

Texas Wildfire Protection Plan

*the promise of a safer future
for Texans*



*A comprehensive plan to reduce fire occurrence and homes
at risk, as well as increase state and local ability to respond.*

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Texas Wildfire Protection Plan

Introduction

Wildfires in Texas are both a rural and urban issue. Since 1996, the state has seen significant fire seasons in seven out of the past ten years. In 2005-2006, more than 2.2 million acres have burned as a result of more than 29,000 fires. Of those, 85% were less than two miles from a community. In this same time period, \$556 million in property has been lost.

To adequately protect the state, Texas needs to resolve the increasing statewide deficiency in firefighting resources – the state is in critical need of additional firefighters, fire coordinators, prevention and mitigation specialists, and heavy firefighting equipment.

The Texas Wildfire Protection Plan (TWPP) was funded in 1999 by the Texas Legislature as a pilot project at \$4 million per year. However, funding for this highly successful pilot has been eroding since its inception to the point that the original \$4 million has been reduced to nearly half of the initial request.

By making a moderate investment in the Texas Wildfire Protection Plan – up front instead of after we start burning – to prevent fires and mitigate the factors which cause wildfires, the lives and properties of Texans will be protected and saved from catastrophic loss.

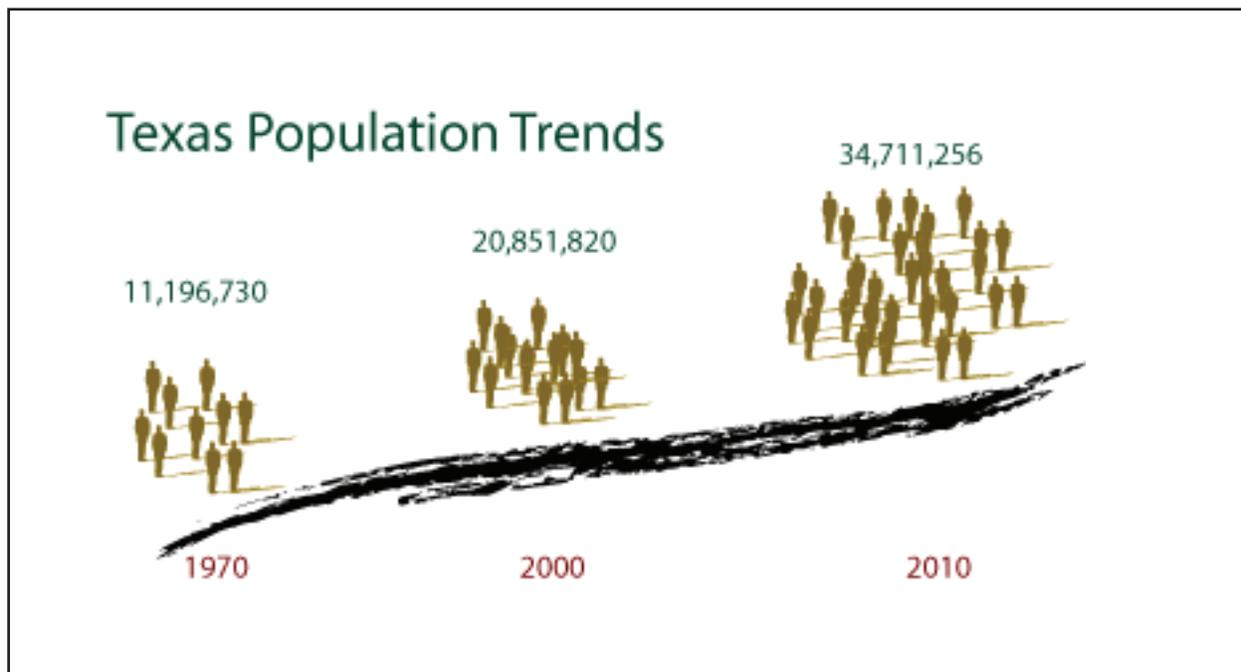
Why do Wildfires occur?

Three primary factors combined to create this year's fire season – one of the state's most historic – which has already set records for lives lost, homes and property destroyed.

Population

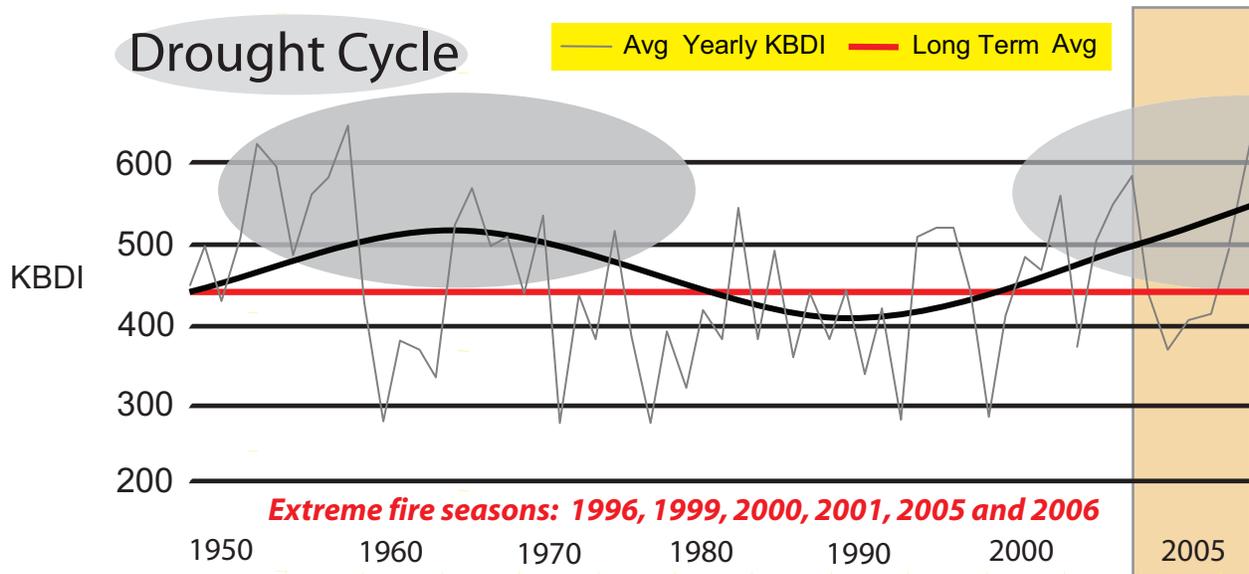
Since 1970, the population of Texas has doubled. Few new communities have been created; however many communities and cities have expanded into the undeveloped "wildland" without regard for wildland fire protection principles. People have and continue to "get in harm's way" and cause 95% of the wildfires occurring in Texas.

Source: U.S. Census Bureau 2000



Drought

In 1999, Texas Forest Service identified a distinctive drought cycle occurring in Texas by analyzing weather data from the past 100 years. Three separate 25 to 30 year drought cycles were recognized, with the last drought being in the 1950s to the late 1970s. This drought drove many small farmers out of Central and East Texas who could not withstand extended crop failure. The current drought, which began in 1996, is also taking its toll on the agricultural industry.



KBDI = Keetch-Byram Drought Index

Land Use Changes

Land use patterns have changed in the past 100 years, resulting in significantly more vegetation and fuels available to be burned. The town of Cross Plains in North Central Texas was devastated by fire on December 27, 2005. In the early 1900s, this area was used by share croppers and farmers, and little or no vegetation remained around the homes, farms and ranches in the community.

By 2005, a town of 1,076 people had sprung up with the typical Texas landscape – tall grass, trees and other vegetation – surrounding their homes. The devastating fire in December 2005 claimed two lives and destroyed 116 homes. Little remained of what was once a thriving community.



*Cross Plains, Texas
1945*



*Cross Plains, Texas
December 27, 2005*

Communities at Risk

The town of Cross Plains is an example of what happens when a community gets in the way of wildfire. There are currently 14,506 communities in Texas deemed to be at risk of the destructive potential of a devastating wildfire.

Texas Wildfire Response

Under the leadership of Texas Forest Service, Texas has a tiered strategy for fire response to meet this risk. This involves local fire departments, Texas Forest Service and other state agencies, as well as firefighters and equipment from across the nation.

The Role of Fire Departments

The local fire departments are the first responders to wildland fires in Texas. They are the first line of defense. However, if they determine that their capacity to control the fire is exceeded, suppression assistance is requested from Texas Forest Service. This may occur quickly or over time after the fire has grown large and become destructive.

Local fire departments vary in their structure and organization. In a survey conducted by Texas Forest Service, of the approximately 1,800 fire departments in Texas, 1,450 were found to be strictly volunteer departments, 250 have a combination of paid and volunteer firefighters, and 100 are fully-paid departments. The survey indicated there are a total of 59,000 firefighters in the state, with 40,000 being volunteers and 19,000 being paid firefighters.

When asked about the major operational issues faced by the departments, fighting wildland fires was the most frequent response. After funding, the major administration issues cited were firefighter availability, recruitment and retention.

Local departments serving as the first line of defense are limited in the number of personnel available and the equipment they have.

In addition to the number of departments, the survey provided the following:

- From the Hill Country and I-35 corridor east, there are generally five or more departments per county. Ten or more departments per county are not uncommon.
- Across West Texas, South Texas, the Panhandle and the Rolling Plains, there are generally four departments or fewer per county. Many of these counties have only one or two departments per county.
- These departments suppress more than 90% of the wildfires in the state, however they have a limited ability to respond over long distances and for long periods of time.
- They need state support when fire behavior/duration, heavy vegetation or terrain exceeds their capabilities.

Texas Forest Service Mission and Mandate

Texas Forest Service is mandated by the Texas legislature to protect the entire state—its forests, woodland and citizens—from wildfire. Also, in the state’s emergency management plan, Texas Forest Service is responsible for suppressing all fires that exceed local capacity.

In addition to suppression efforts when a fire breaks out, prevention and the elimination of the causes leading to wildfire are important facets to the operation. A large component of Texas Forest Service’s fire program includes informing the public of possible wildfire danger and offering steps they need to take to eliminate risk to themselves, their families and their property. Therefore, public education and awareness programs are essential in reducing the number of fires started.

Texas Forest Service also provides leadership, expertise and equipment beyond the capabilities of local communities. In 1998, the agency developed a comprehensive approach to address the state’s wildfire problem. This approach works to maximize the capabilities and effectiveness of all responders. To do so, in times of extreme wildfire danger, Texas Forest Service stages personnel and equipment in strategic locations across the state to meet the expected need. Constant vigilance and reliance on assessment and planning go into the fluid nature of shifting these assets to areas in the most danger of being affected by wildfire.

All Hazard Response

In addition to the firefighting mandate, Texas Forest Service is routinely called upon to assist during all-hazard emergencies such as hurricanes, floods, tornadoes, oil spills and domestic situations that need to be managed by an incident command staff. The incident command system provides a means to coordinate and manage personnel, equipment, facilities and communications to effectively accomplish emergency response operational requirements at incident sites.

The State of Texas Emergency Management Plan states:

The Texas Forest Service has organized several “Incident Management Teams” composed of ICS-experienced personnel that can be deployed as needed to either manage or assist in the management of emergency response operations. The Incident Management Teams can operate from any direction and control facility, but are particularly effective in situations that require field deployment of resources.

Background: Benefits of the Texas Wildfire Protection Plan (TWPP)— The promise of a safer future for Texans

The concept for the Texas Wildfire Protection Plan began following the 1996 fire season. By 1998, the agency had instituted the initial stages of the plan, and over the past decade, it has been tested, refined and developed as knowledge and understanding of the situations facing the state has increased. The plan was funded as a Pilot Project by the 77th Legislature in 1999 at \$4 million per annum of the approximately \$33 million per annum requested.

Today, the plan's practices are the basis for a proven, proactive interagency wildfire response model emphasizing prevention, reduction of risks and hazardous conditions; pre-positioning of resources based on fire risk; local fire department capacity-building; rapid initial attack to wildland fires; and unified operations with local, state and federal responders. When fully implemented, the plan builds a solid wildfire protection infrastructure for Texas, leading to decreased fire occurrences.

The plan is built around a few basic facts:

- Most wildfires in Texas are preventable – more than 90% are caused by people
- Expected fire behavior such as rate of spread and difficulty of control can be scientifically predicted based on weather, vegetation and other environmental factors
- Most of the proven effective methods homeowners and responders can take to protect home and property need to be accomplished before the fire starts
- Coordinated and prompt response will reduce fire size and losses
- Smaller fire size and more effectively coordinated response efforts allow responders to suppress fires with fewer resources, lowering overall suppression costs, as out-of-state resources are generally three times as expensive as comparable Texas resources

When fully implemented, the Texas Wildfire Protection Plan builds a solid wildfire protection infrastructure for Texas, leading to decreased fire occurrences.

Assessment and Monitoring

Texas Forest Service continually analyzes current and predicted weather conditions throughout the year. The assessment and predictive services staff develop seasonal forecasts that assist the state and local governments in preparing for upcoming fire seasons. Daily fire danger forecasts are calculated for the entire state which are also used by these entities.

Wildfires are tracked, and ignition sources are determined when possible. Texas Forest Service staff monitors local response capabilities and disseminates assessment information to cooperators, elected officials and the public

Conditions of wildland fuels are also observed and used to calculate and predict fire behavior. Each region of the state contains a dominant fuel type – grasses, brush and trees – that Texas Forest Service must consider when assessing risk. When conditions are extremely dry, the percentage of rainfall and how quickly the grasses, brush and trees dry out are calculated.

In addition, predictive service staff works with National Weather Service forecasters to determine areas of extreme fire danger by assessing forecasted temperatures, relative humidity and wind force.

By considering all these elements, Texas Forest Service is able to predict fire behavior for certain areas and conditions. These assessments are used in pre-positioning personnel to areas of extreme fire danger.

When funded, the TWPP will allow for additional predictive services and fire behavior professionals, and added weather stations to be positioned across the state to monitor fire conditions at a more local level.

Prevention and Reduction of Risks and Hazardous Conditions

Texas has identified 14,506 communities as being at risk for wildland fire. Surprisingly, many populated areas are more at risk, due to the increased number of human-caused fires.

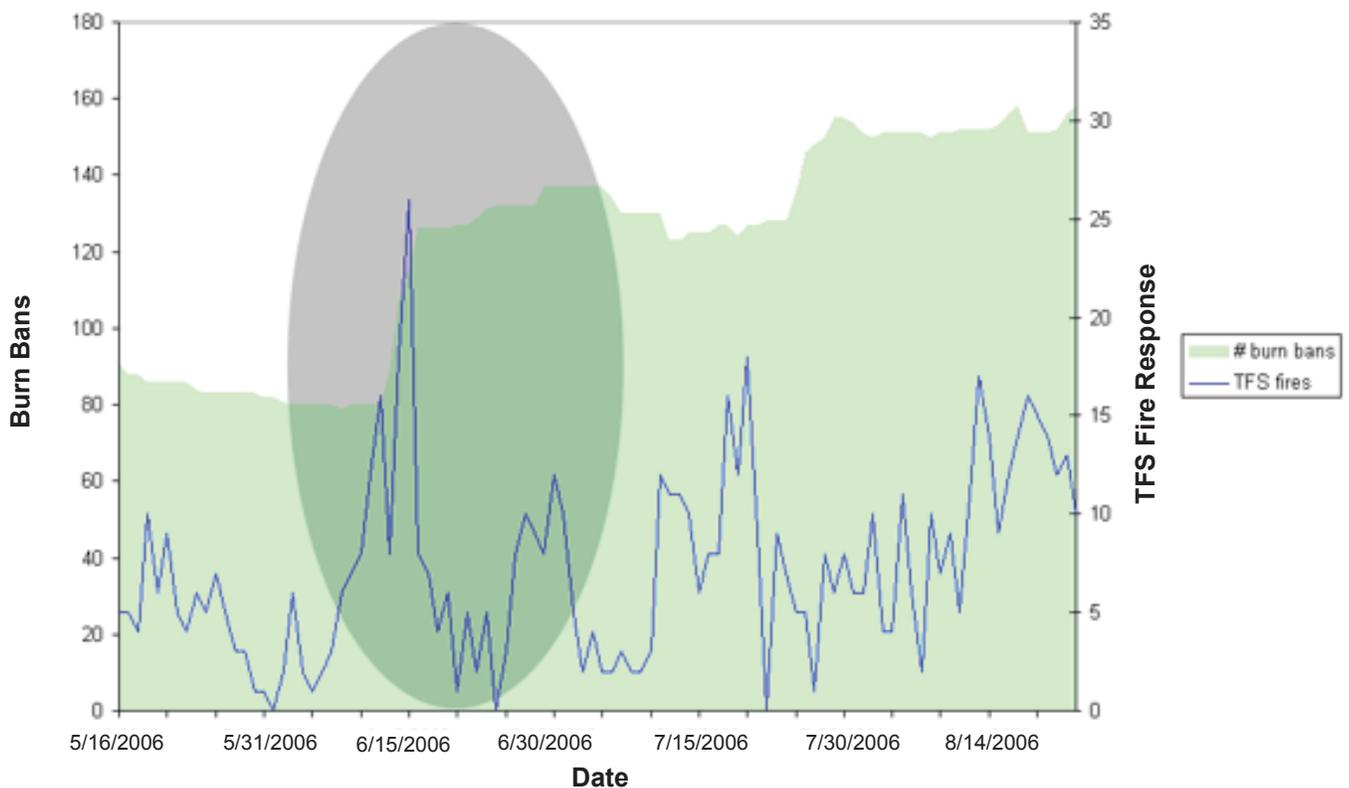
Texas Forest Service assigns a high priority to year-round wildfire prevention and other efforts that reduce hazardous conditions and risks to citizens and property. To be effective, these efforts must be based on local assessments and initiated prior to a developing fire season. Local involvement when designing and delivering these programs is also essential.

Wildfire Prevention

Wildfire prevention campaigns are particularly effective in Texas where more than 90% of fires are caused by human activity. Prevention specialists work with county government, local citizens groups and responders to develop targeted prevention campaigns based on local fire occurrence activity. Utilizing radio, TV, print and web-based products, as well as county burn bans and local outreach programs, active prevention campaigns have been proven to reduce local fire occurrence by 60% to 70%.

When funded, the TWPP will allow Texas Forest Service prevention teams to work with more counties and local governments to educate the public on prevention methods vital to stopping wildfires before they start.

Burn Ban v. TFS Fire Response :



June 15, 2006 = approximately 138 Texas Forest Service responses to fires. When burn bans were placed in the following days, response numbers fell dramatically.

Community Wildfire Protection Plans (CWPP)

Texas Forest Service has a long history of helping Texans help themselves. Urban Wildland Interface (UWI) specialists help communities determine their risk level from wildfires, identify hazards and determine treatment options for reducing wildfire risks, particularly in UWI areas where subdivisions, businesses and other developments meet natural areas such as fields and forests. These specialists also encourage communities and property owners to take a prominent role in eliminating their risk and hazards. Organized community protection activity can greatly reduce damage and losses even when large wildfires still occur.

Texas Forest Service has developed a user-friendly set of guides and tools—the Community Wildfire Protection Plan (CWPP)—to aid communities wishing to reduce the risk wildfires pose to homes, businesses and natural resources on which so many of the communities in Texas depend. A CWPP is unique in that it empowers a community to share the responsibility of determining the best strategies for their protection and allows community members to make informed choices to diminish the hazards around them.

Emerging Communities Initiative

As the state population continues to grow, many Texas communities are experiencing high velocity change and development. Texas Forest Service's participation in the Emerging Communities Initiative helps communities prepare and plan in order to alleviate problems as they grow. Texas Forest Service specialists work to identify and organized local community groups, partners and cooperators in this effort. Many of these communities have gone on to become nationally recognized as Firewise Communities.

Fuel Reduction - Mitigation

One of the tools in hazard reduction efforts is the removal of heavy vegetation growth under controlled conditions to reduce the fuels available to future wildfires. Vegetation is generally removed using mechanical methods—such as mowing or chopping—or prescribed (controlled) fires under manageable conditions. Removal of the excess vegetation, such as the Pecos River project (shown at right) will aid in wildland fire suppression in treated areas for years to come.

The Texas Wildfire Protection Plan allows for sufficient prevention, UWI and mitigation specialists to make these cooperative programs available to communities across the state.

Pecos River Prescribed Burn Demonstration
September 29, 2006



Before prescribed
burning



During prescribed
burning



After prescribed
burning

Planning and Preparedness

Planning personnel work in conjunction with risk assessment personnel to monitor data to determine the needed preparedness levels. Based on this analysis, resources are pre-positioned in areas of the state deemed to be at risk before the fires start. The force structure is flexible, is based on the current fire risk and occurrence, and involves local, state, federal and contract resources.

The process can be as simple as coordinating common communications frequencies and key personnel with local fire departments, or as complex as pre-identifying and contracting air tanker facilities across the state. Wildfires are fast-moving and dangerous. Anything that reduces response times and uncertainty on the fire line also reduces losses and increases safety.

Even a moderately sized wildfire may involve from two to 10 fire departments, numerous pieces of county equipment, local law enforcement, emergency medical services and resources from Texas Forest Service, Department of Public Safety, Texas Department of Transportation, Texas National Guard, Governor's Division of Emergency Management and multiple out-of-state cooperators. All of these responders need to be organized before the fire starts to maximize safety and effectiveness.

Statewide, a fire season can easily involve hundreds of pieces of equipment and thousands of firefighters. Good planning and preparedness allows for a more effective and faster response, thereby reducing both losses and suppression cost.

Current Texas Forest Services activities in these areas include:

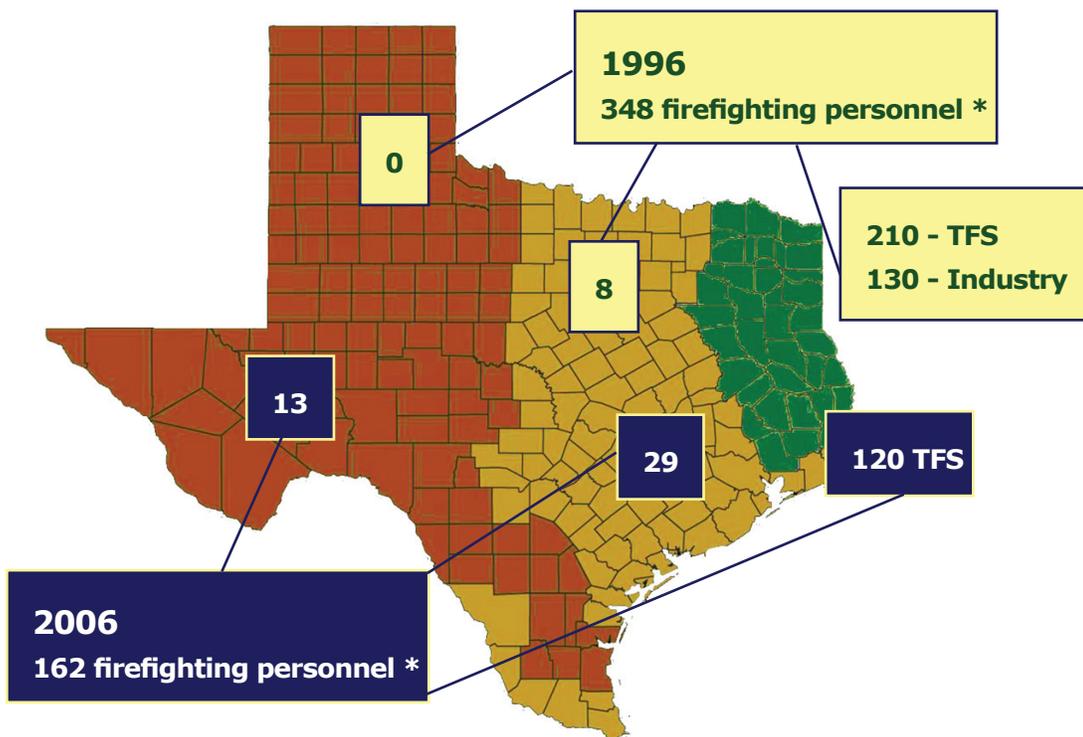
- E-mail alerts to local fire departments on days with red flag or high fire danger conditions
- The statewide designation and use of three shared radio frequencies for local fire departments and state responders
- Common wildfire and emergency management training for local, state and national firefighters
- Pre-positioning of essential supplies
- Repositioning and management of available resources based on current fire risk

The Texas Wildfire Protection Plan builds the state's capacity to handle wildfire protection and suppression responsibilities at a fraction of the cost of a national mobilization. The plan increases the state's ability to plan, prepare and coordinate wildfire suppression activities with all cooperators and to reduce fire size and property losses. It also allows the state and local responders to more effectively respond with fewer overall resources, thereby reducing expensive out-of-state mobilization costs.

Local Capacity Building

Texas uses a tiered approach to wildfire response and suppression. Local fire departments and counties are the first responders, with state response being activated as fires or conditions exceed the local ability to control. The overwhelming majority of wildfire incidents that Texas Forest Service employees step into are already in the major complex phase. As the response capability of state agencies is depleted, out-of-state resources are brought in as needed.

Since 1996, Texas Forest Service resources have been steadily declining. Firefighting personnel decreased by 26%, and the liquidation of forest industry land resulted in 100% reduction in industry firefighting personnel.



**Includes firefighters, dispatchers, fire behavior analysts and prevention and mitigation specialists.*

As the local fire departments are the primary initial attack resource for rural and urban wildland interface communities in Texas, Texas Forest Service is committed to train, equip, and assist them and other cooperators in support of the Texas Wildfire Protection Plan. To help accomplish this, Texas Forest Service currently administers a number of highly successful fire department assistance programs including:

- *Volunteer Fire Assistance (1975)* – The Texas Forest Service receives a limited amount of federal funds to assist local fire departments. In previous years these funds were used to provide equipment grants. Since 2001, the funds have been utilized in conjunction with the Rural Volunteer Fire Department Assistance Program to provide grants for wildland and structural protective clothing to firefighters.

- *Federal Excess Personal Property (FEPP) (1978)* – Texas Forest Service has the authority to acquire excess military vehicles and equipment and assign the equipment to fire departments. Departments are responsible for the care and maintenance of all assigned property. Currently there are 1,700 FEPP vehicles assigned to Texas fire departments.
- *Helping Hands (1997)* – Created by the 75th Texas Legislature (HB 680) the Helping Hands Program provides liability relief to industry, business, cities and others to donate surplus fire and emergency equipment to Texas Forest Service. Donated equipment can then be distributed by Texas Forest Service to fire departments around the state. Since 1997, the Helping Hands Program has received more than \$16 million in donated equipment, including 123 vehicles and 3,598 breathing apparatus.
- *Rural Volunteer Fire Department (VFD) Assistance Program (2001)* – Created by the 77th Texas Legislature (HB 2604) the Rural VFD Assistance Program provides \$15 million per year in grants for equipment and training. The program is administered by the Texas Forest Service and, in four years of operation, has funded:
 - o 576 tankers and brush trucks
 - o 136 truck chassis
 - o 138 slip-on units
 - o 1,310 grants for 5,175 pieces of fire and rescue equipment
 - o 1,045 grants for 20,076 sets of protective clothing
 - o 3,046 training grants for 12,714 students
 - o 101 regional training libraries
- *Rural Volunteer Fire Department Insurance Program (2001)* – The Rural VFD Insurance Program was also created by the 77th Texas Legislature (HB 3667) to provide grants for Texas firefighters to obtain workers compensation and death and disability insurance. The program is administered by Texas Forest Service and is funded by a 2% tax on the sale of fireworks. This program provides insurance grants for more than 400 fire departments and 11,000 firefighters each year.

Together these programs have provided assistance 17,467 times to Texas fire departments, which is valued at \$149,072,288.

Other Texas Forest Service assistance programs include:

- *Firesafe* (1986) – Texas Forest Service also operates a program to provide low-cost wildland and structural protective clothing to rural and small community fire departments. New gear is purchased in volume and then resold, with the savings being passed along to the fire department. Through this program eligible fire departments can get quality protective clothing at savings of 30% to 40%. In 2005, the Firesafe Program processed over \$1 million in protective clothing and gear.
- *Volunteer Fire Department Vehicle Liability Insurance* (1995) – The VFD Vehicle Liability Insurance Program was established by the 74th Texas Legislature (SB 1232), who directed Texas Forest Service to create and administer this self-insurance program for fire departments. Through the program, Texas Forest Service provides low-cost vehicle liability insurance at a greatly reduced cost. Currently the program insures 1,253 vehicles from 326 fire departments at a cost of \$200 per vehicle per year. Since inception, this program has saved fire departments an estimated \$2.5 million in premiums.
- *Fire Department Training* – Texas Forest Service also provides nationally certified wildfire and emergency management training to fire departments and agencies across the state. Through regional academies and local classes, Texas Forest Service has provided training to more than 5,000 students since 1998.

Under the funded plan, Texas Forest Service could provide more personnel to work with local entities and assist them with the process, in order for more goods and services to be received from the assistance programs.

Rapid Initial Response to Wildland Fires

Volunteer firefighters do an exemplary job with local response and mutual aid. However, they have primary jobs and families and are not always available for wildfire response, particularly for extended periods of time. Volunteer Fire Departments have equipment which primarily use water to suppress fires. Once the flame lengths exceed eight feet, water is ineffective at stopping a fire. Texas Forest Service responds when local capacity and/or fire conditions are beyond the local capabilities.

Texas Forest Service also works with responding agencies at the state level to increase the effectiveness of state response. Shared training and communications has helped the agencies at the state level better prepare for fire response. However, the overall number and availability of state resources has continued to decrease, particularly for Texas Forest Service and Texas Air National Guard. In addition, the Texas Wildfire Protection Plan encourages partnerships between all federal, state and local cooperators.

The rapid initial response to wildland fires by Texas Forest Service is essential to provide safety to emergency responders and citizens. The task is to do so in a cost-effective and efficient manner.

Texas Forest Service uses the incident command system to coordinate the efforts of all

cooperators to minimize losses. Aggressive initial attack is emphasized and is based on fire behavior. Operational objectives are incorporated to prevent project fires – areas of numerous fire ignitions – that burn for multiple days and tie up resources needed for initial attack.

Since 1998, Texas has brought in more than 14,410 personnel, 517 aircraft, 801 engines and 490 dozers for wildfire suppression. (This does not include the 17,304 personnel brought in during the Space Shuttle Columbia Recovery in 2003.) Generally, out-of-state resources cost about three times as much as comparable Texas resources.

One drawback with bringing in out-of-state personnel is that the training and experience they receive while here in Texas goes home with them after the fire season. The funds would be better spent on personnel who are residents of the state and who will use their training for Texas wildfires.

There are other disadvantages to continuing to mobilize national resources. Aerial firefighting equipment and firefighting personnel are not always readily available; there is a three to five-day lag time in mobilizing out-of-state resources. In addition, national mobilization costs are three to four times greater per unit than Texas resources.

However, without the out-of-state personnel, the wildfires would not have been suppressed. Texas Forest Service personnel are showing signs of extreme fatigue. From April 21, 2005 to September 3, 2006, Texas Forest Service had 500 consecutive days of wildfire/disaster response. From September 1, 2005, to August 1, 2006, 277 employees earned 148,536 hours of emergency response overtime – the equivalent of 71 additional full time employees. In addition, Texas Forest Service personnel are increasingly stressed and have indicated frustration at being put into host and logistical roles when incident command posts and large staging areas were co-located at permanent field offices.

With additional funding, Texas Forest Service will position an additional 263 firefighting personnel across the state.

The Solution: Texas Wildfire Protection Plan

The Texas Wildfire Protection Plan is a proven, proactive interagency wildfire response model emphasizing prevention; reduction of risks and hazardous conditions; pre-positioning of resources based on fire risk; local fire department capacity-building; rapid initial attack to wildland fires; and unified operations with local, state and federal responders.

By making a moderate investment in the Texas Wildfire Protection Plan – up front instead of after Texas is burning – to prevent fires and mitigate the factors which cause wildfires, the lives and properties of Texans will be protected and saved from catastrophic loss.

When funded at the basic level and implemented, the Texas Wildfire Protection Plan – a proactive approach with prevention, risk reduction and rapid response as the cornerstones – will:

- Cost 1/3 of what the state has spent this year
- Cut losses from wildfire by at least 80%
- Slash national mobilization costs by 80%

The state's firefighting personnel have been steadily decreasing – from 348 in 1996 to 162 in 2006. Today, Texas Forest Service has statewide firefighting and protection responsibility with less than half the resources we had available when responsible for East Texas only.

At an absolute minimum, Texas Forest Service needs an additional 263 firefighting, prevention and mitigation personnel to adequately protect the state from wildfire and resolve the ever-increasing statewide deficiency in resources. The gigantic size and location of Texas, along with the rapidly growing population and increasing values at risk in the ever expanding rural/urban interface, make this minimum request essential.

While the TWPP pilot plan funded at \$4 million/year in 2000 was very successful, it is now time to fund the plan to at least the basic level. Texas Forest Service requests the Legislature fund the basic Texas Wildfire Protection Plan, at an additional \$20.4 million per year above the agency's current state appropriation of \$7.7 million, with the consideration that this request be funded from Fund 036, (Dept. of Insurance). The increase in appropriation for the Texas Wildfire Protection Plan will be offset by a corresponding increase in insurance fees and taxes resulting in \$0 impact on the state's budget.

The plan proposes regional fire response centers that will house wildland firefighters who, in addition to being at the ready to fight wildland fires, will also be cross-trained in fire prevention, structure protection, homeowner risk reduction, modifying vegetation and fuels, and fire department training. These centers will also be the pivotal bases for equipment pre-positioning to reduce response times to fires.

Sample Regional Wildfire Protection Plan

Introduction

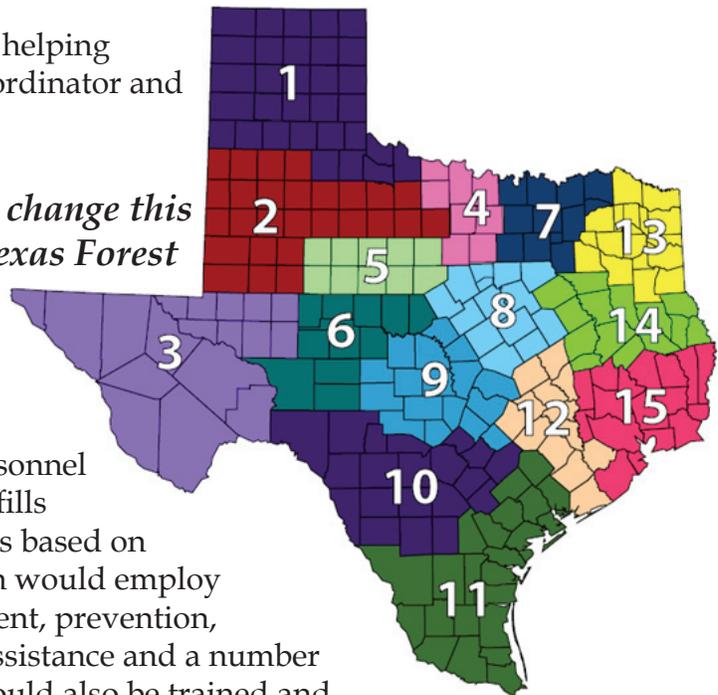
Texas is a big state. While the key functions of the Texas Wildfire Protection Plan (TWPP) remain consistent across the state, local implementation will differ based on the local variations of vegetation, demographics and other factors. Fire prevention, for example, is a key component of the TWPP. However fire causes, delivery methods and targeted audiences will vary significantly from a rural county in West Texas versus a populated county along the I-35 corridor.

To implement the Texas Wildfire Protection Plan at the local level across Texas, the Texas Forest Service would create 15 Wildfire Protection Regions. These regions are based, as closely as possible, on the Department of Public Safety Disaster Districts. Each region would have a staff of specialists and technicians dedicated to delivering the TWPP to communities across their region.

Texas Forest Service has a long history of helping Texans help themselves by acting as a coordinator and multiplier of local efforts.

Fully funding the TWPP would not change this philosophy, but it would provide Texas Forest Service with sufficient resources to greatly increase the number of communities we can help.

Additionally, all Texas Forest Service personnel are multi-purpose employees. Everyone fills multiple roles with changing job functions based on program needs. For example, each region would employ specialized personnel to work in assessment, prevention, community protection, fire department assistance and a number of other roles. However, all personnel would also be trained and expected to participate in firefighting and other key emergency response roles as needs developed.



To fully develop and deliver this plan across the state would require the full implementation of the Texas Wildfire Protection Plan.

To more clearly explain how this would be implemented at the local level, the following is a sample plan for one of the proposed regions of the state. To fully develop and deliver this plan across the state would require the full implementation of the Texas Wildfire Protection Plan. However the enclosed document should provide a clearer picture of the level of detail and complexity of providing wildland fire protection to the citizens and communities of Texas today.

TWPP Region 4

Key Demographics

Region 4 of the Texas Wildfire Protection Plan includes Archer, Clay, Jack, Montague, Palo Pinto, Parker, Wichita and Wise counties.

These eight counties cover a land area of approximately 7,352 square miles, approximately the size of Connecticut and Delaware combined.

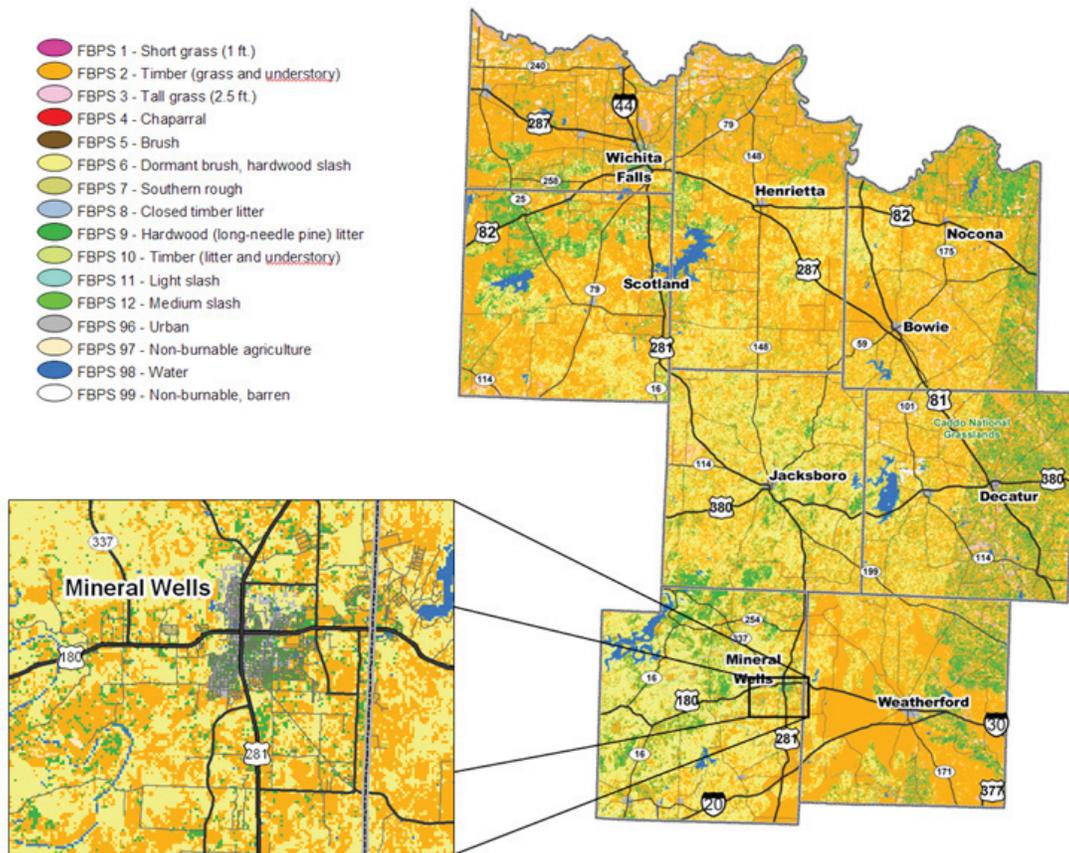
The 2000 census estimates the population at 343,718, of which approximately 57% resides in rural or urban-wildland interface areas, where developed and undeveloped lands mix.

Housing values are estimated at \$10.3 billion, with approximately 57% (by value) located in the rural or urban-wildland interface areas.



Vegetation and Fuels

The region is primarily covered by grasslands and prairie with scattered woody trees and shrubs, most commonly cedar and mesquite. Decreasing agricultural usage over most of the region has resulted in the increasingly heavier vegetative cover. Wildfires are primarily carried by the grass fuels. Increasing abundant woody vegetation can significantly increase the fire control problems during drier periods.



Decreasing agricultural usage over most of the region has resulted in the increasingly heavier vegetative cover.

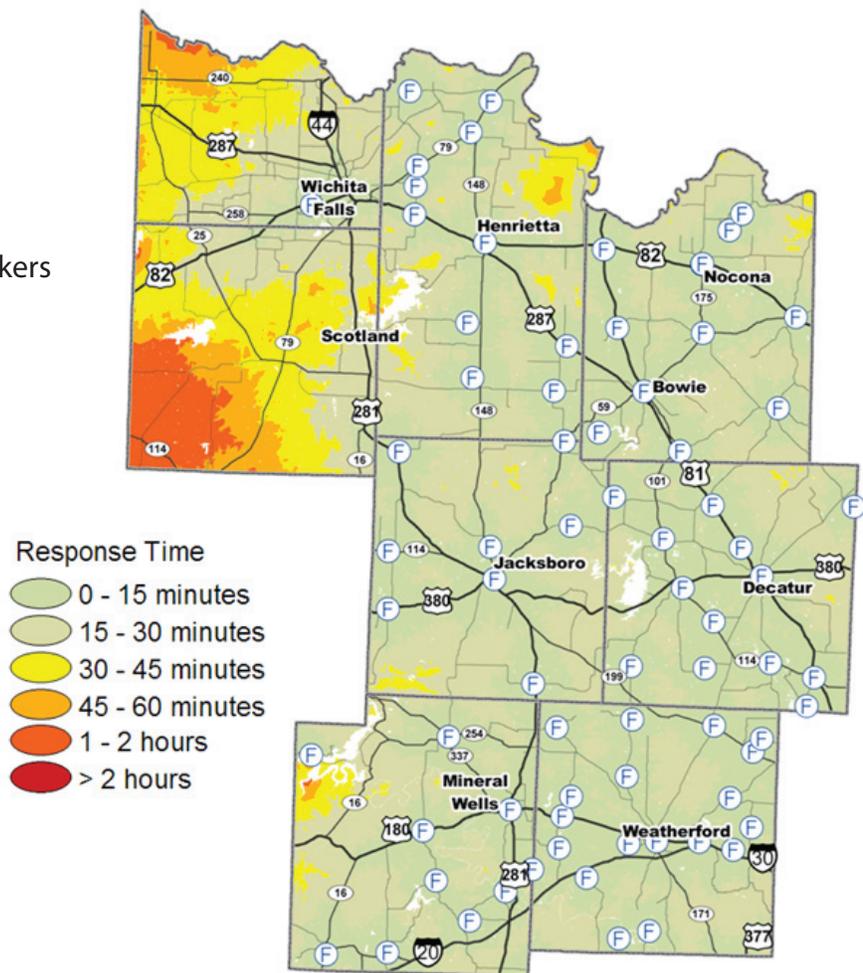
Local Response Capabilities

There are approximately 93 active fire departments in this region. Of these, one department utilizes only paid firefighters, 87 are fully-volunteer and five are combination departments, utilizing a mix of volunteer and paid staff. Total staffing for these departments is an estimated 2,137 firefighters – 1,915 volunteer and 222 paid.

As of September 1, 2006, Texas Forest Service assistance programs have provided 782 assists to these departments, issuing grants and equipment valued at \$6,898,831.

When fires or conditions exceed local control, Texas Forest Service is responsible for supplementing local response efforts with heavy equipment, aircraft and wildland firefighters as needed to maintain adequate response capabilities. Currently Texas Forest Service has no offices or equipment permanently stationed in the region. The only heavy wildfire suppression equipment in the region belongs to the USDA Forest Service and is stationed at the National Grasslands office in Decatur. This equipment is only available for response on the national grasslands or within 3 miles of their border. When fires or conditions exceed local control, personnel and equipment must be mobilized from other areas of the state or nation. Response times are significantly impacted, and costs to maintain deployed resources are substantial.

**Fire Department
Response Time**
(Primarily brush trucks, tankers
and engines)



State/Federal Response Time

(Primarily dozers and heavy suppression equipment)

CURRENT RESPONSE

USDA Forest Service is the only Firefighting Agency with Heavy Equipment



USDA Forest Service

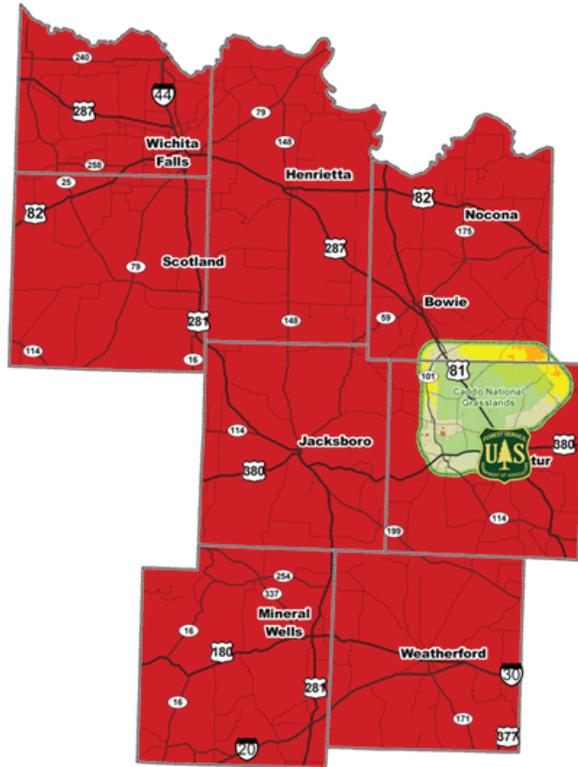


Texas Forest Service

Estimated Response Time

- 0 - 15 minutes
- 15 - 30 minutes
- 30 - 45 minutes
- 45 - 60 minutes
- 1 - 2 hours
- > 2 hours

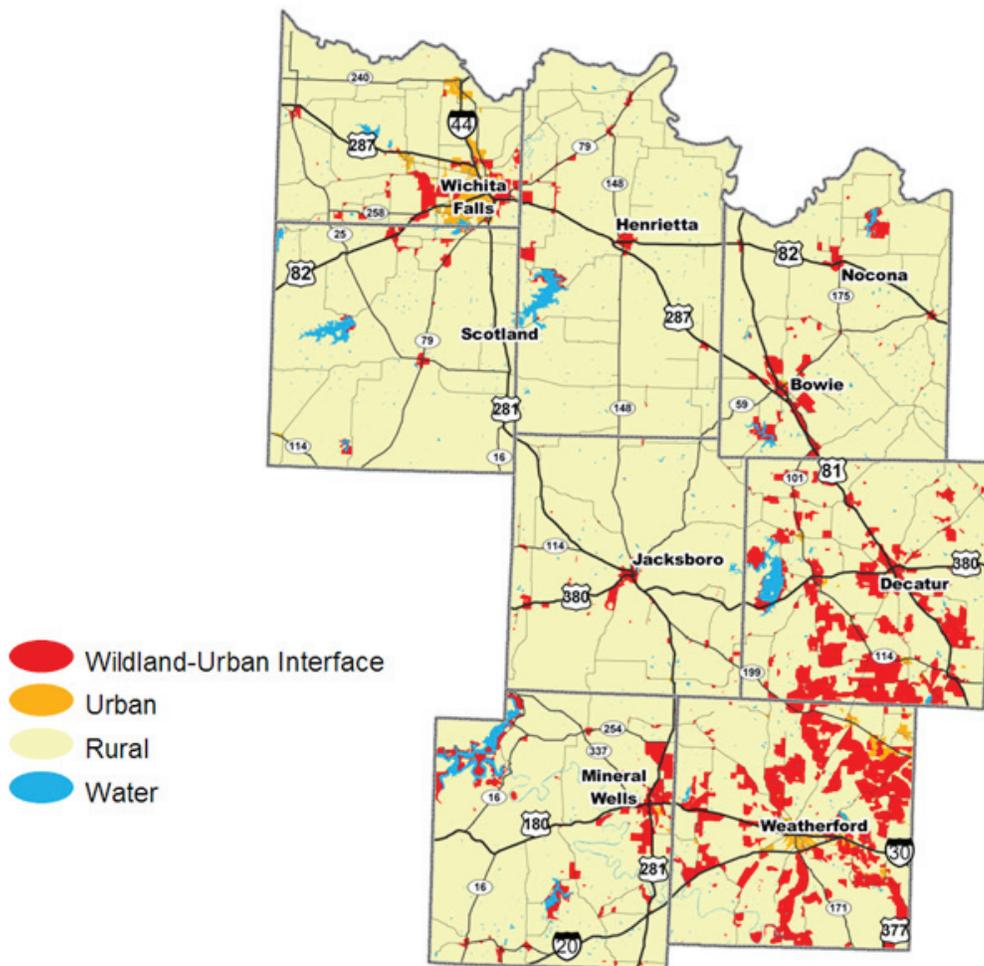
USFS 3 Mile Response Buffer



UWI and Communities at Risk

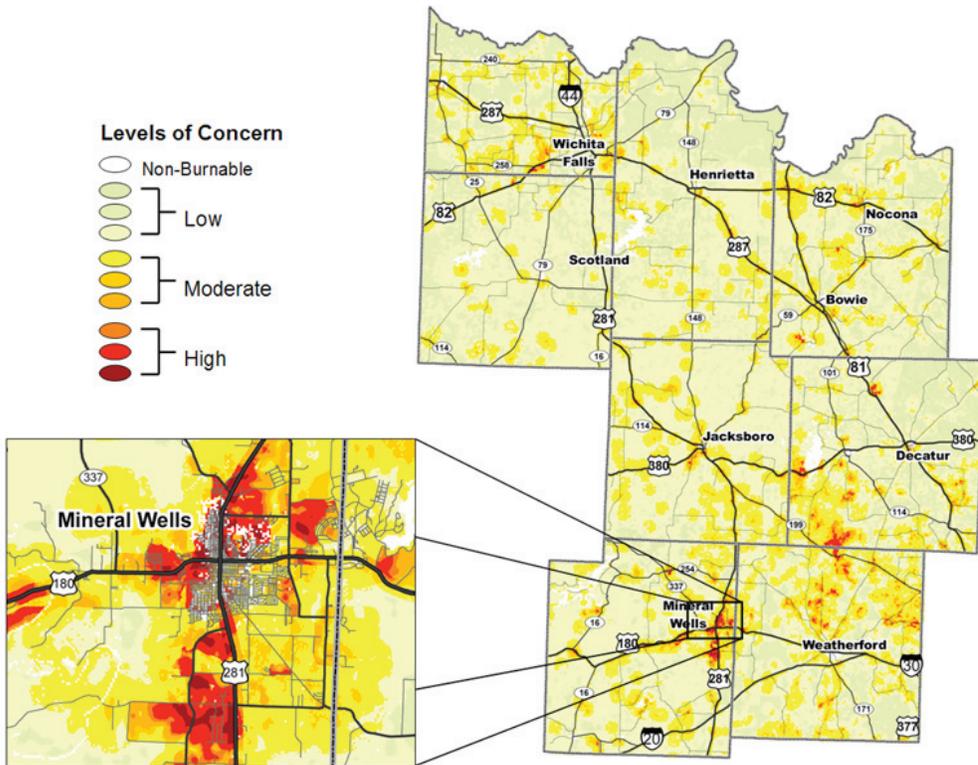
Approximately 57% of the population resides in rural or urban-wildland interface areas. The urban wildland interface (UWI) areas, where developed and undeveloped lands mix, are particularly at risk from wildfire losses. For this region alone, the UWI area hosts an estimated 124,870 citizens out of 353,718. Home values alone in the UWI are estimated at \$3.9 billion.

So far, 517 Communities at Risk have been identified in the region at moderate, high or extreme risk for wildfire. Almost all of these are located in the UWI and rural areas of the region.



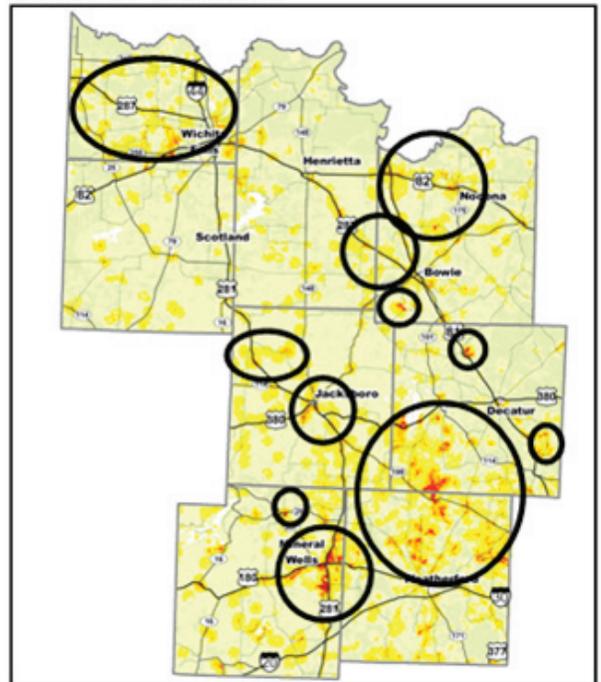
Levels of Concern

Texas Forest Service is able to generate products displaying the statistical probability of fire occurrence, expected fire behavior/fire effects modeling, and estimated values and population at risk. All of this information may be used to generate a *Level of Concern* map delineating key areas of risk convergence.



Utilizing these and other products, Texas Forest Service, counties, cities and local cooperators can easily identify areas where on-the-ground assistance is most needed. With sufficient personnel, this will allow Texas Forest Service to focus the components of the TWPP to an astonishing new level of effectiveness.

Level of Concern



From a fire response standpoint, the full implementation of the TWPP will allow the state to utilize and manage its firefighting resource more effectively than ever before. The ability to identify the areas of greatest concern down to the local level, combined with weather forecasting and fire behavior modeling, will significantly increase the effective placement of suppression resources during high fire danger events.

Proposed Heavy Equipment Positioning During High Fire Danger Events



Texas Forest Service



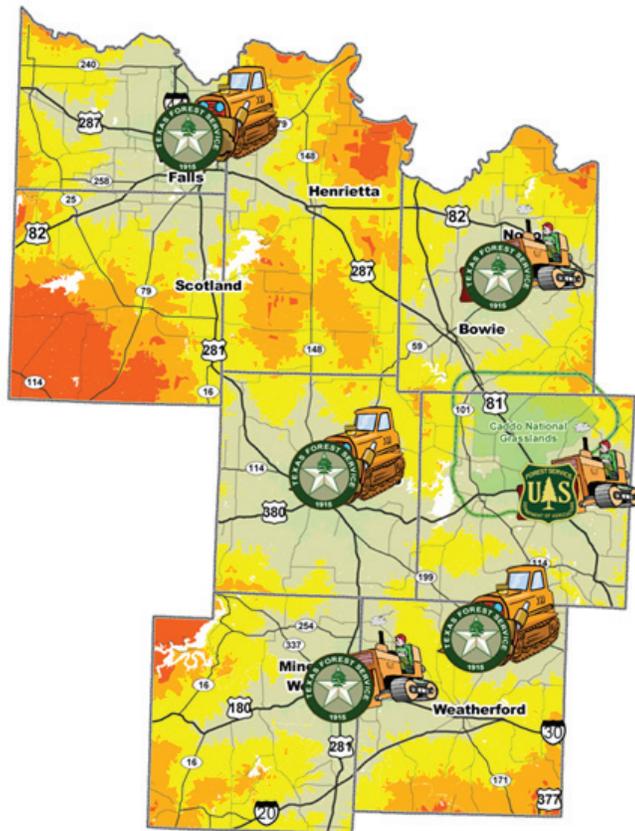
USDA Forest Service

Response Time

- 0 - 15 minutes
- 15 - 30 minutes
- 30 - 45 minutes
- 45 - 60 minutes
- 1 - 2 hours
- > 2 hours



USFS 3 Mile Response Buffer



Implementation of the Texas Wildfire Protection Plan

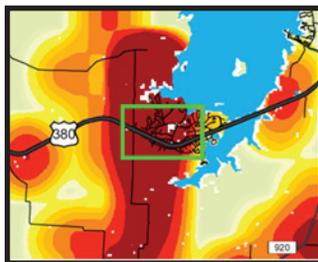
Under the Texas Wildfire Protection Plan, the role of Texas Forest Service firefighting resources is not to replace local resources but to aid them, particularly when large, damaging fires are likely. Fully implemented, the TWPP will greatly increase the state's ability to respond without requiring the costly mobilization of out-of-state resources.

However, the greatest impact the fully implemented Texas Wildfire Protection Plan will have is in what it enables agency personnel to accomplish when not fighting fire. The primary focus of the TWPP is to enable agency personnel and local cooperators to prevent fires outright or to prevent losses by reducing hazards, risk management, rapid response and other proven methods.

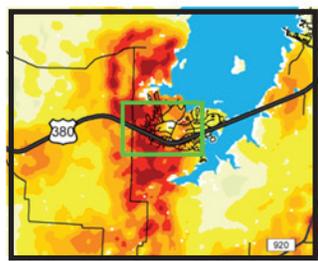
Areas of Concern

One of the key responsibilities for the specialists assigned to this region would be to identify the underlying causes that are creating the individual *Areas of Concern*. They would then be expected to initiate contact with the local communities and homeowners. By helping homeowners and local leaders identify the risks, causes and most effective solutions, Texas Forest Service can help remove many of the risks before wildfire losses can occur.

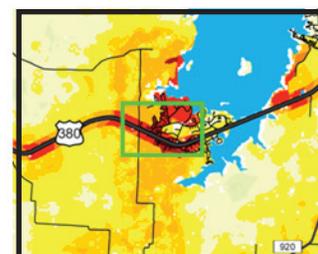
As an example, the community below was identified as high risk by the preliminary assessment. Regional staff would ground-check and verify the assessment and then work with local community leaders to develop and implement a community wildfire protection plan (CWPP). This may involve the UWI Specialist and a community vegetation management program, the Regional Fire Coordinator working with local departments to provide more equipment for the area, prepared firebreaks being installed around the community or any



Fire Occurrence Areas



Wildland Fire Susceptibility Index



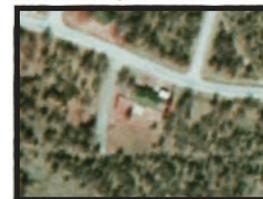
Levels of Concern



Defensible space < 100 feet



Defensible space > 100 feet



number of options. The overall goal will always be to help the community develop and implement a solution that they can and will maintain.

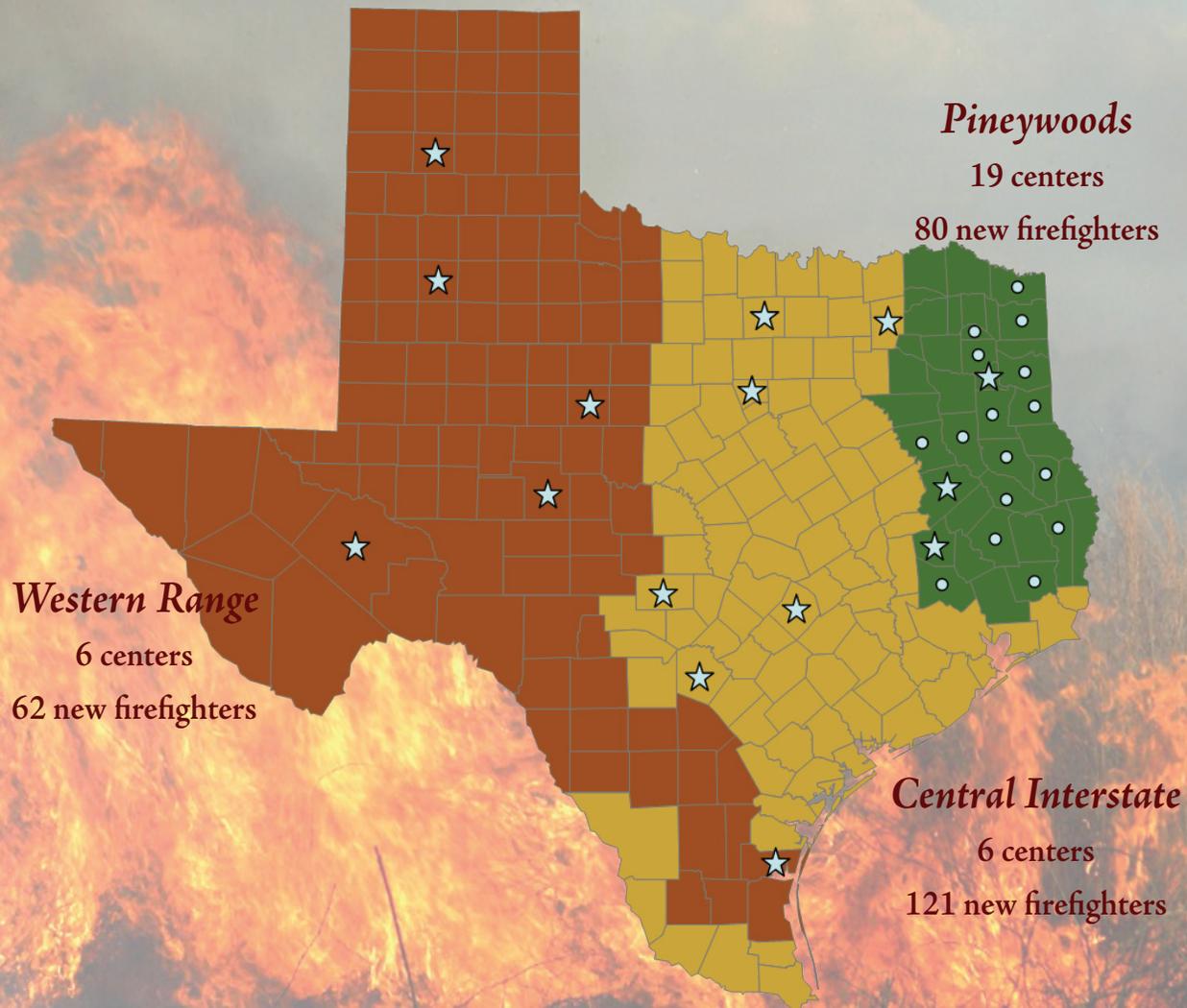
In addition to the regional offices, the TWPP will also provide regional and statewide administrative and support staff. Part of this staff will be dedicated to maintaining the tools, products and information needed by the regional offices. Some positions such as mechanics, dispatchers, fiscal staff and program administrators will be able to support multiple regions and provide statewide coordination of efforts.

Fully implemented, the Texas Wildfire Protection Plan will provide personnel at the local, state and regional level who will:

- Monitor weather, vegetation and fire occurrence to provide fire behavior forecasts to state and local responders.
- Predict high fire danger conditions with sufficient lead time to alert and mobilize adequate response resources at the local, state and national level.
- Develop targeted fire prevention campaigns based on local fire causes, risks and activities.
- Identify homes and communities at risk for wildfires and implement local fire risk reduction programs.
- Monitor expected fire conditions and local response capabilities.
- Mobilize and position additional personnel, equipment and supplies as needed to meet potential fire occurrence.
- Maintain readiness of equipment and personnel to support regional or statewide wildfire and all-hazard response activity.
- Develop and maintain facilities, communications systems and supplies to support potential deployment of emergency resources.
- Assist local fire departments and responders in identifying and accessing assistance programs and grant opportunities.
- Manage Texas Forest Service fire department assistance programs to provide the most effective local-level assistance possible.
- Provide training on wildfire and emergency management to local, state and regional responders.
- Coordinate and communicate fire response activity with local government, fire department and cooperating agencies.
- Maintain rapid response capabilities necessary to prevent large, damaging wildfires.
- Support state wildfire and all-hazard response as needed.

Texas Forest Service Fire Response Centers . . .

A mobile and responsive fire organization.



Texas Forest Service firefighters

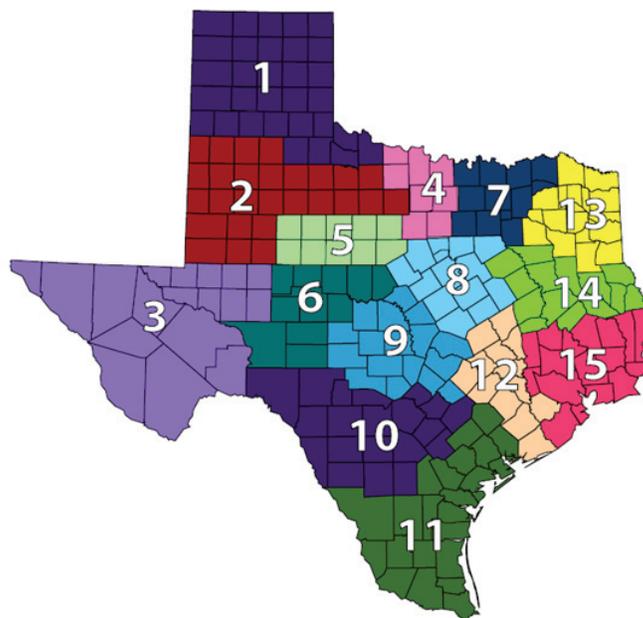
are also cross-trained in

- *fire prevention*
- *structure protection*
- *homeowner risk reduction*
- *modifying vegetation/fuels*
- *fire department training*

An additional \$20.4 million/year, for a proposed funding of 17¢ per acre.

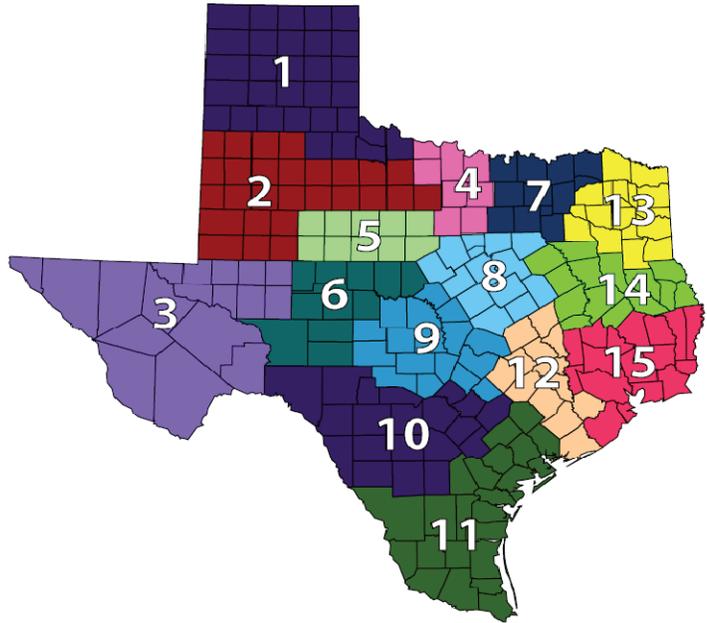
TWPP Regional Summary

| TWPP | | | | | |
|--------------|------------|-------------------|-----------------------|-----------|--------------------------------------|
| Region | FTEs | Funding | Wildland Fire Engines | Dozers | Key Response Issues |
| 1 | 12 | 1,077,690 | 2 | 4 | fast moving fires |
| 2 | 11 | 1,028,190 | 2 | 4 | fast moving fires |
| 3 | 11 | 1,025,490 | 3 | 3 | difficult terrain |
| 4 | 15 | 1,213,490 | 3 | 5 | population at risk |
| 5 | 17 | 1,323,590 | 2 | 4 | difficult terrain |
| 6 | 11 | 1,022,440 | 2 | 4 | difficult terrain |
| 7 | 15 | 1,226,540 | 2 | 4 | population at risk |
| 8 | 25 | 2,047,290 | 2 | 4 | population at risk |
| 9 | 18 | 1,368,140 | 3 | 5 | population at risk/difficult terrain |
| 10 | 15 | 1,211,990 | 3 | 5 | population at risk/difficult terrain |
| 11 | 14 | 1,174,340 | 2 | 4 | fast moving fires |
| 12 | 19 | 1,698,040 | 2 | 4 | population at risk/forest |
| 13 | 25 | 1,579,590 | 2 | 11 | population at risk/forest |
| 14 | 29 | 1,829,846 | 2 | 10 | forest |
| 15 | 26 | 1,589,840 | 2 | 11 | population at risk/forest |
| Total | 263 | 20,416,506 | 34 | 82 | |



TWPP Summary of Regional Information

| TWPP | | | | |
|--------------|------------|-------------------|-----------------------|-----------|
| Region | FTEs | Funding | Wildland Fire Engines | Dozers |
| 1 | 12 | 1,077,690 | 2 | 4 |
| 2 | 11 | 1,028,190 | 2 | 4 |
| 3 | 11 | 1,025,490 | 3 | 3 |
| 4 | 15 | 1,213,490 | 3 | 5 |
| 5 | 17 | 1,323,590 | 2 | 4 |
| 6 | 11 | 1,022,440 | 2 | 4 |
| 7 | 15 | 1,226,540 | 2 | 4 |
| 8 | 25 | 2,047,290 | 2 | 4 |
| 9 | 18 | 1,368,140 | 3 | 5 |
| 10 | 15 | 1,211,990 | 3 | 5 |
| 11 | 14 | 1,174,340 | 2 | 4 |
| 12 | 19 | 1,698,040 | 2 | 4 |
| 13 | 25 | 1,579,590 | 2 | 11 |
| 14 | 29 | 1,829,846 | 2 | 10 |
| 15 | 26 | 1,589,840 | 2 | 11 |
| Total | 263 | 20,416,506 | 34 | 82 |



| Region | Demographics | | | | | | | | Fire Occurrence (Jan 1, 2005 - Aug 31, 2006) | | | |
|--------------|-------------------|------------------------------|------------------|---------------------|---------------|------------------|--------------------------|----------------------|--|------------------|---------------|-----------------|
| | Population | % Population in rural or UWI | Size (sq. miles) | % Area in rural/UWI | # of Counties | # of Homes | \$ of Homes | % Homes in rural/UWI | # Fires | # Acres | # Homes Saved | # of Homes Lost |
| 1 | 427,214 | 54% | 30,161 | 99% | 31 | 178,199 | \$10,779,461,094 | 53% | 1,294 | 1,301,472 | 5,200 | 43 |
| 2 | 494,787 | 37% | 25,596 | 99% | 27 | 206,306 | \$11,162,726,902 | 36% | 1,010 | 134,576 | 456 | 10 |
| 3 | 1,002,758 | 84% | 39,740 | 99% | 18 | 359,936 | \$24,100,294,815 | 86% | 254 | 79,190 | 36 | 1 |
| 4 | 343,718 | 57% | 7,352 | 98% | 8 | 143,125 | \$10,258,108,339 | 57% | 1,593 | 126,666 | 1,146 | 114 |
| 5 | 237,723 | 47% | 9,166 | 99% | 10 | 101,939 | \$5,153,681,312 | 45% | 1,001 | 95,015 | 1,052 | 165 |
| 6 | 184,519 | 100% | 14,306 | 99% | 11 | 83,749 | \$4,895,226,116 | 100% | 645 | 117,403 | 268 | 7 |
| 7 | 5,012,459 | 10% | 9,335 | 85% | 12 | 1,956,343 | \$218,724,247,042 | 9% | 2,945 | 63,269 | 2,521 | 81 |
| 8 | 957,957 | 68% | 12,089 | 97% | 14 | 373,181 | \$26,508,913,700 | 68% | 2,796 | 72,689 | 1,905 | 104 |
| 9 | 1,387,719 | 78% | 15,678 | 99% | 17 | 569,684 | \$71,462,073,699 | 77% | 1,754 | 37,914 | 1,139 | 14 |
| 10 | 1,893,518 | 43% | 25,221 | 98% | 20 | 716,001 | \$56,206,683,995 | 42% | 2,287 | 67,851 | 2,178 | 37 |
| 11 | 1,902,387 | 38% | 27,784 | 89% | 24 | 690,022 | \$40,163,387,469 | 38% | 1,597 | 37,109 | 830 | 8 |
| 12 | 812,267 | 37% | 11,489 | 93% | 13 | 310,263 | \$28,490,004,209 | 39% | 1,050 | 11,219 | 792 | 14 |
| 13 | 786,777 | 69% | 11,644 | 96% | 18 | 337,725 | \$22,338,362,079 | 68% | 4,932 | 40,411 | 1,515 | 41 |
| 14 | 487,247 | 71% | 12,420 | 95% | 14 | 214,554 | \$12,364,175,804 | 71% | 2,567 | 23,396 | 1,270 | 49 |
| 15 | 4,920,445 | 32% | 16,465 | 86% | 17 | 1,916,220 | \$176,879,308,965 | 32% | 2,273 | 23,881 | 816 | 23 |
| Total | 20,851,495 | | 268,446 | | 254 | 8,157,247 | \$719,486,655,540 | | 27,998 | 2,232,061 | 21,124 | 711 |

| Region | TFS FD Assistance | | # of FD | | | | # of Firefighters | | | | |
|--------------|-------------------|----------------------|--------------|------------|------------|--------------|-------------------|---------------|---------------|-------------------|---------------|
| | # of Assists | \$ of Assists | Volunteer | Combined | Paid | Total | Paid | Volunteer | Total members | Active Volunteers | Total Active |
| 1 | 974 | \$11,826,022 | 74 | 12 | 4 | 90 | 339 | 1,669 | 2,008 | 1,517 | 1,856 |
| 2 | 633 | \$10,944,224 | 70 | 9 | 2 | 81 | 349 | 1,749 | 2,098 | 1,208 | 1,557 |
| 3 | 392 | \$4,088,824 | 40 | 1 | 2 | 43 | 348 | 756 | 1,104 | 728 | 1,076 |
| 4 | 782 | \$6,898,831 | 87 | 5 | 1 | 93 | 222 | 1,915 | 2,137 | 1,640 | 1,862 |
| 5 | 714 | \$7,958,898 | 42 | 5 | 5 | 52 | 322 | 1,035 | 1,357 | 705 | 1,027 |
| 6 | 531 | \$6,364,124 | 45 | 2 | 2 | 49 | 180 | 1,963 | 2,143 | 776 | 956 |
| 7 | 1,362 | \$9,020,595 | 116 | 41 | 46 | 203 | 6,469 | 3,375 | 9,844 | 2,785 | 9,254 |
| 8 | 1,609 | \$13,984,914 | 140 | 20 | 6 | 166 | 793 | 3,614 | 4,407 | 2,613 | 3,406 |
| 9 | 847 | \$8,636,911 | 94 | 22 | 6 | 122 | 1,569 | 3,161 | 4,730 | 2,146 | 3,715 |
| 10 | 931 | \$8,222,744 | 97 | 20 | 10 | 127 | 1,567 | 2,627 | 4,194 | 1,872 | 3,439 |
| 11 | 930 | \$7,931,217 | 107 | 27 | 10 | 144 | 1,616 | 3,393 | 5,009 | 2,253 | 3,869 |
| 12 | 1,180 | \$8,420,358 | 118 | 9 | 4 | 131 | 381 | 3,998 | 4,379 | 2,487 | 2,868 |
| 13 | 2,030 | \$13,677,408 | 163 | 13 | 9 | 185 | 632 | 3,369 | 4,001 | 2,578 | 3,210 |
| 14 | 2,451 | \$17,478,778 | 148 | 6 | 3 | 157 | 120 | 2,880 | 3,000 | 2,191 | 2,311 |
| 15 | 2,101 | \$13,618,442 | 156 | 44 | 9 | 209 | 4,504 | 6,261 | 10,765 | 4,655 | 9,159 |
| Total | 17,467 | \$149,072,288 | 1,497 | 236 | 119 | 1,852 | 19,411 | 41,765 | 61,176 | 30,154 | 49,565 |

In Texas, wildfire is a rural *AND* urban problem.

85% of the 29,141 wildfires that have burned since January 1, 2005, occurred less than two miles from a community.

More than 90% of Texas wildfires are human-caused.



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

James B. Hull
Director
979-458-6606
texasstateforester@tfs.tamu.edu