

Texas Oak Wilt Suppression Project

Challenges, Accomplishments

and Lessons Learned

Ronald F. Billings
Texas Forest Service

Oak Wilt in Texas

- Oak wilt first identified in Texas in Dallas in 1961
- Prior to mid-1970s, live oak mortality in Central Texas attributed to other causes
- Live oaks and red (Spanish) oaks are most severely affected by oak wilt
- Only red oaks produce fungal mats
- Most tree losses occur from pathogen spread through connected root systems (common in live oaks) or root grafts.

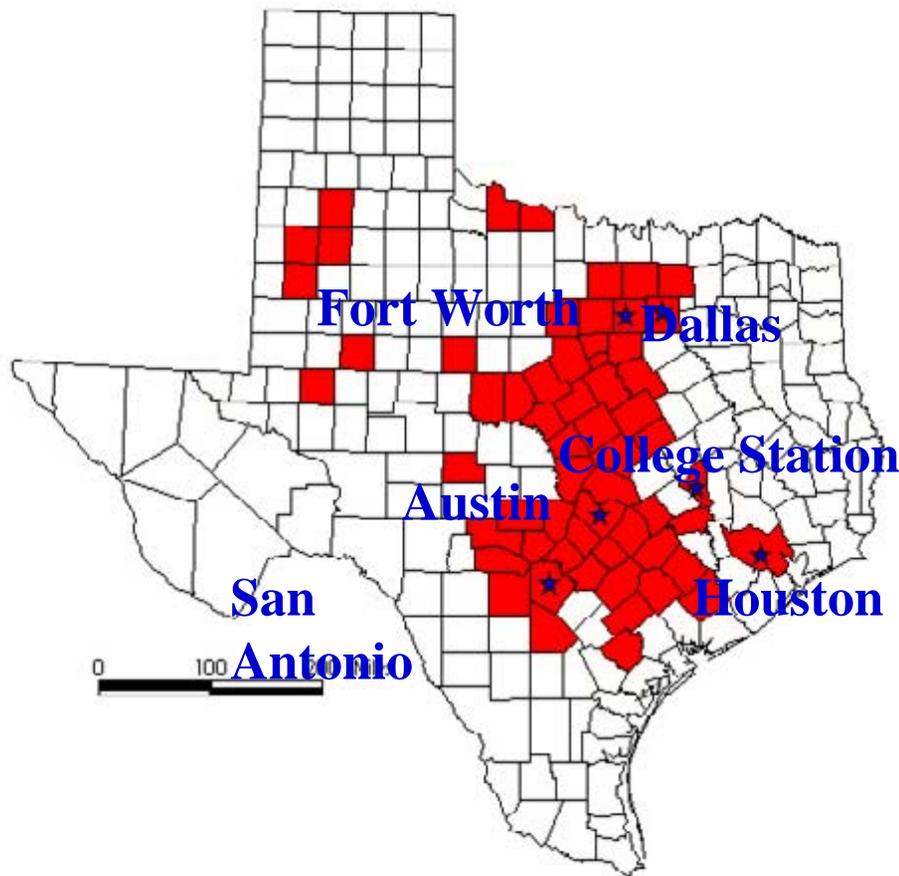


*Veinal necrosis
on live oak*



Oak wilt fungal mat on red oak

Distribution of Oak Wilt in Texas



- **56 counties in Central Texas**
- **6 counties in West Texas**

Counties in Texas with oak wilt cover an area larger than VT, NH, MA, CT, NJ, RI and MD combined.



Texas Oak Wilt Suppression Project



Since 1988



Texas Oak Wilt Suppression Project Background



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- Initiated in 1988, by TFS & City of Austin following a 5-year federal:state Oak Wilt Demonstration Project
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- TFS staff in 1988 = one forester in Austin, urban foresters in Fort Worth and San Antonio.

Oak Wilt in Texas

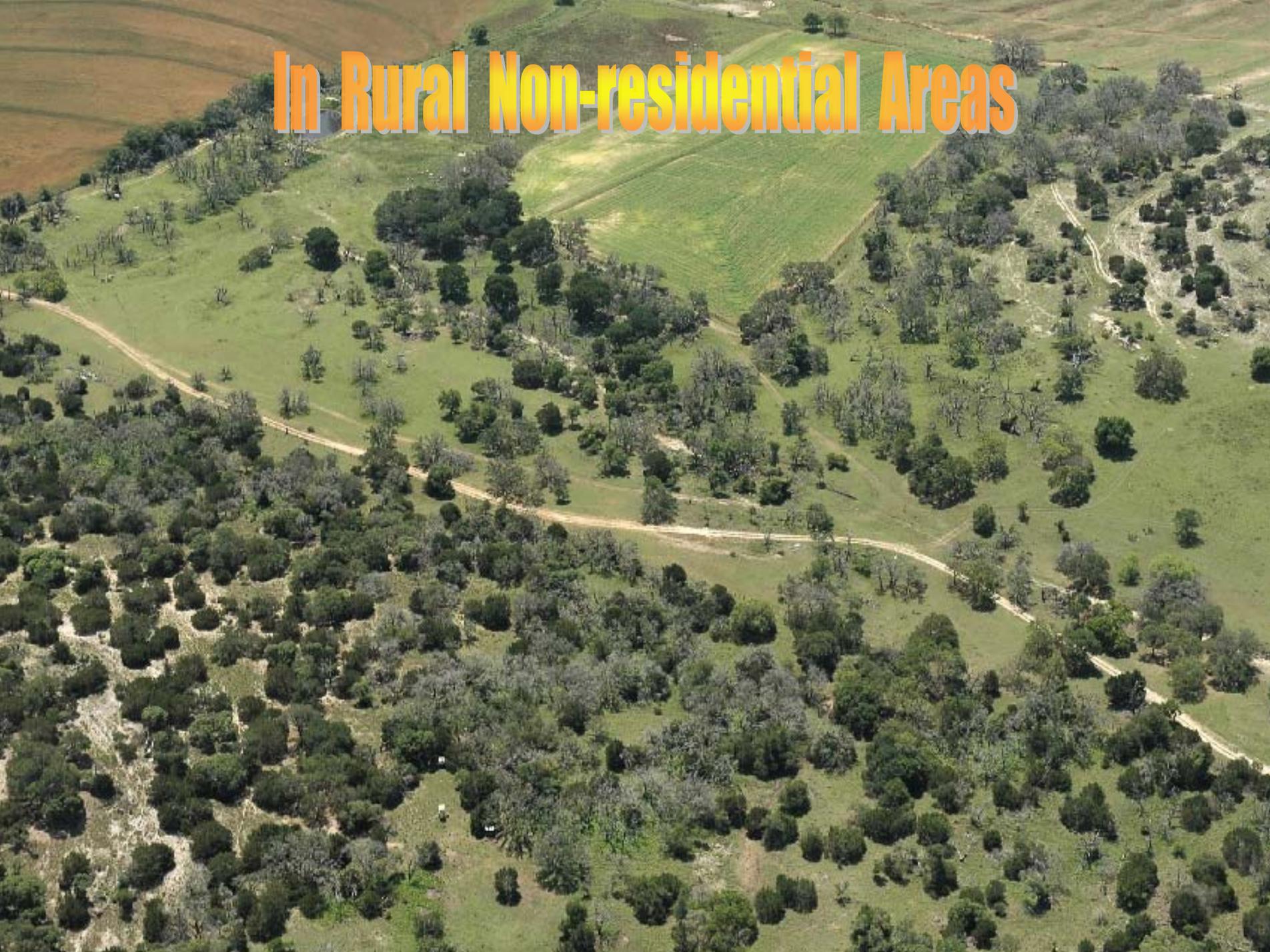
(Initial Perception = Small problem, easy to contain)



Oak Wilt in Texas: Actual Situation (A Huge Problem)



In Rural Non-residential Areas





In Rural Residential Areas



In Suburban Areas



In Urban Areas



In High Class Urban Areas

Oak Wilt Project - TFS Staff Foresters in Central Texas

2007



Jim Rooni
Regional Forester, Austin



James Houser
Oak Wilt Technical Coordinator
Austin



Carrie Atchison
Granbury



Renee Burks
Meridian



Rob Grotty
Austin



Eric Beckers
Austin



Robert Edmonson
Johnson City



Mark Duff
Kerrville



Daniel Lewis
La Grange

Vacant

Urban Forester
San Antonio

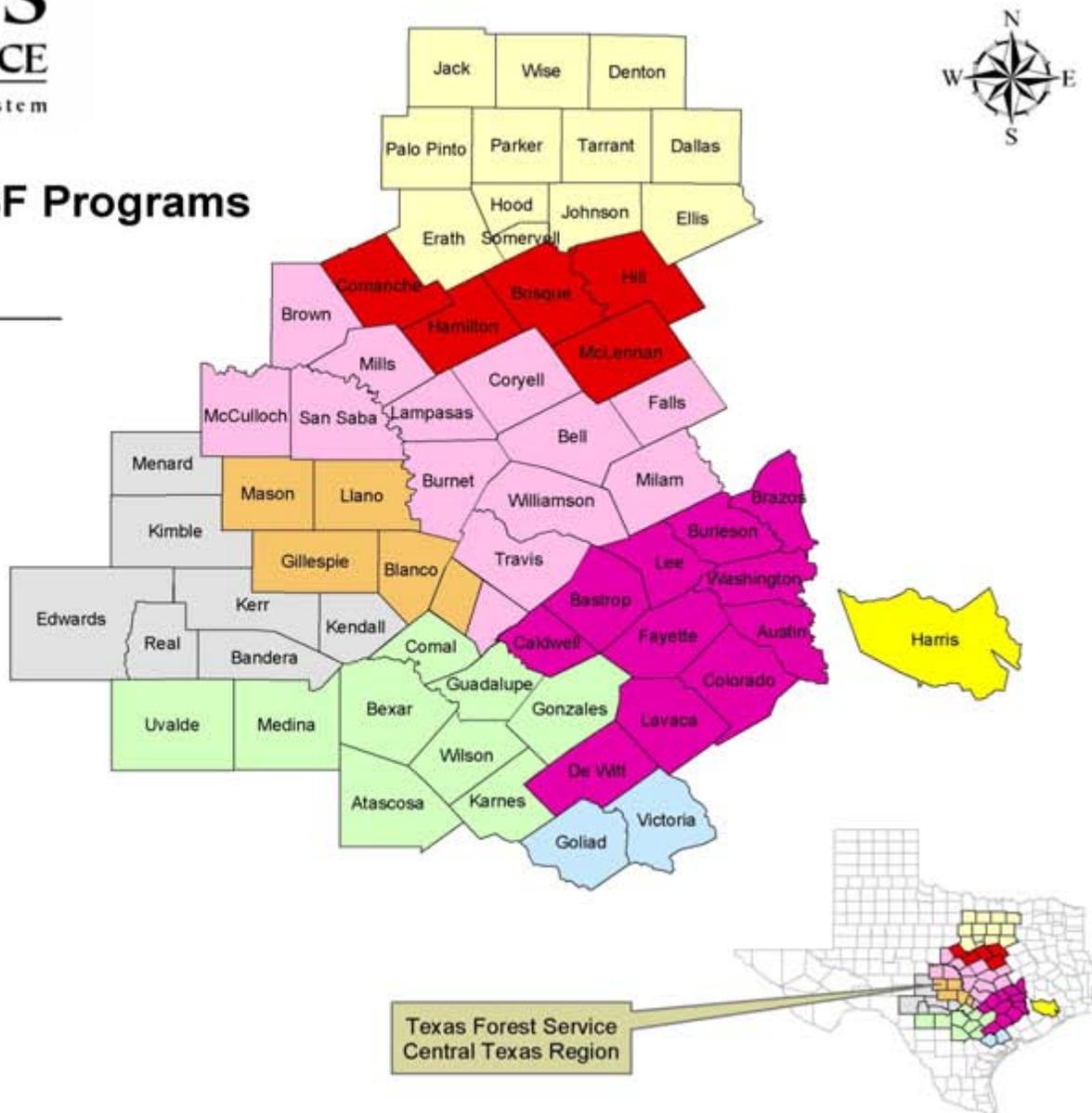
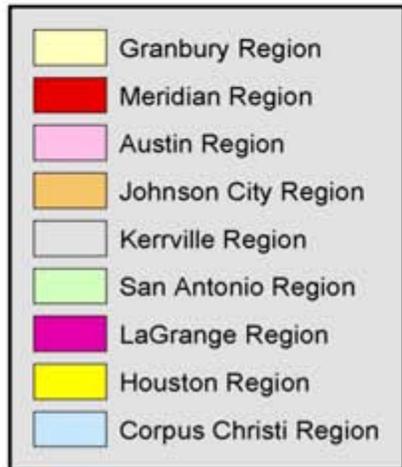
Each TFS Forester is Responsible for Multiple Counties



Central Texas FRD & SF Programs

Regional Coverage Areas

- Oak Wilt Suppression
- Forest Stewardship
- Forest Inventory & Analysis
- Urban & Community Forestry





**Dr. David Appel, Texas A&M University Forest Pathologist
Provides Technical Expertise**

Oak Wilt Technical Advisory Board

- **Dr. Dave Appel**, TAMU
- **Dr. Brad Barber**, TFS
- **Dr. Ron Billings**, TFS
- **Carrie Burns**, City of Lakeway
- **James Houser**, TFS
- **Jay Culver**, City of Austin
- **Gene Gehring**, Arborist
- **Jordy Hagen**, Arborist
- **Jim Rooni**, TFS
- **Emsud Horosovic**, City of Round Rock
- **Billy Kniffen**, Hays County Extension
- **Dr. Forrest Oliveria**, US Forest Service
- **Curt Randa**, City of Cedar Park
- **Dale Starkey**, US Forest Service
- **Damon Waitt**, L.B. J. Wildflower Center
- **Dr. Dan Wilson**, US Forest Service



Project Objectives

- **Public awareness**
- **Detection and evaluation**
- **Technical assistance to landowners**
- **Cost shares for oak wilt control**
- **Train oak wilt specialists**
- **Develop and implement strategic plan**



Deal One-on-one with Affected Property Owners





Partnerships and Cooperation

- **LBJ Wildflower Center**
- **Houston Advanced Research Center (NBII)**
- **Cities of Austin, Lakeway**
- **Master Gardeners/Master Naturalists**
- **ISA Certified Arborists**



Oak Wilt Web Page

Since 2003

A cooperative project involving:

- Lady Bird Johnson Wildflower Center
- Houston Advanced Research Center
- National Biological Information Infrastructure
- Texas Forest Service
- USDA Forest Service, Forest Health Protection
- ISA, Texas Chapter

<http://www.texasoakwilt.org/>

http://www.texasoakwilt.org



Over 19,000
page views and
79,000 hits in
March 2007

TEXAS OAK WILT INFORMATION PARTNERSHIP

Home
Oak Wilt in Texas
Oak Wilt FAQs
Oak Wilt Assistance
Vendor Directory
Stewardship
For Professionals
Additional Resources
Oak Wilt Symposium

WELCOME TO WWW.TEXASOAKWILT.ORG

Within these pages you will find an array of oak wilt resources covering everything from oak wilt biology to diagnosis, treatment, and management. Clicking the banner will return you to the Oak Wilt Information Partnership home.

The Oak Wilt Information Partnership is a collaborative project among the Texas Forest Service, the Forest Health Protection branch of the U.S. Department of Agriculture (USDA) Forest Service, the Central Southwest/Gulf Coast Information Node of NBI housed at the Houston Advanced Research Center, the Texas Chapter of the International Society of Arboriculture, and the Lady Bird Johnson Wildflower Center.

The goals of the Oak Wilt Information Partnership are:

- To deliver oak wilt educational materials to the general public;
- Facilitate communication among private and public stakeholders who have a vested interest in oak wilt; and
- Provide a venue for sharing information about oak wilt identification, management, and research.

What's New

Upcoming Workshops

June 19, 2007 Master Gardener Oak Wilt Specialist Brady, TX. Contact Jim Houser-TFS Oak Wilt Technical Coordinator (512) 339-4589 or Jerry Kidd-McCulloch County Extension Agent (915) 597-1295 for details. Click [here](#) for this workshop schedule.

June 28, 2007 Master Gardener-Oak Wilt Specialist-Granbury, TX. Contact Jim Houser-TFS Oak Wilt Technical Coordinator (512) 339-4589 or Carrie Atchison-TFS Staff Forester (817) 579-5773 for details.

Attention Oak Wilt Vendors Please read [this](#) and update your information [here](#) or [here](#).

Studies on Pruning Cuts and Wound Dressings for Oak Wilt Control (Used by permission. Copyright International Society of Arboriculture, Arboriculture & Urban Forestry 2007. 33 (2) 132-139) ([Download PDF](#))

National Oak Wilt Symposium

June 4-7 at the Austin Hilton Hotel. [Click here](#) to register for the NOWS Conference online or [click here](#) to learn more.



OAK WILT SPECIALISTS OF TEXAS, INC.



🌳 Suppression Trenching 🌳 Disease Management Plans
🌳 Alamo® Tree Injections 🌳 Specialized Cedar Control

877-842-8733

stopoakwilt.com

GOD BLESS AMERICA

46 Oak Wilt Vendors Listed on Web Page

38 Oak Wilt Certified Arborists Listed on Web Page

ISA Certified Arborist Training



- 66 trained in San Antonio in 2006
- 51 trained in Austin and Dallas in 2007



Master Gardener/Master Naturalists



Prevention



Systemic fungicides are available to protect individual trees from oak wilt, but these do not stop tree-to-tree spread.

State-of-the-art GIS and Data Management Systems



DOQQ Photo Maps of Treatments

TFS 6875

TEXAS FOREST SERVICE
Oak Wilt Suppression Project
Treatment Map



200 0 200 400 Feet

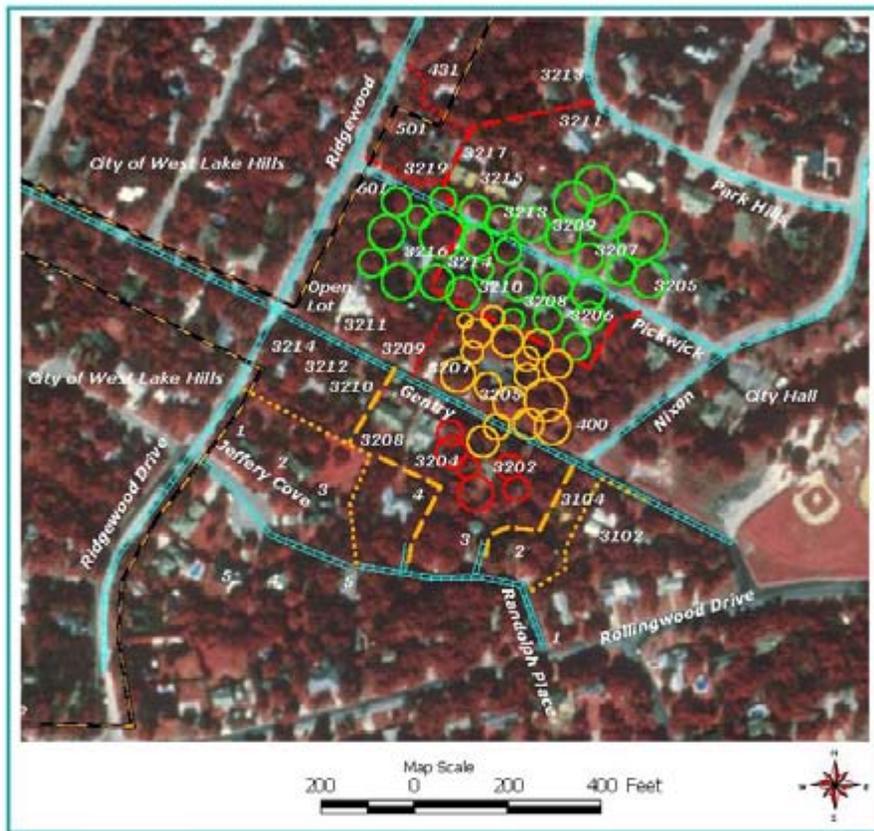
Trench - August 1999 - 1450'
 Oak Wilt

Project: Marcum
County: Hays
Quad: Dripping Springs - NW
Loc: 290W, Bell Springs to Benjie
Prepared By: Eric Beckers
Last Revised: July 18, 2002

TFS Form 6875

TEXAS
FOREST SERVICE
The Texas A&M University System

Oak Wilt Treatment Plan



Map Scale
200 0 200 400 Feet



Map Legend

- Most Recent Spread - June 01
- Area of New Spread
- Previous Oak Wilt
- 2002 Primary Trench Location (52" depth - 980 ft.)
- 2002 Secondary Trench (52" depth - 860 ft.)
- 1998 Trench Locations (42" depth)
- 1994 Trench Locations (36" depth)
- Utility Trench Locations
- City Boundary

Project Information

Project Name: City of Rollingwood
Location: Gentry & Randolph
County: Travis County, TX
USGS Quad: Austin West
Latitude: N 30 16' 23"
Longitude: W 97 47' 23"
Prepared by: J. Rooni - TFS Austin
17-July-2002

Barrier Treatments

- In live oak motts, expanding oak wilt centers may spread through interconnected root systems up to 100 feet per year.
- Trenching (at least 4 feet deep) is required to halt oak wilt spread through interconnected root systems
- Roguing (removal of diseased trees within the trenched area) is recommended in rural areas



Most Common Trenching Equipment in Texas

Ripper Bar



Rock Saw



Back Hoe

52- or 60-inch Rock Saw



Texas –sized Trencher



Total Trench Accomplishments 1988 - 2007

Centers trenched = 2,466

Feet of trench = 3.4 Million Feet (665 miles)

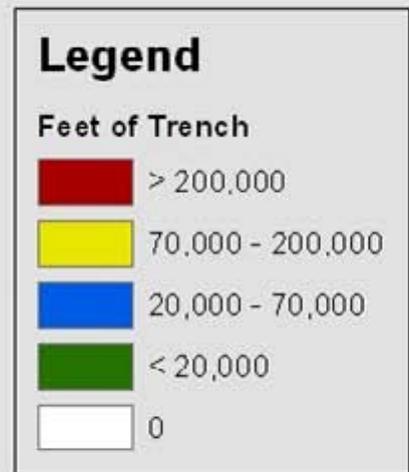
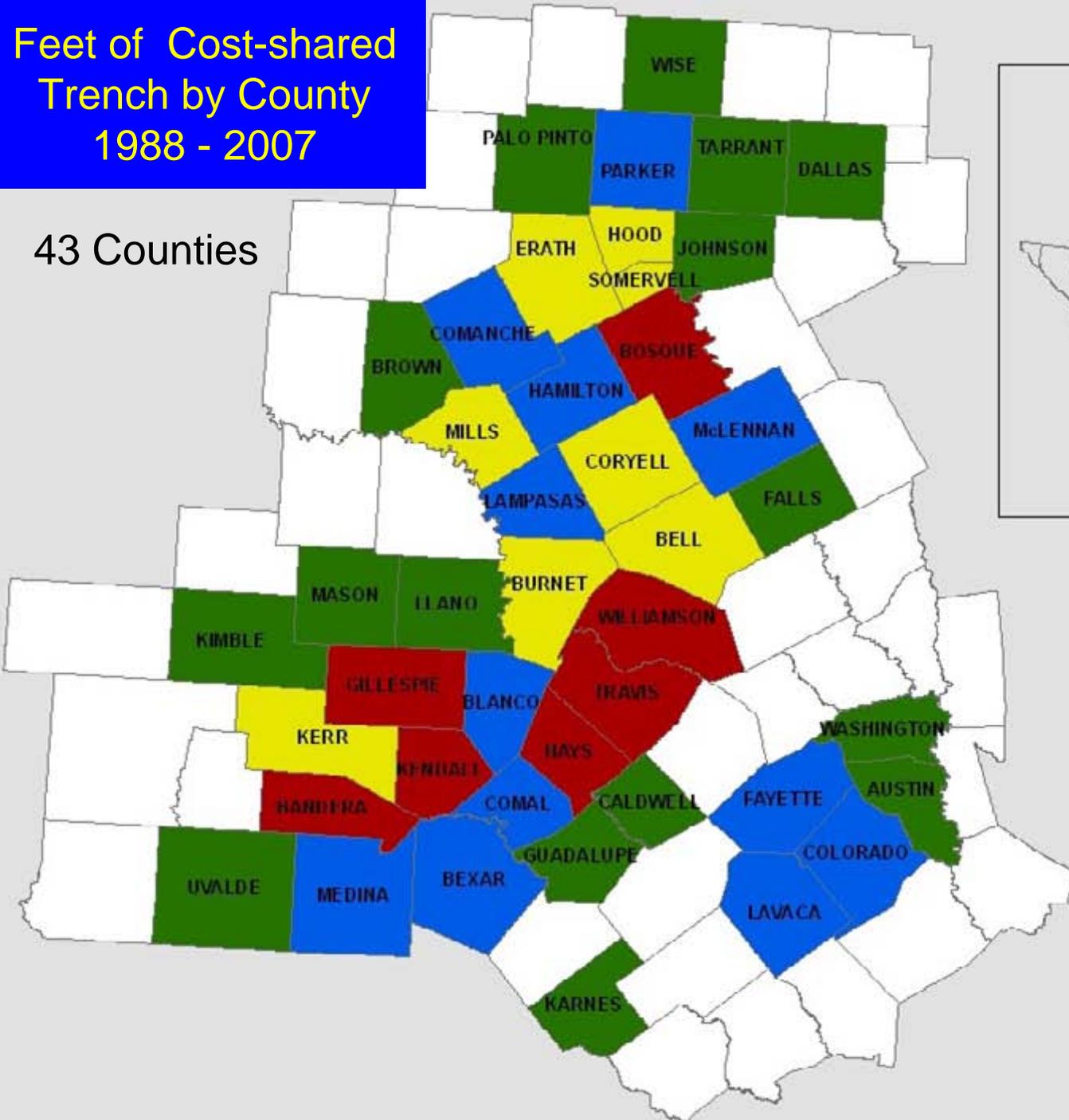
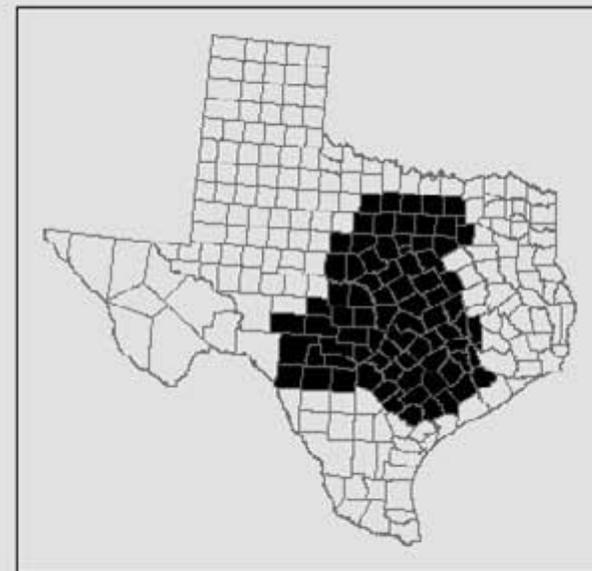
Total cost shares = \$ 2,461,758

Total costs = \$ 6,005,645

Average cost/foot = \$1.71

Feet of Cost-shared Trench by County 1988 - 2007

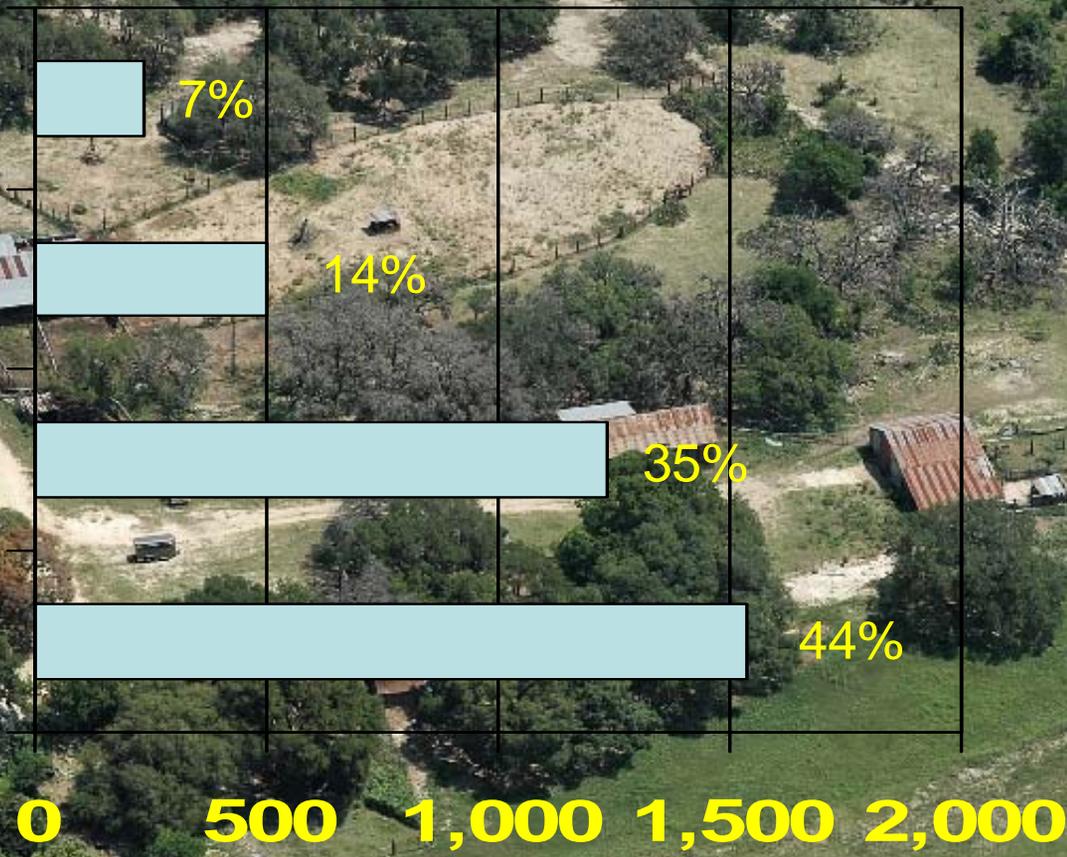
43 Counties



Feet of Trench by Land Use

1988 - 2007

Urban
Suburban
Rural Res.
Rural

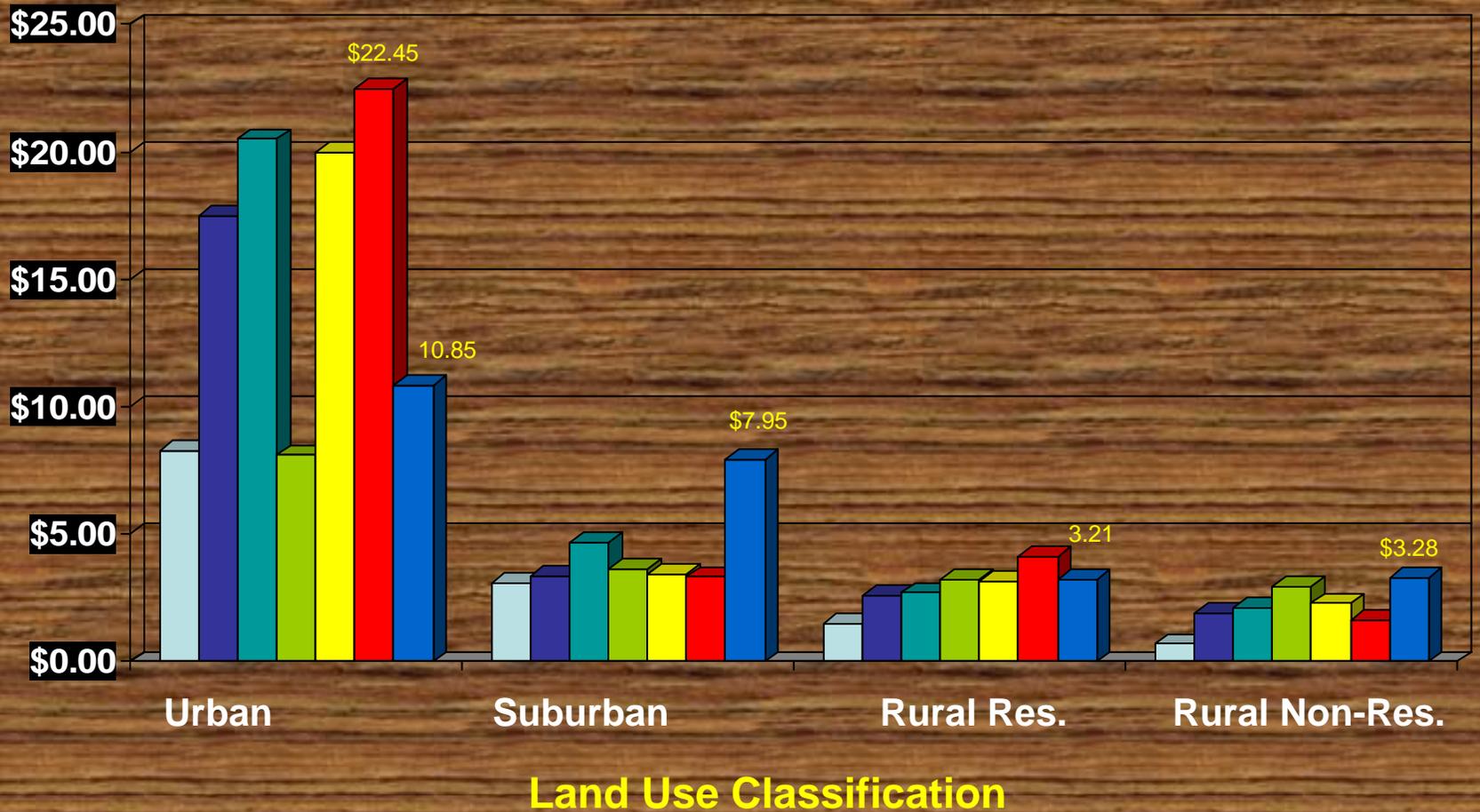


Feet x 1,000

Total = 3.4 million feet (648 miles)

Cost/Foot of Trenches by Land Use

Texas Oak Wilt Suppression Project





Long-range Strategic Plan

- Pursue integrated approach to pest management
- Identification of priority areas, partnerships
- Empower more cities & communities to address oak wilt
- Involve and train volunteer groups to assist with Project goals
- Plant resistant trees; diversify landscapes
- Increase state funding



Lessons Learned

About Oak Wilt

- Oak wilt impact has increased with a rapidly-increasing population, property fragmentation, and urban sprawl.



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- Trench depth, placement, and tree removal inside trenched area are critical to success.
- Trenches to 4 feet depth are effective in halting oak wilt spread, but failure (breakout) is always an option.
- Most breakouts occur within 2 years, but some may appear 10-12 years later.

About Oak Wilt Management

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- Neighborhoods have developed unique methods for combating oak wilt.



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- Neighborhoods have developed unique methods for combating oak wilt
- Partnerships are the key.
- A holistic, stewardship approach is best.

No Silver Bullet for Oak Wilt



The Texas Chapter,
International Society of
Arboriculture presents

2nd National Oak Wilt Symposium



June 4 - 7, 2007
Hilton Hotel
Austin, Texas



Conclusion

With the proper staff, dedication, resources, partnerships, knowledge, and long-term commitment, anything can be accomplished.



**The Texas Cooperative
Oak Wilt Suppression
Project is proof of that!**



**Oak Wilt
Management**

Stewardship

Woodlands
Protection
Initiative

**Watershed
Protection**

**Fire
Prevention**

**Thanks
for your attention.**



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