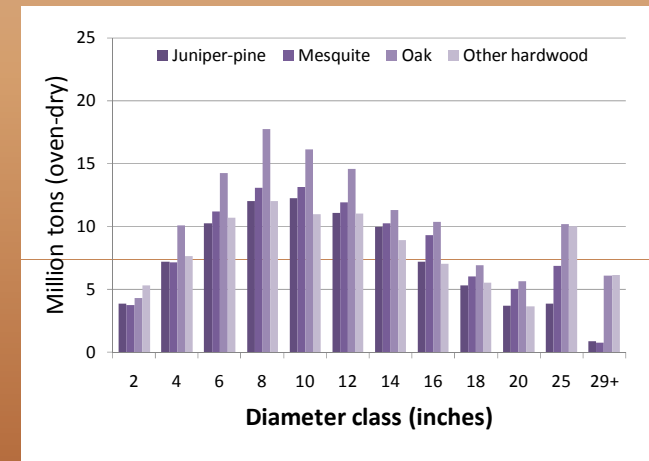
Juniper-pine biomass is 87.9 million tons for live trees (dbh of 1.0 inch or greater), mesquite biomass is 98.8 million tons.

Oak biomass is 128.0 million tons while other hardwood biomass is 99.3 million tons.

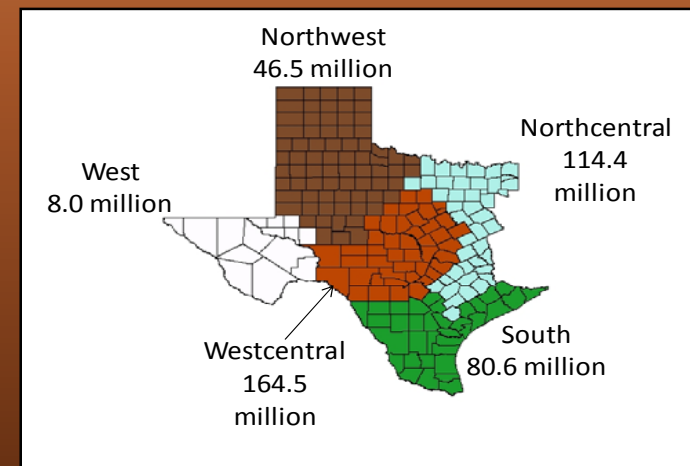
### Standing biomass (oven-dry tons) of all trees on forestland by forest type and county, 2007



### Biomass in live trees (oven-dry tons), forestland, 2007



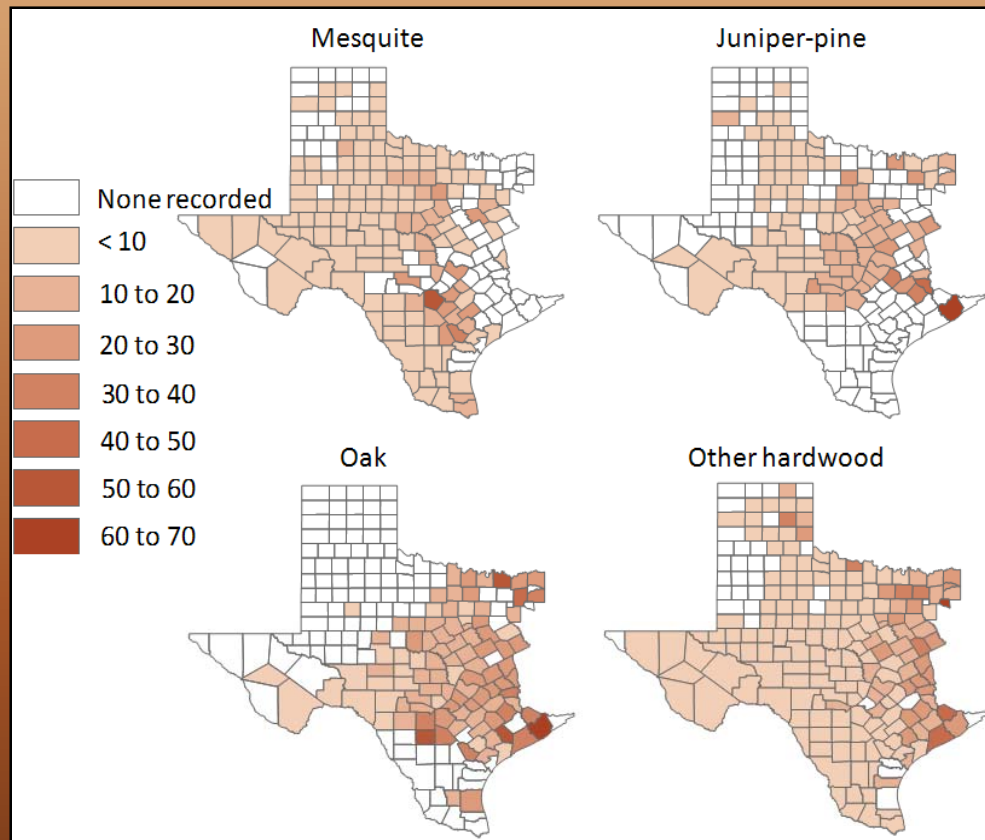
### Standing biomass (oven-dry tons) on forestland by region, 2007



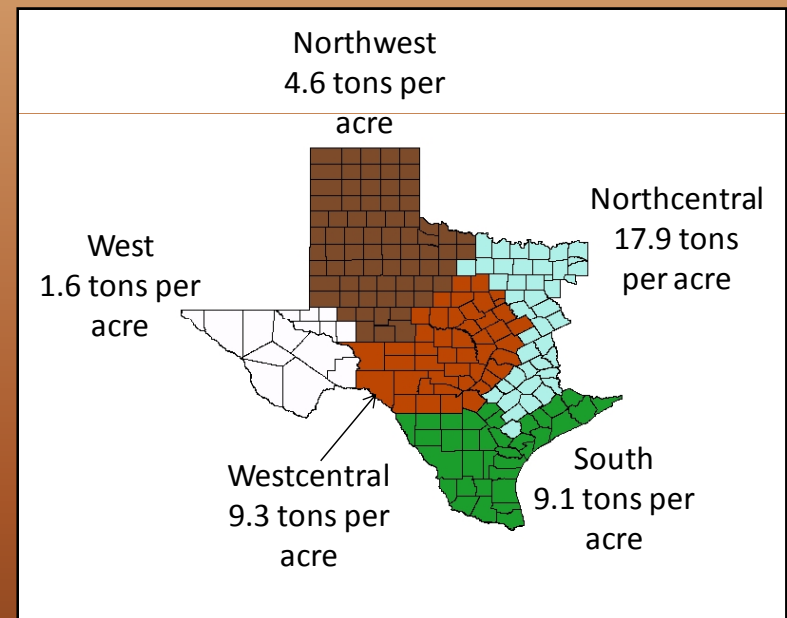
# Biomass

## Average Standing Biomass Per Acre

Average standing biomass (oven-dry tons) per acre of all trees on forestland by forest type and county, 2007



Average standing biomass (oven-dry tons) per acre of all trees on forestland by region, 2007



# 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.

*Timberland.* Forestland capable of producing 20 cubic feet of wood volume per acre annually and not withdrawn from timber utilization

**Family forest.** Private land owned by individuals and families, including farms, where the owner does not own a primary wood-using plant or is not a formally incorporated company or organization. Formally referred to as non-industrial private forest (NIPF) owners.

**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