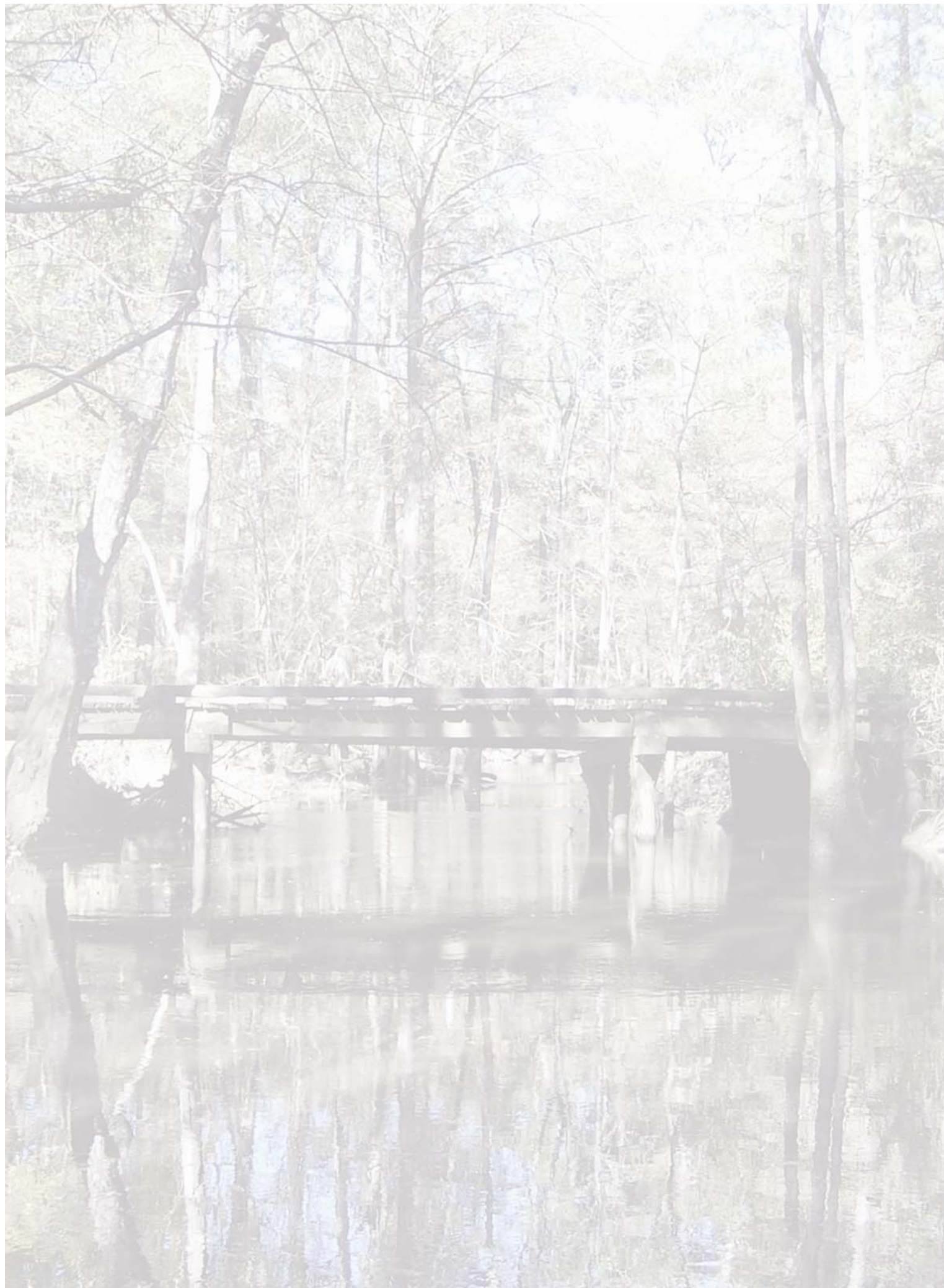


# Texas Forests Today

2005

TEXAS  
FOREST SERVICE  
The Texas A&M University System





“Texas forests are one of our state’s most valuable natural resources, with unlimited environmental and economic potential for future generations.”

James B. Hull, State Forester  
and Director, Texas Forest Service



Texas’ abundant and diverse forests are vital economic and environmental assets. Of the 21.4 million acres of land in East Texas, 56 percent is covered in flourishing, green forest.

Texas forests play an essential role in the state’s economy and overall quality of life. Texas forests provide key environmental benefits such as sparkling clean water, habitats for diverse wildlife, clean air and recreation.

As the second fastest growing population in the nation, with no signs of slowing down, urban sprawl is turning private forestland into housing and business developments. Now more than ever, the vibrant Texas forests need to be sustained to ensure the health of the state’s economy, environment and quality of life for Texans.

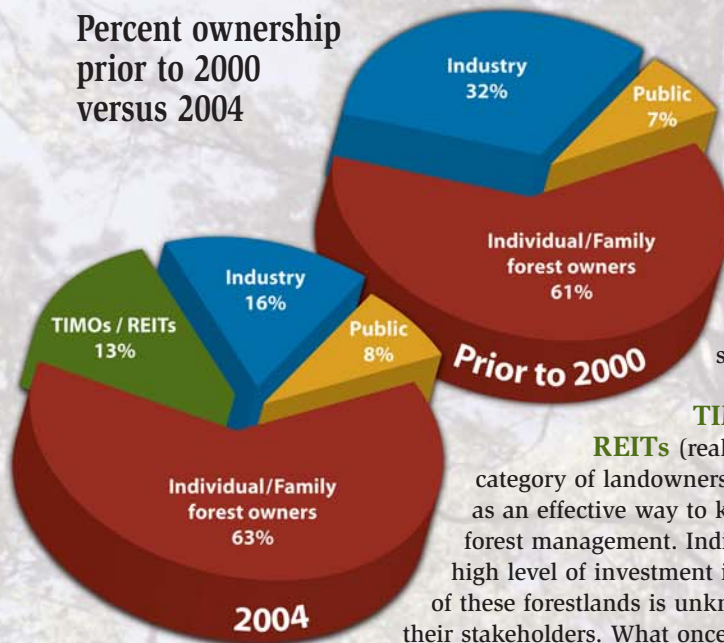
This summary report provides a snapshot of the status of the East Texas forest resources based on the latest Forest Inventory and Analysis of Texas.<sup>1</sup> The report also addresses the impact of forestry on the state’s economy and environment, as well as challenges and opportunities for sustaining our forests for generations of Texans to come.



# Texas Forest Trends

## Who Owns Texas Forests?

Percent ownership  
prior to 2000  
versus 2004



**TIMOs**  
timber  
investment  
management  
organizations

**REITs**  
real estate  
investment trusts

### Ownership

Ownership patterns of the 11.9 million acres of forestland remained relatively stable for the past 50 years until recently when forest industry's divestiture of more than 1.5 million acres produced a new category of landowners.

**Individual/family forest owners** hold an estimated 63% of the state's forestland and represent a growing number of new landowners, roughly 250,000, who own smaller parcels of land (1-49 acres) for reasons other than economic gain. An additional 50,000 landowners own 50 or more acres. Landowners with 20-500 acres, representing 60% of the individual/family forest owner group, will be counted on to grow and sustain the state's forest resources for timber production.

**TIMOs** (timber investment management organizations) and **REITs** (real estate investment trusts), which represent the new category of landowners, offer advantages to their owners and are generally viewed as an effective way to keep large blocks of former forest industry lands under good forest management. Indications are these new corporate owners are maintaining a high level of investment in timber production. However, the long-term sustainability of these forestlands is unknown as TIMOs strive to maximize return on investment to their stakeholders. What once was a large track of well-managed industry timberland, might eventually be parceled into smaller isolated pieces and converted to development as investment gains are maximized. This practice is potentially detrimental to wildlife habitats, the ecosystem and long-term forest sustainability.

**Public:** Forestlands owned by federal, state or local governments provide stable blocks of non-fragmented forest cover, thus their conservation value is high and expected to increase with the state's rapid urbanization.

**Forest Industry:** Several concerns arise resulting from industry's divestiture of 1.5 million acres of prime forestland since 2000. The survey showed industry reforested an average of 87,000 acres per year since 1992, representing a substantial increase and investment during the ten-year period. With almost 83% of pine forests in pine plantations, industry lands have nearly reached peak reforestation capacity. Additionally, with the significant decrease in industry-owned acres, reforestation and forest pest and disease research activities by this group will obviously decrease in the coming years.

The exodus of a significant number of forest industries has caused a deficit in the state's forest fire fighting capacity, as industry's fire protection crews and large specialized equipment have always been available to assist Texas Forest Service whenever local capacity was exceeded.

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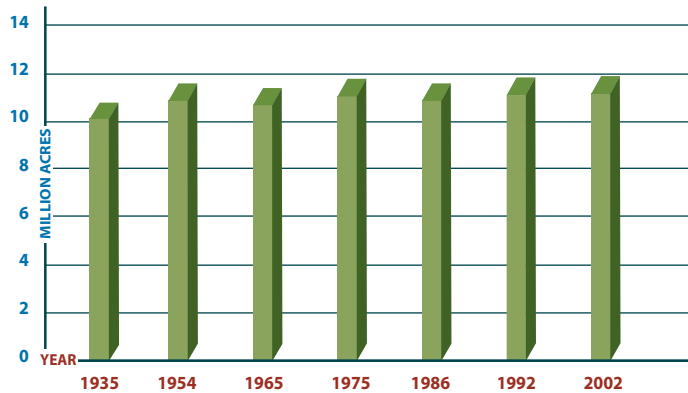
Virtually all forest industry fire-fighting resources ~ 100 firefighters and 50 large dozers ~ will no longer be available to assist in fighting the intense wildfires in the dense East Texas forests. This critical deficit will need to be addressed by the state with a continuing commitment to bring wildfire fighting prevention and suppression resources up to meet the increasing wildfire risk.

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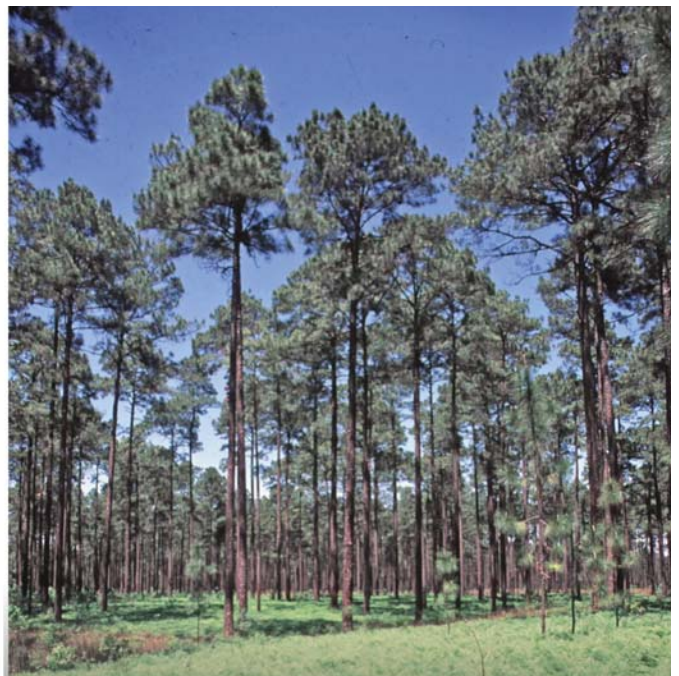
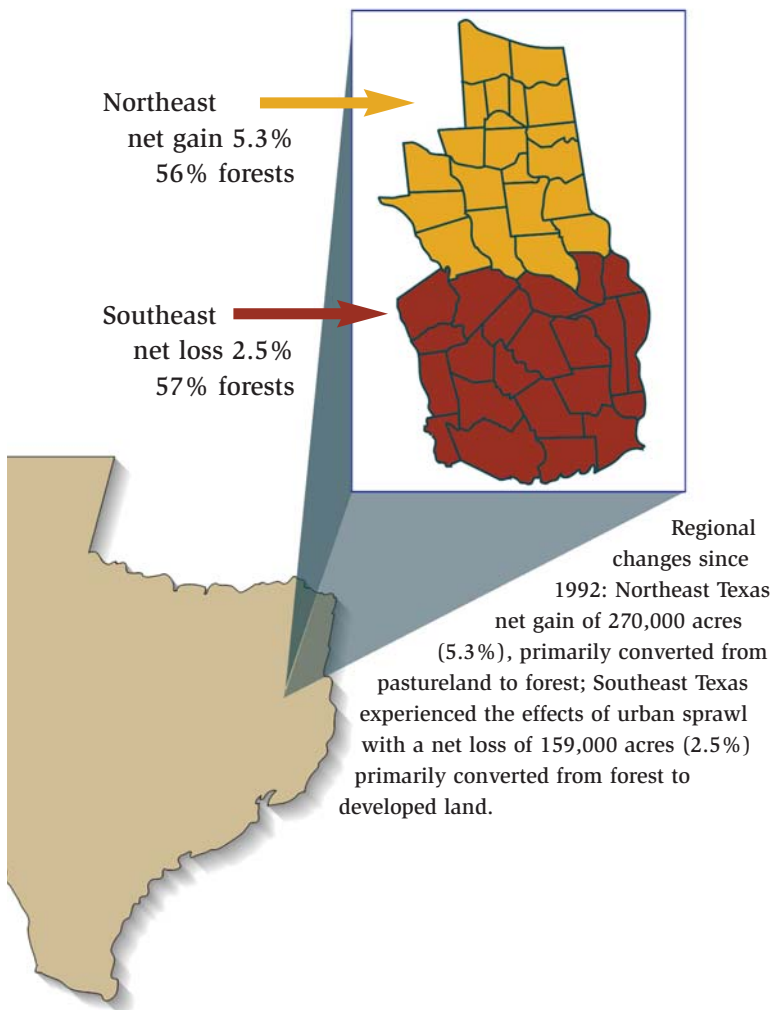
## Forest Area

Of the 21.4 million acres in East Texas, 11.9 million acres are forestland, representing a net increase of 105,000 acres (.9%) since 1992. Despite forest loss to development and urban growth, overall timberland acres have remained relatively stable, the most notable change being land fragmentation.

Acres of Timberland by FIA Survey Year  
East Texas (relatively stable)

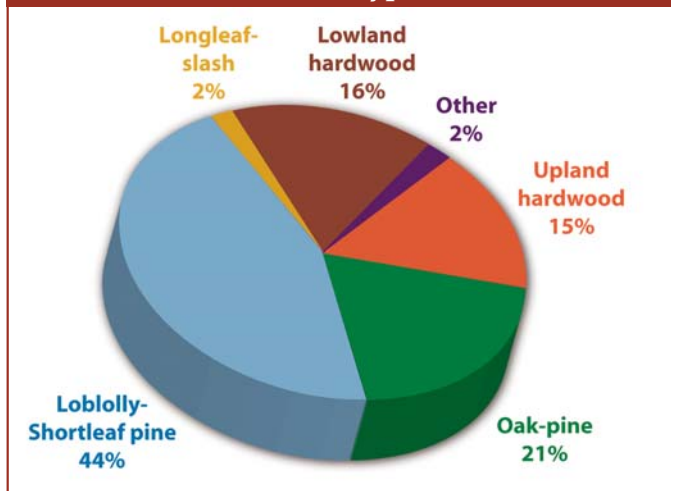


Timberland Acres  
1992-2002



Overall, landowners are increasing in number while property size is decreasing. This “fragmentation” of forestland is a major factor contributing to increased catastrophic wildfire risk, as well as having a negative effect on water quality and quantity, forest health and wildlife.

Forest Types



## Forest Protection and Health

**Ice storms:** The 2000/2001 ice storms destroyed thousands of acres of profitable timber and landscape trees in five Northeast Texas counties. Although losses were severe, the Texas Forest Service, with the help of federal Forest Stewardship funding, coordinated one of the largest reforestation projects from a natural disaster in the state's history: *7.2 million trees planted on 9,600 rural acres; 8,400, 15-gallon trees planted in 14 Northeast Texas communities.*

**Insects/disease:** Forest loss from southern pine beetle infestations was light or non-existent over the past ten years. Healthy, well-managed and properly thinned forests continue to be the best defense against destructive pest invasions.

**Wildfires:** The current 25-year drought cycle, which began in 1996, resulted in serious wildfire occurrences in 1996, 1998, 1999 and 2000. *The most severe wildfire siege the state has ever experienced occurred in 2000 when Texas Forest Service responded to 1,413 fires in a three-month period, burning 60,400 acres in East Texas.* In response to the growing fire severity, Texas Forest Service developed a pilot program in 1998 – the Texas Wildfire Protection Plan – a strategy that helped save \$70 million in structures during the 2000 fire siege. This proactive plan, while only funded at a pilot level by the Texas Legislature, continues to help Texas meet its statewide wildfire protection challenges.



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The average annual mortality of the forest resource was considerably higher than the previous survey in 1992, primarily due to one of the worst drought cycles (1996-2000) the state has experienced since the 1950s and a devastating ice storm in 2000.

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## Reforestation

Tree planting by large corporate landowners slowed down from a high of 120,000 acres in 2000, to a low of 62,600 acres in 2003. However, we are now seeing the positive effects of the intense reforestation efforts of industry over the past 20-25 years. But with industry divesting more than half of its land, Texas cannot continue to count on industries' reforestation efforts at 87,000 acres per year; rather, individual/family forest owners (currently reforesting 49,400 acres per year) will need to step up their tree-planting efforts considerably if Texas' forest resource is to be sustained for generations to come.

## Tree Volume

Volume increased by 16% (individual/family, industry, other private) and represents the amount of forest resource available for use. Volume is a direct measure of the forest's capacity to produce timber products and capture atmospheric carbon.

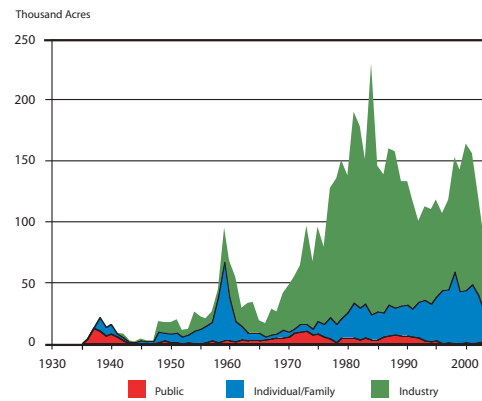
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There was a net gain of 22.5 million cubic feet of pine timber on private land which indicates an amount sufficient to support a new oriented strand board (OSB) mill in Southeast Texas, and given a boost in reforestation, a small log sawmill in four or five years as the inventory increases in size and volume. Combined, these two new mills would employ 455 workers with a \$263.7 million annual economic impact.

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If landowners continue to cut more than they grow, the resources needed to meet the state's forest-based economic potential and sustain healthy forests for clean water and air will be compromised, unless a large-scale tree-planting program is undertaken.

## Historical Reforestation in East Texas



## Growth and Removal

Growth exceeded removal by 8% annually over the ten-year survey period. Although growth exceeded removal overall, there was a distinctive surge in softwood timber removals in the individual/family ownership group. Removals exceeded growth by 21 percent, creating a 45-million cubic feet annual deficit over the ten-year period. This is the first time since the early 1900s that removals exceeded growth for each year of the ten-year cycle, representing a significant loss given this group owns more than 63% of the forestland.

*Why did removal exceed growth in the individual/family ownership group?* The bulk of the United States timber supply literally locked up in the West in the early 1990s due to the impact of the spotted owl on federal forestland. Demand was then met by southern forests, which was good for forest landowners because it inflated timber prices. However, it wasn't long before consumers started turning to other countries for their cheaper wood products, such as lumber, furniture and paper.



# Benefits of Texas Forests

## *Economic Impact*

According to a recent economic study by the Texas Forest Service<sup>2</sup>, the Texas forest sector produced \$22.1 billion in industry outputs, employed 79,500 workers and paid \$2.9 billion in wages, a major economic impact to the state's economy. In 23 of 43 East Texas counties, the two largest manufacturing employers are forest-based industries.

In 2003, the appraised timber tax base in East Texas was \$2.2 billion representing 7.6 million acres of productive forestland. As more agricultural lands are converted to forestlands (taxed two to five times greater per acre than open agricultural land), and local taxing entities are able to access accurate and real-time digital maps, counties will be able to properly classify and tax each acre of forestland.

A sluggish economy and global repositioning of forest industry in recent years have caused mill closures in East Texas, resulting in a significant loss of jobs and hundreds of millions of dollars in local economic impact and tax revenues. These factors may contribute to forestland being converted to other uses because of landowners choosing not to invest the long-term sustainability of timberland.

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The forest sector is a key component contributing to the health of the state's economy. Programs and policies need to be created that protect our forests and the viability of the forest sector to ensure a healthy state economy.

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## *Clean Water*

Nearly 80% of the nation's freshwater resources originate on forestland. Over 60% of the Texas freshwater resources originate from East Texas, making the 11.9 million acres of forestland a critical factor in the clean water equation. Forests not only act as natural filters to trap sedimentation, they also absorb rainfall, reduce flooding and provide habitat to wildlife and aquatic life.

Texas forestry leaders have developed the Best Management Practices (BMPs) program to protect East Texas streams and creeks during all forestry activities such as harvesting, road building, chemical treatments and tree planting. BMPs are voluntary; more than 90% of Texas landowners, loggers and consulting foresters implement these practices.

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As the state's population continues to grow, so will its demand for clean water.

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Trees are carbon sinks making forests a substantial warehouse for offsetting harmful carbon dioxide, the principal greenhouse gas.

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### *Clean Air*

Studies have shown that forests and urban trees help improve air quality by reducing temperatures, removing pollutants and reducing building energy use and consequent pollutant emissions from power plants. Because forests convert harmful atmospheric carbon into vegetation, increasing the quantity of carbon stored in forests has the potential to offset carbon released from manufacturing plants and other fossil fuel burning operations.

### *Wildlife Habitats and Recreation*

Hunting, wildlife viewing, bird watching, hiking and horseback riding are some of the activities that draw urban residents to the forests of East Texas including five state forests, three national forests and the Big Thicket National Preserve. Eco-tourism is an emerging, nature-based market of interest to landowners who are deriving economic benefit by making their land available for recreational opportunities.



East Texas' 11.9 million acres of forestland with clear, sparkling water, offer some of the most beautiful landscapes in the state, while providing ideal habitats for diverse animal and bird populations.



# Are today's forest resources sufficient for tomorrow's needs?

No matter how you cut it, Texas will not have adequate forest resources for future needs if we do not act now!

The state of Texas needs to invest in a major tree-planting program now to increase the forest resource base for tomorrow.

## IMPERATIVES FOR ACTION

Texas needs to create and support policies and programs aimed at bolstering the forest resources and forest-based economic development opportunities and, in so doing, plant the seeds of a sustainable forest resource and healthy environment for all Texans.



### **Invest in a major, statewide reforestation and tree-planting initiative.**

Using today's resources without replanting for future needs is not responsible stewardship.

*To ensure adequate forest resources for the state's estimated increase in consumption and realize maximum benefit from the forest's inherent environmental benefits, Texas needs to plant more trees.*

Reforestation of harvested land, conversion of idle pastureland to forestland, and urban and community tree planting programs must be intensified.



### **Establish policies for funding landowner reforestation efforts.**

With more than 63% of the forestland in the hands of the individual/family forest owners, their reforestation efforts need to be stepped up if Texas' forest resource is to be sustained for future generations. Programs are needed that encourage individual/family forest owners to plant new trees and manage their land for the long-term sustainability of our forests.



### **Create and maintain a healthy, forest business climate.**

With current hardwood and softwood surpluses, Texas is poised to expand its forest products industry base providing a much-needed boost to the state's economy. Transportation infrastructure, tax incentives, and a sustainable supply of timber, are critical to the success of forest industry recruitment and expansion, and lead to improved community economic development and forest resource sustainability.



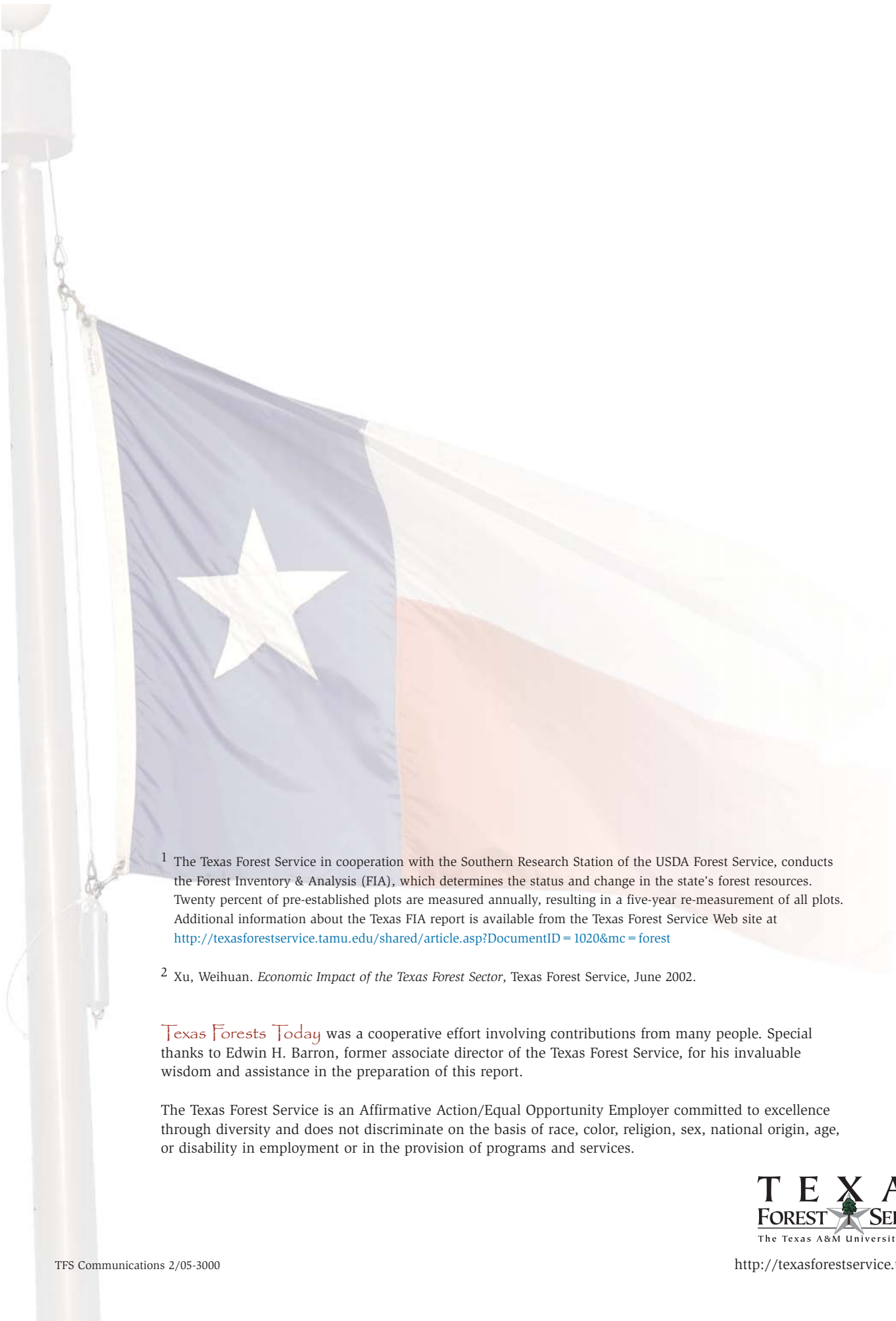
### **Discontinue the practice of giving away forest-based business opportunities to other states and nations.**

Demand for forest products by Texas consumers doubled in the last decade. Yet, the market share of Texas-produced forest products dropped from 54% in 1988 to 30% in 2003. We have an abundance of quality, commercial timber throughout the eastern third of the state. Texas needs to turn this logistical advantage into an economic asset for Texas communities.



### **Explore the emerging environmental services and credit trading markets as additional potential resources for forest landowners.**

Policies need to be developed promoting the exploration and feasibility of marketing the inherent environmental qualities of trees and forests. If the proper mechanism for certifications and registrations can be implemented in Texas, markets for environmental services could be created where landowners would grow trees for carbon sequestration. This would offer industry a lower cost option to mitigating carbon dioxide emissions from fossil fuel consumption while providing added income for forest landowners.



<sup>1</sup> The Texas Forest Service in cooperation with the Southern Research Station of the USDA Forest Service, conducts the Forest Inventory & Analysis (FIA), which determines the status and change in the state's forest resources. Twenty percent of pre-established plots are measured annually, resulting in a five-year re-measurement of all plots. Additional information about the Texas FIA report is available from the Texas Forest Service Web site at <http://texasforestsERVICE.tamu.edu/shared/article.asp?DocumentID=1020&mc=forest>

<sup>2</sup> Xu, Weihuan. *Economic Impact of the Texas Forest Sector*, Texas Forest Service, June 2002.

*Texas Forests Today* was a cooperative effort involving contributions from many people. Special thanks to Edwin H. Barron, former associate director of the Texas Forest Service, for his invaluable wisdom and assistance in the preparation of this report.

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