Palo Pinto County Community Wildfire Protection Plan

2023

A collaborative planning process to help protect lives, property, and natural resources in Palo Pinto County

In accordance with Title I of the Healthy Forest Restoration Act of 2003

This document was prepared by Palo Pinto County office of Emergency Management
and Texas A&M Forest Service
and was completed on January 26, 2023.

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Contents

Community Wildfire Protection Plan Leader's Guide

Community Wildfire Protection Plans are a collaborative approach to wildland fire protection and mitigation. A plan can be as simple or complex as the needs of the community dictate.

☐ **Convene Decision Makers.**
- Engage local Texas A&M Forest Service representative—they can provide guidance and subject matter expertise.
- Involve local jurisdictions and fire service leadership from local, state, and federal cooperators.
- Notify local government officials—local support will bolster political capital in the community.

☐ **Engage Interested Parties.**

Wildfire risk is a community problem and a shared responsibility between stakeholders.
- Form a core working group with representation from the local fire department, local government, and Texas A&M Forest Service.
- Additional partners should be encouraged to participate. Who needs to be part of the conversation? Who has a vested interest in the community?
- Gain input from a variety of partners to ensure that the CWPP reflects the interests and values of the entire community.

☐ **Start Proclamation.**
- Present a proclamation/resolution to local government for approval and signatures.

☐ **Create a Community Base Map.**
- Develop a base map of the community that identifies potential communities at risk, areas with critical infrastructure, and delineation of the Wildland Urban Interface.
- Identify high-risk, priority areas for risk assessments.

☐ **Conduct Risk Assessments.**
- Consider factors that influence risk in the community: fuels, structural characteristics, access, local fire capacity, utilities, etc.
- Assume no operational response and address stand-alone survivability.
- Utilize as a tool to help residents understand their wildfire risk and engage in mitigation actions.
- Compile results and share with core working group and partners.

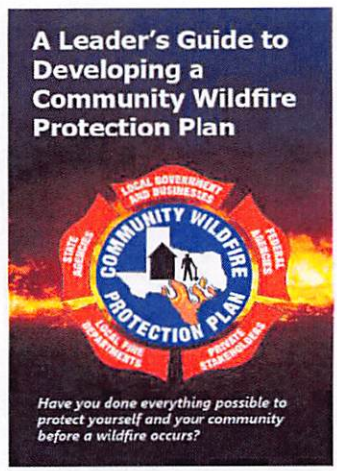
☐ **Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability.**
- Communicate the results from the risk assessments with all stakeholders.
- Begin to develop priorities for the community.
- Recommend actions that address structural ignitability and hazardous fuel reduction.
- Create strategies that address local fire service capacity.

☐ **Develop an Action Plan.**
- Generate prioritized recommendations for fuels reduction projects, outreach and education programs, and other mitigation actions that assist in achieving the goals and objectives of the CWPP.
- Identify roles and responsibilities, funding needs, and timelines for each priority project.
- Recommended actions must directly relate to the protection of the community and its values.

☐ **Finalize the Community Wildfire Protection Plan.**
- Complete plan and ensure that the three required criteria are met.
- Present a final draft to local signatories and Texas A&M Forest Service for approval.
- Plan a signing/recognition ceremony.

Download a Leader's Guide to Developing Community Wildfire Protection Plans at

tfsweb.tamu.edu/ProtectYourCommunity/



1.0 Introduction

Texas is one of the fastest growing states in the nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will affect counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire.

Between January 1st, 2005 and December 21st 2021, 86 percent of wildfires in Texas occurred within two miles of a community. That means 86 percent of Texas wildfires could pose a threat to life and property. A Community Wildfire Protection Plan (CWPP) is a plan developed by a community in an area at risk from wildfire. The CWPP is a collaborative product involving interested parties, local government, local firefighting agencies, the state agency that oversees forest management, and federal land management agencies, if present. While plans do not need to be overly complicated, they should effectively address local forest and range conditions, values-at-risk, and priorities for action. By developing a CWPP, Palo Pinto County is outlining a strategic plan to mitigate and prepare for wildfire.

1.1 Statement of Intent

With this document Palo Pinto County recognizes their risk and history of devastating wildfires, and the need for change. The plan intends to provide a blueprint for improving safety of the public and first responders, reducing home loss, and promoting ecosystem health within the county.

1.2 Goals and Objectives

Goals

- Provide for the safety of the public and for emergency personnel.
- Limit the number of homes, businesses, and critical infrastructure destroyed by wildfire.
- Promote a healthy ecosystem.
- Educate citizens about wildfire, the wildland urban interface and wildfire prevention.

Objectives

- Complete wildfire risk assessments.
- Identify strategic fuels reduction projects.
- Address treatment of structural ignitability.
- Identify local capacity building and training needs.
- Promote wildfire awareness programs.

1.3 Collaborative Planning Committee Members

Palo Pinto County Mistie Garland, Emergency Management Coordinator Gary Lee, Fire & EMS Coordinator Tye Jackson, ESD #1 President Ricky Hunter, Emergency Management Coordinator	**Texas A&M Forest Service** Adam Turner, Regional WUI Coordinator Sam Bundy, Regional Fire Coordinator Emily Mitchell, Field GIS Analyst
Fire Departments Ryan Dunn, Chief, Mineral Wells Fire Department Dusty Bernthal, Deputy Chief, Mineral Wells Fire Department	

1.4 Planning Process

Meeting Date	Topics Covered	Attendees	Action Items
June 29, 2021	**Discussed the need for a County CWPP and who would participate**	• **Mistie Garland** • **Gary Lee** • **Sam Bundy** • **Adam Turner**	**Receive declaration from county judge to start document**
November 15, 2021	**Discussed what a CWPP is, and its uses. Developed potential list of cooperators.** **Looked over TxWRAP data.**	• **Mistie Garland** • **Gary Lee** • **Tye Jackson** • **Ryan Dunn** • **Dusty Bernthal** • **Sam Bundy** • **Adam Turner**	**Develop units for risk assessments**
December 13, 2021	**Created units for risk assessments**	• **Mistie Garland** • **Gary Lee** • **Tye Jackson** • **Ryan Dunn** • **Dusty Bernthal** • **Sam Bundy** • **Adam Turner**	**Meet with Fire Departments about Risk Assessments**
January 28, 2022	**Identify Potential Fuels projects**	• **Mistie Garland** • **Gary Lee** • **Tye Jackson** • **Ryan Dunn** • **Dusty Bernthal** • **Sam Bundy** • **Adam Turner**	**Finalize Risk Assessments**
March 4, 2022	**Identified remaining risk assessments to be completed.**	• **Mistie Garland** • **Gary Lee**	**Finish Risk Assessments**

	Discussed Fuel Projects	• Tye Jackson • Ryan Dunn • Dusty Bernthal • Sam Bundy • Adam Turner	
May 10, 2022	Finalized risk assessment map and areas to work on. Updated Fire Stats	• Mistie Garland • Gary Lee • Tye Jackson • Ryan Dunn • Dusty Bernthal • Sam Bundy • Adam Turner	Update Fire reports from Fire Departments
June 7, 2022	Reviewed CWPP written areas	• Mistie Garland • Gary Lee • Tye Jackson • Dusty Bernthal • Sam Bundy • Adam Turner	Write CWPP
July 30, 2022	Split up remaining sections of CWPP to be written	• Mistie Garland • Gary Lee • Tye Jackson • Dusty Bernthal • Sam Bundy • Adam Turner	Continue Writing CWPP
January 24, 2023	Review written draft and finalize action plan	• Mistie Garland • Ricky Hunter • Tye Jackson • Dusty Bernthal • Sam Bundy • Adam Turner	Schedule CWPP signing ceremony

2.0 Community Profile

2.1 Location

Palo Pinto County, Texas

N 32.777926

W 98.310062

Palo Pinto County covers 986 square miles with a population of 28,409 residents. The county is part of the Dallas – Fort Worth statistical area and resides in the Cross Timbers Ecoregion. The largest city is Mineral Wells, located on the eastern side of the county. The county seat is Palo Pinto, and is located approximately 100 miles east of Abilene, 95 miles south of Wichita Falls, and 62 miles west of Fort Worth.

With the proximity to the Dallas-Fort Worth metroplex many new homes are being built as people move out of the metroplex. Additionally, the multiple lakes around the county provide a wealth of opportunities for secondary homes and seasonal residents. These factors present unique challenges for the county to work through.

2.2 General Landscape

The topography of Palo Pinto County is a varied mixture of wide flat pastures and plains, flat top mountains, small canyons, and flat river bottoms. The Brazos River runs through the middle of the county and has carved a canyon along its path. Inside this canyon there are flat river bottoms where residencies have been established since the 1850s. A chain of flat-top mountains extend through the county; these are largely characterized by short but steep rises between the plains below and the flat area on top. Lake Possum Kingdom, Lake Palo Pinto, and Lake Mineral Wells were all created by the construction of dams in a basin surrounded by flat top mountains. Large sections of the rest of the county are flat prairies and agricultural fields.

The challenging and unique mixture of terrain in this county has continually presented issues to first responders. Response times are extended due to limited and one-way road systems. Heat injuries have been an issue when working outdoors in the summer, particularly during summer fire seasons.

2.3 Climate

Predictive Service Areas (PSA) are geographic regions where weather reporting stations tend to act similarly in daily weather regimes and have similar fluctuations in fire danger and climate. Across Texas there are seven PSAs, Palo Pinto County resides in the Cross Timbers ecoregion. Each PSA region has had Fire weather thresholds, fuel moisture thresholds, and National Fire Danger Rating System thresholds developed for them.

The critical Fire weather thresholds in the Cross Timbers PSA are as follows:

- **Relative Humidity**: 25% or less
- **20-foot windspeed**: 20mph or greater
- **Temperature**: 90^0 or greater

There are two peak fire seasons in Palo Pinto County, one in the summer and one in the winter. Summer fire season typically peaks between July and September, and is driven by dry vegetation, little to no rain, and high temperatures. Winter fire season peaks between January and April and is driven by cured grasses and high wind events.

2.4 Vegetation

The two predominant vegetation types within the county are Juniper/Oak Forest and Grasslands. Both vegetation types fit in to the Cross Timbers Ecotype, which is characterized by dense Oak, Mesquite, Elm, and Juniper forests between open stretches of grasslands or Oak Savannahs. Within this ecotype the primary driver of fire is grass and timber litter fuels. Significant fires often feature torching trees, long range spotting, and short crown runs through closed canopy forests.

Previously this area would have seen low to moderate intensity fires every 3-5 years that would have removed woody encroachment on the open grasslands, helped clear dead and dying fuels in the forests, and returned nutrients back into the soil. The removal of fire as a management technique has played a large role in the expansion of forested areas within the county and the increased density within these forests. Grasslands have been encroached upon by mesquite and junipers, absorbing more water and shading out the grasses beneath their canopies.

Figure 2.1, Map of vegetation types across Palo Pinto County

Junipers need a large amount of water to live and will absorb large amounts of groundwater. As their population increases in an area, there will be more competition for a smaller amount of available

surface water. With lower amounts of ground water available, any new growth will tend to be short term, pushing up new vegetation before drying and up and turning into fuel for wildfire.

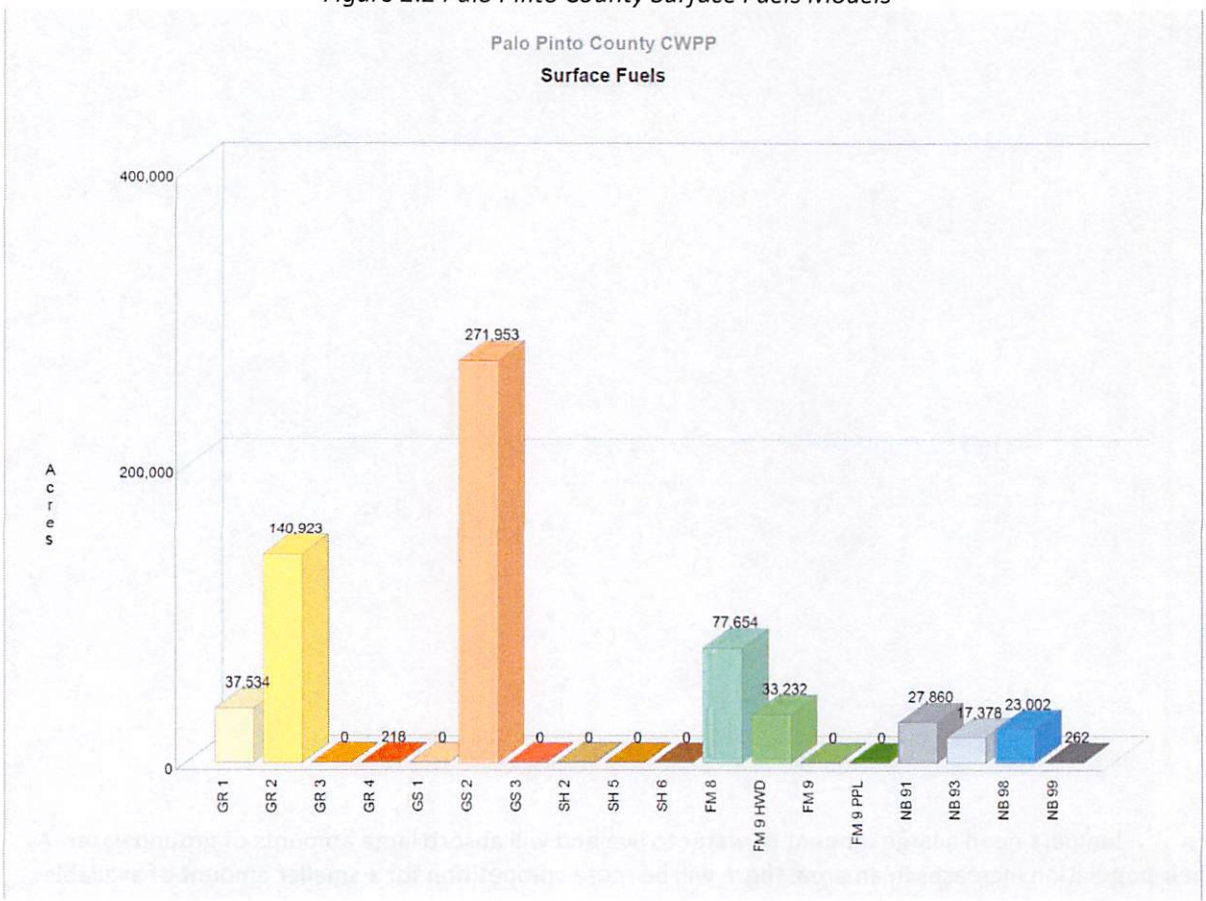
Fuel Models are used by fire analysts and planners to model fire behavior in an area and plan for what to expect under various conditions. The grasslands within Palo Pinto County typically fall under two fuel models, Grass Models 1&2 (GR1 & GR2). The Oak Juniper forests, depending on the density and maturity of trees, fall under either Grass Shrub 2 (GS2) or Closed Timber Litter (FM8). Together these four fuel models account for approximately 90% of the surface fuels within the county.

2.5 Land Use

Currently most land in Palo Pinto County is utilized for agriculture and livestock grazing. Ranching remains the largest industry, with many large ranches raising cattle, other livestock, and wild game. Hunting is a major attraction for the county with many ranches maintained for residents of other areas to come and hunt on. The several lakes in the county are predominantly used for recreation and tourism for nonresidents, retirees, and local residents. There are several quarries as well producing gravel and stone for use in the metroplex.

In the past, many locations around the county were used for military training during World War 2 and the Vietnam War. Apart from Fort Wolters Military Base and Dempsey Heliport, most of these

Figure 2.2 Palo Pinto County Surface Fuels Models



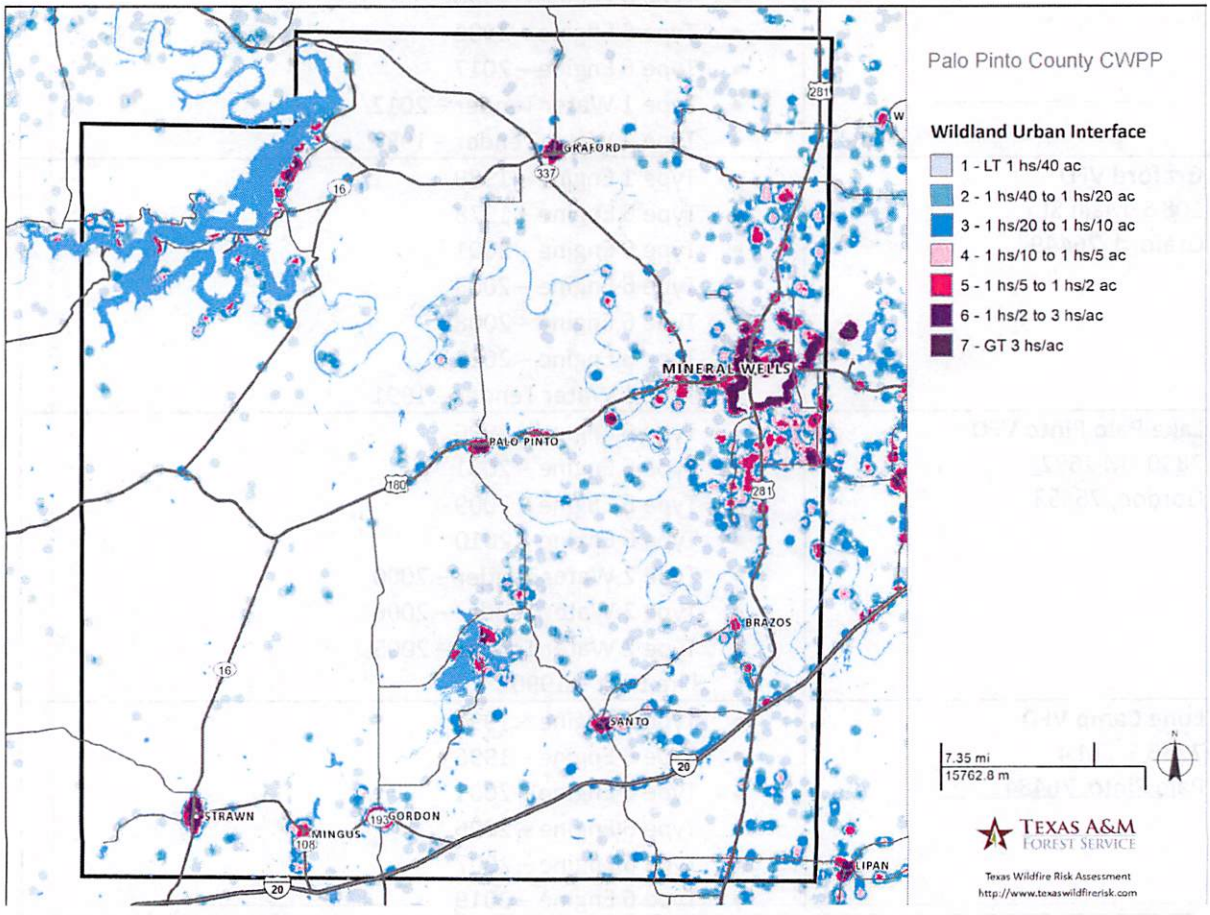
areas have been converted to private property and are being used for a variety of other uses. There are 2 state parks within the county, located on Lake Possum Kingdom and near Strawn, and one Wildlife Management Area located between Santo and Lake Palo Pinto. Additionally, several small ranches are owned by various charitable organizations and operate as camps for use throughout the year.

2.6 Population

Palo Pinto county's population is estimated to be 28,409, according to the 2020 U.S. Census. Of this population an estimated 77 percent live within the Wildland Urban Interface, based on the housing density of the county. Many areas around both lakes are made up of second homes, or houses owned by weekend or seasonal residents.

The entire county is experiencing an influx of building as developers change previously agricultural land into housing developments for new residents. Much of this growth will change areas previously categorized as rural into Wildland Urban Intermix or Interface. The changing population will put increased stress on local volunteer fire departments as calls for assistance will likely increase.

Figure 2.3, Map of Population centers across Palo Pinto County



2.7 Fire Response Capabilities

Palo Pinto County currently has 10 Volunteer Fire Departments (VFD) and 1 Combination/ Part-Paid department. Working for these various departments are 39 paid staff and 279 volunteers, 162 of whom are actively responding to calls. The number of volunteer firefighters is decreasing each year and this number is likely to continue to decrease, leading to less capacity for fire response within the county. Less capacity within the county will require more need for mutual aid from surrounding counties and state resources to assist with incidents.

Table 2.1: Fire Departments, their apparatus, and apparatus age

Fire Department	Apparatus
Brazos VFD 201 E. Rusk St. Santo, 76472	• Type 6 Engine – 2003 • Type 6 Engine – 2007 • Type 6 Engine – 2008 • Type 1 Water Tender – 2012
Gordon VFD 111 E. Crockett Gordon, 76453	• Type 3 Engine – 1990 • Type 3 Engine – 1998 • Type 6 Engine – 1973 • Type 6 Engine – 1998 • Type 6 Engine – 2006 • Type 6 Engine – 2017 • Type 1 Water Tender – 2012 • Type 2 Water Tender – 1997
Graford VFD 108 S. Main St. Graford, 76449	• Type 1 Engine – 1989 • Type 6 Engine – 1978 • Type 6 Engine – 2001 • Type 6 Engine – 2003 • Type 6 Engine – 2008 • Type 6 Engine – 2022 • Type 1 Water Tender – 1991
Lake Palo Pinto VFD 7830 FM 2692 Gordon, 76453	• Type 6 Engine – 1996 • Type 6 Engine – 2001 • Type 6 Engine – 2009 • Type 6 Engine – 2010 • Type 2 Water Tender – 2000 • Type 2 Water Tender – 2006 • Type 2 Water Tender – 2005 • Fire Boat – 1990
Lone Camp VFD 7236 S. FM 4 Palo Pinto, 76484	• Type 1 Engine – 1992 • Type 6 Engine – 1996 • Type 6 Engine – 2001 • Type 6 Engine – 2006 • Type 6 Engine – 2007 • Type 6 Engine – 2019

	• Type 2 Water Tender – 1988 • Type 3 Dozer – 2006 • ATV – 2007 • Tractor Trailer Unit – 1998 • Rescue Truck – 2019
Mineral Wells FD 300 S. Oak St. Mineral Wells 76068	• Type 1 Engine – 2000 • Type 3 Engine – 1984 • Type 3 Engine – 2012 • Type 6 Engine – 2004 • Type 6 Engine – 2017 • Type 6 Engine – 2022 • Type 1 Water Tender – 2003
Palo Pinto VFD 620 Oak St. Palo Pinto, 76484	• Type 2 Engine – 1991 • Type 3 Engine – 1984 • Type 6 Engine – 2002 • Type 6 Engine – 2002 • Type 2 Water Tender – 2001 • Rescue Truck – 2002
Possum Kingdom VFD 358 N FM 2353 Graford, 76449	• Type 2 Engine – 2004 • Type 3 Engine – 1997 • Type 6 Engine – 1994 • Type 6 Engine – 1999 • Type 6 Engine – 2018 • Type 2 Water Tender – 1995 • Rescue Truck – 2012
Possum Kingdom Westside VFD 4806 Green Acres Rd. Graham, 76450	• Type 1 Engine – 2000 • Type 3 Engine – 1986 • Type 4 Engine – 2005 • Type 6 Engine – 1995 • Type 6 Engine – 2000 • Type 6 Engine – 2012 • Type 6 Engine – 2006 • Type 1 Water Tender – 1986 • Type 1 Water Tender – 1990 • Command Vehicle – 2012
Santo Fire & EMS 1250 FM 2201 Santo, 76472	• Type 1 Engine – 2004 • Type 6 Engine – 2000 • Type 6 Engine – 2001 • Type 2 Water Tender – 2017 • BLS Ambulance – 2001 • BLS Ambulance – 2015 • Command Vehicle – 2003

	• Rescue Truck – 1985
Strawn VFD 612 Grant Ave. Strawn 76475	• Type 1 Engine – 2014 • Type 3 Engine – 1974 • Type 3 Engine – 1985 • Type 6 Engine – 1974 • Type 6 Engine – 2008 • Type 6 Engine – 2011 • Type 7 Engine – 1986 • Type 1 Water Tender – 1990

2.8 Emergency Facilities

Within Palo Pinto County are several small clinics and one General Hospital in Mineral Wells. Palo Pinto General Hospital is a Level IV Trauma center and has a landing site for medical helicopters. The closest Level I Trauma center is JPS Health in Fort Worth, approximately 60 miles away. The closest Burn Unit is the Southwestern Regional Burn Center located within Parkland hospital in Dallas, TX, 100 miles away.

Table 2.2: Hospitals, and their addresses

Hospital	Address
Palo Pinto General Hospital	400 SW 25th Ave. Mineral Wells, TX 76067
Palo Pinto Mobile Clinic	Various Locations
Community Care Center / Urgent Care	202 SW 25th Ave. Ste 300 Mineral Wells, TX 76067
Santo Family Health	13965 S. FM 4 Santo, TX 76472
Gordon Family Health	118 S. Main Gordon, TX 76453
Possum Kingdom Family Health	55 S. FM 2353 Graford, TX 76449

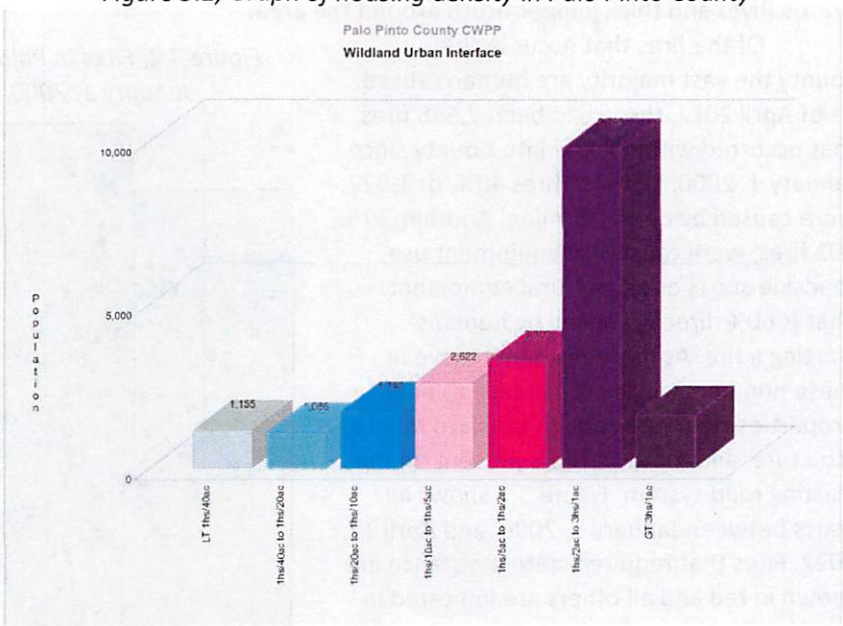
3.0 Fire Environment

3.1 Wildland Urban Interface

The Wildland Urban Interface (WUI) is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. This area is showing drastic growth in population as the overall population in Texas rises. Many urban residents are moving to more rural counties and areas. With Palo Pinto County's proximity to the DFW metropolitan area population growth is occurring and even more homes are expected to be built in the next five years.

Population density is measured in the number of houses per acres. The highest density areas have more than 3 houses per acre and the least dense areas have 1 house per 40 acres or more. This information can give county planners and first responders an idea of how many homes are at risk of wildfire and which areas will have the highest need for evacuations.

Figure 3.1, Graph of housing density in Palo Pinto County



The data represented below is based on data from 2015 and in the 7 years since many new homes and structures have been constructed. Many new subdivisions have been built and there are many new ones scheduled to begin construction in the next five years. These new homes will change the concentration of homes in the WUI, and Palo Pinto County should see more residents living within the WUI.

Table 3.1, Housing Density across Palo Pinto County

Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
LT 1hs/40ac	1,155	5.4 %	55,791	51.1 %
1hs/40ac to 1hs/20ac	1,086	5.1 %	17,935	16.4 %
1hs/20ac to 1hs/10ac	1,740	8.2 %	14,863	13.6 %
1hs/10ac to 1hs/5ac	2,622	12.3 %	9,861	9.0 %
1hs/5ac to 1hs/2ac	3,300	15.5 %	6,340	5.8 %
1hs/2ac to 3hs/1ac	9,798	46.0 %	4,226	3.9 %
GT 3hs/1ac	1,600	7.5 %	194	0.2 %
Total	**21,301**	**100.0 %**	109,210	100.0 %

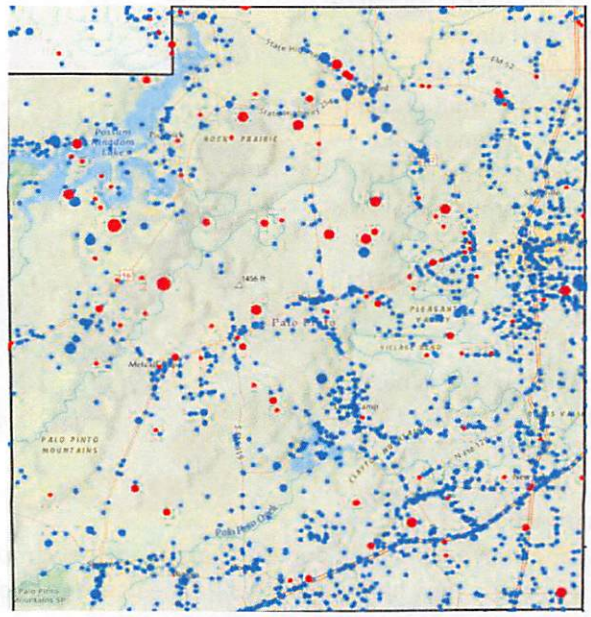
3.2 Fire Occurrence

Palo Pinto County has a history of significant fires. The Possum Kingdom Complex fires took place in April of 2011 and burned 126,7334 acres and 133 homes. This fire holds a place in many long-term residents' memories and is frequently brought up when discussing wildfires. Other major wildfires in the county include the Rhodes Ranch Fire, Surprise Fire, CR 337 Fire, 101 Ranch Fire, Pennington

Creek Fire, and Dark Valley Fire. These fires all occurred North of US 180 in difficult terrain along the Brazos River and thick juniper brush around the area.

Of the fires that occur in this county the vast majority are human caused. As of April 2022, there had been 2,555 fires that occurred within Palo Pinto County since January 1, 2000. Of these fires 40%, or 1,022, were caused by debris burning. Another 20 %, 502 fires, were caused by equipment use, roadside starts or agricultural equipment. That is 60% directly caused by humans starting a fire. As more residents move in these numbers will likely increase as new properties clear just enough brush to build a structure, and more traffic is present on the existing road system. Figure 3.2 shows all starts between January 1, 2000, and April 12, 2022. Fires that required state assistance are shown in red and all others are indicated in blue.

Figure 3.2, Fires in Palo Pinto County between January 1, 2000, and April 1, 2022

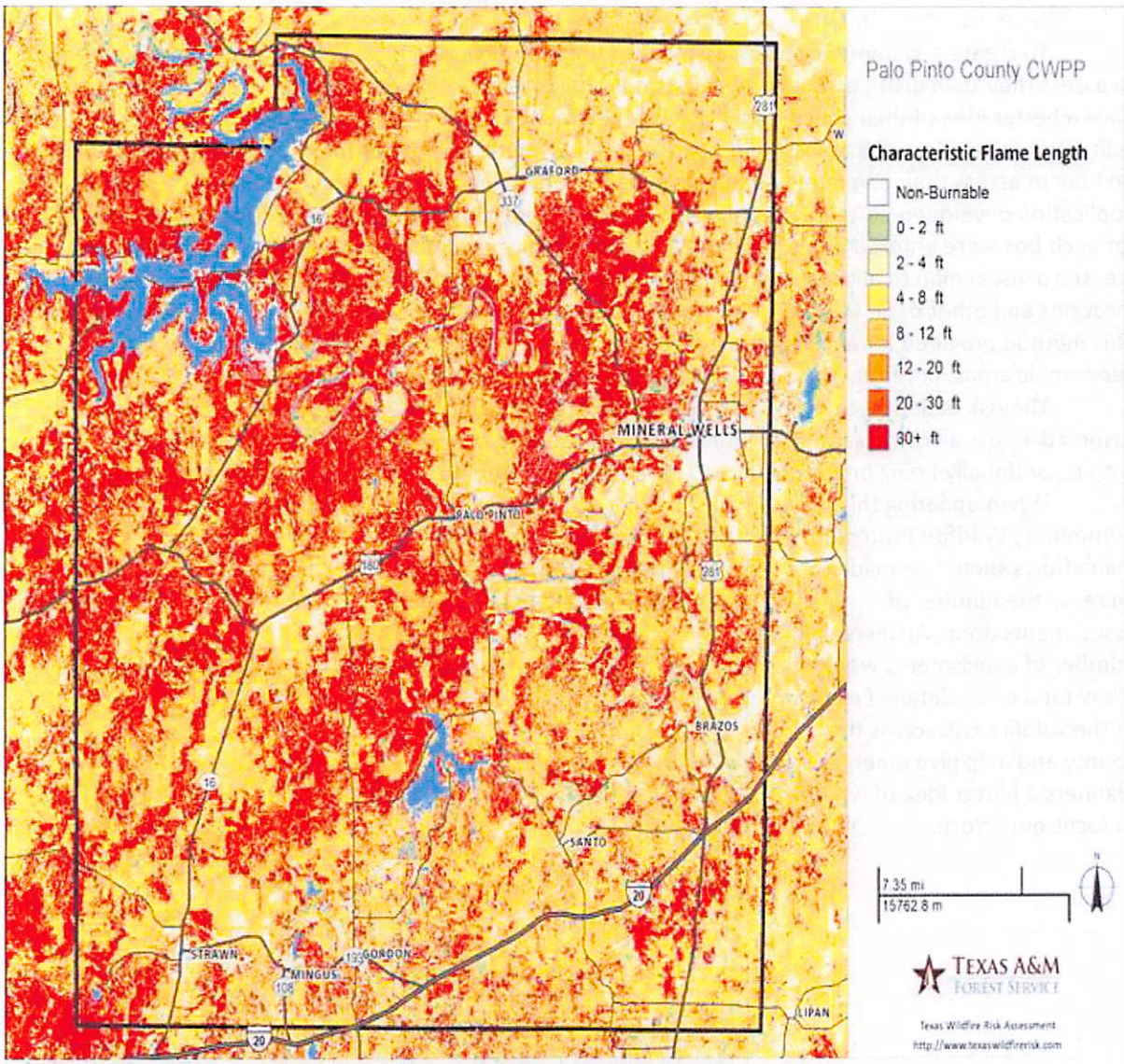


3.3 Fire Behavior

Fires in this county behave largely dependent on the available fuels. During the winter months under normal moisture conditions there are large windswept grass fires that will spread quickly but stop when they hit dense juniper brush. These fires can see flame lengths in the 4 – 12 foot range and can see rates of spread ranging from 15-150 chains per hour. During the summer when fuels are drier, or under drought conditions, juniper brush will come available, and fires will then be fuel driven and highly resistant to control efforts. These fuel driven fires can have extreme rates of spread with flame lengths well over 30 feet long.

The most devastating fires in the county's history are strongly associated with actively burning juniper brush and long runs across grassy fields. The area is under threat of Southern Plains Wildfire Outbreaks, extreme wind events that can cause any fire start to experience rapid growth and exhibit extreme behaviors. Residents should be made aware of these events and the associated threats. Typically, the worst parts of fire season in this county line up with high tourist visitation. Spring Break, 4th of July, and Labor Day are all busy times for the lakes, and second homes are occupied across the county. These areas are usually excessively dry and have additional ignition sources with increased traffic and more residents doing work on their landscapes, including burning debris.

Figure 3.3 Characteristic Flame Length situated around the county



4.0 Risk Assessments

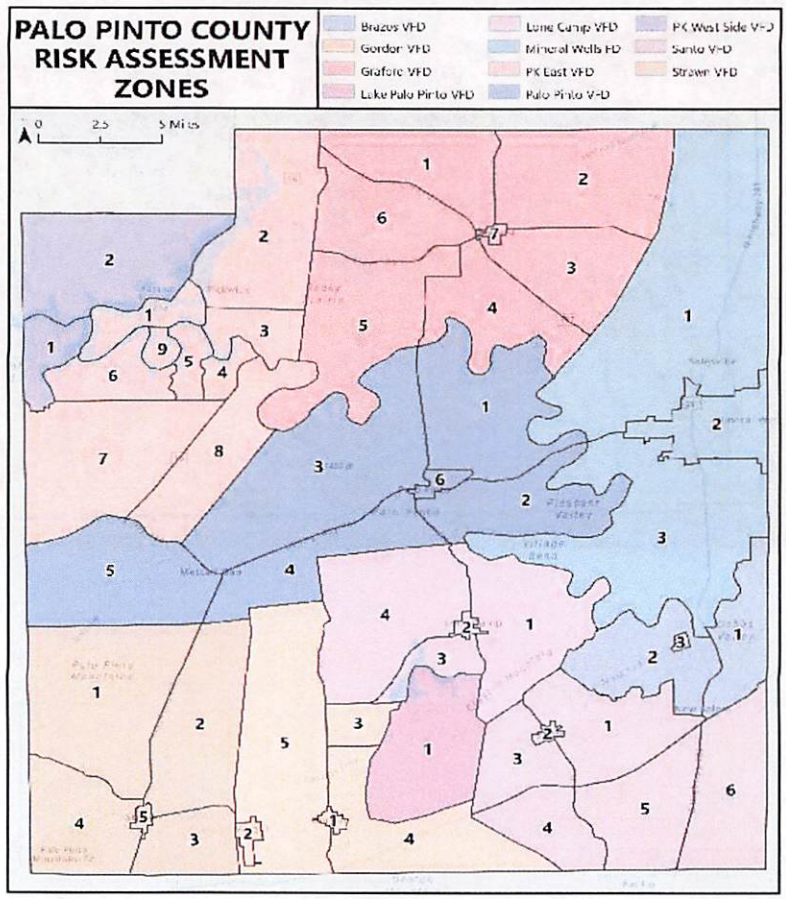
4.1 Risk Assessments

To create a systematic risk assessment of the entire county, local fire departments were utilized to assess their own districts. The local department has specific knowledge to their districts and would have a better idea of their specific risks. Each department was divided into smaller boxes to be assessed, split into between 4 and 8 assessment boxes per department. The department personnel were educated on how to assess their community and fill out paper forms (Figure 4.2) of the Community Assessor application developed by Texas A&M Forest Service. After the paper forms were collected the answers for each box were entered into Community Assessor to give a digital record of the findings. This also created a visual map to allow the working group to compare the assessed risk against population locations and other data. Overall, a total of 51 boxes were assessed by local departments (Figure 4.1). This method provided for a common scoring matrix but created an average score across large geographic areas, potentially showing lower risk or elevated risk due to specific hazards.

The risk of Southern Plains Outbreaks, which could occur anywhere across the county, was assumed across all risk assessments. Additionally, the entire county has a history of high fire occurrence, with it continually being one of the most active counties for major wildfires in the state of Texas.

When updating this Community Wildfire Protection Plan efforts should be made to increase the number of assessments done. An increased number of assessments would allow for a more detailed picture of the wildfire risk across the county and help give emergency planners a better idea of where to focus our efforts.

Figure 4.1, Map of Risk Assessment Zones

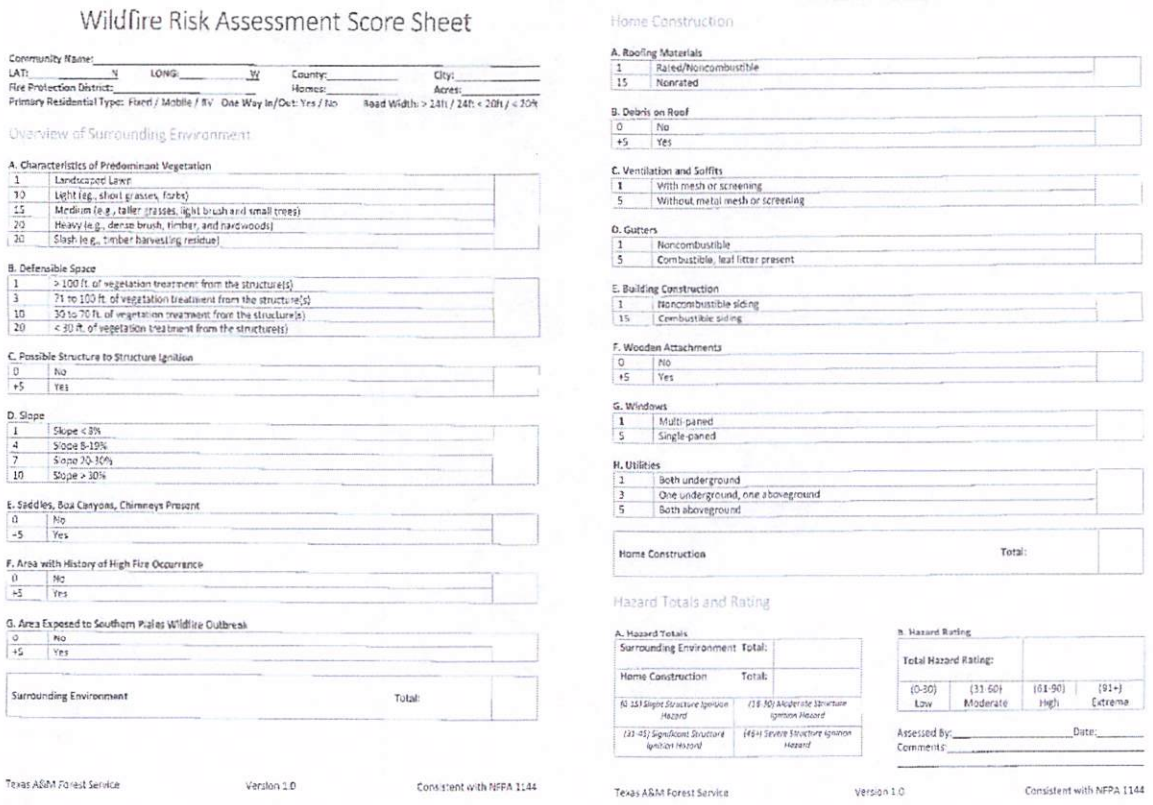


4.2 Risk Assessment Findings

After entering all the assessments into Community Assessor, risks were indicated by the shade of red (Figure 4.3). This map showed a large area of extreme risk in the northern half of the county. This area had several major wildfires in the summer of 2022 and continues to present a risk as further development of the area will see increased number of homes being built. Future development of the area will further increase the wildfire risk as homes are built in areas that were previously wildland or pastures. The current developed areas in the county do have a marginally reduced risk but are still elevated when compared to other developing areas around the state.

Most of the county has a high wildfire risk rating and presents opportunities for work to be done. It is not a matter of "if" a major wildfire occurs but "when" and which part of the county will be affected. With limited funds available and the limitations of a small staff, efforts will be focused on ensuring that resources are available to respond to wildfires and major hubs for the county will be safe in the event of a major wildfire. This presents a starting point to expand outwards from and enable future risk reduction.

Figure 4.2, Wildfire Risk Assessment sheet used to conduct all risk assessments across the county.



Wildfire Risk Assessment Score Sheet

Community Name:_____

LAT:_____N LONG:_____W County:_____ City:_____

Fire Protection District:_____ Homes:_____ Acres:_____

Primary Residential Type: Fixed / Mobile / RV One Way In/Out: Yes / No Road Width: > 24ft / 24ft < 20ft / < 20ft

Overview of Surrounding Environment

A. Characteristics of Predominant Vegetation

1	Landscaped Lawn
10	Light (eg., short grasses, forbs)
15	Medium (e.g., taller grasses, light brush and small trees)
20	Heavy (e.g., dense brush, timber, and hardwoods)
30	Slash (e.g., timber harvesting residue)

B. Defensible Space

1	> 100 ft. of vegetation treatment from the structure(s)
3	71 to 100 ft. of vegetation treatment from the structure(s)
10	30 to 70 ft. of vegetation treatment from the structure(s)
20	< 30 ft. of vegetation treatment from the structure(s)

C. Possible Structure to Structure Ignition

0	No
+5	Yes

D. Slope

1	Slope < 8%
4	Slope 8-19%
7	Slope 20-30%
10	Slope > 30%

E. Saddles, Box Canyons, Chimneys Present

0	No
+5	Yes

F. Area with History of High Fire Occurrence

0	No
+5	Yes

G. Area Exposed to Southern Plains Wildfire Outbreak

0	No
+5	Yes

Surrounding Environment Total:

Texas A&M Forest Service Version 1.0 Consistent with NFPA 1144

Home Construction

A. Roofing Materials

1	Rated/Noncombustible
15	Nonrated

B. Debris on Roof

0	No
+5	Yes

C. Ventilation and Soffits

1	With mesh or screening
5	Without metal mesh or screening

D. Gutters

1	Noncombustible
5	Combustible, leaf litter present

E. Building Construction

1	Noncombustible siding
15	Combustible siding

F. Wooden Attachments

0	No
+5	Yes

G. Windows

1	Multi-paned
5	Single-paned

H. Utilities

1	Both underground
3	One underground, one aboveground
5	Both aboveground

Home Construction Total:

Hazard Totals and Rating

A. Hazard Totals

Surrounding Environment Total:	
Home Construction Total:	
(0-15) Slight Structure Ignition Hazard	(16-30) Moderate Structure Ignition Hazard
(31-45) Significant Structure Ignition Hazard	(46+) Severe Structure Ignition Hazard

B. Hazard Rating

Total Hazard Rating:			
(0-30) Low	(31-60) Moderate	(61-90) High	(91+) Extreme

Assessed By:_____ Date:_____

Comments:_____

Texas A&M Forest Service Version 1.0 Consistent with NFPA 1144

4.3 Assets at Risk

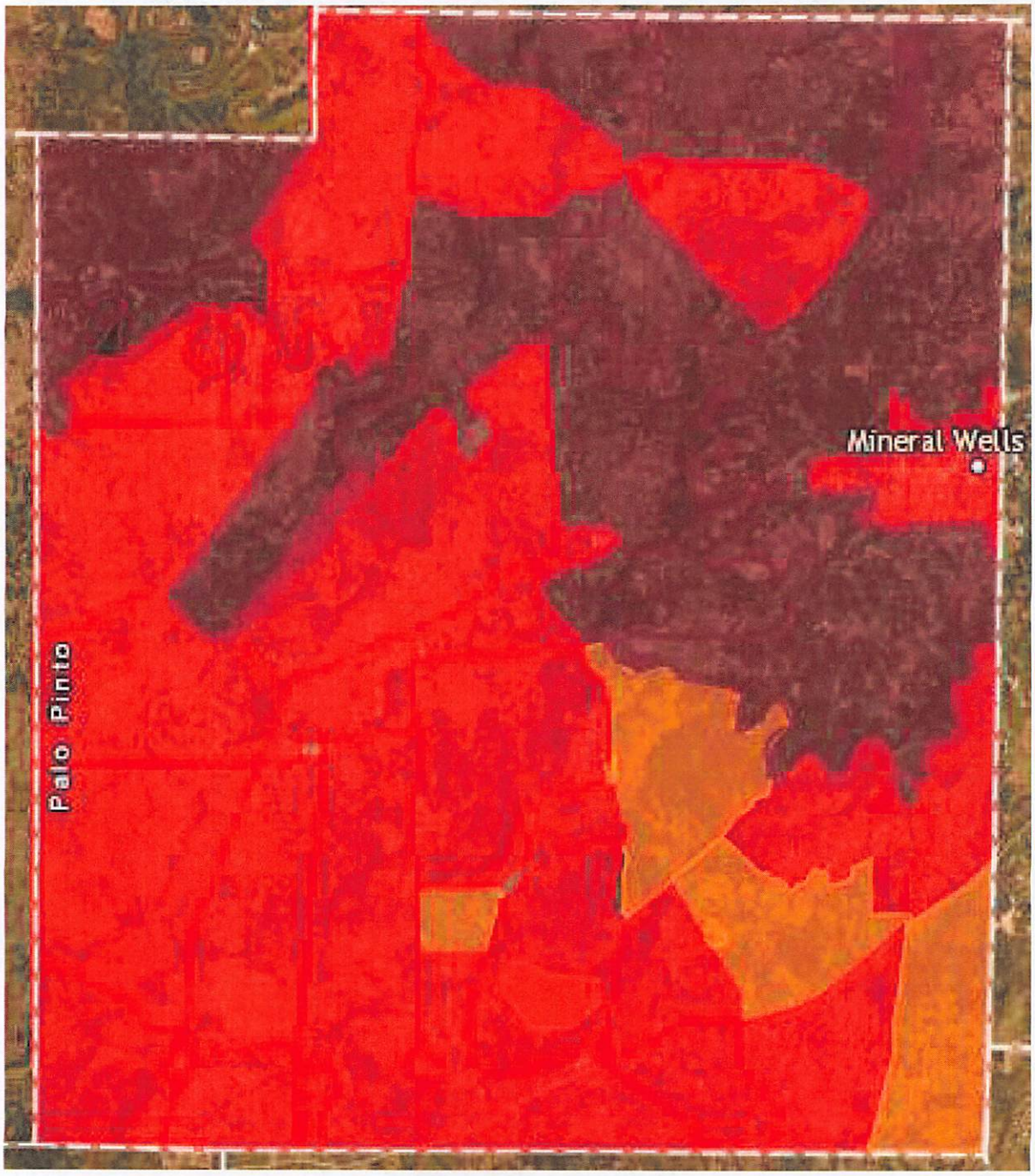
- Homes around Lake Possum Kingdom, due to dense fuel loading and narrow one-way directional streets. Homes are made of mixed construction with some being solid brick and stone construction and others wood siding.
- Communications tower on Johnson Peak, Main Communication hub for the entire county. All county radios will be line of sight and communications will be difficult to maintain across difficult terrain throughout the county.
- Palo Pinto county courthouse. The town of Palo Pinto houses the county jail, dispatch, and emergency operations center. This centralized location represents the nerve center for any major emergency operations and ensuring this location is safer from wildfires will ensure continued operations in the event of a major wildfire moving towards the town. In previous major fires there had to be a debate on how to evacuate the county jail and what to do with its incarcerated occupants.
- Communities along the Brazos River, many of these areas have multiple homes crowded along small one lane roads and have limited cell phone service. In the event of a fire, first responders will be fighting residents evacuate to suppress the fire. These situations require increased defensible space constructed around their homes to give responders the chance to protect them, or for the fire to pass around the homes and not impact them.

Table 4.1. Assessment scores for Palo Pinto County

Id	Community Name	Number of Homes	Acres	Residential Type	One Way In/Out	Road Width Class	Total Score
3927	MWFD Region 3	2,182	7,909	Fixed	No	> 24 ft	105
3925	MWFD Region 1	2,004	13,511	Fixed	No	> 24 ft	105
3931	Graford VFD Unit 1	69	25,330	Fixed	Yes	< 20 ft	105
3988	PK East VFD Unit 1	938	4,359	Fixed	Yes	> 24 ft	99
3983	PK West VFD Unit 1	131	19,106	Fixed	Yes	24 ft < 20 ft	99
3933	Graford VFD Unit 5	124	12,406	Fixed	Yes	> 24 ft	98
3984	PK West VFD Unit 2	131	12,982	Fixed	Yes	> 24 ft	97
3935	Graford VFD Unit 4	142	45,277	Fixed	Yes	< 20 ft	96
3982	PK East VFD Unit 8	46	31,342	Mobile	No	24 ft < 20 ft	93
3928	Graford VFD Unit 2	219	439	Fixed	No	24 ft < 20 ft	93
4090	Palo Pinto VFD Unit 2	317	20,325	Fixed	No	24 ft < 20 ft	93
4089	Palo Pinto VFD Unit 1	44	12,329	Fixed	No	24 ft < 20 ft	91
3989	PK East VFD Unit 2	1,441	22,360	Fixed	No	24 ft < 20 ft	90
3936	Graford VFD Unit 7	404	9,167	Mobile	No	< 20 ft	87
3986	Strawn VFD Unit 2	104	1,197	Fixed	No	24 ft < 20 ft	85
3968	Strawn VFD Unit 3	117	12,080	Fixed	No	< 20 ft	84
3967	Strawn VFD Unit 4	46	19,549	Fixed	Yes	< 20 ft	83
3926	MWFD Region 2	6,882	366	Fixed	No	> 24 ft	82
4094	Palo Pinto VFD Unit 4	132	15,966	Fixed	No	24 ft < 20 ft	82
3934	Graford VFD Unit 3	100	35,512	Fixed	No	< 20 ft	82
4092	Palo Pinto VFD Unit 3	124	12,209	Fixed	No	24 ft < 20 ft	82
3990	PK East VFD Unit 3	223	14,633	Fixed	No	> 24 ft	81
4088	Brazos VFD Unit 1	254	19,730	Fixed	No	24 ft < 20 ft	81
3985	Strawn VFD Unit 1	49	4,544	Fixed	No	24 ft < 20 ft	80
3987	Strawn VFD Unit 5	508	20,776	Fixed	No	24 ft < 20 ft	80
4093	Palo Pinto VFD Unit 5	74	2,670	Fixed	Yes	24 ft < 20 ft	80
3965	Santo VFD Unit 5	279	17,335	Mobile	No	24 ft < 20 ft	80
4091	Palo Pinto VFD Unit 6	267	12,840	Fixed	No	24 ft < 20 ft	80
3994	PK East VFD Unit 7	113	2,160	Fixed	No	24 ft < 20 ft	80
4096	Gordon VFD Unit 2	265	3,486	Fixed	No	24 ft < 20 ft	80
3932	Graford VFD Unit 6	80	14,227	Mobile	Yes	< 20 ft	78
3964	Brazos VFD Unit 3	77	7,268	Fixed	No	< 20 ft	78
3959	Brazos VFD Unit 2	374	14,479	Fixed	No	< 20 ft	78
3970	Santo VFD Unit 4	103	25,448	Fixed	Yes	24 ft < 20 ft	77
3963	Lone Camp VFD Unit 4	133	12,509	Fixed	No	24 ft < 20 ft	74
3971	Santo VFD Unit 3	106	15,815	Fixed	Yes	24 ft < 20 ft	74
3995	PK East VFD Unit 9	94	5,392	Fixed	Yes	24 ft < 20 ft	73
3993	PK East VFD Unit 6	250	2,580	Fixed	Yes	24 ft < 20 ft	72
3962	Lone Camp VFD Unit 3	421	523	Fixed	No	24 ft < 20 ft	69
4098	Gordon VFD Unit 4	209	16,780	Fixed	No	> 24 ft	69
4099	Gordon VFD Unit 5	217	127	Fixed	No	24 ft < 20 ft	68
4095	Gordon VFD Unit 1	400	444	Fixed	No	24 ft < 20 ft	68
3992	PK East VFD Unit 5	424	1,432	Fixed	Yes	24 ft < 20 ft	67
3991	PK East VFD Unit 4	258	7,102	Fixed	Yes	24 ft < 20 ft	67
3958	Lake Palo Pinto VFD	564	12,811	Fixed	No	24 ft < 20 ft	64
3952	Santo VFD Unit 6	461	7,835	Fixed	Yes	< 20 ft	59
3961	Lone Camp VFD Unit 2	107	551	Fixed	No	24 ft < 20 ft	58
3972	Santo VFD Unit 2	255	3,030	Fixed	No	24 ft < 20 ft	58
3960	Lone Camp VFD Unit 1	205	950	Fixed	No	24 ft < 20 ft	55
3966	Santo VFD Unit 1	377	25,332	Fixed	No	> 24 ft	49
3924	7R Community	120	8,486	Fixed	Yes	> 24 ft	47
4097	Gordon VFD Unit 3	6	20,785	Fixed	No	24 ft < 20 ft	41

Total Score	Wildfire Risk
91+	Extreme
61-90	High
31-60	Moderate
0-30	Low

Figure 4.3, Risk Assessment map. Darker colors have a higher risk.



5.0 Mitigation Strategies

5.1 Public Education

Palo Pinto county has identified a need for public awareness to ensure that the lessons learned after the 2011 fires are carried forward as the population increases with the ongoing developments. Along with Texas A&M Forest Service, Palo Pinto County will work to spread information and awareness about wildfires. Currently the county hosts a variety of National Night Out events in October each year and this process will be continued to educate our permanent residents. Palo Pinto County will leverage the variety of fundraising events that occur for the local fire departments in the summers to educate the seasonal residents. Palo Pinto, Graford, and Mineral Wells will receive some specific targeted messaging to educate residents on methods to protect their homes.

Continued education of developers working in the county will help to create safe spaces for new homes as the population grows in the county. Development is occurring across the county turning previously rural areas into Wildland Urban Intermix and Wildland Urban Interface areas rapidly. These new homes will present new issues to the local volunteer departments. Wildfires happen where people live, and as new residents move in, Palo Pinto County will see an increase in overall fire starts that can potentially be offset by good education on new resident's wildfire risk.

5.2 Hazardous Fuels Reduction

Fuels reduction projects are designed to reduce the intensity and rate of spread of fires in areas of overgrown vegetation. Often these projects align with creating a healthier ecosystem and defensible space that firefighters can respond to and control wildfires in. Shaded fuel breaks are the most common product, allowing green space while still creating a break for lower fire activity. Constructing these along evacuation routes, neighborhoods, roads, and community boundaries creates a safer space for residents and responders.

Several treatment options exist at a variety of price points:

- Mechanical (mulching, chipping)
- Hand Clearing (chainsaws, handsaws)
- Herbicide Application
- Prescribed Fire

Several locations have been identified for fuels reduction to protect county infrastructure in the event of a major wildfire. The county repeater system is located at the top of Johnson Peak, a hill covered in thick juniper brush located on the peninsula in lake Possum Kingdom. To protect this repeater, the area at the top of the peak will need to have a shaded fuel break created around it and expanded to ensure that if a fire comes up the hill side it will not majorly impact the repeater system. The work will need to be done largely by mechanical thinning due to thick vegetation and terrain presenting issues for access. Pairing this initial mechanical thinning with prescribed burning to maintain the cleared area will help create a persistent protected area around the important communications hub. The land is split across three property owners, BRA, YMCA, and Circle 10 BSA council. Texas A&M Forest Service has already conducted some mechanical thinning on the BSA property and plans to continue the thinning as funds and resources come available.

Another location identified is the county jail, dispatch center, and county courthouse located in Palo Pinto. If this key infrastructure is threatened there will be drastic complications with evacuating prisoners and losing county wide coordination. These properties are all surrounded by private or county

property and will require multiple landowners' approval. Constructing a large shaded fuel break around the perimeter of the town by mechanical thinning will allow for better protection in the event of a wildfire moving towards the town. Due to the volatile nature of the fuels in the area and the topography the shaded fuel break will have to be significant and require upkeep to ensure success when a wildfire confronts it.

Along the 1148 road on the west side of Possum Kingdom Lake a major wildfire occurred during the summer of 2022. The 1148 fire forced residents to evacuate by boat as the fire burned down the roadway, blocking the only access in and out for all residents. This area of the county is isolated from other county resources due to the travel time around the lake and any fires that exceed local capacity are likely to grow rapidly. Constructing a shaded fuel break along the roadway would allow residents and emergency responders safer access in and out of the area during an emergency, and potentially stop a fire moving south from destroying homes built along the lake shore. Fuel break construction could be down by a mixture of hand and mechanical techniques according to the terrain and thickness of fuels. Outside of emergency situations this thinning would also allow for more sightlines as drivers travel along 1148 and its numerous curves.

5.3 Incorporating Prescribed Fire

Prescribed fire is a natural part of the ecosystem here in Palo Pinto County and increasing its presence will help alleviate some of the wildfire threat. Currently many landowners conduct pile burns, with some large agriculture burns taking place. As fire departments are available to assist landowner with prescribed burns in the county, they will take advantage of those opportunities if available.

Additionally, Texas A&M Forest Service is increasing its burn program locally and has already identified about 2000 acres to be burned in the next year. Additional areas have been identified by them and are being prepared for prescribed fires over the course of the next 5 years. Texas Parks and Wildlife also conduct prescribed burns on their properties within county limits and the county will support them in their efforts as opportunities arise.

Other potential avenues would be conducting burn workshops for private landowners with Texas A&M AgriLife extension agents to help teach private landowners how to safely burn piles and brush on their own lands. With the completion of this document Palo Pinto County residents will also became eligible to apply for Community Protection Plan grants for prescribed fire through Texas A&M Forest Service. This grant would allow landowners to pay a private burn manager to burn their property and be reimbursed with funds for the cost of the burn, up to a certain amount of funding.

Table 5.1, Fuel Reduction Projects and Prescribed Burn Projects

Project	Details	Location	Fire District
County Repeater	Construct Defensible Space around the county communications hub. Utilize chainsaws and forestry mulchers to thin the forest around the radio tower.	Johnson Peak	Possum Kingdom VFD
County Jail	Construct a shaded fuel break around the town of Palo Pinto to protect the county seat, dispatch, and the county jail from impact by a major wildfire	Palo Pinto	Palo Pinto VFD

1148 Road	Widening and constructing the shaded fuel break along 1148 on the north side of Possum Kingdom. This will allow better access and potentially stop a fire before impacting the lake homes along the storm. This will require a forestry mulcher and chainsaws to work in tandem due to road and structure proximity	North Side of Lake Possum Kingdom	Possum Kingdom Westside VFD
Fort Wolters Prescribed Burn	Conduct regular prescribed burns on Fort Wolters property to protect the eastern half of the county and the major population center in Mineral Wells. This reduces fuels and allows local fire personnel to gain valuable training time on a controlled fire.	Mineral Wells	Mineral Wells FD
Texas Parks & Wildlife Burns	Texas Parks &Wildlife have several properties across the county that they will conduct prescribed burns on. These properties are located near homes and private properties and will help reduce overall fire risk for these homes	Possum Kingdom, Lake Palo Pinto, Strawn	Possum Kingdom Westside VFD, Lake Palo Pinto, VFD, Strawn VFD

5.4 Defensible Space

Several communities within Palo Pinto County are already working to build defensible space around their homes. Many members are aware of the need and are doing work to facilitate that process. The county will begin publicizing more information on how to build defensible space around your homes in the home ignition zone (HIZ). Several Firewise USA sites are located within Palo Pinto County and the county will be promoting the program to its constituents over the next five years.

The Home Ignition Zone is broken down into three zones and each zone differs in composition and importance. The zones are:

- **The Immediate Zone – 0-5 feet:** This area is ideally completely free of combustible material. If plants are in this zone they should be kept well maintained through regular watering and pruning. Plants should be pruned up away from the ground and down so that they are below windowsills or do not present a risk to the roof. Any material that falls from the plant and lands underneath it should be removed regularly so that there are not beds of dry fuels for embers to land in. Larger trees that provide shade for the home can be placed close, but they must also have lower limbs pruned and any ladder fuels removed. These trees need to have some separation from other trees in the area so that there is not a continuous path to the structure. Utilization of rocks and other physical boundaries are important in this area.
- **The Intermediate Zone – 5-30 feet:** This area should be regularly mowed to keep grass and other groundcovers short. Usage of walkways and landscaping beds help to break apart the continuity of fuels in this area. Any trees or brush in this area should be pruned up to a 1/3 of the tree height, up to a maximum of 10 feet. Additionally, trees and brush should be spaced apart and breaks in the canopy should be created to isolate the home and the immediate zone

from the rest of the canopy. Any propane tanks or fuel storage in this area should be well marked and protected from buildup of fuels.

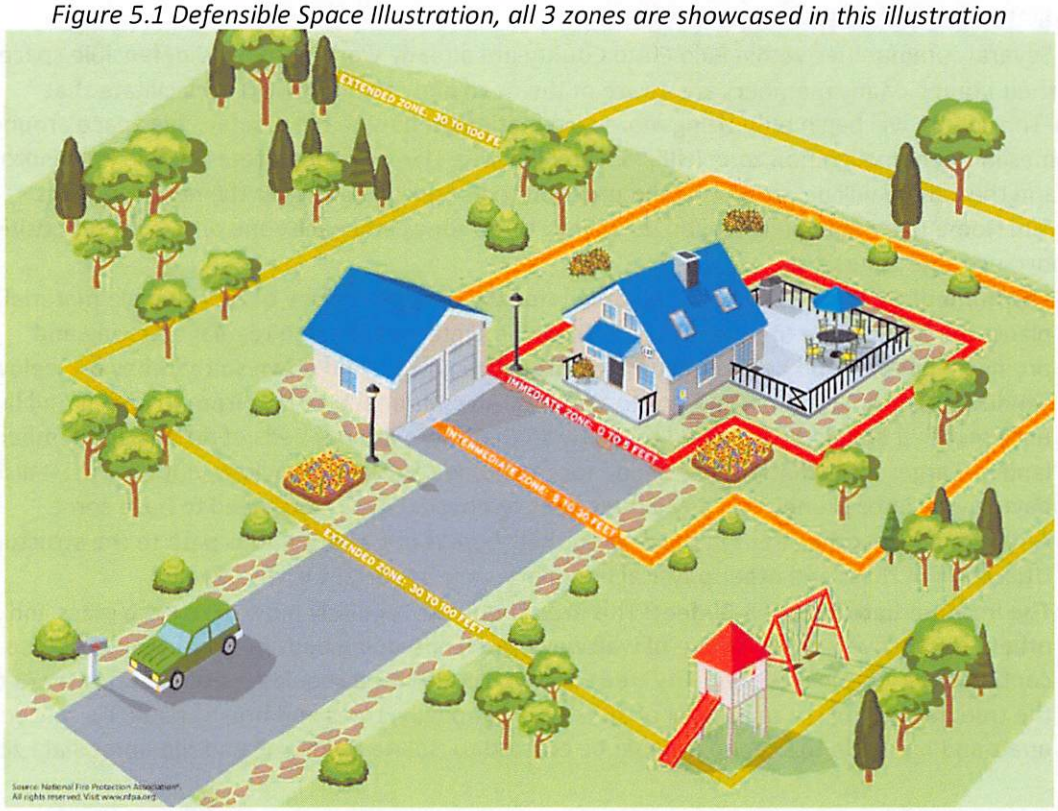
- **The Extended Zone – 30-200 feet:** This area should have trees limbed up to remove ladder fuels and isolate the tree canopy from the ground. Any excessive debris build up should be removed by hand or the use of a fuel's treatment such as prescribed fire. Any brush that regenerates should be kept at bay through regular maintenance.

The picture below shows the three zones and how the areas should look. For additional information residents should look at the Firewise USA program and its vast resources on how to manage the areas around their homes to both maintain their visual appeal and defensible space. Many residents mention having a screen of brush to keep their homes isolated from roads and other homes. These screens can work if the landowners have enough space to build defensible space between the screen and their house and the screen and other homes. Currently 4 Firewise USA sites exist within Palo Pinto County and are making beneficial efforts in the overall reduction of their risk. Additional work remains but with more time and funds these communities will decrease their risk overall.

5.5 Treatment of Structural Ignitability

Alongside creating defensible space to prevent home losses, residents should also look at changing how their home is constructed to prevent loss in a wildfire event. "Hardening a home" is a term that describes the process of retrofitting a home to reduce its risk to a home. Typically, this process involves utilizing non-combustible building materials and upgrading older windows, roofs, and vents.

Figure 5.1 Defensible Space Illustration, all 3 zones are showcased in this illustration



The largest cause of home loss in wildfires are ember wash and debris igniting. Swapping out roofs, siding for ignition resistant materials alongside with regular debris removal will help protect against ember ignitions.

When looking at replacing roofs residents should consider utilizing a fire rated roof. Roofs are rated for fire as Class A, B, C, or Unrated. Class A is the highest rating and unrated is the worst. Examples of Class A roofs include metal roofs with an insulation layer, concrete or clay roof tiles, and fiberglass asphalt composition shingles. These fire rated roofs provide better protection from ignition for the whole house, especially when any debris such as leaves, or juniper needles are regularly removed.

Another common avenue for ember intrusion is through vents and access points to crawl spaces or attics, as well as broken windows. Vents and access points can be protected by a $1/8^{th}$ inch mesh screening, allowing air flow while blocking all but the smallest embers. Single Pane windows can break if direct flame contact occurs allowing flames and embers to then enter the structure. Multi-pane windows help to prevent that by creating multiple barriers that would have to fail before allowing access.

5.6 Local Capacity Building

Currently departments are using old equipment being maintained largely by volunteer labor. With equipment being older and heavily used they require a larger amount of upkeep, taking up more time and funds from dedicated volunteers that could be spent at home with their families. Providing new or updated equipment will help lower this amount of upkeep time needed and ensure readiness for response to any emergency.

One key part of this would be the introduction of more water tenders throughout the county. Ensuring that at least every department has a functioning water tender would allow for longer responses and more resources available as most of the county does not have readily available water for fire use. Tenders can be used for both structural and wildland fires and are often some of the most requested resources as engines need to be able to quickly refill and return to fight fire.

Additional purchases of personal protective equipment (PPE), both wildland and structural gear, would allow for better protection of volunteers responding to fires. Most wildfires, volunteers are seen fighting fire in bunker pants and structural jackets. This PPE is excellent for structural fire but is heavy and hot in the middle of a summer fire season. Wildland gear allows for better heat exchange keeping firefighters in better condition to continue fighting fire instead of needing to back away to avoid heat injuries. Palo Pinto County is notorious for heat injuries, including causing a fatality of a federal Hotshot on the CR 337 fire in 2011.

Wildland training for the volunteer departments would help to increase safety as volunteers become more aware of the dangers of some tactics. Having a solid base understanding of wildland fire across all the departments would allow for better cohesion and communication on major wildfires where multiple departments are working together. Communication errors cause problems with fires and present safety concerns to both responders and members of the public.

5.7 Evacuation Planning

Currently evacuations are not well publicized and do not have set routes. During multiple fires in 2022 evacuations occurred and residents had issues with being sure where to get good information and whether they needed to evacuate. Establishing a common information source to ensure good

information gets out about burn bans, evacuations, and ongoing fires would assist with chaotic situations that may occur in emergencies.

Previously a public address system mounted on the Palo Pinto County courthouse was used to warn residents in the nearby area of danger and emergencies. This system worked for the immediate area until the siren was damaged and never repaired. Public address systems located across the county would be beneficial for a variety of emergency situations to help inform the public. Other beneficial options would be to move forward with a reverse 911 system or something of the type. This would allow for pushing notifications to cell phone currently in danger or the path of a fire and help evacuate residents out of the way. Another path will be the creation of a common social media page for mass addressing the public, media, and onlookers. Currently there are multiple social media pages for a variety of departments, but few are commonly updated and maintained.

Many roads around Possum Kingdom or the Brazos River are dead ends. Ensuring that these areas are well marked with evacuation routes would help ensure that members of the public are capable of safely exiting the area. Additionally, this would benefit first responders arriving to support local resources. Non-local resources may not be aware of the dangers of certain roadways and ensuring clearly marked dead ends and evacuation routes would help if responders needed to quickly leave.

The establishment of a variety of evacuation centers around the county would help in the event of a major fire. This includes both space for people and livestock, as both can be threatened by wildfires. These areas do not need to be permanent spots but identifying locations ahead of time allows for quick establishment and common knowledge in the event they are needed.

5.8 Planning and Zoning

Currently the county does not have a high enough population to adopt codes or conduct zoning. As the population grows zoning and basic fire codes should be considered to ensure that residents are safe and secure. Due to the nature of the fuels and topography, adoption of a Wildland Urban Interface code should be considered. This code considers wildfires and helps ensure that homes are built to survive wildfires as well as maintaining defensible space in occupied areas.

5.9 Mitigation Funding Sources

FEMA Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.
http://www.fema.gov/hazard-mitigation-grant-program

Texas A&M Forest Service National Fire Plan Grant

The National Fire Plan Grant provides assistance to communities that have been or may be threatened by wildfire by funding prescribed burning to reduce hazardous fuels in and around communities. Treatment areas will be private property in the 30 Texas Counties that have a Community Wildfire Protection Plan within the county. The goal is to protect high-risk communities and aid in ecosystem restoration by utilizing prescribed fire to consume excess vegetation before it contributes to catastrophic wildfire. Priority will be given to treatments sites that are within a CWPP, located near a

Firewise community, located near homes based on Texas Wildfire Risk Assessment Portal and contain ecosystems that will benefit from prescribed fire.

Texas A&M Forest Service Capacity Building

Texas A&M Forest Service provides eligible fire departments with programs designed to enhance their ability to protect the public and fire service personnel from fire and related hazards. Ten highly successful programs are currently administered to help fire departments discover and achieve their potential. Citizens are better served by well-trained and equipped fire department personnel. http://texasfd.com

Rural Volunteer Fire Department Assistance Program (HB 2604)

The Texas Rural Volunteer Fire Department Assistance Program is a cost-share program funded by the Texas State Legislature. It provides funding to rural volunteer fire departments for the acquisition of firefighting vehicles, fire and rescue equipment, protective clothing, dry-hydrants, computer systems and firefighter training. A chartered, non-profit volunteer fire department operated by its members is eligible. Any part-paid/part volunteer fire department is also eligible provided the number of paid members is 20 or less.
http://texasforestservice.tamu.edu/main/popup.aspx?id=9436

Community Wildfire Defense Grants

The Community Wildfire Defense Grants are intended to help at-risk local communities and Tribes plan and reduce the risk against wildfire. The grants are funded through the Bipartisan Infrastructure Law.

The Act prioritizes at-risk communities in an area identified as having high or very high wildfire hazard potential, are low-income, and/or have been impacted by a severe disaster. More details on these three priorities can be found in the Notices of Funding Opportunity (NOFOs) below.

There are two primary project types for which the grant provides funding:

- The development and revision of Community Wildfire Protection Plans.
- The implementation of projects described in a Community Wildfire Protection Plan that is less than ten years old.

5.10 Develop an Action Plan

To reduce the risk of wildfires in Palo Pinto County the planning committee has identified several projects that they plan to accomplish over the next five years. These include a variety of goals including, increasing response capacity through the purchase of new equipment, additional trainings for fire response personnel, several fuels mitigation projects across the county, establishment of new Firewise USA sites, and development and update of this CWPP prior to 2028.

Capacity Building

To stop wildfires sooner and avoid significant wildfire outbreaks, emergency resources need better training and additional equipment. The purchase of fire shelters for each apparatus and its crew will enable better safety of fire crews and their work. Currently most departments have none, and this lack of basic equipment prevents the fire departments from taking on more prescribed burning or participating with state or federal resources on their prescribed burns. Additionally, purchasing

additional wildland PPE will enable many of the departments to have enough PPE for each volunteer and increase the usage of wildland PPE.

The purchase of additional wildland equipment, such as wildland hand tools, backpack blowers, chainsaws, portable pumps, drop tanks, and wildland hose, will allow fire departments to begin working on fuel mitigation projects in their regions or across the counties. These fuel mitigation projects would include the listed projects in the next section as well as prescribed burns conducted both by regional partners and state and federal agencies in the county. Participation in prescribed burns provides excellent training on wildfire behavior, suppression tactics, and ignition operations.

Additional training on portable pump operations (NWCG S-211), chainsaw operations (NWCG S-212), and ignition operations (NWCG S-219) will all enable fire response personnel to become more capable in prescribed fire management as well as wildfire response. Training for prescribed fire goes hand in hand with wildfire suppression, more efficient responses enabled by additional training can help reduce overall risk of devastating wildfires.

The training aspect of capacity building will be an ongoing process over the course of the lifespan of this document. The purchase of this additional equipment will be funded through the application for several grants including the Community Wildfire Defense Grants and the Rural Volunteer Fire Department Assistance Program. These grants will be coordinated by the county emergency management staff and the county Emergency Service District (ESD 1) staff. These grants are high priority and will be submitted by August 2023 with the goal of all equipment purchased by December 2023

More water sources spread around the county will increase water capacity for suppressing a wildfire. The installation of dry hydrants around the major lakes and large ponds in Palo Pinto County (Lake Possum Kingdom, Lake Palo Pinto, various ponds) will create shorter drive times for apparatus to refill their tanks and return to an active wildfire. With the growing populations around these bodies of water this will become increasingly important for both wildfires and structural fires. Grant applications for the necessary funding will be completed by Spring of 2027 and installation will occur from summer of 2027 through the end of 2028.

Fuel Mitigation Projects

There have been 3 major fuel reduction projects identified by the planning committee. These projects will each take place over a large area of the county and work will be largely dependent on grant funding secured by the emergency management coordinator and their staff. Each project has been outlined over the next few pages and will present major undertakings for this county.

Name:	Road Easement Clearing
Location:	FM 1148, Fortune Bend Road, Chick Bend Road, Devil's Hollow Road
Hazard Rating:	High - Extreme hazard rating for each site
Owner/Responsible Party:	Private and Public land, Private Contractors will create
Contact Information:	Ricky Hunter, EMC, rhunter@co.palo-pinto.tx.us
Type:	Construction of Shaded Fuel Breaks
Size:	~100 acre, ~$50,000,000 of property protected

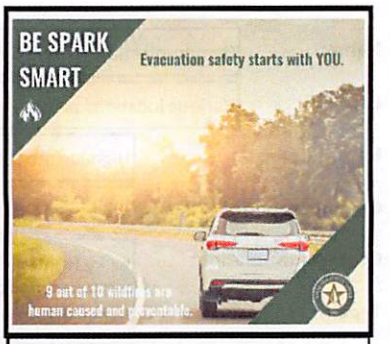


Figure 5.4: Evacuation routes PSA

Reasoning: These are multiple dead end road systems in Palo Pinto county that have lots of private homes along them or at their end. Creating shaded fuel breaks and removing excessive fuels along county road easements will allow safer routes into and out of these road systems.

Is this project impacting a low-income community?	*Yes* ☑	*No* ☐
Is this project impacting a community that has been affected by severe disaster?	*Yes* ☑	*No* ☐
Is this project located within an area identified as having high wildfire hazard potential?	*Yes* ☑	*No* ☐

Defensible Space: Cleared road easements allow responders to have better visibility as they travel into a dead end road system. This also allows for better 2 way traffic as shoulders can become available for road traffic of responders driving in and residents evacuating.

Mitigation/Management Plan: Clearing the entirety of road easements would allow county precinct staff or private landowners to regularly mow these easements and maintain the visibility and access that's been created. All fuels will be removed mechanically through the use of chainsaw or forestry masticator. Depending on funding availability this project will either be taken on by private contractors or county staff. If funds are not received via grants, Texas A&M Forest Service (TFS) staff may take on the task. Creating more open space along a road system improves overall safety of the roadway. These cleared road ways help create potential fire breaks throughout the county, as more roads are cleared more breaks are built.

Completion Timeline: Grants will be applied for to secure the funding of this project by March of 2026. Once funds are secured work will begin and should be completed by November of 2027. Golden cheek warbler nesting season may present an issue between March and the end of June with accomplishing work.

Maintenance Plan: Once the road easement is cleared it will be mowed and maintained by the land owner or county precinct staff. Annually the sites will be inspected and any woody vegetation needed to be removed will be cleared by either local fire departments, county precinct staff, or Texas A&M Forest Service staff. This will largely depend on availability of resources and funds.

Name:	Communication Towers Defensible Space
Location:	Various locations across Palo Pinto County, within ESD 1
Hazard Rating:	High hazard rating for each site
Owner/Responsible Party:	Private and Public land, Private Contractors will create
Contact Information:	Ricky Hunter, EMC, rhunter@co.palo-pinto.tx.us
Type:	Construction of Defensible Space and Shaded Fuel Breaks
Size:	~2 acre each, ~$500,000 of equipment protected each
Reasoning:	These communication towers are spread throughout the county and their destruction or damage in a wildfire would cease all communications across the county. This will cause issues coordinating emergency response across the county, and no public awareness of potential dangers affecting them.

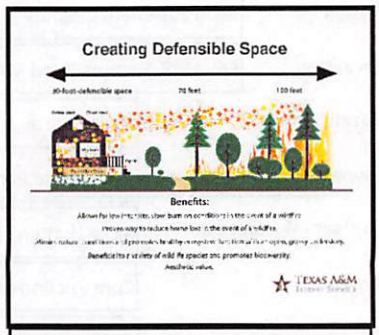


Figure 5.2: Explanation of Defensible Space

Is this project impacting a low-income community?	*Yes* ☑	*No* ☐
Is this project impacting a community that has been affected by severe disaster?	*Yes* ☑	*No* ☐
Is this project located within an area identified as having high wildfire hazard potential?	*Yes* ☑	*No* ☐

Defensible Space:	Each tower will have the three tiers of defensible space constructed around them, including the removal of all vegetation within the first five feet of the secured area. After that the next 30 feet will be cleared of ground fuels and the canopy will be thinned. From 30 feet to 100 feet a shaded fuel break will be created
Mitigation/Management Plan:	Creating specific locations of shaded fuel breaks in a variety of locations around the county will create anchor points for future work to expand out from. Using these points as examples for the various landowners that may have access to these towers will educate others on constructing defensible space in their own properties. Depending on funding availability this project will either be taken on by private contractors to expedite the completion of work. If funds are not received via grants, Texas A&M Forest Service (TFS) staff may take on the task and work with ESD 1 firefighters to remove the vegetation. This would allow for training on chainsaw operations for local fire personnel by experienced TFS staff
Completion Timeline:	Grants will be applied for to secure the funding of this project by March of 2024. Once funds are secured work will begin and should be completed by November of 2024. Golden cheek warbler nesting season may present an issue between March and the end of June with accomplishing work.
Maintenance Plan:	Once the defensible space is cleared it will be mowed and maintained by the land owner or county precinct staff. Annually the sites will be inspected and any woody vegetation needed to be removed will be cleared by either local fire departments, county precinct staff, or Texas A&M Forest Service staff. This will largely depend on availability of resources and funds.

Name:	Critical Infrastructure Defensible Space
Location:	Various locations across Palo Pinto County, within ESD 1
Hazard Rating:	High hazard rating for each site
Owner/Responsible Party:	Private and Public land, Private Contractors will create
Contact Information:	Ricky Hunter, EMC, rhunter@co.palo-pinto.tx.us
Type:	Construction of Defensible Space and Shaded Fuel Breaks
Size:	~100 acre, ~$50,000,000 of property protected
Reasoning:	The critical infrastructure outlined in section 6.2 are largely at risk of damage from a wildfire. The loss of any of these structures would present a major loss to the community and have major repercussions. These repercussions would affect every person in the county and would be long-lasting.

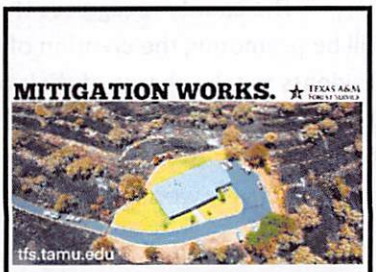


Figure 5.3: Successful defensible space

Is this project impacting a low-income community?	*Yes* ☑	*No* ☐
Is this project impacting a community that has been affected by severe disaster?	*Yes* ☑	*No* ☐
Is this project located within an area identified as having high wildfire hazard potential?	*Yes* ☑	*No* ☐

Defensible Space:	Each structure will have three tiers of defensible space constructed around them, including the removal of all vegetation within the first five feet of the secured area. The next 30 feet will be cleared of ground fuels and the canopy will be thinned. From 30 feet to 100 feet a shaded fuel break will be created.
Mitigation/Management Plan:	Creating specific locations of shaded fuel breaks in a variety of locations around the county will create anchor points for future work to expand out from. Using these points as examples for the various landowners that may have access to these towers will educate others on constructing defensible space in their own properties. Depending on funding availability this project will either be taken on by private contractors to expedite the completion of work. If funds are not received via grants, Texas A&M Forest Service (TFS) staff may take on the task and work with ESD 1 firefighters to remove the vegetation. This would allow for training on chainsaw operations for local fire personnel by experienced TFS staff
Completion Timeline:	Grants will be applied for to secure the funding of this project by March of 2025. Once funds are secured work will begin and should be completed by November of 2026. Golden cheek warbler nesting season may present an issue between March and the end of June with accomplishing work.
Maintenance Plan:	Once the defensible space is cleared it will be mowed and maintained by the land owner or county precinct staff. Annually the sites will be inspected and any woody vegetation needed to be removed will be cleared by either local fire departments, county precinct staff, or Texas A&M Forest Service staff. This will largely depend on availability of resources and funds.

Firewise USA program and Community Outreach

The county recognizes the importance of community involvement and resident participation and will be promoting the creation of Firewise USA sites. This national program is an excellent tool for residents to take charge of their own risk and begin reducing it, thereby protecting both themselves and their neighbors. As of January 2023, Palo Pinto County has 4 Firewise communities working to reduce their risk. Each of these communities already have lower risk in comparison to their surrounding areas and are actively working to lower their risk.

By the end of the lifespan of this document (2028), the county will have 3 additional Firewise sites established within its borders. This will require coordination between both the state agency responsible for Firewise USA in Texas, Texas A&M Forest Service, and the county Emergency Management Coordinator and their staff. At the time of the writing of this document there is one community interested in the development of this program and there are more to be found.

CWPP Updates and Management

The first priority of this CWPP is the establishment of a county Wildfire Mitigation Coordinator (WMC) position. The WMC will have several job functions benefiting the county and be a determining factor in the efficacy of this CWPP. This position would report to the County Emergency Management (OEM)/ Fire Marshal office. The general roles of the WMC will be to implement and coordinate CWPP fuels mitigation projects, purchase prescribed fire equipment, implement wildfire prevention and education, and grant procurement. The full-time position will be hired and maintained through grant funding provided by state and federal cooperators. With funding secured this position would be filled by November 2023. Without outside funding, Palo Pinto County will struggle to implement the wildfire mitigation priorities outlined within this CWPP.

Currently, the Palo Pinto County OEM/Fire Marshal office is staffed with 1 position, with an annual budget of $99,713. Additional staff and grant funding are essential for the attention to wildfire mitigation necessary to mitigate current wildfire risk. A full-time position will be necessary to effectively complete wildfire prevention and education, fuel reduction projects, and managing grant deadlines.

A major part of this position would be the continued tracking of accomplishments and goals outlined in this CWPP. By meeting deadlines for grant applications funding would be secured to enable all the other projects outlined above. As work progresses it is important to be able to relay to residents and county officials what their current risk looks like as work is completed. By December of 2027 a new assessment of the county's wildfire risk will begin, largely guided by the position outlined above. A new assessment will be critical to the development of an update to this plan so that new projects can be created with an accurate map of current wildfire risks. By June of 2028 an updated CWPP should be completed to replace this current version.

6.0 Appendix

6.1 CWPP Proclamation

PROCLAMATION

WHEREAS, Palo Pinto 'County has experienced growth and development in areas that were once rural coupled with the regular recurrence of wildfires; and

WHEREAS, it is in these areas where developments meet vegetation, or the Wildland Urban Interface that the greatest risk to public safety and property from wildfire exists; and

WHEREAS, the best defense is preparedness and public education concerning the dangers that wildfire poses tothe residents and natural resources of Palo Pinto County; and

WHEREAS, a Community Wildfire Protection Plan (CWPP) is authorized under the provisions outlined in Title I of the Healthy Forest Restoration Act of 2003; and

WHEREAS, a CWPP is a written document, mutually agreed upon by local, state and federal representatives and stakeholders that identifies how a community will reduce its risks from wildland fire; and

WHEREAS, a CWPP addresses structural ignitability, prioritizes hazardous fuel reduction efforts on public and private lands, and is developed collaboratively; and

WHEREAS, the development of a CWPP gives a community an opportunity to influence the manner in which hazardous fuels are reduced on Federal lands in proximity to communities; and

WHEREAS, communities with a CWPP offer the best solution for communities at risk from wildfire to mitigatesaid risks.

NOW, THEREFORE, BE IT RESOLVED, that the Commissioners Court of Palo Pinto County hereby urges all citizens of this county and this community to participate in the development of a countywide Community Wildfire Protection Plan in accordance with the Healthy Forest Restoration Act

Approved in Open Court on the 25 day of October, 2021.

Shane Long, County Judge

Gary Glover, Commissioner Pct 1

Mike Reed, Commissioner Pct 2

Mike Pierce, Commissioner Pct 3

Jeff Fryer, Commissioner Pct 4

ATTEST:
Janette Green, County Clerk

6.2 Palo Pinto County Critical Infrastructure

Palo Pinto County Critical Infrastructure				
Facility	**Address**	**City**	**Zip**	**Description**
Brazos River Authority	301 Observation Point Rd.	Graford	76449	River Authority / PK Lake
Brazos VFD	201 East Rusk St.	Santo	76472	Volunteer Fire Department
Chestnut Mountain Tower		Lone Camp	76472	Communications
City of Mineral Wells	115 SW 1st St.	Mineral Wells	76067	City Hall
DAEP	906 SW 5th Ave.	Mineral Wells	76067	ISD
Dempsey Tower	32.778 N, 98.273 W	Palo Pinto	76484	Communications
Gordon City Hall	105 S. Main St.	Gordon	76453	City Hall
Gordon EMS Station	108 N. Main St.	Gordon	76453	EMS Station
Gordon ISD	112 Rusk	Gordon	76453	ISD
Gordon VFD	111 E. Crockett	Gordon	76453	Volunteer Fire Department
Gordon Water Treatment Plant	1801 TX 193	Gordon	76453	Water Treatment Facility
Graford City Hall	424 E Lee Ave.	Graford	76449	City Hall
Graford Emergency Fire District	108 W. Lee Ave.	Graford	76449	Volunteer Fire Department
Graford EMS Station	108 W. Lee Ave.	Graford	76449	EMS Station
Graford ISD	400 W Division St.	Graford	76449	ISD
Graford Radio Site				Communications
Graford Water Treatment Plant	1200 Hwy 337	Graford	76449	Water Treatment Facility
Graford Water Treatment Plant	4554 Hwy 337	Graford	76449	Water Treatment Facility
Houston Elementary	300 SW 13th St.	Mineral Wells	76067	ISD
Johnsons Peak Tower	32.881 N, 98.478 W	PK East	76449	Communications
Lake Palo Pinto Area Water	4500 N. Lakeview Dr.	Palo Pinto	76484	Water Supply
Lake Palo Pinto VFD	7830 FM 2692	Gordon	76453	Volunteer Fire Department
Lamar Elementary	2012 SE 12th St.	Mineral Wells	76067	ISD
Lone Camp VFD	7236 S. FM 4	Palo Pinto	76484	Volunteer Fire Department
Mineral Wells Animal Shelter	101 FM 2256	Mineral Wells	76067	Animal Shelter

Mineral Wells FD / EMS	211 SW 1st Ave.	Mineral Wells	76067	Fire Department / EMS Station
Mineral Wells FD / EMS	3701 Industrial Pkwy	Mineral Wells	76067	Fire Department / EMS Station
Mineral Wells High School	3801 Ram Blvd.	Mineral Wells	76067	ISD
Mineral Wells Jr. High	1301 SE 14th Ave.	Mineral Wells	76067	ISD
Mineral Wells Police Department	212 S. Oak Ave.	Mineral Wells	76067	Police Department / Detention Center / Dispatch
Mineral Wells Regional Airport	5300 Airport Rd.	Mineral Wells	76067	Airport
Mineral Wells Wastewater Treatment Plant	1700 Pollard Creek Dr.	Mineral Wells	76067	Wastewater Treatment Facility
Mineral Wells Water Treatment Plant	6962 Hwy 281 S.	Mineral Wells	76067	Water Treatment Facility
Mingus City Hall	229 S. Mingus Blvd	Mingus	76463	City Hall
Morris Sheppard Dam	301 Observation Point Rd.	Graford	76449	Dam
North Rural Water Supply	3810 N. US 281	Mineral Wells	76067	Water Supply
Palo Pinto County Annex	100 SE 6th Ave.	Mineral Wells	76067	Courthouse Annex
Palo Pinto County Courthouse	520 Oak St.	Palo Pinto	76484	Courthouse
Palo Pinto County Sheriff's Office	402 Cedar St.	Palo Pinto	76484	Sheriff's Office / Detention Center / Dispatch
Palo Pinto General Hospital	400 SW 25th Ave.	Mineral Wells	76067	Hospital
Palo Pinto ISD		Palo Pinto	76484	ISD
Palo Pinto VFD	620 Oak St.	Palo Pinto	76484	Volunteer Fire Department
Palo Pinto Water Supply	238 Oak St.	Palo Pinto	76484	Water Supply
Possum Kingdom EMS Station / ESD 1 Office	55 S. FM 2353	Graford	76449	EMS Station / ESD Admin
Possum Kingdom VFD	358 N. FM 2353	Graford	76449	Volunteer Fire Department
Possum Kingdom Water Supply	1170 Willow Rd.	Graford	76449	Water Supply
Possum Kingdom West Side VFD	4809 Green Acres Rd.	Graham	76450	Volunteer Fire Department
RW Miller Power Plant	2217 FM Rd 3137	Palo Pinto	76484	Power Plant
Santo EMS Station	1250 FM 2201	Santo	76472	EMS Station
Santo ISD	406 FM 2201	Santo	76472	ISD

Santo Special Utility District	13497 S FM 4	Santo	76472	SUD
Santo VFD	1250 FM 2201	Santo	76472	Volunteer Fire Department
Strawn City Hall	118 E Housley St.	Strawn	76475	City Hall
Strawn ISD	224 E Walnut St.	Strawn	76475	ISD
Strawn Tower				Communications
Strawn VFD	612 Grant Ave.	Strawn	76475	Volunteer Fire Department
Strawn Water Treatment Plant	400 S. Front St.	Strawn	76475	Water Treatment Facility
Sturdivant Progress Water Supply	241 Village Bend Rd.	Mineral Wells	76067	Water Supply
Texas A&M Forest Service	3000 MH 379	Mineral Wells	76067	Forest Service
Travis Elementary	1001 SE MLK Jr. St.	Mineral Wells	76067	ISD

6.3 Progression Tracking

Action	Begin Date	End Date	Completed Y/N
Capacity Building			
Communication Towers			
Road Easement			
FIRE WISE Site Increase			
CWPP Update			

6.4 Leader's Guide

Community Wildfire Protection Plan Leader's Guide

Community Wildfire Protection Plans are a collaborative approach to wildland fire protection and mitigation. A plan can be as simple or complex as the needs of the community dictate.

☐ **Convene Decision Makers.**
- Engage local Texas A&M Forest Service representative—they can provide guidance and subject matter expertise.
- Involve local jurisdictions and fire service leadership from local, state, and federal cooperators.
- Notify local government officials—local support will bolster political capital in the community.

☐ **Engage Interested Parties.**

Wildfire risk is a community problem and a shared responsibility between stakeholders.
- Form a core working group with representation from the local fire department, local government, and Texas A&M Forest Service.
- Additional partners should be encouraged to participate. Who needs to be part of the conversation? Who has a vested interest in the community?
- Gain input from a variety of partners to ensure that the CWPP reflects the interests and values of the entire community.

☐ **Start Proclamation.**
- Present a proclamation/resolution to local government for approval and signatures.

☐ **Create a Community Base Map.**
- Develop a base map of the community that identifies potential communities at risk, areas with critical infrastructure, and delineation of the Wildland Urban Interface.
- Identify high-risk, priority areas for risk assessments.

☐ **Conduct Risk Assessments.**
- Consider factors that influence risk in the community: fuels, structural characteristics, access, local fire capacity, utilities, etc.
- Assume no operational response and address stand-alone survivability.
- Utilize as a tool to help residents understand their wildfire risk and engage in mitigation actions.
- Compile results and share with core working group and partners.

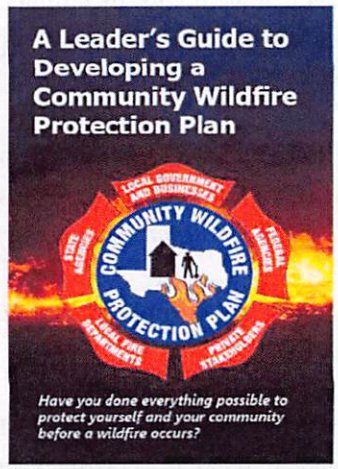
☐ **Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability.**
- Communicate the results from the risk assessments with all stakeholders.
- Begin to develop priorities for the community.
- Recommend actions that address structural ignitability and hazardous fuel reduction.
- Create strategies that address local fire service capacity.

☐ **Develop an Action Plan.**
- Generate prioritized recommendations for fuels reduction projects, outreach and education programs, and other mitigation actions that assist in achieving the goals and objectives of the CWPP.
- Identify roles and responsibilities, funding needs, and timelines for each priority project.
- Recommended actions must directly relate to the protection of the community and its values.

☐ **Finalize the Community Wildfire Protection Plan.**
- Complete plan and ensure that the three required criteria are met.
- Present a final draft to local signatories and Texas A&M Forest Service for approval.
- Plan a signing/recognition ceremony.

Download a Leader's Guide to Developing Community Wildfire Protection Plans at

tfsweb.tamu.edu/ProtectYourCommunity/



6.5 Glossary

Community base map — A geographic information systems product that can include streets, topography, and vegetation. For the purposes of a CWPP, a community base map should include areas at risk, critical infrastructure, and the community's WUI zone.

Defensible space — The area immediately encircling a home and its attachments.

Extended attack — Suppression activity for a wildfire that has not been contained or controlled by initial attack or contingency forces and for which more firefighting resources are arriving, in route or being ordered by the initial attack incident commander. *(National Wildfire Coordinating Group definition)*

Fuel loading — The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. This may be available fuel (consumable fuel) or total fuel and is usually dry weight. *(National Wildfire Coordinating Group definition)*

Healthy Forests Restoration Act — Signed into law in 2003, this act authorizes Community Wildfire Protection Plans as a tool to reduce hazardous fuels and maintain healthy forests.

Home hardening — Retrofitting process that reduces a home's risk to wildfire. This involves using non-combustible building materials and keeping the area around your home free of debris.

Home Ignition Zone (HIZ) — An area of up to 200 feet immediately surrounding a home.

Incident Action Plan (IAP) — Contains objectives reflecting the overall incident strategy, specific tactical actions and supporting information for the next operational period. When written, the plan may have several attachments, including incident objectives, organization assignment list, division assignment, incident radio communication plan, medical plan, traffic plan, safety plan and incident map. *(National Wildfire Coordinating Group definition)*

Initial attack — Fire that is generally contained by the attack units first dispatched, without a significant augmentation of reinforcements, and full control is expected within the first burning period. *(National Wildfire Coordinating Group definition)*

Mitigation Action Plan — A document that outlines a procedure for mitigating adverse environmental impacts.

Pre-Attack Plan — A resource for first responders that includes information specific to the community where an incident is taking place. Pre-Attack Plans may include possible Incident Command Post locations, shelter locations, radio frequencies, maps, high-risk areas, and contingency plans.

Structural ignitability — A home's design, construction materials and immediate surroundings are factors that contribute to how easily a home will ignite when wildfire threatens.

Wildland Urban Interface (WUI) — Areas where human habitation and development meet or are intermixed with wildland fuels (vegetation).