2023 HAZARD MITIGATION ACTION PLAN

Prepared by:
City of Pittsburg Emergency Management

Under Authority of:
CAMP COUNTY COMMISSIONERS COURT
and
CITY OF PITTSBURG CITY COUNCIL

Local Contact: David Abernathy
903-856-3621
dabernathy@pittsburgtx.gov

Date original plan submitted to TDEM:	**December 31, 2017**
Date revised copy re-submitted to TDEM:	_____
Date original plan Submitted to FEMA:	**February 20, 2018**
Date original approved by FEMA:	**March 6, 2018**

ADOPTION RESOLUTION: CAMP COUNTY

A RESOLUTION OF CAMP COUNTY, TEXAS, ADOPTING THE 2023 CAMP COUNTY-CITY OF PITTSBURG, TEXAS HAZARD MITIGATION ACTION PLAN

WHEREAS, certain areas of Camp County, Texas, are subject to periodic flooding and other natural and man-caused hazards with the potential to cause damages to people and properties within the area; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, Camp County's existing Hazard Mitigation Action Plan expires on May 30, 2023; and

WHEREAS, this county-wide, multi-jurisdictional Hazard Mitigation Plan covering Camp County and the City of Pittsburg has been revised and updated and is "approved pending adoption" by TDEM and FEMA; and

NOW THEREFORE, BE IT RESOLVED that the Camp County Commissioners Court hereby:

1. Adopts the REVISED and UPDATED **2023 Camp County-City of Pittsburg, Texas Hazard Mitigation Action Plan**.
2. Vests the County Judge of Camp County with the responsibility, authority, and means to:
    a. Inform all concerned parties of this action.
    b. Develop an Addendum to this Hazard Mitigation Action Plan if the County's unique situation warrants such an addendum.
3. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of this Hazard Mitigation Action Plan.

Passed, approved, and adopted this _____ day of _____, 2023.

_____

A. J. Mason
Camp County Judge

Attest:

_____

Sandra Knight
Camp County Clerk

ADOPTION RESOLUTION: CITY OF PITTSBURG

A RESOLUTION OF THE CITY OF PITTSBURG, TEXAS, ADOPTING THE 2023 CAMP COUNTY-CITY OF PITTSBURG, TEXAS HAZARD MITIGATION ACTION PLAN

WHEREAS, certain areas of Camp County, Texas, including the City of Pittsburg are subject to periodic flooding and other natural and man-caused hazards with the potential to cause damages to people and properties within the area; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, Camp County's existing Hazard Mitigation Action Plan expires on May 30, 2023; and

WHEREAS, this county-wide, multi-jurisdictional Hazard Mitigation Plan covering Camp County and the City of Pittsburg has been revised and updated and is "approved pending adoption" by TDEM and FEMA; and

NOW THEREFORE, BE IT RESOLVED that the City of Pittsburg City Council hereby:

1. Adopts the REVISED and UPDATED **2023 Camp County-City of Pittsburg Hazard Mitigation Action Plan**.
2. Vests the Mayor of the City of Pittsburg the responsibility, authority, and means to:
    a. Inform all concerned parties of this action.
    b. Develop an Addendum to this Hazard Mitigation Action Plan if the County's unique situation warrants such an addendum.
3. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of this Hazard Mitigation Action Plan.

Passed, approved, and adopted this _____ day of June, 2023.

_____

David Abernathy, Mayor
City of Pittsburg, Texas

Attest:

_____

Stacy Dorsett, City Secretary
City of Pittsburg, Texas

ACRONYMS

DFIRM	Digital Flood Insurance Rate Map
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Service
ETCOG	East Texas Council of Governments, which includes 14 counties and 99 cities
FEMA	Federal Emergency Management Agency,
FD	Fire Department
HMAP	Hazard Mitigation Action Plan
HMGP	FEMA Hazard Mitigation Grant Program
LEPC	Local Emergency Planning Committee
LOMA	Letter of Map Amendment for specific DFIRM
NFIP	National Flood Insurance Program
PDM	FEMA Pre-Disaster Mitigation Grant Program
TCEQ	Texas Commission on Environmental Quality
TDEM	Texas Division of Emergency Management

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2023 CAMP COUNTY
HAZARD MITIGATION ACTION PLAN

EXECUTIVE SUMMARY

Camp County and the City of Pittsburg are dedicated to the protection of local citizens and their property, and to the improvement of the quality of life for all residents. Hazard mitigation is a key element in these efforts. This Hazard Mitigation Action Plan is the result of several years of study, data collection, analysis, and community debate. Experts and specialists have been consulted; the regional Council of Governments has assisted in Plan development, and the final draft of this Plan has been reviewed by elected officials and citizens from throughout the region. Final decisions about the implementation of action items identified in the Plan have been made by elected officials from Camp County and the City of Pittsburg, with public comments and suggestions solicited, encouraged, and accepted throughout the planning process.

The 2023 Camp County Hazard Mitigation Action Plan covers Camp County and the City of Pittsburg. This Plan analyzes the risk posed to Camp County and the City of Pittsburg by all known natural hazards, and identifies mitigation actions to be taken to reduce risks associated with the following:

- Tornado
- Windstorm
- Hailstorm
- Severe Winter Storm
- Wildfire
- Drought
- Flood

This completed Plan and any updates will be posted on the Camp County website: **http://www.co.camp.tx.us/** as well as on the City of Pittsburg website: **http://www.pittsburgtx.gov/** and on the East Texas Council of Governments website: **http://www.etcog.org**.

The original Camp County Hazard Mitigation Action Plan was approved by FEMA and was officially adopted by Camp County and the City of Pittsburg, effective on March 28, 2012.

Over the past five years, Camp County and the City of Pittsburg have accomplished the following hazard mitigation activities:

Camp County

1. Camp County has adopted Smart911 emergency notification system, and uses it when needed. The Camp County website **(http://www.co.camp.tx.us/)** includes a link for citizens to register their telephone numbers, to ensure prompt notification in times of emergency. This is a free service to citizens. The County also uses a Facebook page to post public notices: **https://www.facebook.com/CampCountyTexas/**

2. Camp County Emergency Medical Service operates a total of eight (8) ambulances as of the date of this document. Connect with Camp County EMS via its Facebook page at: **https://www.facebook.com/CampCountyEMS**

3. Camp County issues Burn Ban notices when conditions warrant; these notices are posted in a prominent position on the County website; burn bans are enforced by the Sheriff's Office and Constable.

4. An early detection lightning warning system has been installed at Broach Park Recreation Complex to provide warnings.

City of Pittsburg

1. The City of Pittsburg has adopted Smart911, a citizen emergency notification system, and uses it when needed. The City of Pittsburg's website **Pittsburg, TX | Official Website (pittsburgtx.gov)** and Facebook site: **City of Pittsburg, Texas - Government | Pittsburg TX | Facebook** are also used to disseminate emergency messages, weather alerts, etc.

2. The City of Pittsburg has a link to enroll in Smart911 on their webpage and offers bi-lingual city staff to assist citizens with enrolling. Enrollment and assistance are free.

3. The City of Pittsburg's Departments, including: **Emergency Management**, **Fire Department** and **Police Department** also have Facebook pages and either post or share emergency messages and alerts.

4. The City of Pittsburg Fire Department is a combination career and volunteer department providing fire, rescue, inspections, and fire prevention services and operates from two fire stations. (The City of Pittsburg is quartered by two railroads. The fire stations are in locations to allow responses if trains block intersections.) The City of Pittsburg has been contracted by Camp County to provide services to the county as described above.

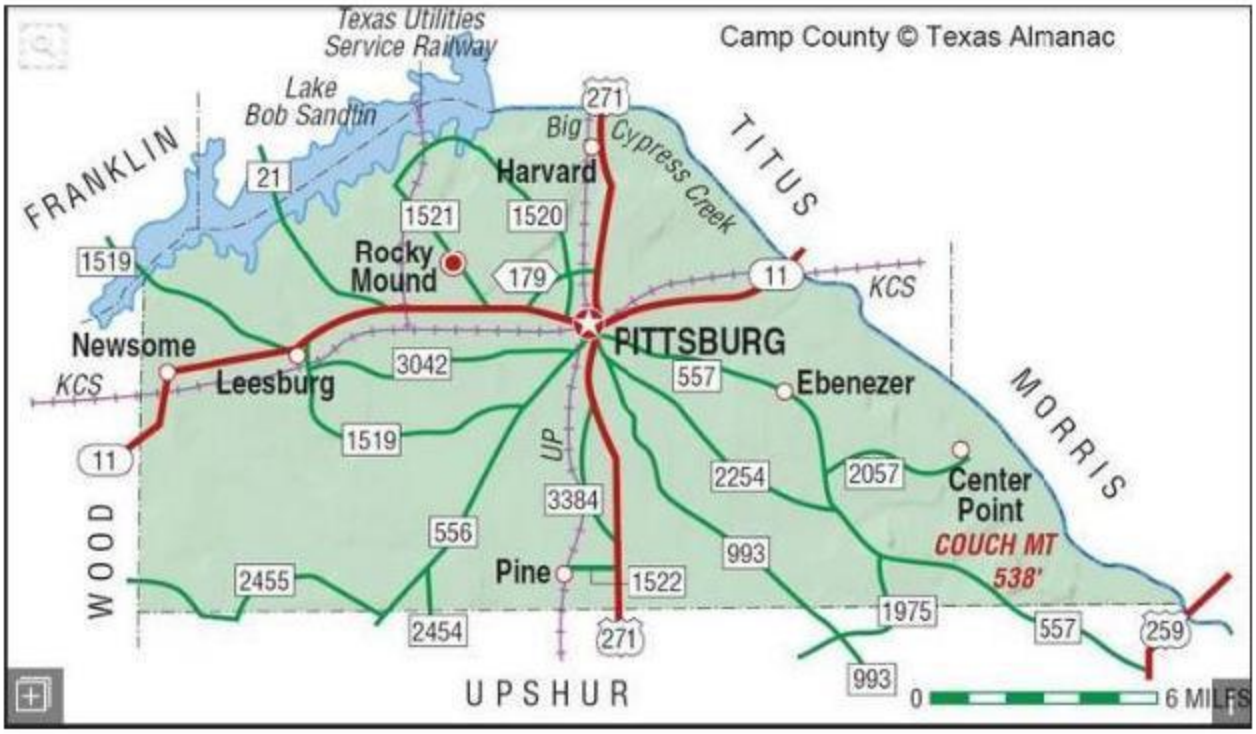
5. The City of Pittsburg adopted the ICC International Building Code, 2012 Edition, the NCC National Electrical Code, 2011 edition, and the ICC International Plumbing Code, 2012 edition, on June 10, 2013; and adopted the International Residential Code, 2015 edition, on August 8, 2016. Permits are required to build within the city. Article 3.05: Flood Damage Prevention designates the chief building official as the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain management.

6. The City of Pittsburg uses code enforcement to require the mowing of weeds, to prevent the spread of fire. There is a new City Ordinance on burning, which is posted on the City's website. The entire current version of the Code of Ordinances for the City can be found at: Ordinances | Pittsburg, TX (pittsburgtx.gov)

7. City leadership, city emergency management, and city department leaders routinely brief and work alongside each other during potential threats to the safety of citizens in the City of Pittsburg.

8. Early detection lightning warning systems have been installed to provide warnings to all school campuses, city parks and related outdoor recreational areas of Pittsburg.

Hazard Mitigation Actions planned for the next five years are found on pages 129 through 132.


Camp County © Texas Almanac
Texas Utilities Service Railway
Lake Bob Sandlin
FRANKLIN
TITUS
MORRIS
WOOD
UPSHUR
Big Cypress Creek
Harvard
Rocky Mound
PITTSBURG
Newsome
Leesburg
Ebenezer
Center Point
COUCH MT 538'
Pine
KCS
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271
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1521
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179
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2254
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CAMP COUNTY

2023 CAMP COUNTY HAZARD MITIGATION ACTION PLAN

PLANNING PROCESS

Natural hazard events are inevitable. When buildings, infrastructure, agriculture, and other human activities lie in the path of a hazard event, disaster occurs. The resulting damage may impact the environment and the local economy for several years.

Governing entities in Camp County and the City of Pittsburg cannot prevent natural hazard events, but can identify and implement mitigation measures to reduce damage and risk to human lives; to better protect the health, safety, and welfare of residents. This revised and updated Hazard Mitigation Action Plan is the result of countless hours of research, review, discussion and deliberation by many individuals throughout Camp County and elsewhere.

The increasing public cost of disaster response requires emergency management professionals, elected officials, and the general public to seek ways to reduce the risk associated with all hazards affecting the jurisdictions where they live and work. The Hazard Mitigation Planning process resulted from a series of federal and state mandates designed to significantly reduce the impact of various hazards at local levels. Authority comes from the Robert T. Stafford Disaster Relief and Assistance Act (Public Law 93288), as amended by the Disaster Mitigation Act of 2000. The requirements and procedures for State, Tribal and Local Mitigation Plans are found in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201 (44 CFR Part 201). Additional guidance and updated regulations are provided by the FEMA Interim Final Rule dated October 31, 2007 (**http://www.fema.gov**).

Texas Executive Order RP-12 on April 3, 2002, established the Emergency Management Council, and designated the Division of Emergency Management to administer and supervise the provisions of the Act. This State directive was later modified by Texas Executive Order RP-32, issued on January 28, 2004. By these Executive Orders, the

Governor designated the Mayor of each municipality and the County Judge of each county as Emergency Management Directors (EMDs) for their respective political subdivisions, and authorized each political subdivision to establish inter-jurisdictional agencies by intergovernmental agreement as needed.

The Camp County Hazard Mitigation Action Plan covers Camp County and the City of Pittsburg. Camp County joined with the East Texas Council of Governments (ETCOG) to produce the initial Hazard Mitigation Action Plan for Camp County and the City of Pittsburg, which was approved by FEMA and formally adopted by both jurisdictions, effective March 28, 2012. Throughout the planning process, efforts were made to solicit input from the general public; from neighboring community leaders; from first responders; from non-profit organizations and volunteer groups such as the Red Cross, Salvation Army, and others; from local industry professionals; and from all levels of government within Camp County and the City of Pittsburg. Public input from these sources was incorporated into the original HMAP, which has now been revised and updated.

Copies of the current Plan are available at the Camp County Courthouse and the Pittsburg City Hall. Throughout the revision process, a notice has been posted on the Camp County website at: **http://www.co.camp.tx.us/default.aspx?CampCounty/** inviting public comment and suggestions. Those who actively participated in the review and updating of the 2012 HMAP and preparation of this revised document include the Camp County Judge, Camp County Commissioners, the Camp County EMC, the Mayor of the City of Pittsburg, and the Pittsburg EMC. Although the public was invited to attend two public meetings, few people appeared and none participated in the discussion. However, public input was used during the writing of the first HMAP to identify the hazards to be mitigated. This included some instances where information was used during the writing of the first HMAP to identify the hazards to be mitigated. This included some instances where information was given about a hazard event that occurred in Camp County but did not appear on the NCDC list. All such information about historical events was included in this updated HMAP; therefore, “public input” is still shown as a source of information.

The revision process began in February of 2015, when Camp County applied for a FEMA grant to assist in funding the revision project. This grant, awarded in May of 2016, enabled Camp County and the City of Pittsburg to hire a contractor to prepare the revised document.

Existing plans, studies, reports and information were gathered from all available sources to assist in this Plan revision, including, but not limited to: census data; data on the current value of homes and other buildings from the Camp County Tax Assessor's office; the FEMA floodplain map for the City of Pittsburg and the one LOMA issued regarding it; repetitive flood loss data from the FEMA regional office; definitions and other hazard information from the 2013 Texas State Hazard Mitigation Plan; maps, charts and tables from the 2013 CHAMPS report for Camp County; wildfire data from the Texas A&M Forest Service; fire call data from the Pittsburg Fire Department; weather data from the National Climatic Data Service; list of county burn bans issued from the County Judge's Office; City of Pittsburg building codes and ordinances, from the City website; existing emergency management plans and annexes, and the expiring Camp County Hazard Mitigation Action Plan, from the EMC's office.

Public meetings were held on April 18, 2017 and on May 17, 2023, to discuss the revision process, including risk assessment for newly-considered hazards, mitigation actions completed over the past five years, and possible mitigation actions to be done over the next five years; and on December 12, 2017 and May 22, 2023 and May 23, 2023, to review the revised document and discuss any remaining issues. This document is the result.

Community Profile

Camp County, the third smallest Texas County, is comprised of 203 square miles of East Texas timberlands. It is heavily forested with a great variety of softwoods and hardwoods, especially pines, oaks and cypress. The terrain ranges from nearly level to hilly; most of the county is undulating to rolling. The county is located in northeastern Texas, approximately 50 miles from Louisiana and approximately 50 miles from Oklahoma. Pittsburg, is located on U.S. Highway 271, 60 miles southwest of Texarkana and 100 miles northeast of Dallas. U.S. Highway 271 runs through the county from north to south and State Highway 11 which runs through the county from east to west.

Two railroads cross Camp County and intersect in Pittsburg. The Union Pacific Railroad, constructed as the Texas and St. Louis Railway in the late 1870s, crosses the county from north to south, and the Kansas City Southern Railroad, constructed in the late 1870s as the East Line and Red River Railway, crosses the county from east to west.

Demographics

The table below shows actual population growth from 2000 to 2020, as well as the estimated population as of July 1, 2022, per the U.S. Census Bureau website, which was accessed on May 10, 2023 and on: **(https://www.census.gov/quickfacts/fact/table/campcountytexas,TX/PST045216**).

Population Changes of Pittsburg, Camp County, and the State of Texas

	2000	2010	2020	2022 estimate	Rate of Change (2000-2020)
Pittsburg	4,313	4,497	4645	4,545	0.44%
Camp County	11,549	12,401	12,464	12,716	0.9%
State of Texas	20,851,820	25,145,561	29,145,505	30,029,572	0.69%

Source: United States Census Bureau 2023; American Factfinder

	Number of Households	Persons per household	Same residence 1 year ago	Language other than English spoken at home
Pittsburg	1,782	2.55	81.9%	24%
Camp County	4,431	2.81	90.1%	21%
State of Texas	9,149,196	2.84	83.3%	35%

Source: United States Census Bureau population estimates, July 1, 2016 (V2016); American Factfinder); last accessed 8/12/17.

Age Distribution as a percentage of total population *(2019 data)*

Age group	Pittsburg population %	Camp County population %	Texas population %
Under the age of 5 years	9.5%	7.2%	7.7%
Ages 5 to 17 years	22.3%	27.1%	27.3%
Ages 18 to 64 years	54.3%	49.6%	54.7%
Ages 65 years and over	13.9%	16.1%	10.3%

Camp County has more older citizens than the state average, many of whom are retirees on a fixed income. (*Source:* Pittsburg, Texas (TX 75686) profile: population, maps, real estate, averages, homes, statistics, relocation, travel, jobs, hospitals, schools, crime, moving, houses, news, sex offenders (city-data.com) last accessed 05/17/2023).

During emergencies, older residents are more likely to need transportation assistance, particularly elders who live alone, and those with serious health issues. Nursing home residents are more likely to require specialized transportation assistance.

Racial Distribution

Racial group	Pittsburg population %	Camp County population %	Texas population %
White	30.6%	73.5%	45.3%
Black	25.2%	22.0%	11.8%
Latino	43.1%	3.1%	37.6%
Native American	0.2%	0.8%	0.7%
Asian	0.8%	0.5%	3.8%
other	0.1%	0.1%	0.8%

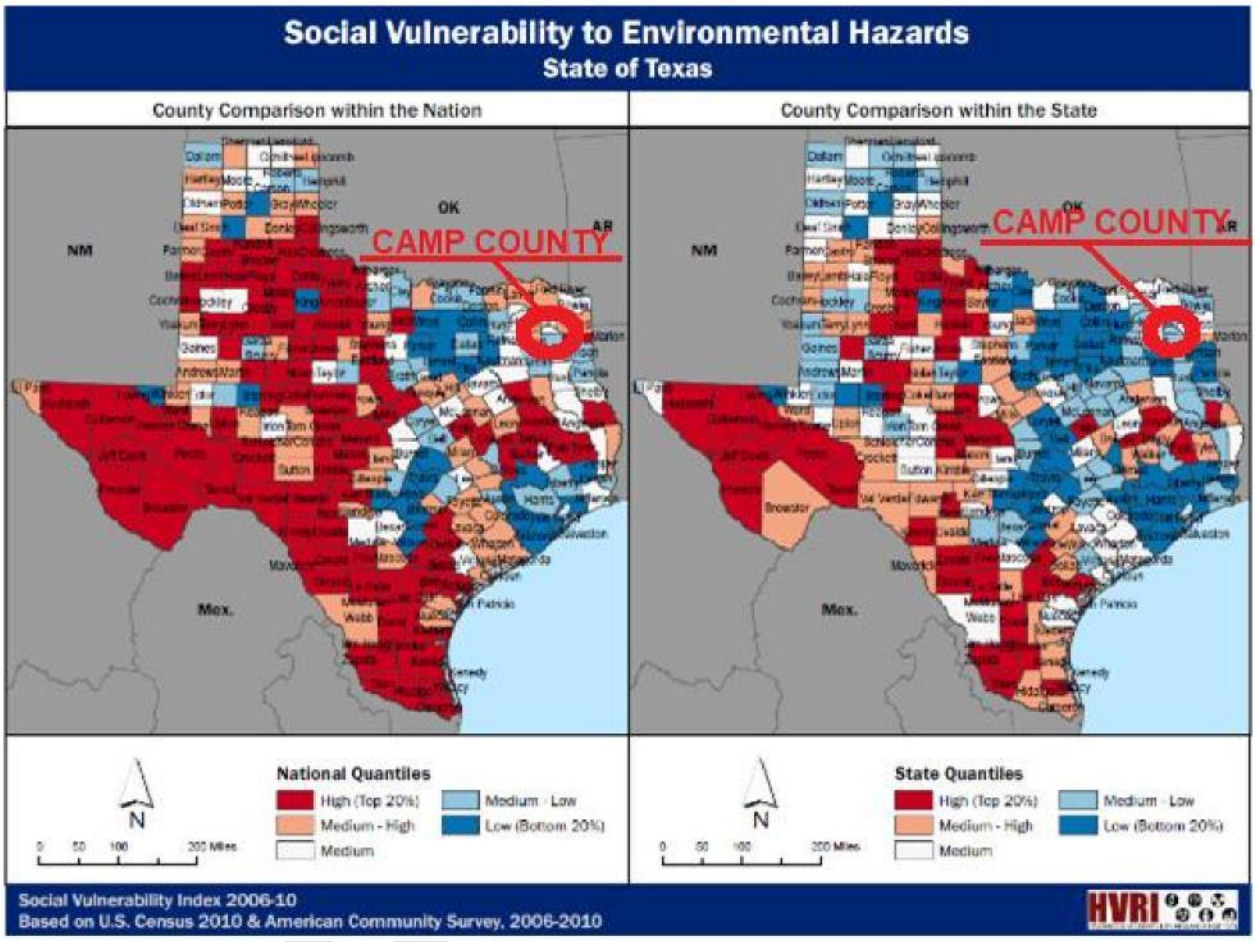
(*Source:* http://www.city-data.com/ county/CampCounty-TX.html; last accessed 11/10/17).

Special Considerations

The 2010 census reported that 10% of the adult population of Camp County, under the age of 65, suffers from some disability. This is more than the state average of 8.2%. In a time of disaster, these disabled people may need assistance in evacuating their homes. According to the U.S. Census Bureau, the median income for a household in Camp County from 2011 – 2015 (in 2015 dollars) was $37,851; in the City of Pittsburg it was $32,794; and the median per capita income (in 2015 dollars) was $19,738 in the County and $15,963 in the City. About 18.1% of rural Camp County residents fell below the poverty line, and 27.4% of Pittsburg residents, including 31.3% of families with children, and 41.1% of female-led families with children, compared to the State average of 17.2%. **The City of Pittsburg is designated for special consideration because of minority or economically disadvantaged population.**

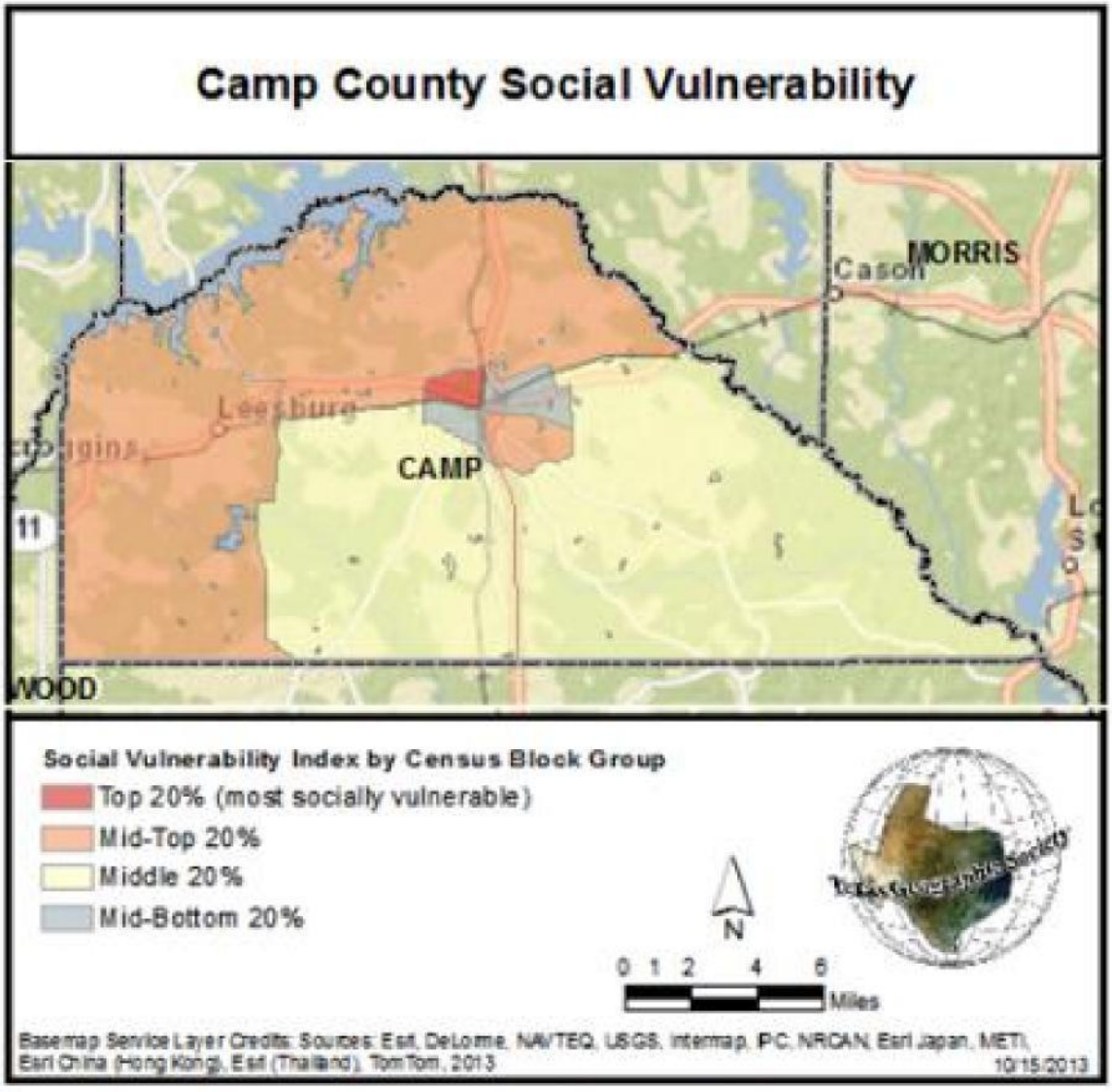
Social Vulnerability is estimated through an indexed combination of social, economic, demographic, and housing characteristics that influence a community's ability to respond to, cope with, recover from, and adapt to environmental hazards. The highest-rated counties are the most socially vulnerable (the least able to respond, cope, recover and adapt to environmental hazards).

The maps below display the social vulnerability index for each county in Texas based on the 2010 Census and surveys conducted in the 2006-2010 timeframe. The one on the left compares Texas counties with other US counties. (Camp County is shown in white.) The one on the right compares Texas counties to each other. (Camp County is shown in light blue.) Each of the five classifications contains an equal number of counties, or 20% of the total number of counties.



Source: *These maps were produced by the Texas Geographic Society, from data collected from several national sources, but primarily the U.S. Census Bureau (2010). This data was synthesized and distributed by the Hazards and Vulnerability Research Institute at the University of South Carolina, and these maps were part of the November 2013 CHAMPS report.*

The map below displays the social vulnerability index for each census block group in Camp County and the City of Pittsburg, based on the 2000 Census (latest date for which this level of detail was available). Each classification contains 20% of the total number of block groups. The highest rated groups are the most socially vulnerable (least able to respond to, cope with, recover from and adapt to environmental hazards). Special effort must be made to assist residents who are particularly vulnerable.



Source: This map is produced from data collected from several national sources, but primarily the U.S. Census Bureau (2000). This data was synthesized and distributed by the Hazards and Vulnerability Research Institute at the University of South Carolina, and was provided to the Camp County HMAP Team by the Texas Geographic Society, as part of the 2013 CHAMPS report.

Natural Environment

Camp County, located in northeast Texas, is bordered by Franklin County to the northwest, Titus County to the north, Morris County to the northeast, Upshur County to the south, and Wood County to the southwest. Camp County encompasses some 203 square miles of East Texas timberlands. Natural resources are the basis for a large part of Camp County's economy. If these resources were lost due to a hazard event, the economic impact would be devastating.

Climate

The climate of Camp County is subtropical. Temperatures range from an average in July and August of 71° to 93°F, and in January of 32° to 54°F, for an average annual temperature of 65°F. The average annual rainfall is 44 to 45 inches, and the growing season is 236 days. The average date of the last freeze is March 11, and the first freeze is around November 26. This pleasant climate makes Camp County a desirable recreational and retirement area.

Topography, Soils, Vegetation, Wildlife, Mineral Resources

Camp County is heavily forested with a great variety of softwoods and hardwoods, especially pine, cypress, and oak. The terrain ranges from nearly level to hilly; the largest portion of the county is undulating to rolling. The elevation ranges from 250 to 450 feet above mean sea level. The county is drained by Big Cypress Creek, which formed the northern and eastern boundaries of the county when it was organized. There are six major lakes within eighteen miles of Pittsburg that are reputed to be among the best bass-fishing lakes in Texas. By 1983 Lake Bob Sandlin and Lake O' The Pines had subsumed more than half of the creek bed along the northern and eastern boundaries of the county. The soils in Camp County are predominantly light-colored loam with loam and clay subsoils. Between 31 and 40 percent of the land in the county is considered prime farmland. Mineral resources include ceramic clay, industrial sand, oil, gas, and lignite coal.

Economy

Camp County is a northeast Texas county with an economy based on agriculture (predominantly chicken processing), light manufacturing, and timber production. The Texas Almanac lists broilers, eggs, cattle, hay, peaches, blueberries, greenhouse plants, and vegetables as principal sources of agricultural income. The City of Pittsburg is the county seat and principal commercial center of Camp County.

By 1982, 97% of the county's income from agriculture was generated by livestock and livestock products. Most of it came from hens, pullets, eggs, and commercial broiler production. Mechanization and the increasing emphasis on livestock also resulted in fewer and larger farms in the county. In 1920 the county had 1,709 farms. By 1959, the number had dropped to 537. In 1982, the 413 farms averaged 169 acres each. In 2002 the area had 399 farms and ranches covering 69,343 acres, 50 percent of which were devoted to crops, 32 percent to pasture, and 14 percent to woodlands. In that year farmers and ranchers in the county earned $81,672,000 (down 46 percent from 1997); livestock sales accounted for $80,751,000 of the total. Poultry and poultry products, beef, dairy cattle, horses, peaches, hay, blueberries, and vegetables were the chief agricultural products.

Retail sales in 2002 totaled $191 million. The 2000 census for the county was 11,549, an increase of 16.6% since 1990. The 2010 census reported 12,401, and the official estimated population for 2014 is 12,621. The total 2002 Effective Buying Income was $175.3 million with a median income of $29,931 per household compared to the state median of $38,669. A total of 68.1% of the households had Effective Buying Incomes in excess of $20,000, while 31.9% had incomes below $20,000.

Minerals produced in the county include oil, gas, clay and coal. There were 420,378 barrels of crude oil and 571 million cubic feet of natural gas recovered in 2001. Lake O' the Pines attracts many tourists to the county.

(Source: *Handbook of Texas Online*, Cecil Harper, Jr., "Camp County," accessed September 27, 2016, **http://www.tshaonline.org/handbook/online/articles/hcc05**)

According to http://www.city-data.com/county/Camp_County-TX.html (last accessed 05/05/2023) Camp County has the following housing units, by structure type:

Single-family residence, detached: 3,736
Single unit, attached: 58
Duplex: 108
3 or 4 units: 46
5 to 9 units: 62
10 to 19 units: 11
20 or more units: 66
Mobile homes: 996
Boats, RVs, vans, etc.: 145

Between 2010 and 2014, 13 new home building permits were issued in Camp County, with an average cost of $80,000 each.

Camp County
Population & Buildings Summary

POPULATION	12,401

BUILDING COUNTS

Residential	Commercial	Industrial	Agricultural	Religion	Government	Educational	TOTAL
5,504	237	66	28	27	6	9	5,877

BUILDING VALUES

Residential	Commercial	Industrial	Agricultural	Religion	Government	Educational	TOTAL
$434,162	$73,916	$27,890	$6,695	$13,272	$1,276	$9,499	$566,710

* Building dollar values are in 1000s of dollars 11/2/2013

Source: *This table was produced from data collected from several sources, primarily the U.S. Census Bureau (2000) and Dun & Bradstreet (2002), and applying RS Means (2006) building replacement values for typical square footage in each occupancy type. It was provided by the Texas Geographic Society, as part of the 2013 CHAMPS report.*

HAZARD IDENTIFICATION AND RISK ASSESSMENT

Identification of Hazards

Understanding possible hazards and their potential consequences is the first step toward effective reduction of community risks. The committee has identified eight specific natural hazards to be mitigated by Camp County, and seven which are to be mitigated by the City of Pittsburg.

The Camp County Hazard Mitigation Planning Committee identified these hazards through an extensive process that used research from the National Climatic Data Center; the State of Texas Hazard Mitigation Plan; the 2013 CHAMPS report, prepared by the Texas Geographic Society; the Multi-hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy; other materials obtained at TDEM training on Hazard Mitigation Planning; Planning Committee member input; and public input. All fifteen (15) of the hazards defined in the State of Texas Hazard Mitigation Plan 2013 update were considered for inclusion into this Plan. However, some are not included in this plan as targets for mitigation by Camp County and/or the City of Pittsburg, for the reasons stated below.

All 15 of the hazards defined in the State of Texas Hazard Mitigation Plan 2013 update were considered by the Hazard Mitigation Planning Committee. Those hazards are:

1. **Flood,** which is an overflow or accumulation of an expanse of water that submerges land. Flooding may result from the volume of water within a river, creek or lake, which overflows or breaks dams or levees, with the result that some of the water escapes its normal boundaries. A **flash flood** is rapid flooding of low-lying areas, usually caused by heavy rain in a relatively short period of time. For the purposes of this plan, flash floods are considered together with flood as a single hazard.

2. **Hurricane / Tropical Storm,** which are areas of disturbed weather in the tropics with closed isobars and a distinct rotary circulation. Hurricanes and tropical storms bring heavy rain, localized flooding, high tides, localized coastal erosion, and wind damage. To qualify as a hurricane, wind speed must be 74 mph or more. Hurricanes are classified into categories based on wind speed and the potential damage they cause. **Because Camp County and the City of Pittsburg are more than 250 miles from the Texas Gulf Coast, hurricanes and tropical storms are not a hazard to be mitigated in this Plan.**

3. **Wildfire,** which is any uncontrolled fire that occurs in the countryside or a wilderness area. Reflecting the type of vegetation or fuel, other names such as brush fire, bushfire, forest fire, grass fire, and wildland fire may be used to describe the same phenomenon. A wildfire differs from other fires by its extensive size, the speed at which it can spread out from its original source, and its ability to change direction unexpectedly and to jump gaps, such as roads, rivers and fire breaks.

4. **Tornado,** which is a localized and violently destructive rotating windstorm occurring over land, characterized by a funnel-shaped cloud extending toward the ground.

5. **Drought**, which is an extended period of months when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. It can have a substantial impact on the ecosystem and agriculture, and may cause severe water shortages, as well as higher fire danger.

6. **Coastal Erosion,** which is a hydrologic hazard defined as the wearing away of land and loss of beach, shoreline, or dune material because of natural coastal processes or manmade influences. **Because Camp County and the City of Pittsburg are more than 250 miles from the Texas Gulf Coast, coastal erosion is not a hazard to be mitigated in this Plan.**

7. **Dam or Levee failure,** which is defined as the sudden, uncontrolled release of water from a body of water that was previously contained by a dam or levee. Such events are comparatively rare, but can cause immense damage and loss of life when they occur, if people or structures are in the release path. Although there are seven earthen dams within Camp County, analysis of each has revealed that a complete failure of any of these dams would result in no significant damage; therefore, **Dam or Levee Failure is not a hazard which threatens Camp County or the City of Pittsburg. Therefore, Dam or Levee Failure is not a hazard to be mitigated by these jurisdictions. Dam or Levee Failure is no longer a concern for Camp County, because the Titus County Fresh Water District recently purchased all of the land in Camp County which might be at risk of flooding, should Fort Sherman Dam fail, releasing water from Lake Bob Sandlin. This is a change in priority from the 2012 Hazard Mitigation Action Plan.**

8. **Earthquake,** which is the motion or trembling of the ground produced by a sudden displacement of rock in the Earth's crust. **Because no earthquake has been reported in Camp County history, and because Camp County is not located in an earthquake fault zone, earthquake is not a hazard to be mitigated in this Plan.**

9. **Expansive Soil,** which includes several types of clay, particularly bentonite, which are especially prone to shrinking and swelling. Areas where these clays are known to be present are especially likely to have damage due to expansive soil. This can disrupt supply lines (roads, power lines, railways and bridges) and damage structures. **Because Camp County soil is not high in bentonite or other such clays, because no damage due to expansive soil has been reported in the City of Pittsburg or elsewhere in Camp County, and because no such damage is anticipated within the next five years, expansive soil is not a hazard to be mitigated in this Plan.**

10. **Extreme Heat,** which is defined as “temperatures that are 10˚ or more above the normal average high temperature.” The dangerous effects of extreme heat are compounded by the addition of high humidity. Extreme heat is dangerous because

heat stroke and dehydration may occur when people work outdoors in hot, humid conditions. Between 1950 and 2010, extreme heat was not reported in Camp County. “Excessive heat” was reported to the NCDC in June, July, August and September of 2011; July and August of 2015; July and August of 2016; and on July 28, 2017. No deaths, injuries or damages were reported. **Because no deaths, injuries or damage have been reported in either jurisdiction due to heat, and because none are anticipated within the next five years, extreme heat is not a hazard to be mitigated in this Plan.**

11. **Hailstorm,** which is defined as a storm which brings frozen precipitation in the form of small balls or lumps, usually consisting of concentric layers of clear ice and compact snow. Texas officials estimate that up to 40 percent of all homeowners’ insurance claims in the state result from hail damage. The northern half of the state, where Camp County and the City of Pittsburg are located, experiences more frequent severe hailstorms than other areas of Texas.

12. **Land Subsidence,** which is defined as the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface to localized, full-blown collapses. Land subsidence occurs in different areas for different reasons. A sinkhole is a category of subsidence. **Because land subsidence has not been reported in the City of Pittsburg or elsewhere in Camp County, and is not expected to occur within the next five years, land subsidence is not a hazard to be mitigated in this Plan.**

13. **Severe Winter Storm,** characterized by freezing rain or snow, and sometimes referred to as an ice storm. The U.S. National Weather Service defines an ice storm as a storm which results in the accumulation of at least 0.25-inch (0.64 cm) of ice.

14. **Windstorm,** characterized by the presence of strong straight-line winds, of 85 mph or above, with little or no precipitation. According to the current FEMA wind zone map,

Camp County and the City of Pittsburg are located in wind speed zone 4, and can expect to be subject to Wind Storms generating straight-line winds of up to 250 mph.

Source: **National Institute of Standards and Technology:**

Wind Zone Map (nist.gov)

15. **Lightning**, which is the discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. **Because no deaths, injuries or damage have been reported due to lightning in the City of Pittsburg or elsewhere in Camp County, and no such damage is expected to occur within the next five years, lightning is not a hazard to be mitigated in this Plan.**

The Camp County Hazard Mitigation Committee identified the following hazards as potentially serious dangers for Camp County, to be addressed in this Plan: Tornado, Windstorm, Hailstorm, Severe Winter Storm, Wildfire, Drought, and Flood.

Hazard	Sources used to Identify	Why it was identified
Tornado	Review of past storm events; Committee Input; National Climatic Data Center; CHAMPS data; internet research; Public Input	The County experiences a tornado **once every four to five years**, on average, with 12 events reported to NOAA from 1962 to 2017, a period of 55 years.
Windstorm	Review of past storm events; Committee Input; National Climatic Data Center; CHAMPS data; internet research; Public Input	The County experiences about **two to three significant wind storms per year**, with 104 events reported to NOAA from 1974 to 2017, a period of 44 years, an average of 2.4 events per year.

Hazard	Sources used to Identify	Why it was identified
Hailstorm	Review of past storm events; Committee Input; National Climatic Data Center; CHAMPS data; internet research; Public Input	The County experiences **one or more significant hail storms per year**, with 66 events reported to NOAA from 1978 to 2017, a period of 39 years, an average of 1.7 events per year.
Severe Winter Storm	Review of past storm events; Committee Input; National Climatic Data Center; CHAMPS data; internet research; Public Input	The County experiences at least **one severe winter storm per year**, with 26 events reported to NOAA from 1994 to 2017, a period of 24 years.
Wildfire	Review of past events; Committee Input, National Climatic Data Center; Texas A&M Forest Service TxWRAP website; CHAMPS data; internet research; Public Input	The County experiences Numerous wildfires every year.
Drought	Review of past storm events; Committee Input, National Climatic Data Center; CHAMPS data; internet research; Public Input	The County experiences drought potential annually, with 29 events reported to NOAA from 1996 to 2017, representing 8years of drought out of the past 22 years.
Flood	Review of past storm events; Committee Input; National Climatic Data Center; FEMA flood map website; CHAMPS data; internet research; Public Input	The County experiences a flash flood event about every 1.6 years, with 12 events reported to NOAA from 1997 through 2017, a period of 21 years.

Data Sources:

American Society of Civil Engineers (ASCE), “Facts About Windstorms.”
Web site: **www.windhazards.org/facts.cfm**

Bureau of Reclamation, U.S. Department of the Interior
Web site: **www.usbr.gov**

Federal Emergency Management Agency (FEMA)
Web site: **www.fema.gov**

National Climatic Data Center (NCDC), U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Web site: **http://lwf.ncdc.noaa.gov/oa/ncdc.html**

National Drought Mitigation Center, University of Nebraska-Lincoln
Web site: **www.drought.unl.edu/index.htm**

National Severe Storms Laboratory (NSSL), U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Web site: **www.nssl.noaa.gov**

National Weather Service (NWS), U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Web site: **www.nws.noaa.gov**

Storm Prediction Center (SPC), U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service
Web site: **www.spc.noaa.gov**

Texas State Hazard Mitigation Plan, 2013 Update, available online at:
http://www.dps.texas.gov/dem/Mitigation/txHazMitPlan.pdf

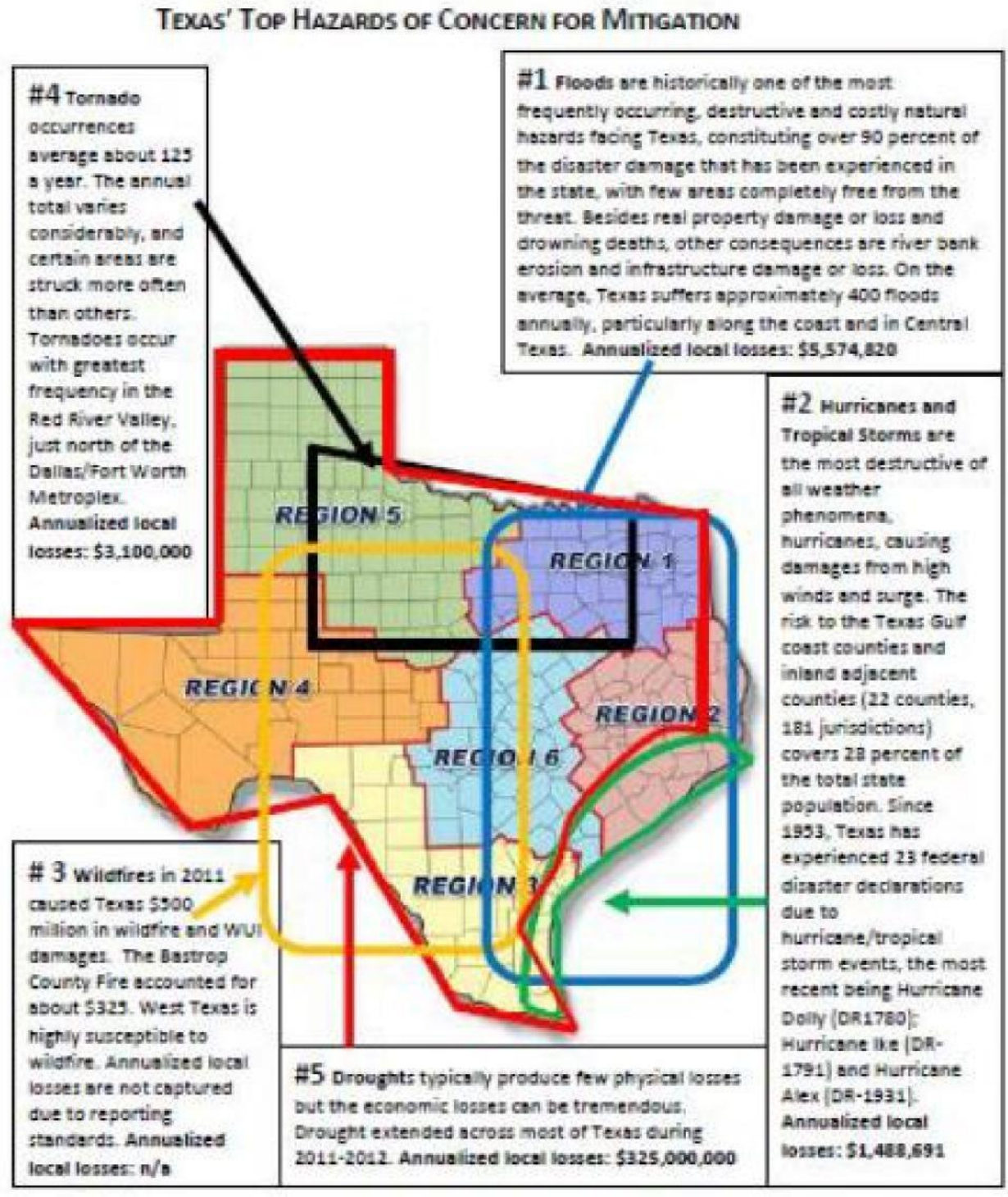
Texas A&M Forest Service, Texas Wildfire Risk Assessment Portal (TxWRAP)
Web site: **https://www.texaswildfirerisk.com/**

The Tornado Project, St. Johnsbury, Vermont
Web site: **www.tornadoproject.com**

United States Department of Energy (DOE)
Web site: **www.energy.gov**

United States Geological Survey (USGS), U.S. Department of the Interior
Web site: www.usgs.gov

The map below shows Texas' top five mitigation concerns, with the areas of the State that are most at risk for each.



*(Source: 2013 Texas State Hazard Mitigation Plan Update: **https://www.txdps.state.tx.us/dem/ Mitigation/txHazMitPlan.pdf**.)*

Profiling Hazards to be Mitigated

The Hazard Mitigation Committee determined just how badly each hazard could affect the City of Pittsburg and Camp County. Any given hazard type can produce different effects depending on its magnitude, duration, and intensity. The plan uses past occurrences to predict future probability. **Appendix 1 – Historical Storm Data** includes all incidents reported to NOAA since January 1, 1950. This database lists all significant weather events impacting the City of Pittsburg and Camp County. Since all the hazards can affect the entire area of the City and County equally, they are analyzed together.

Factors Examined:

Location - *Potential affected area* that the hazard might impact.

Extent - Potential magnitude or *severity of Impact* – how much can it cost people and communities to respond and recover?

Previous Occurrence – how often has the hazard occurred in the past?

Probability of Future Events – How often is the hazard likely to occur? Is the hazard year-round or seasonal? Probability or frequency of occurrence is categorized as **unlikely** through **highly likely**. These terms are defined as follows:

Highly likely: Event is probable within the next year or two.
Likely: Event is probable within the next 3 to 5 years.
Occasional: Event is possible within the next 5 years. **Unlikely**:
Event is not expected to occur within the next 5 years.

Hazard Magnitude Categories

Four categories were used to define each hazard's potential severity: substantial, major, minor, or limited. For purposes of this document, these categories are defined as follows:

Substantial:

- Multiple deaths likely;
- Complete shutdown of facilities for 30 days or more could occur;
- More than 50% of property likely to be destroyed or suffer major damage.

Major:

- Injuries and/or illnesses may result in permanent disability;
- Complete shutdown of critical facilities for at least 2 weeks could occur;
- More than 25% of property likely to be destroyed or suffer major damage.

Minor:

- Injures and/or illnesses could result in permanent disability;
- Complete shutdown of critical facilities for more than 1 week could occur;
- More than 10% of property likely to be destroyed or suffer major damage.

Limited:

- Injuries and/or illnesses are treatable with first aid;
- Minor quality of life lost;
- Shutdown of critical facilities and services for 24 hours or less;
- Less than 10% of property likely to be destroyed or suffer major damage.

All these factors were used to profile each hazard to be mitigated in Camp County and the City of Pittsburg. Some hazards, such as floods and wildfires, were profiled by mapping the geographic extent of probable damage, because these events usually occur in predictable areas of the community. Other hazards, such as tornadoes, do not occur

in predictable areas; these were profiled by reviewing past occurrences and projecting the possibilities of future events.

Tornado

The committee analyzed storm history events and information from the American Society of Civil Engineers to profile tornados and determined that the potential severity of impact could be major.

Major Characteristics:

Injuries and/or illnesses result in permanent disability

Complete shutdown of facilities for at least 2 weeks

More than 10 percent of property destroyed or with major damage

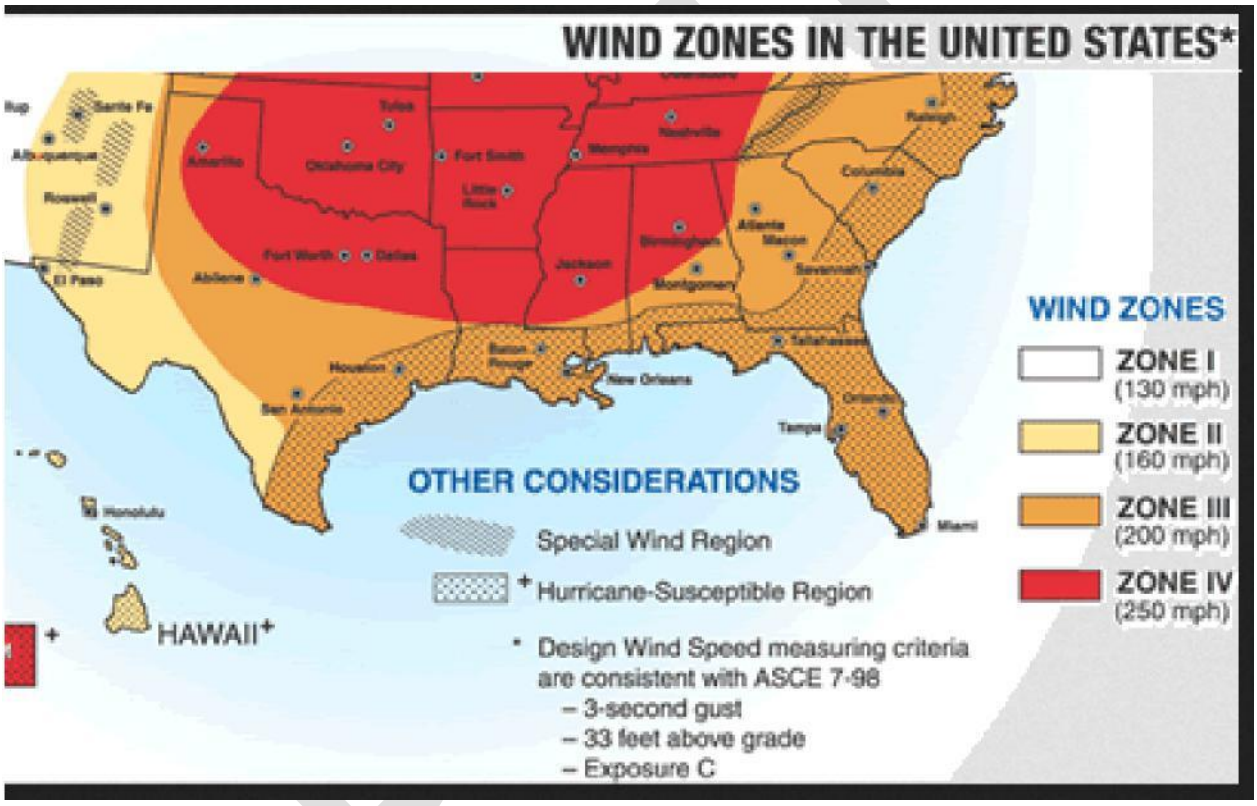
The following table profiles how tornados could affect the jurisdictions.

TORNADO	
Category	**Response**
Potential Severity of Impact	Major
Frequency of Occurrence	Likely
Probability of Future Events	Likely
Seasonal Pattern	All Year
List of Sources	Internet, social media, Television, Radio, and NOAA warning systems, local input; “Taking Shelter from the Storm” (2014) FEMA booklet National Climatic Data Center historical records;
Probable Duration	15-30 min.
Warning Time	Minimal / no warning – (20 min.)
Existing Warning Systems	Smart911 (mass altering system to notify citizens), NOAA warning system, trained Storm Spotters, Internet, Radio, TV
Potential Affected Area	The entire City and County
Cascading Potential	Evacuations, Sheltering, Feeding, Communications Disruptions, Power outage Debris in road (trees) Natural gas pipeline breaks – Fire Injuries, Possible deaths Transportation disruption

Justification for the County's Risk Assessment/Profile

Camp County is in Wind Zone IV (250 mph) according to the Design Wind Speed map created by the American Society of Civil Engineers, and is estimated to have 6-10 tornados per 1,000 square miles. Using these two factors, Camp County is at "High Risk." This means that the County could experience a F4 (old Fujita Scale) tornado, which could create devastating damage.

Past records indicate 12 tornados have touched down in Camp County since 1950, causing one injury and at least $750,000 in property damage.



Most past incidents are recorded using the old Fujita Scale, while current incidents use the Enhanced Fujita Scale. Both the original Fujita Scale and the new Enhanced Fujita Scale were used for reference and are included here.

Fujita Tornado Measurement Scale (old)

Category F0	Gale Tornado (42-72 mph)	Light damage. Some damage to chimneys, break branches, push over shallow-rooted trees, damage to signs.
Category F1	Moderate Tornado (73-112 mph)	Moderate damage. The lower the limit is the beginning of hurricane wind speed; peel surface off roofs, mobile homes pushed off of foundations or overturned, moving autos pushed off of the road.
Category F2	Significant Tornado (113-157 mph)	Considerable damage. Roofs torn off frame houses; mobile homes demolished, boxcars pushed over; large trees pushed over or uprooted, light-object missiles generated
Category F3	Severe tornado (158-206 mph)	Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; cars lifted off ground and thrown
Category F4	Devastating tornado (207-260 mph)	Devastating damage. Well-constructed houses leveled; structure with weak foundation blown off some distance; cars thrown and large missiles generated
Category F5	Incredible tornado (261-318 mph)	Incredible damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 yards; trees debarked; incredible phenomena will occur

Comparison of old and new scales

Fujita Scale			Derived EF Scale		Operational EF Scale	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	**EF Number**	**3 Second Gust (mph)**
0	40-72	45-78	0	65-85	**0**	**65-85**
1	73-112	79-117	1	86-109	**1**	**86-110**
2	113-157	118-161	2	110-137	**2**	**111-135**
3	158-207	162-209	3	138-167	**3**	**136-165**
4	208-260	210-261	4	168-199	**4**	**166-200**
5	261-318	262-317	5	200-234	**5**	**Over 200**

Enhanced Fujita Scale Damage Indicators

NUMBER (Details Linked)	DAMAGE INDICATOR	ABBREVIATION
1	Small barns, farm outbuildings	SBO
2	One- or two-family residences	FR12
3	Single-wide mobile home (MHSW)	MHSW
4	Double-wide mobile home	MHDW
5	Apt, condo, townhouse (3 stories or less)	ACT
6	Motel	M

NUMBER (Details Linked)	DAMAGE INDICATOR	ABBREVIATION
7	Masonry apt. or motel	MAM
8	Small retail bldg. (fast food)	SRB
9	Small professional (doctor office, branch bank)	SPB
10	Strip mall	SM
11	Large shopping mall	LSM
12	Large, isolated ("big box") retail bldg.	LIRB
13	Automobile showroom	ASR
14	Automotive service building	ASB
15	School - 1-story elementary (interior or exterior halls)	ES
16	School - jr. or sr. high school	JHSH
17	Low-rise (1-4 story) bldg.	LRB
18	Mid-rise (5-20 story) bldg.	MRB
19	High-rise (over 20 stories)	HRB
20	Institutional bldg. (hospital, govt. or university)	IB
21	Metal building system	MBS
22	Service station canopy	SSC
23	Warehouse (tilt-up walls or heavy timber)	WHB

NUMBER (Details Linked)	DAMAGE INDICATOR	ABBREVIATION
24	Transmission line tower	TLT
25	Free-standing tower	FST
26	Free standing pole (light, flag, luminary)	FSP
27	Tree - hardwood	TH
28	Tree - softwood	TS

Frequency - Between 1962 and 2017, a 56-year period, 12 tornados ripped through Camp County. On average, a tornado occurs once each four to five years. See **Appendix 1** – Historical Storm Event Data for additional information.

Personal Injury and Property Damage

One person was reportedly injured due to a tornado in Camp County. A total of $763,000 in property damage was reported. It is certain that much more damage was caused by these 12 tornadoes, but no other damage information is available.

Windstorm

The Committee analyzed storm history events as reported by the National Climatic Data Center and used information from personal past experience to profile windstorm events and determined that the potential severity of impact for windstorms is limited.

Limited Characteristics:

Injuries and illnesses are treatable with first aid.

Minor loss of Quality of Life

Shutdown of critical facilities and services for 24 hours or less

Less than 10 percent of property destroyed or with major damage

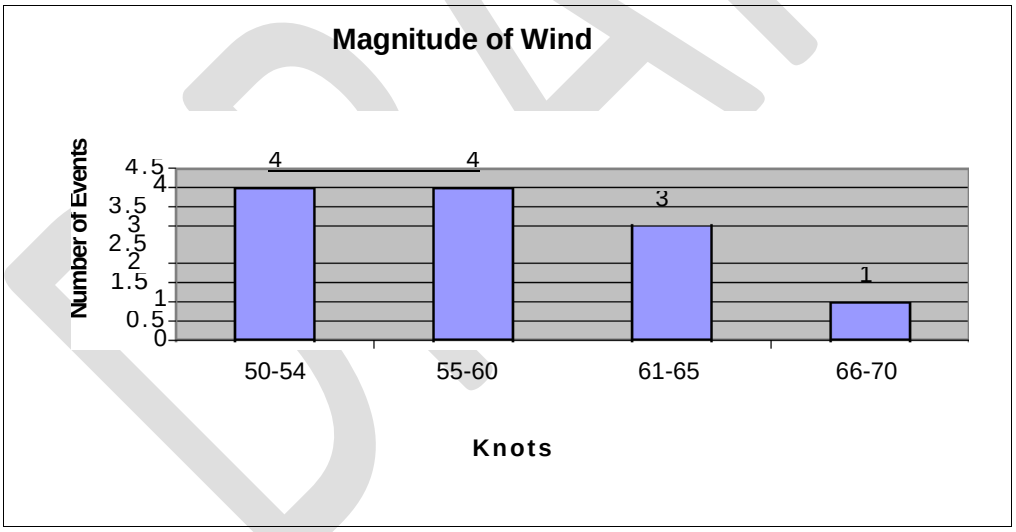
WINDSTORM	
Category	**Response**
Potential Severity of Impact	Limited
Frequency of Occurrence	Highly Likely
Probability of Future Events	Highly Likely
Seasonal Pattern	All Year
List of Sources	Warning system TV, radio, internet Weather radios, social media
Probable Duration	Gust:1-2 hours
Warning Time	3-6 hours
Existing Warning Systems	NOAA warning systems, Smart911 (local alerting system), social media, Internet, Radio, TV
Potential Affected Area	Entire City and County is at risk
Cascading Potential	Property damage to fences, roofs, livestock roaming, poultry houses collapse Debris from trees Transportation delays Injuries and deaths Electrical grid problems, Communication problems – phone and computer lines down

Frequency of Event

A total of 104 Windstorm events were reported to the National Climatic Data Center from 1974 through 2017. This is a 44-year period. More wind events have been reported in the last decade than any other decade. This may be due to an increased ability to report data, and an increased awareness of the importance of reporting. See **Appendix 1 – Historical Storm Event Data** for additional information.

Magnitude / Wind Knots

Camp County wind events most frequently produce between 50-54 knot & 55-60 knot winds, although 70 knot winds have been reported. Winds of 64 knots and over have been known to cause severe damage to structures and trees. According to the Beaufort Wind Scale, winds of this magnitude cause “Very widespread damage to vegetation. Some windows may break; mobile homes and poorly constructed sheds and barns are damaged. Debris may be hurled about.”



The Beaufort wind scale was used to determine characteristics of wind storms in Camp County and the City of Pittsburg.

The Modern Beaufort Wind Scale

Beaufort number	Description	Wind speed				Land conditions
		km/h	mph	kts	m/s	
0	Calm	< 1	< 1	< 1	< 0.3	Calm. Smoke rises vertically.
1	Light air	1 – 5	1 – 3	1 – 2	0.3 – 1.5	Wind motion visible in smoke.
2	Light breeze	6 – 11	4 – 7	3 – 6	1.5 – 3.3	Wind felt on exposed skin. Leaves rustle.
3	Gentle breeze	12 – 19	8 – 12	7 – 10	3.3 – 5.5	Leaves and smaller twigs in constant motion.
4	Moderate breeze	20 – 28	13 – 17	11 – 15	5.5 – 8.0	Dust and loose paper raised. Small branches begin to move.
5	Fresh breeze	29 – 38	18 – 24	16 – 20	8.0 – 11	Branches of a moderate size move. Small trees begin to sway.

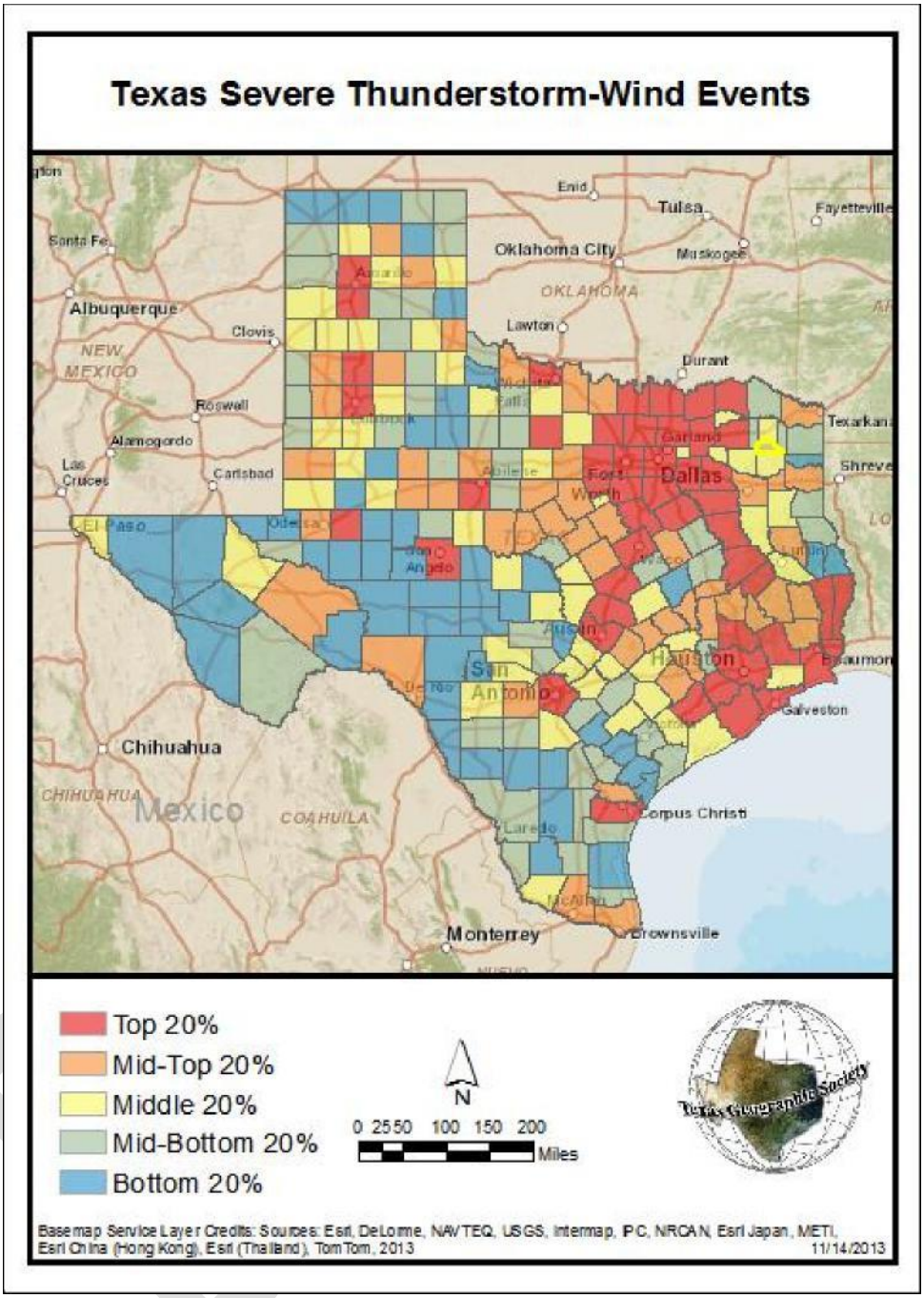
Beaufort number	Description	Wind speed				Land conditions
		km/h	mph	kts	m/s	
6	Strong breeze	39 – 49	25 – 30	21 – 26	11 – 14	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult. Empty plastic garbage cans tip over.
7	High wind, Moderate gale, Near gale	50 – 61	31 – 38	27 – 33	14 – 17	Whole trees in motion. Effort needed to walk against the wind. Swaying of skyscrapers may be felt, especially by people on upper floors.
8	Gale, Fresh gale	62 – 74	39 – 46	34 – 40	17 – 20	Some twigs broken from trees. Cars veer on road. Progress on foot is seriously impeded.
9	Strong gale	75 – 88	47 – 54	41 – 47	21 – 24	Some branches break off trees, and some small trees blow over. Construction/temporary signs and barricades blow over. Damage to circus tents and canopies.
10	Storm[6], Whole gale	89 – 102	55 – 63	48 – 55	25 – 28	Trees are broken off or uprooted, saplings bent and deformed. Poorly attached asphalt shingles and shingles in poor condition peel off roofs.
11	Violent storm	103 – 117	64 – 72	56 – 63	29 – 32	Widespread damage to vegetation. Many roofing surfaces are damaged; asphalt tiles that have curled up and/or fractured due to age may break away completely.

Beaufort number	Description	Wind speed				Land conditions
		km/h	mph	kts	m/s	
12	Hurricane[6]	≥ 118	≥ 73	≥ 64	≥ 33	Very widespread damage to vegetation. Some windows may break; mobile homes and poorly constructed sheds and barns are damaged. Debris may be hurled about.

Personal Injuries and Property Damage

One person was reportedly injured during a windstorm event in Camp County. This occurred on April 25, 2011, when a tree fell on a vehicle with a person inside. This individual was taken to the local hospital, with minor injuries reported. Storm winds have caused a total of $881,500 in reported property damage throughout Camp County, including $469,000 of property damage within the City of Pittsburg; $5,000 of damage in the Green Hill area; $290,000 of damage in the Harvard area; $20,000 of damage in the Leesburg area; $30,000 of damage in the Newsome area; $50,000 of damage in the Pine area; and $6,000 of damage reported as Camp County area.

Camp County and the City of Pittsburg could expect wind speeds of up to 70 knots in the future.



Source: *This map was produced from data collected from several national sources, primarily NOAA's National Climatic Data Center (NCDC), compiled and distributed by the Hazards and Vulnerability Research Institute [SHELDUS dataset v.9], University of South Carolina, and was provided by the Texas Geographic Society, as part of the 2013 CHAMPS report.*

Hailstorm

The HMAP Committee analyzed storm history events as reported by the National Climatic Data Center and used information from personal experience to profile hailstorm events and determined that the potential severity of impact for hailstorms is limited.

Limited Characteristics:

Injuries and illnesses are treatable with first aid.

Minor loss of Quality of Life

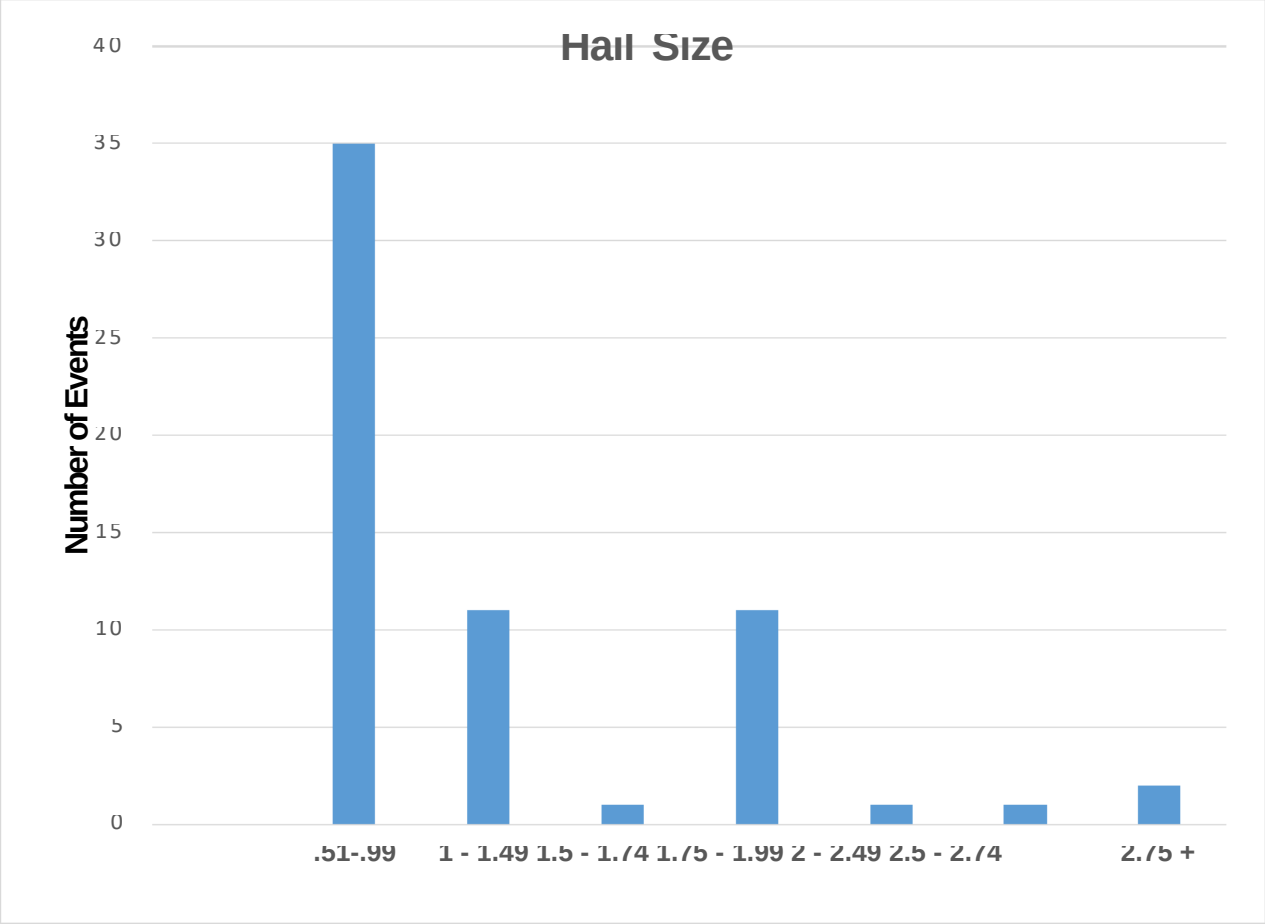
Shutdown of critical facilities and services for 24 hours or less

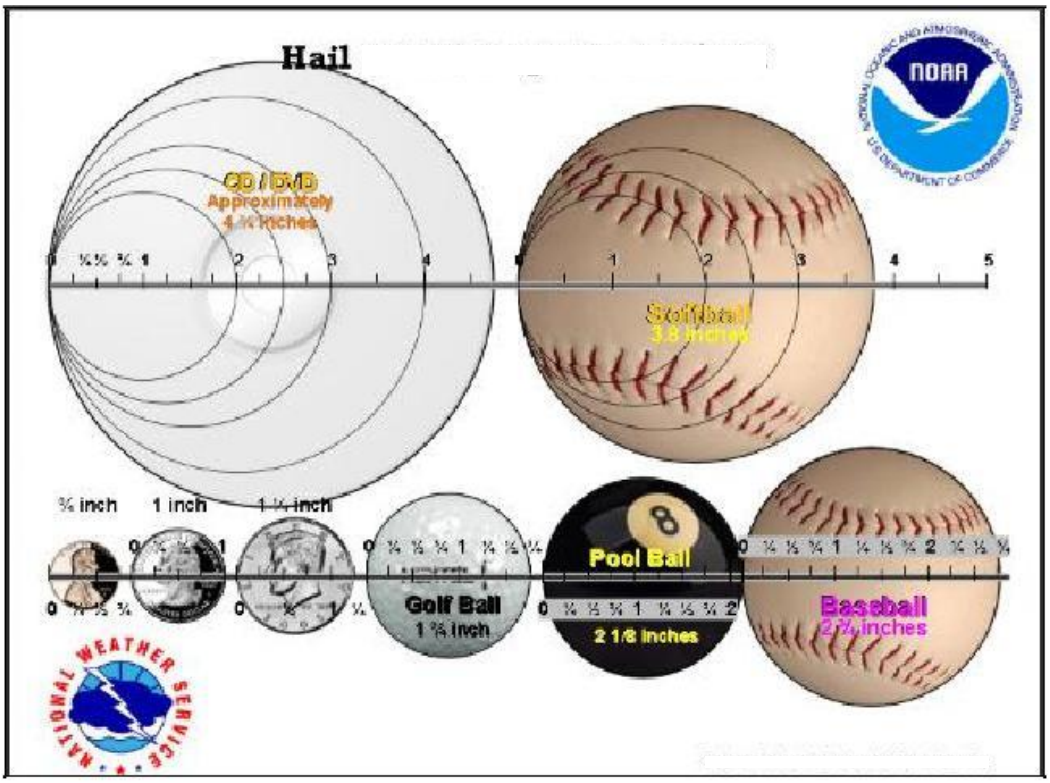
Less than 10% of property destroyed or with major damage.

HAILSTORM	
Category	**Response**
Potential Severity of Impact	Limited
Frequency of Occurrence	Highly Likely
Probability of Future Events	Highly Likely
Seasonal Pattern	All Year
List of Sources	Warning system Outdoor Siren TV, radio, internet Weather radios
Probable Duration	Gust:1-2 hours
Warning Time	3-6 hours
Existing Warning Systems	Smart911 (local warning system), NOAA warning system, social media, Internet, Radio, TV
Potential Affected Area	Entire City and County are at risk
Cascading Potential	Property damage to fences, roofs, livestock roaming, poultry houses collapse Debris from trees Transportation delays Injuries and deaths Electrical grid problems, Communication problems – phone and computer lines down

Since 1978, 66 hailstorm events have been reported to NOAA from locations within Camp County, including the City of Pittsburg. These are listed in **Appendix I**. Reported hail size has ranged from 0.75 inches (about the size of a dime, which may cause significant damage to plants and crops) up to 2.75 inches in diameter (the size of a golf ball, which may cause severe roof damage and the risk of serious injury to persons or animals without shelter).

The following charts show the number of incidents reporting hail of the various sizes, a hail size comparison, and a table giving typical damage for each size category. The first was created locally; the other two are from the National Weather Service.


Hail Size
Number of Events
40
35
30
25
20
15
10
5
0
.51-.99
1 - 1.49
1.5 - 1.74
1.75 - 1.99
2 - 2.49
2.5 - 2.74
2.75 +



SIZE CODE	INTENSITY CATEGORY	SIZE (DIAMETER INCHES)	DESCRIPTIVE TERM	TYPICAL DAMAGE
H0	Hard Hail	up to 0.33	pea	no damage
H1	Potentially Damaging	0.33-0.60	marble	slight damage to plants and crops
H2	Potentially Damaging	0.60-0.80	dime	significant damage to plants and crops
H3	Severe	0.80-1.20	nickel	severe damage to plants and crops
H4	Severe	1.2-1.6	quarter	widespread glass and auto damage
H5	Destructive	1.6-2.0	half dollar	widespread destruction of glass, roofs, and risk of injuries
H6	Destructive	2.0-2.4	ping pong ball	aircraft bodywork dented and brick walls pitted
H7	Very Destructive	2.4-3.0	golf ball	severe roof damage and risk of serious injuries
H8	Very Destructive	3.0-3.5	hen egg	severe damage to all structures
H9	Super Hailstorms	3.5-4.0	tennis ball	extensive structural damage could cause fatal injuries
H10	Super Hailstorms	4.0 +	baseball	extensive structural damage could cause fatal injuries

Property Damage

Hail has caused a reported total of $15,000.00 property damage within Camp County. It is likely that much more hail damage has occurred, but because it has not been reported to NOAA, the information is not available to us.

Severe Winter Storm

The HMAP revision team analyzed storm history events as reported by the National Climatic Data Center (see **Appendix 1**) and used information from personal experience to profile ice storm events and determined that the potential severity of impact for winter storms is minor.

Minor Characteristics:

- Injures and/or illnesses could result in permanent disability;
- Complete shutdown of critical facilities for more than 1 week could occur;
- More than 10% of property likely to be destroyed or suffer major damage.

The following table identifies issues that the Team discussed (using the Hazard Profile Worksheet as a guide) to profile how severe winter storms could affect the County and City:

SEVERE WINTER STORMS	
Category	**Response**
Potential Severity of Impact	Minor
Frequency of Occurrence	Highly Likely
Probability of Occurrence	Highly Likely
Seasonal Pattern	Winter
List of Sources	• NOAA • Internet • Television • Radio • Social Media
Probable Duration	1-3 days
Warning Time	6-12+ hours

SEVERE WINTER STORMS, continued	
Category	**Response**
Existing Warning Systems	Internet, Radio, TV, Storm watchers
Potential Affected Area	Entire County and City is at risk
Cascading Potential	• Power outages • Loss of heat • Frozen/ Busted Pipes • Property damage • Dangerous driving conditions • Stranded travelers / Motels at full capacity • Tree debris creates fire hazard / blocks roads • Delayed Emergency Response Time • Impacts to the economy • Communication capabilities decrease • Sheltering • Power Outages

Frequency of Event
A total of 26 Severe Winter Storm events have been reported to the National Climatic Data Center from 1994 through 2017. This is a 23-year period. On average, Camp County experiences one or two ice storms every year.

Magnitude
Camp County ice storm events produce damage both structurally and economically, affecting rural residents and city dwellers. Winter storms may damage trees, causing loss of timber production, and trees or limbs may fall on utility lines, causing service disruption. Homes, barns and other structures may be damaged by falling timber. Icy roads cause traffic accidents and delay. Some of the most notable storm events are described below.

(1) The February 1994 Ice Storm: An arctic cold front moved into Northern Texas during the afternoon of February 8th, causing temperatures to drop 60 degrees within 48 hours in many locations. Up to four inches of ice and sleet accumulated, making this the most significant ice storm across East Texas in two years. Numerous highways, businesses, and schools were closed. Over 30,000 homes suffered power outages, and damage from falling trees was widespread to homes and businesses. Two indirect fatalities occurred as icy roads caused traffic accidents.

Affecting the following counties: Anderson, Angelina, Bell, Bosque, Bowie, Brown, Callahan, **Camp**, Cass, Cherokee, Coleman, Collin, Comanche, Cooke, Coryell, Dallas, Delta, Denton, Eastland, Ellis, Erath, Falls, Fannin, Franklin, Freestone, Grayson, Gregg, Hamilton, Harrison, Haskell, Henderson, Hill, Hood, Hopkins, Houston, Hunt, Jack, Johnson, Jones, Kaufman, Lamar, Lampasas, Leon, Limestone, Marion, McCulloch, McLennan, Mills, Montague, Marion, Morris, Nacogdoches, Navarro, Palo Pinto, Panola, Parker, Rains, Red River, Rockwall, Rusk, Sabine, San Augustine, San Saba, Shackelford, Shelby, Smith, Somervell, Stephens, Tarrant, Taylor, Throckmorton, Titus, Trinity, Upshur, Van Zandt, Wise, Wood, Young

Total Property Damage - $50,000,000

(2) The January 6, 1997 Ice Storm: 2 to 4 inches of freezing rain and sleet across the area. Numerous accidents were reported along with power outages. Several highways were closed.

Affecting the following counties: Bowie, **Camp**, Cass, Cherokee, Franklin, Gregg, Harrison, Marion, Morris, Panola, Red River, Rusk, Smith, Titus, Upshur, Wood.

(3) The January 14, 1997 Winter Storm: Ice accumulations of 1/4 to 1/2 inch occurred across portions of northeast Texas. Several traffic accidents resulted.

Affecting the following Counties: Bowie, **Camp**, Cass, Franklin, Morris, Red River, Titus, Wood

(4) The December 22, 1998 Ice Storm: A shallow arctic air mass spread across northeast and east Texas while low pressure formed in the Gulf of Mexico. This allowed overrunning of warm moist air over the cold dome producing widespread freezing rain and sleet. Overall ice accumulations were less than one inch. The ice accumulated mainly across exposed surfaces such as trees and power lines as well as bridges and overpasses. A few automobile accidents and downed trees and power lines were the worst result of the storm.

Affecting the following counties: Angelina, Bowie, **Camp**, Cass, Cherokee, Franklin, Gregg, Harrison, Marion, Morris, Nacogdoches, Panola, Red River, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Upshur, Wood

(5) The January 26, 2000 Ice Storm: A strong upper-level trough moved out of the southern Great Basin and into the lower Mississippi Valley sweeping Artic Air southward to the Gulf Coast. Moisture laden air from the Gulf overran the freezing surface temperatures producing ice across the northern half of northeast Texas. Ice accumulations of one to four inches fell across most of the area with the ice and snow accumulations near 8 inches. Thousands of homes were left without power due to ice covered tree limbs falling and snapping power lines. Also, hundreds of chicken houses were destroyed and 7 million chicks were killed. Barns, carports, and weak structure homes suffered collapse from the weight of the ice and snow. Traffic accidents were numerous and I-30 west of Texarkana had to be shut down when the freeway became impassable.

Affecting the following counties: Bowie, **Camp**, Cass, Franklin, Gregg, Harrison, Marion, Morris, Red River, Smith, Titus, Upshur, Wood.

(6) The December 12, 2000 Ice Storm: An arctic air-mass spilled southward out of the central plains and into the lower Mississippi Valley. This cold surface air-mass was overrun by a warm and humid air-mass, which combined with a strong upper-level storm system across west Texas. The result was a mixture of freezing rain, sleet and snow north of a Quitman to Linden Texas line, while further South, precipitation was in the form of freezing rain. Ice accumulations of two to 6 inches were common across the northern third of northeast Texas with accumulations on one to two inches further south. Over 235,000 people were without power from several hours to several weeks from snapped power lines. Upwards of 29 transmission lines atop "H" shaped steel towers were snapped due to the weight of the ice. Numerous traffic accidents were reported from ice covered roads and bridges. Northeast Texas was declared a disaster area.

Affecting the following counties: Bowie, **Camp**, Cass, Cherokee, Franklin, Gregg, Harrison, Marion, Morris, Nacogdoches, Panola, Red River, Rusk, Shelby, Smith, Titus, Upshur, Wood

Property Damage - $123,000,000

(7) The December 26, 2000 Ice Storm: After trying to recover from an ice storm earlier in the month, another even more devastating ice storm struck the northern third of northeast Texas. Freezing rain resulted in ice accumulations ranging from 1/4 to 3 inches, which devastated the middle Red River Valley counties of northeast Texas. Tens of thousands of trees and numerous power lines were either broken or felled from the weight of the ice leaving vast regions of northeast Texas without power for weeks. Bowie, Cass and Red River counties were declared disaster areas.

Affecting the following counties: Bowie, **Camp**, Cass, Franklin, Marion, Morris, Red River, Titus

Property Damage - $31,000,000.00

(8) The February 2006 event: Much of the region was entrenched in an arctic airmass during the weekend of the 18th through the 20th of February. A weak storm system moved into the southern plains and into the lower Mississippi valley with light freezing rain and freezing drizzle falling across much of the region. Ice accumulations were very light...mainly less than one quarter of an inch across most places. While road surfaces remained wet from ground warmth, most elevated bridges and overpasses saw some ice accumulation which resulted in numerous traffic accidents. Many elevated bridges and overpasses had to be closed due to the ice accumulation.

Affecting the following counties: Angelina**,** Bowie, **Camp**, Cass, Cherokee, Gregg, Harrison, Franklin, Marion, Morris, Nacogdoches, Panola, Red River, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Upshur, Wood

(9) The January 7, 2010 Severe Cold Weather: Bitterly cold temperatures swept into the region during the evening hours of January 7th with a hard freeze being observed through the morning hours of January 10th. Overnight and early morning low temperatures were well into the teens with daytime high temperatures struggling to make it to the freezing mark. The cold temperatures froze water pipes of many homes throughout the county. Some city and county water lines burst as well resulting in many residents either without water for a short period of time or with reduced water pressure.

Affecting the following counties: Angelina, Bowie, **Camp**, Cass, Cherokee, Franklin, Gregg, Harrison, Marion, Morris, Nacogdoches, Panola, Red River, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Upshur and Wood

Property Damage - $30,000.00

(10) February 2010 Heavy Snow: A heavy, wet snow began accumulating during the afternoon hours of February 11th and ended during the afternoon of February 12th. Snowfall totals of 5 to 6 inches were common across the county, including specific totals of near 6 inches in Pittsburg, Texas. Due to the wet nature of the snow, several large branches were downed along with a few small trees. Schools and businesses were also closed.

(11) February 23, 2015, Winter Storm: A cold dome of arctic air spilled southward out of the Central and Southern Plains, into the Lower Mississippi Valley ahead of the Winter Storm event. The flow aloft was from the west southwest with embedded disturbances moving towards the region from West Texas. These disturbances provided the necessary lift to generate widespread winter precipitation across the region in the form of freezing rain and sleet. Temperatures during the predawn hours of February 23rd were mostly just above freezing but once the precipitation moved in from the west, the precipitation quickly became freezing rain mixed with sleet as the temperatures fell during the day. Freezing rain accumulations across Northeast Texas, mainly along and north of the Interstate 20 corridor were one-tenth of an inch or less. Sleet accumulations along and north of the Interstate 20 corridor ranged from one-half inch to one and one-half inch.

Affecting the following counties: Bowie, **Camp**, Cass, Franklin, Gregg, Harrison, Marion, Morris, Red River, Smith, Titus, Upshur and Wood.

(12) The February 25, 2015 Ice Storm: Cold arctic air remained in place across the region and there was already ice on the ground across some locations that observed a Winter Storm from sleet accumulation on Monday, February 23rd. An upper level trough exited the Four Corners region of the country and moved into the Texas Hill Country during the predawn hours of Wednesday, February 25th. Widespread precipitation developed ahead of the trough across Texas and moved into the region shortly after midnight on the 25th. The precipitation began as a mixture of light rain or freezing rain

after midnight towards the predawn hours on Wednesday. As the trough moved closer into the region from the west, the precipitation quickly transitioned over to sleet and eventually moderate to heavy snow across a good portion of the region after sunrise on the 25th. The mixed winter precipitation moved out of the region during the late afternoon or early evening hours of the 25th. Snowfall totals across Northeast Texas along and north of the Interstate 20 corridor ranged from 1 inch to near 7 inches. Some of the greatest snowfall accumulations were found at the following locations: Longview: 7 inches, Domino: 7 inches, Avery: 5 inches, Texarkana: 4 inches, Mount Pleasant: 4 inches, Clarksville: 4 inches, Talco: 4 inches, Hallsville: 4 inches, Gladewater: 4 inches.

Affecting the following counties: Bowie, **Camp**, Cass, Franklin, Gregg, Harrison, Marion, Morris, Red River, Smith, Titus, Upshur and Wood.

(13) The March 4, 2015, Ice Storm: A cold, arctic air mass entered the region from the northwest during the late afternoon and early evening hours of Wednesday, March 4th. The flow aloft was from the west southwest and disturbances embedded in this flow produced the lift necessary for precipitation to overspread the region from west to east. The precipitation began as a cold rain but quickly transitioned to sleet during the late-night hours of March 4th with the precipitation transitioning over to snow during the morning hours of March 5th. Freezing rain amounts were near one tenth of an inch with sleet accumulations mainly less than one half inch. Snow amounts were less than 4 inches with widespread one to three inches reported across the northern half of Northeast Texas, mainly north of the Interstate 20 corridor. South of the Interstate 20 corridor, ice and snow amounts were much less.

Affecting the following counties: Angelina, Bowie, **Camp**, Cass, Cherokee, Franklin, Gregg, Harrison, Marion, Morris, Nacogdoches, Panola, Red River, Rusk, Sabine, San Augustine, Shelby, Smith, Titus, Upshur and Wood.

Camp County leadership believes that severe winter storms could occur in our jurisdictions within the next 5 years. Based on past averages, the County and City probably will experience one or two ice storms each winter, with maximum ice accumulation of 1” to 2” and maximum snowfall of 6” to 8”. Such storms are expected to cause severe road hazard conditions (ice

on bridges, fallen trees or limbs blocking rural roads) for 1 to 3 days per storm, and will cause damage to utility equipment which may lead to power outages. Power is expected to be restored within the city within 1 to 2 hours, and in the rural areas within 4 to 12 hours. No deaths are anticipated due to severe winter storms, although increased traffic accidents are likely.

Wildfire

In general, the following factors will affect the potential and severity of a wildfire:

Climatic Considerations – Areas of extreme climate conditions, including temperature, relative humidity, wind speed, and duration of high velocity, precipitation, wind direction, fog, and other atmospheric conditions

Topographic Considerations – elevation and ranges of elevation, location of ridges, drainages and escarpments, slope, location of roads, bridges and railroads

Geographic Considerations – Fuel types, concentration in a mosaic and distribution of fuel types, earthquake fault zones, hazardous material routes

Flammable material – on structure exteriors

Narrow roadways – leading to developed areas

Water supplies in rural areas can be limited

Combustible landscaping or debris near structures

Increased development and human activity in and near the wildland-urban interface

Local officials analyzed fire department calls and runs to profile wildfire events and determined that the potential severity of impact for wildfire is limited.

Limited Characteristics:

Injuries and illnesses are treatable with first aid.

Minor Quality of Life Lost

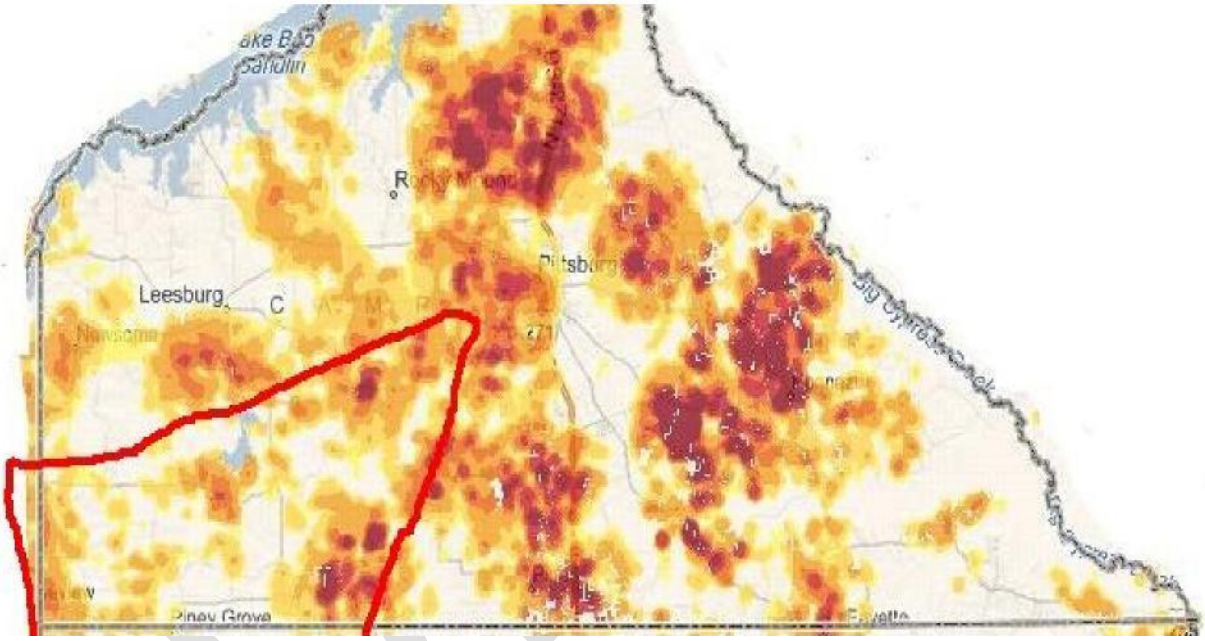
Shutdown of critical facilities and services for 24 hours or less

Less than 10 percent of property destroyed or with major damage

The following table profiles how wildfires could affect the County and City.

WILDFIRE	
Category	**Response**
Potential Severity of Impact	Limited
Frequency of Occurrence	Highly Likely
Probability of Future Events	Highly Likely
Seasonal Pattern	Summer and Winter
List of Sources	Local leadership input, Texas A&M Forest Service products, Fire Danger maps, significant Fire Potential updates, NOAA, television, radio, social media;
Probable Duration	2 hours duration – event itself
Warning Time	24+ hours / no warning
Existing Warning Systems	Texas A&M Forest Service Fire Potential Updates; NOAA; Monitoring local conditions;
Potential Affected Area	Entire County is as Risk. The southwest quadrant of the City has closer interface with wildlands than other areas of the City.
Cascading Potential	Property damage Road closure Traffic accidents Loss of power – burning utility poles Stripped resources Fences Damaged Livestock roaming Loss of resources

The Texas A&M Forest Service Wildfire Risk Assessment indicates high risks throughout Camp County, particularly along the US Highway 271 corridor north of Pittsburg, and along highways 557 and 2254 east of Pittsburg. These indications are based on total number of reported wildfire calls however, and may not accurately reflect the true wildfire risk in the county. According to the data the risk of a major wildfire is probably higher in the southwest quadrant of the county, south of Highway 1519 and along Highway 556. This area is much less developed and the vegetation is overgrown on many properties. However, according the Texas A&M Forest Service, 90% of all wildfires are human caused. This means that virtually all populated areas of Camp County are subject to having wildfires.



Camp County has experienced numerous wildfires. See the data below which was extracted from Pittsburg Fire Department records. Note, these numbers reflect TOTAL fire department responses, however, each year, there are more wildfire responses than any other incident type.

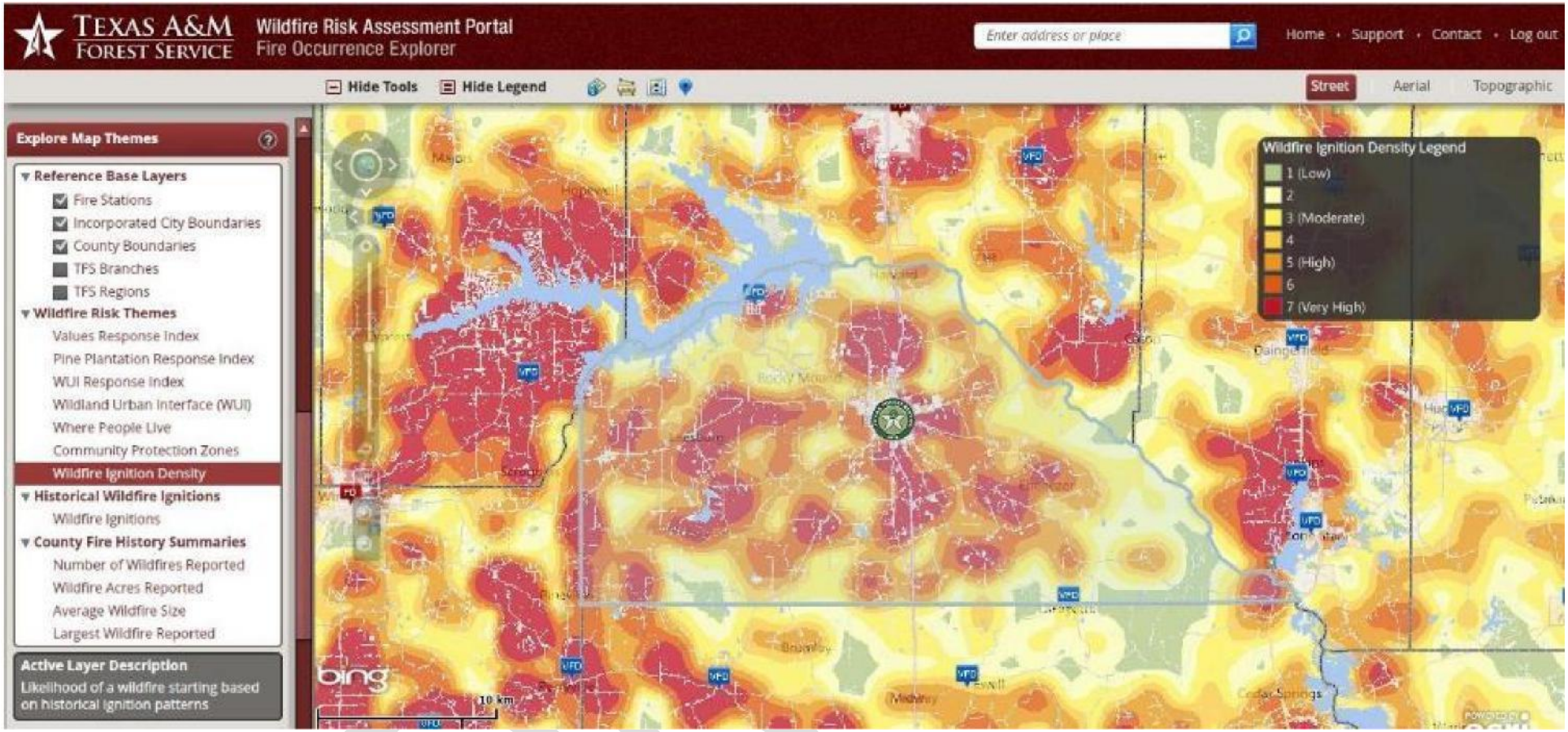
Year	Pittsburg Fire Department Incidents (All)
2010	344
2011	451
2012	332
2013	384
2014	367
2015	374
2016	145
2017	330
2018	380
2019	393
2020	306
2021	447
2022	489

The maps on the following pages were taken from the Texas A&M Forest Service website, Texas Wildfire Risk Assessment Portal (https://www.texaswildfirerisk.com). The first group of maps show all of Camp County, which is shaded light grey on these maps; and the second group of maps show only the City of Pittsburg, which is shaded light grey to show city boundaries. These maps show:

1. **Wildfire Ignition Density** – the likelihood of a wildfire starting, based on historical ignition patterns;
2. **Housing Density** – where people live, which can be compared to historic fire locations;
3. **Community Protection Zones** – areas of primary and secondary priority for planning purposes;
4. **Wildland Urban Interface** – where people and structures are bordered by woodland fuels;
5. **WUI Response Index** – rating the potential impact of wildfire on people and their homes;
6. **Values Response Index** – represents a rating of the potential impact of wildfire on values and assets;
7. **Historic Location and Cause** of all known fires within the subject jurisdiction from 2010 – 2022

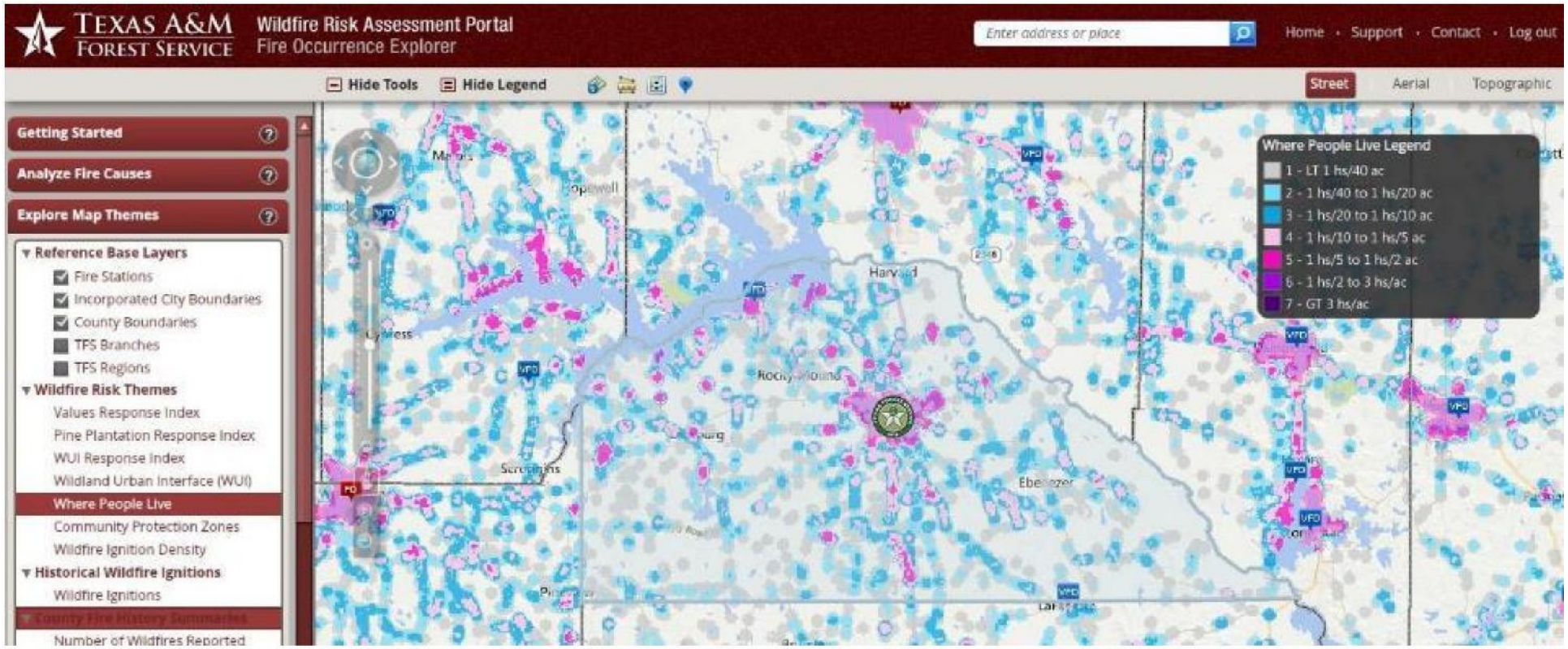
These maps represent all that is known about the past extent and probable future extent of wildfire in Camp County and the City of Pittsburg.

The Camp County HMAP Committee believes that wildfire could occur within the next 5 years, more likely in a rural area of southwest Camp County, or possibly at the Wildland-Urban Interface in the southwest quadrant of the City of Pittsburg. Barring extreme drought and high winds, any such fire should be contained by the Pittsburg Fire Department and not allowed to spread over more than perhaps 100 acres of rural grass land, or a small portion of one city block.



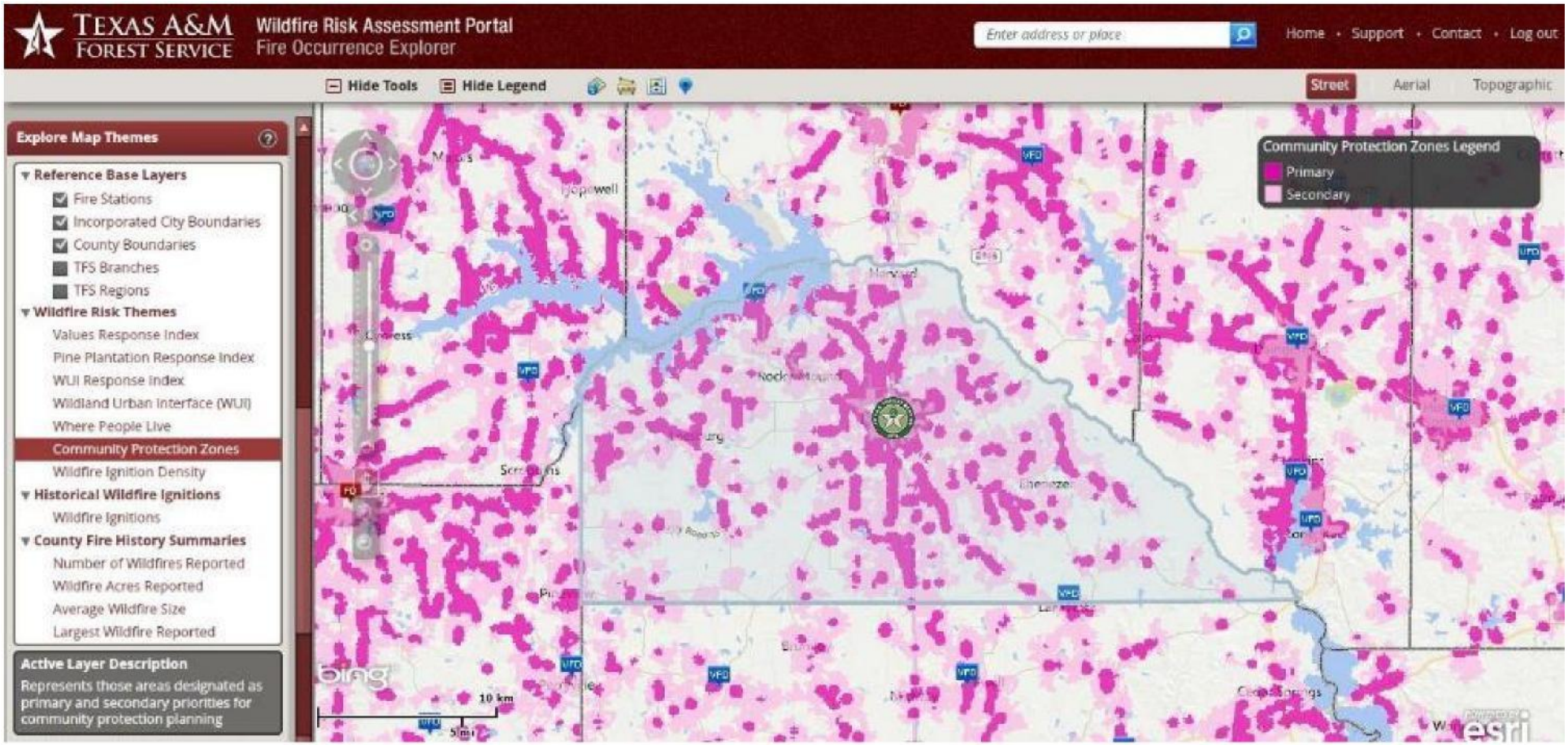
Wildfire Ignition Density – likelihood of a wildfire starting, based on historical ignition patterns

Camp County is shaded light grey.



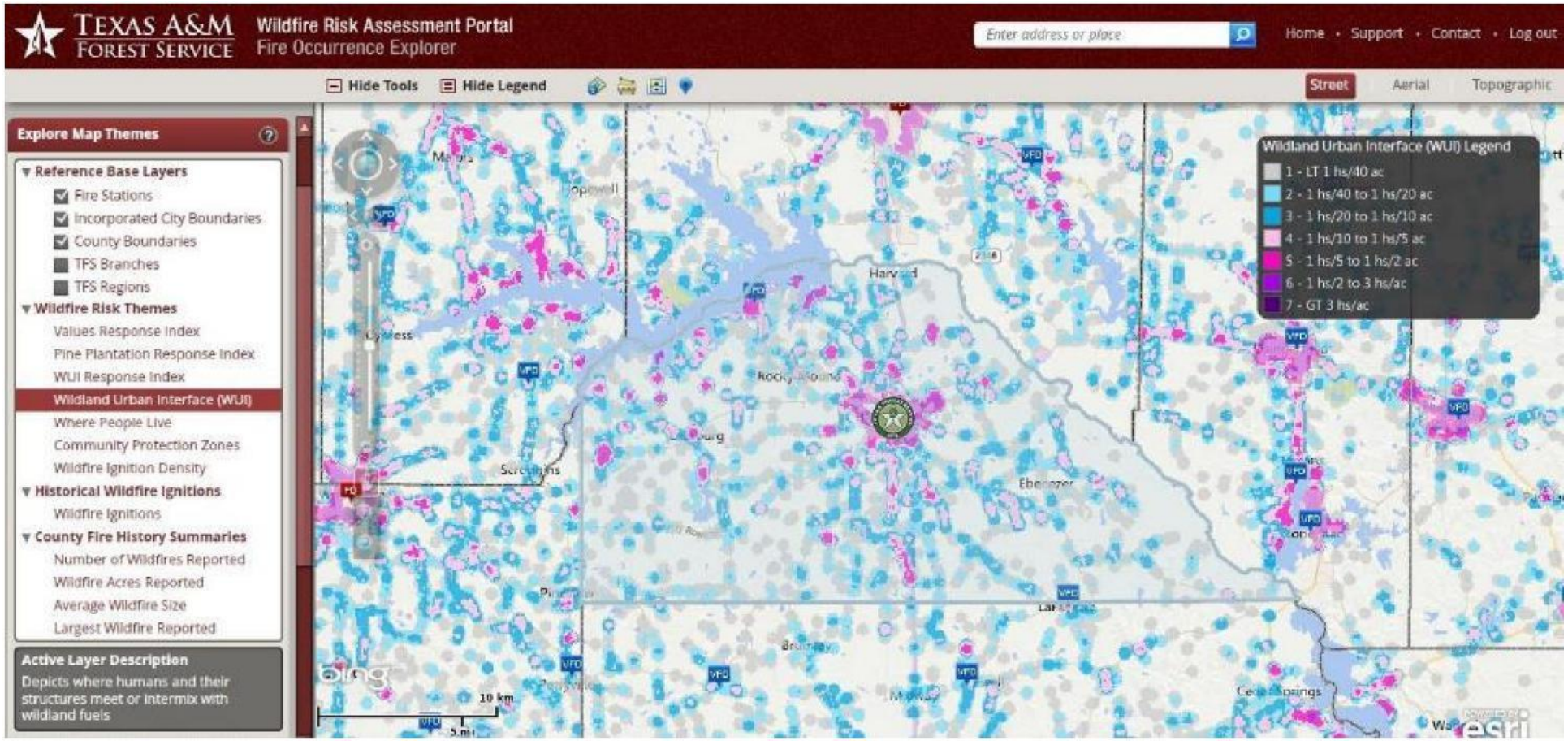
Housing density – shows where people live – compare to historic fire locations

Camp County is shaded light grey.



Community protection zones – primary and secondary priorities for planning purposes

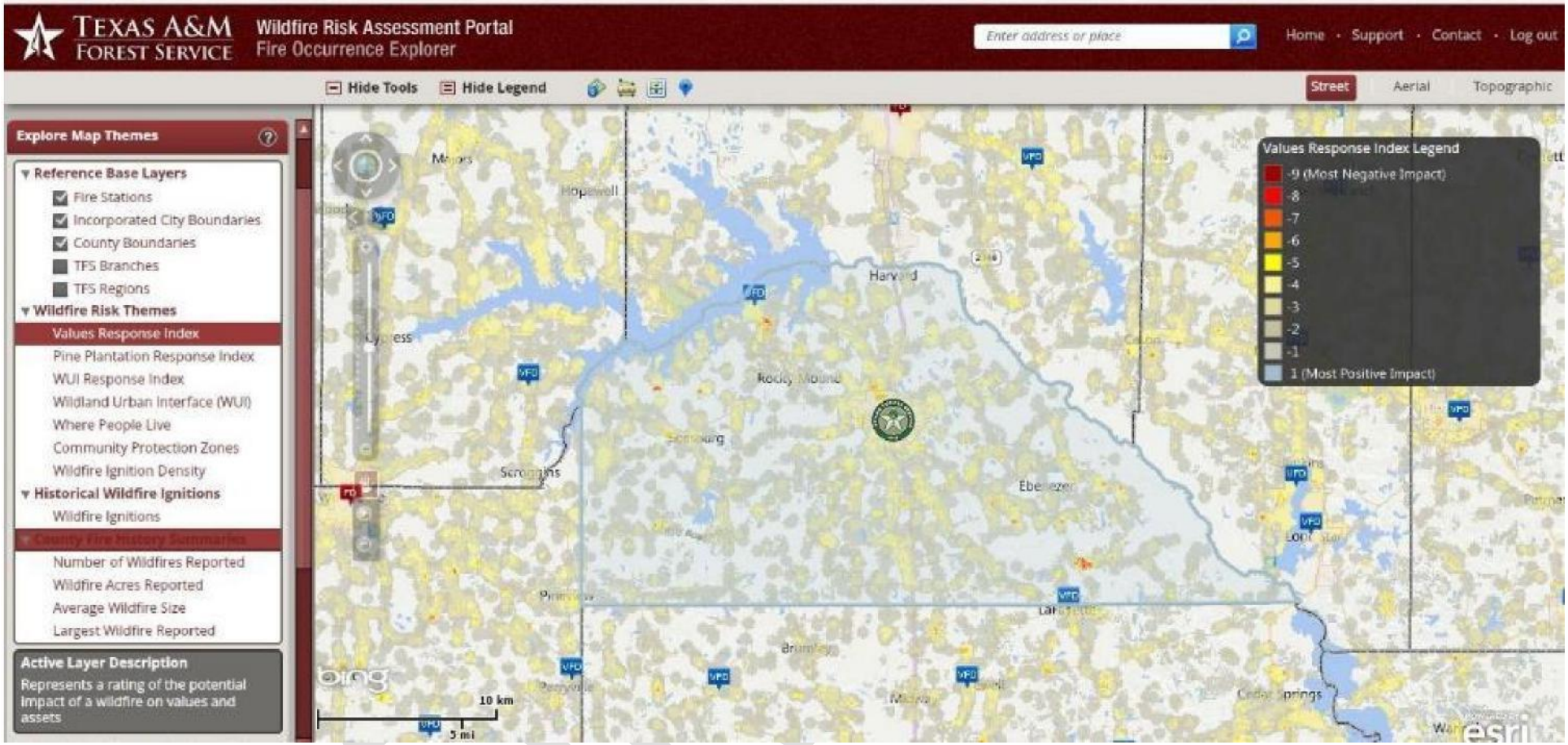
Camp County is shaded light grey.



Wildland-Urban Interface (WUI) – depicts where humans and structures meet or intermix with woodland fuels. Camp County is shaded light grey.

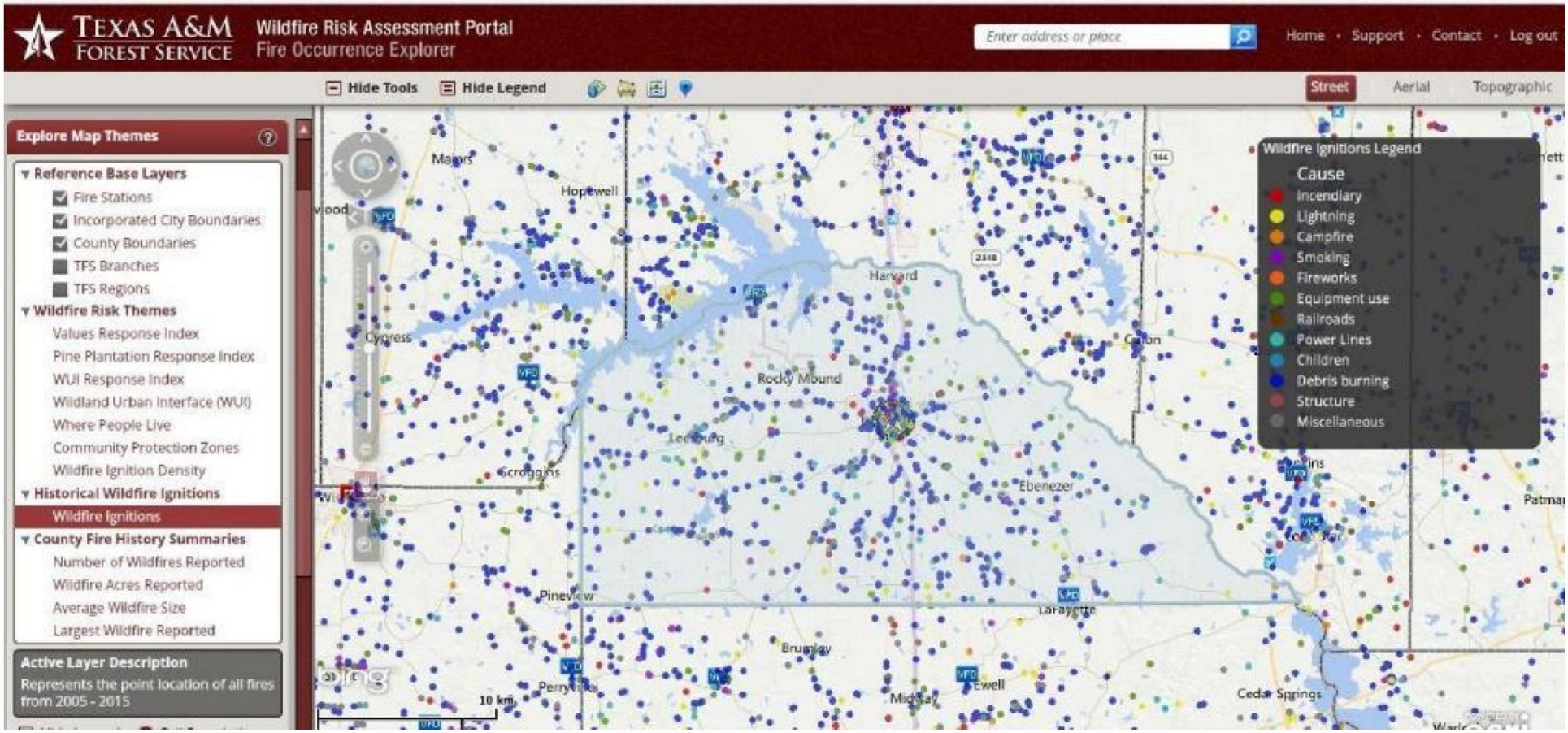
WUI Response Index – represents a rating of the potential impact of wildfire on people and their homes

Camp County is shaded light grey.



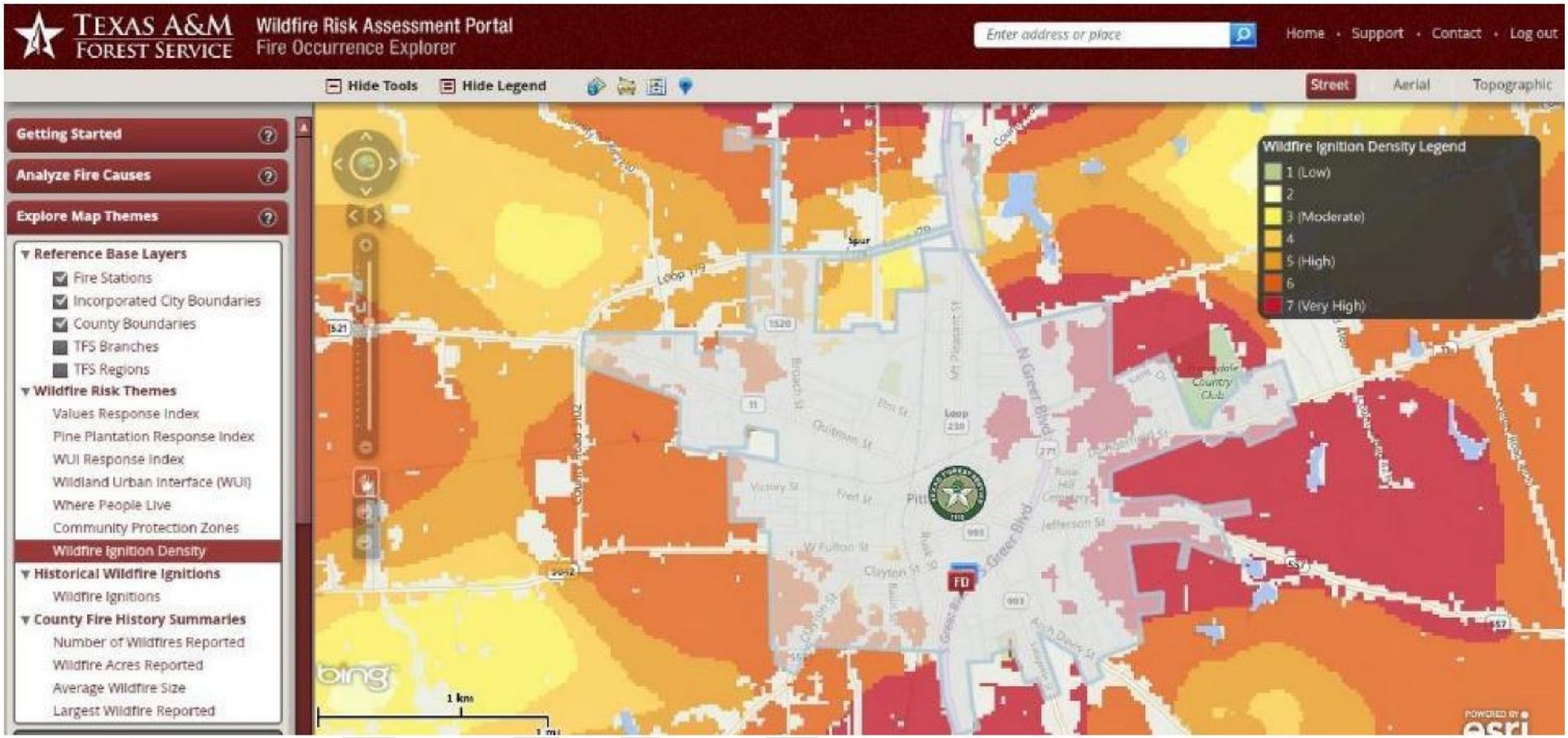
Values Response Index – represents a rating of the potential impact of wildfire on values and assets

Camp County is shaded light grey.



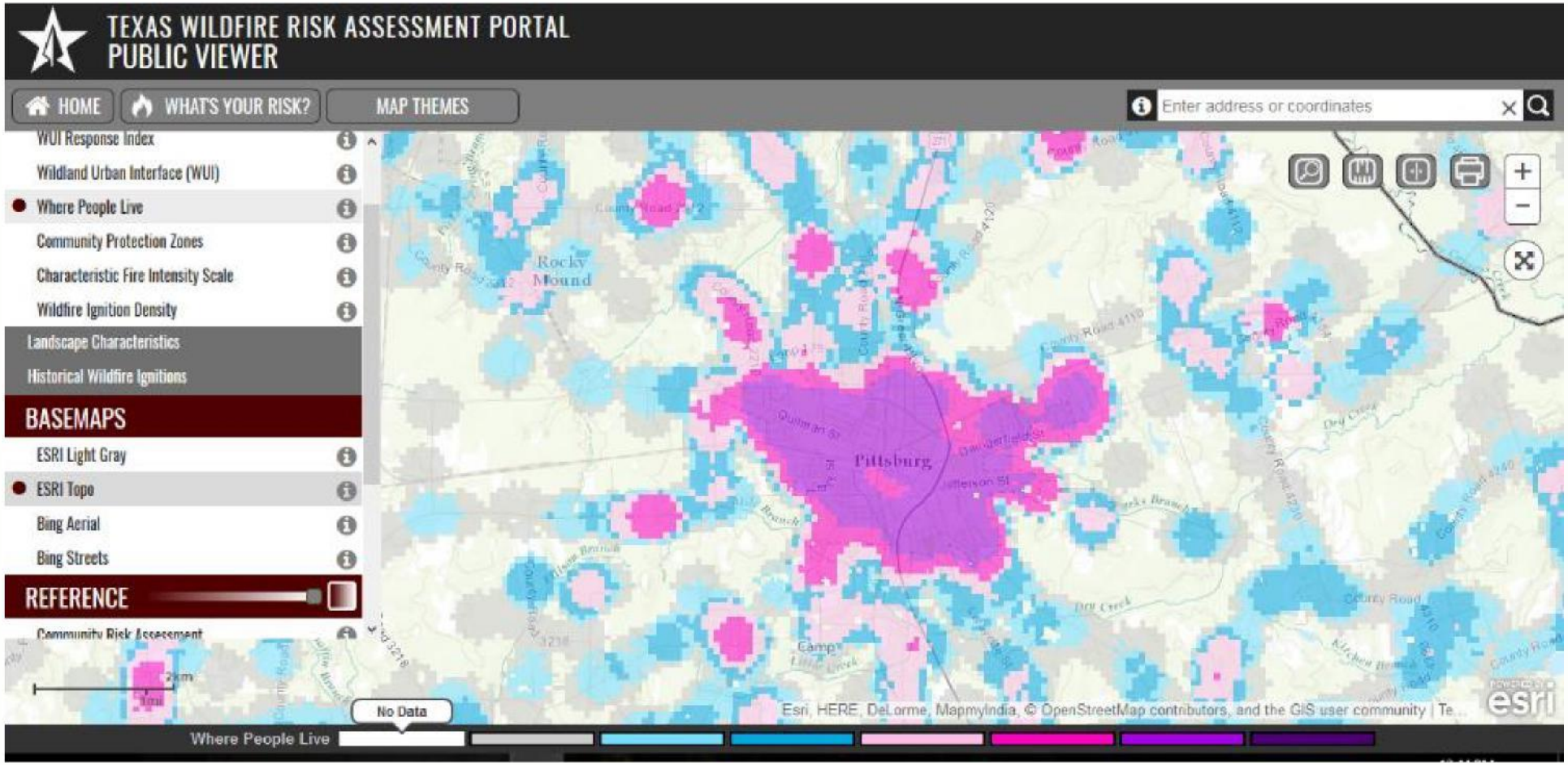
Wildfire locations and causes (2005 – 2015)

Camp County is shaded light grey.



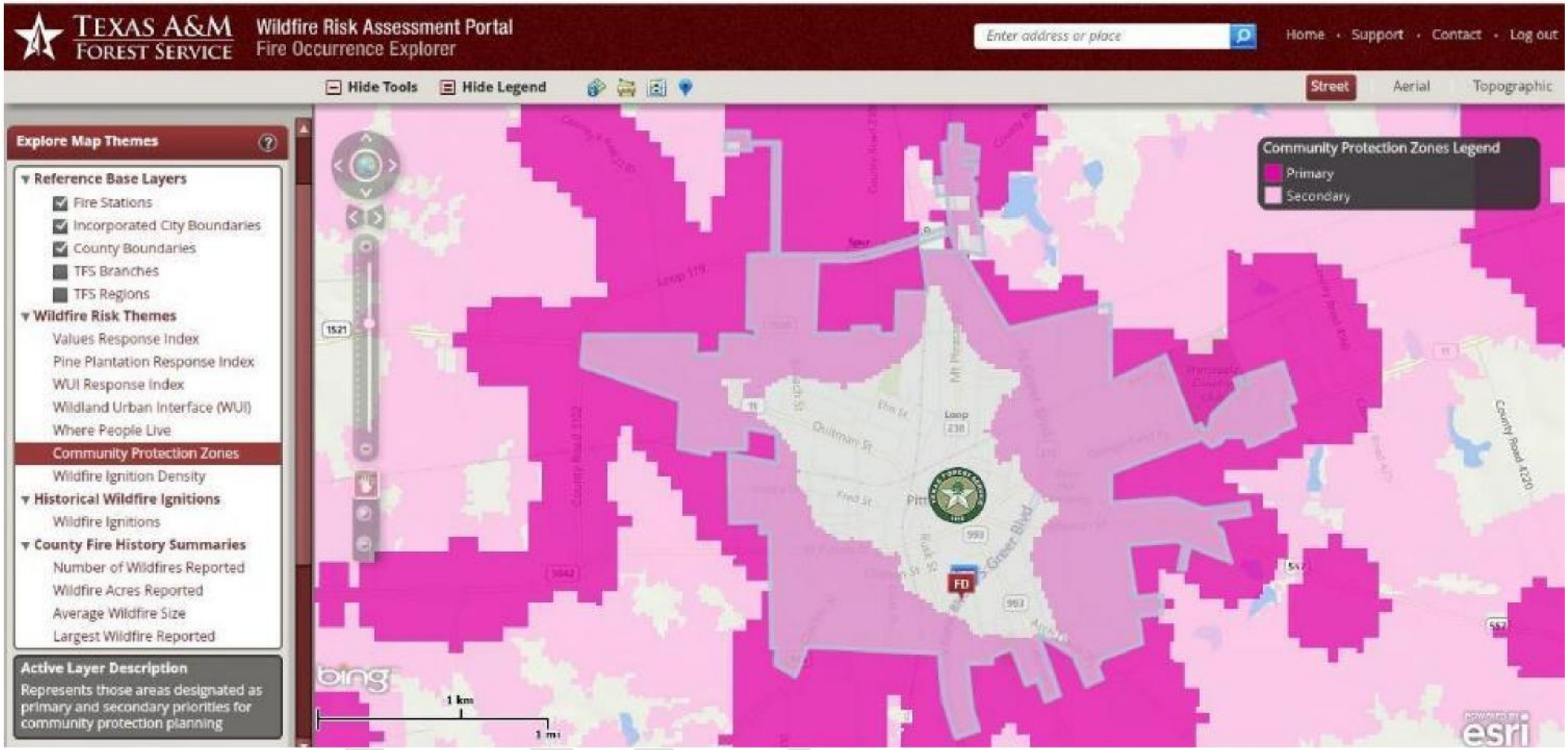
Wildfire Ignition Density – likelihood of a wildfire starting, based on historical ignition patterns

The City of Pittsburg is shaded light grey.



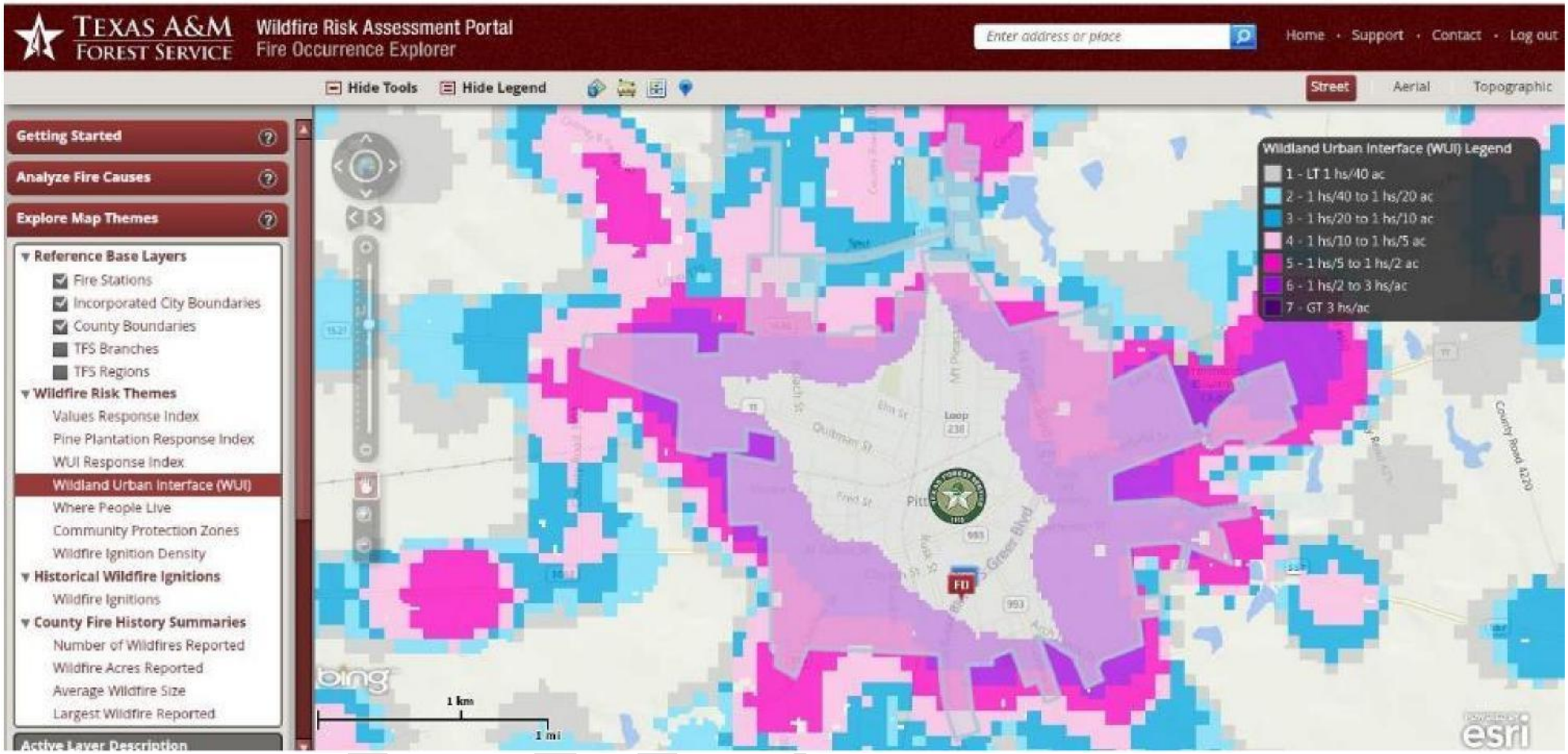
Housing density – shows where people live – compare to historic fire locations

The City of Pittsburg is shaded light grey.

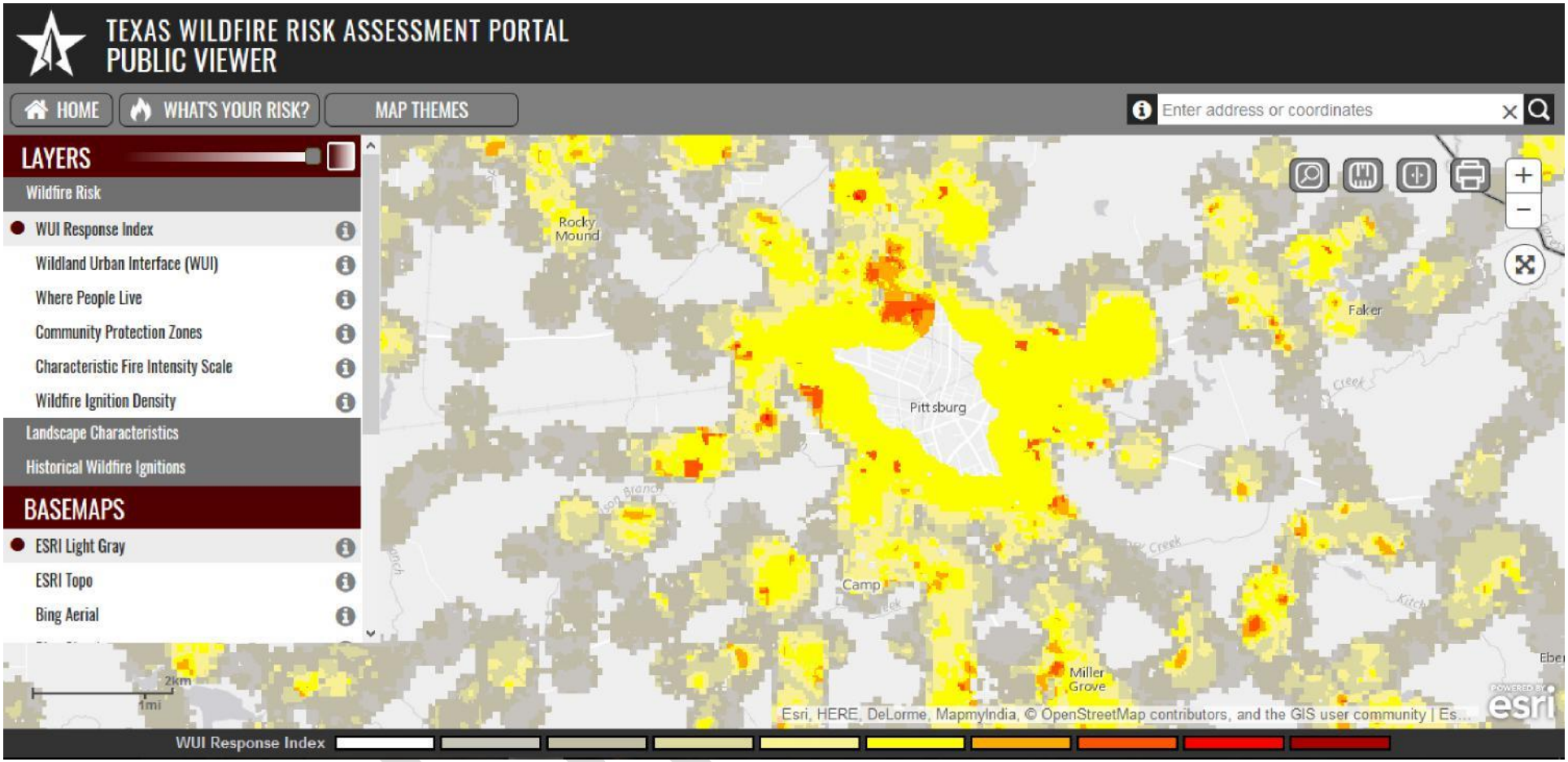


Community protection zones – primary and secondary priorities for planning purposes

The City of Pittsburg is shaded light grey.

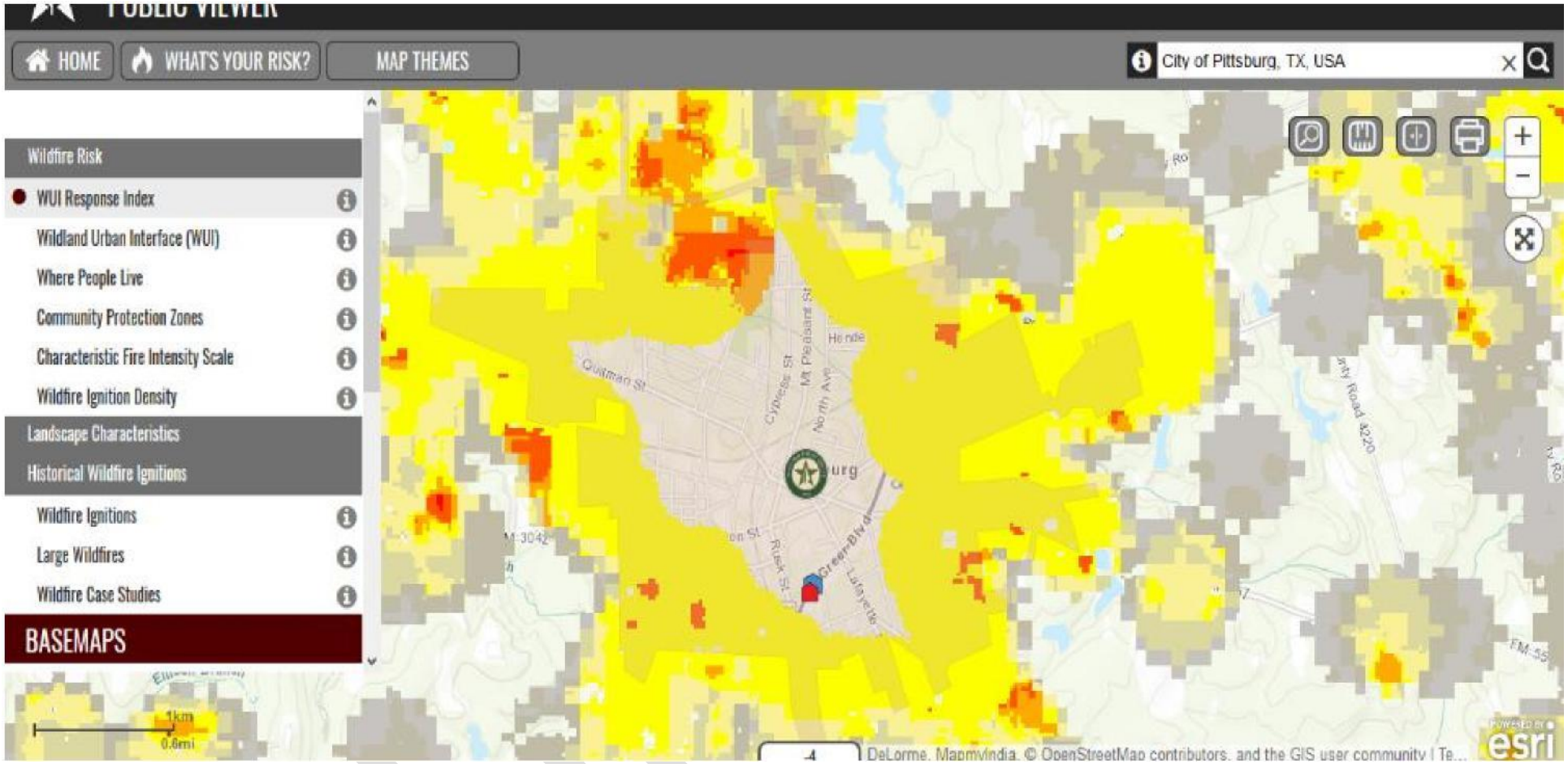


Wildland-Urban Interface (WUI) – depicts where humans and structures meet or intermix with woodland fuels. The City of Pittsburg is shaded light grey.



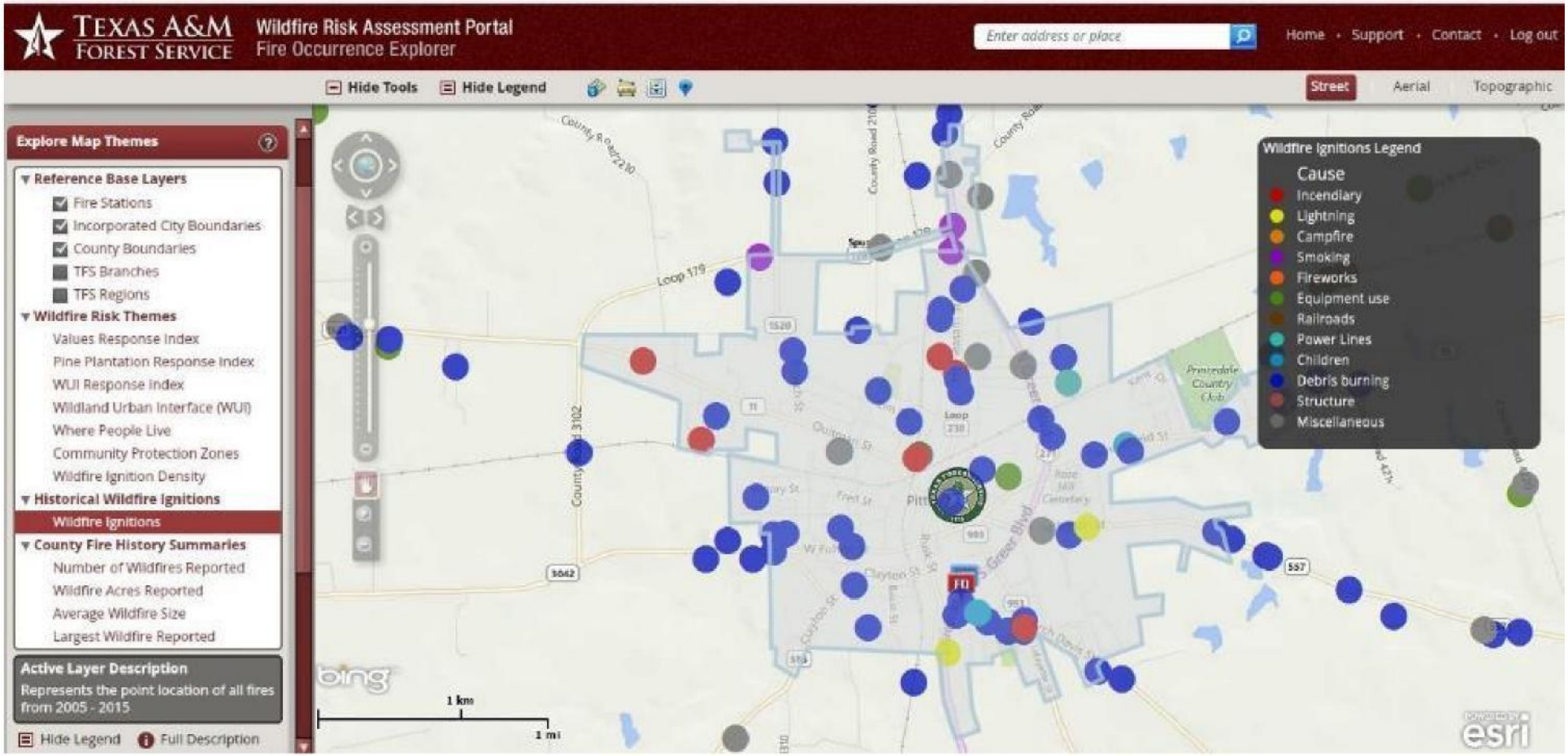
WUI Response Index – represents a rating of the potential impact of wildfire on people and their homes.

The City of Pittsburg is shaded light grey.



Values Response Index – represents a rating of the potential impact of wildfire on values and assets

The City of Pittsburg is shaded light grey.



Wildfire locations and causes (2005 – 2015) City of Pittsburg

The City of Pittsburg is shaded light grey.

Drought

Drought is a frequent hazard encountered in the Camp County area. The County is blessed with abundant rainfall, averaging 43 inches per year. However, droughts have occurred and have had an impact on the area during the years listed below. The Committee determined that drought would have a limited effect due to impact on the economy rather than a direct hazard to human life.

Limited Characteristics:

Injuries and illnesses are treatable with first aid.
Minor Quality of Life Lost
Shutdown of critical facilities and services for 24 hours or less
Less than 10% of property destroyed or with major damage

DROUGHT	
Category	**Response**
Potential Severity of Impact	Limited
Frequency of Occurrence	Highly Likely
Probability of Future Events	Highly Likely
Seasonal Pattern	All Year, but primarily in the Summer
List of Sources	Local resources Television, radio, Internet, social media, print media, Texas A&M Forest Service
Probable Duration	Variable based on several factors
Warning Time	More than 12 hours
Existing Warning Systems	Palmer Drought Index, US Drought Monitor, Keetch-Byrum Drought Index
Potential Affected Area	Entire City and County are at Risk
Cascading Potential	Property damage – crops and agricultural commodities Loss of water supply Increases wildfire potential and intensity Impact on tourism, farming, ranching

Camp County reported drought conditions 29 times from May of 1996 through December of 2017 (29 months of drought, from a total of 260 months). Thus, Camp County has experienced drought approximately 11% of the time, over the past 21 years, including a 15-month period from January 2011 through March of 2012. The impact of drought is mostly damage to the local economy, resulting in loss of natural resources and crop production. All types of agricultural products are affected, including hay, grain, orchards, vegetables, beef and other livestock. Horse and cattle breeders find it difficult to obtain hay, and prices skyrocket as hay must be imported from distant areas. Fishing is adversely affected, as the water level drops on area lakes. Tourism declines. The total cost of drought is difficult to determine, and losses are seldom reported to the National Climatic Data Center.

Local officials believe that drought could occur within the next 5 years, and probably will affect the County and City for about 6 of the summer months, based on past averages. Camp County and the City of Pittsburg could experience a KBDI of 700-800 in the future, as happened in 2011. Some economic damage is expected, primarily to agriculture in rural Camp County, with hay production and all crops being adversely affected. Livestock producers will spend more for hay and feed, due to lack of grass and resulting high prices of hay and possible shortages of forage. Low water supplies in ponds can have a negative impact on livestock production. In the City and County, water rationing may be required, with subsequent loss of grass and flowers in people's yards, and damage to the landscaping and horticulture industry. No deaths or human illnesses would be expected due to drought, but economic losses could exceed $100,000.

Flood

Camp County flooding occurs when a high quantity of rain falls in a short time, causing "flash flooding" which ends when the excess rain drains off into nearby watersheds, or soaks into the ground. Damage caused by these floods is a result of several issues, usually related to property development. As new developments are constructed, less land is available to absorb water; therefore, more water is forced to other low-lying areas,

causing those areas to flood. As forest space and other plant coverage decreases, the amount of run-off and erosion potential increase. Inadequate drainage system capacity can also be a factor, if the system was constructed to meet only the minimum requirements for conditions at the time of construction.

The HMAP Committee analyzed storm history events as reported by the National Climatic Data Center and used personal experience to profile flooding and determined that the potential severity of impact for flood in Camp County is limited.

Limited Characteristics:

Injuries and illnesses are treatable with first aid.
Minor Quality of Life Lost
Shutdown of critical facilities and services for 24 hours or less
Less than 10 percent of property destroyed or with major damage

FLOOD	
Category	**Response**
Potential Severity of Impact	Limited
Frequency of Occurrence	Highly Likely
Probability of Future Events	Highly Likely
Seasonal Pattern	All year
List of Sources	National Climatic Data Center Committee Input
Probable Duration	1 to 24+ hours in some locations
Warning Time	3 to 24+ hours
Existing Warning Systems	NOAA, Internet, media, social media;
Potential Affected Area	City and County areas are identified on maps on pages 78-89
Cascading Potential	Property damage in low-lying areas, Road closures Vehicles damaged One Wastewater Treatment Plant down for days Bridges closed Waste Water Treatment Plant nonfunctional, short in motors, backflow into houses Fire Ants ball together

Twelve flash flood events due to heavy rainfall have been reported to the National Weather Service from 1997 through 2016, a period of 20 years. Camp County has averaged one flooding event every 8 months.

Thirty thousand dollars ($30,000) in property damage was reported in Pittsburg on December 27, 2015, when several people were rescued from a vehicle which had been trapped by the high water. No injuries or deaths have been reported due to flood.

(See **Appendix 1 – Historical Storm Event Data** for additional information)

According to the National Climatic Data Center, flooding events occurred in the following specific areas:

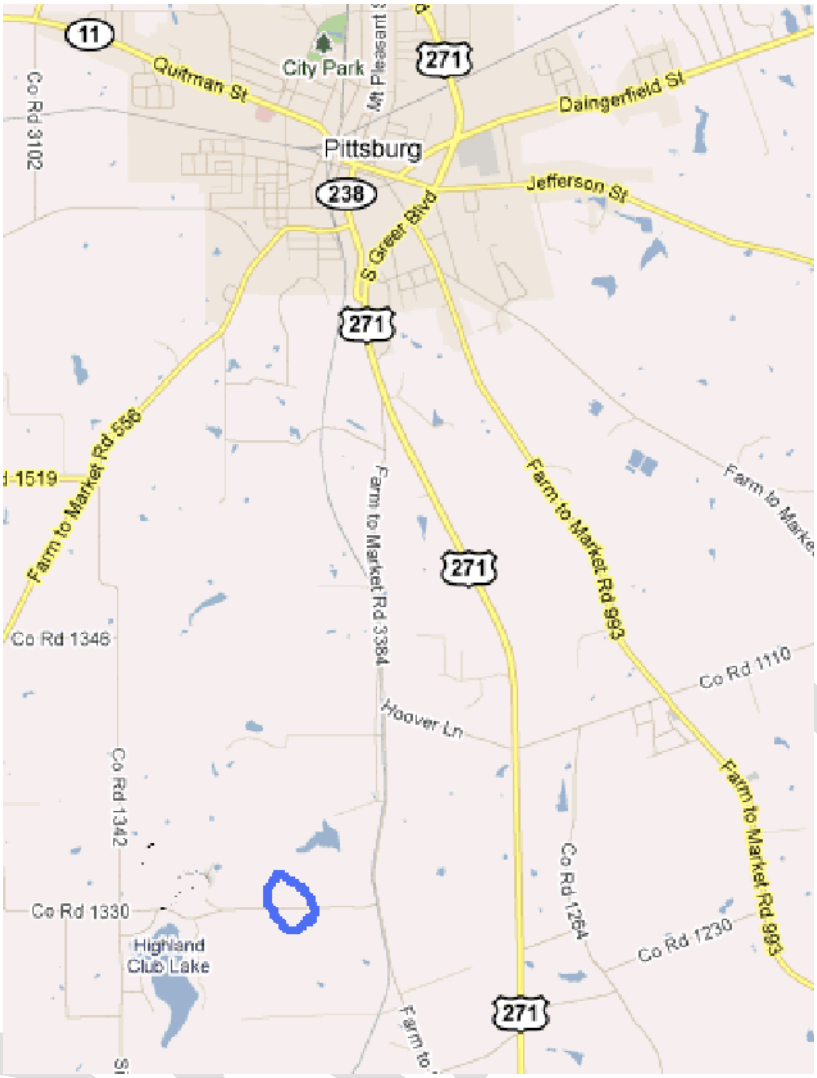
Date	Location	Description of Area
2/20/1997	Pittsburg	Flooding was reported in Pittsburg, and Highway 557 east of Pittsburg was covered with one foot of water.
2/16/2001	Pittsburg	Highway 271 was closed by high water.
6/20/2007	Pittsburg	Six to ten inches of rain produced widespread flash flooding. Several roads underwater from excessive heavy rainfall.
7/31/2007	Pittsburg	Water was reported over Highway 11. Several county roads underwater.
5/2/2009	Leesburg	Numerous roads were flooded and closed throughout the county.
10/13/2009	Leesburg	Numerous cars were stalled and stranded in high water.
10/22/2009	Newsome	Hwy 271, 155, and FM 1519 closed or partially closed by flooding and flash flooding.
9/20/2013	Pittsburg	Texas Street was closed due to flooding. The intersection of Moreland and Fairview Street was also closed due to flooding.
12/13/2015	Pittsburg	Numerous county roads were under water including in and around the Pittsburg community.

Date	Location	Description of Area
12/27/2015	Pittsburg	Widespread flooding was reported across all of Camp County, Texas with several high-water rescues of people in automobiles in the City of Pittsburg.
12/27/2015	Leesburg	Numerous county roads were underwater with several culverts washed out as well.
4/29/2016	Newsome	Numerous roads were flooded and closed throughout Camp County.

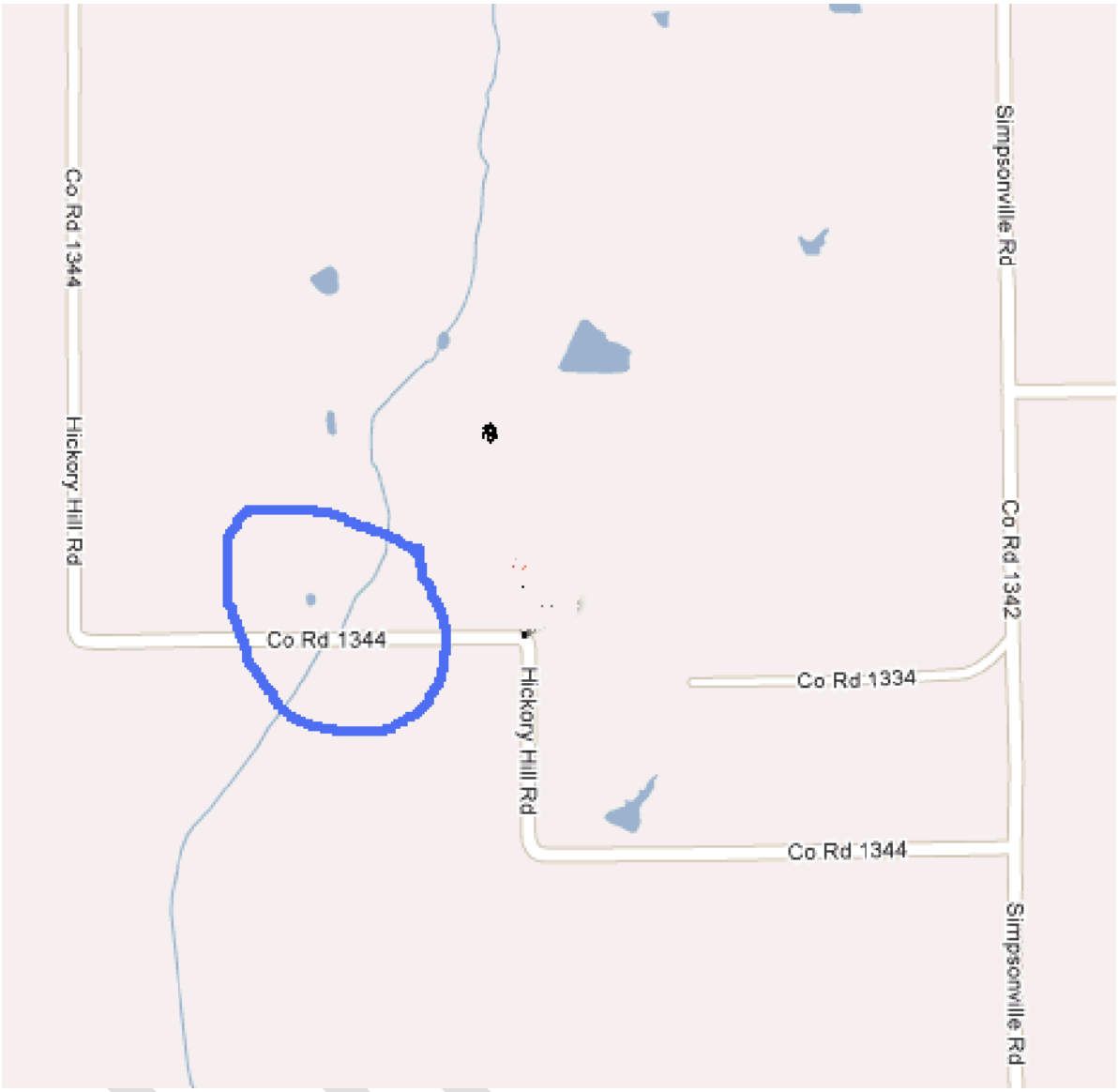
Flood-prone areas in Camp County

There are several low-lying roads, or roads with limited drainage, which have experienced past flooding in Camp County and are prone to short-term flooding during heavy rains. It is anticipated that any future flooding would be limited to these roads only, and that no structures would be affected. No other areas of the County are likely to experience flooding. Potential flood locations are circled on the following maps, with descriptions below each map.

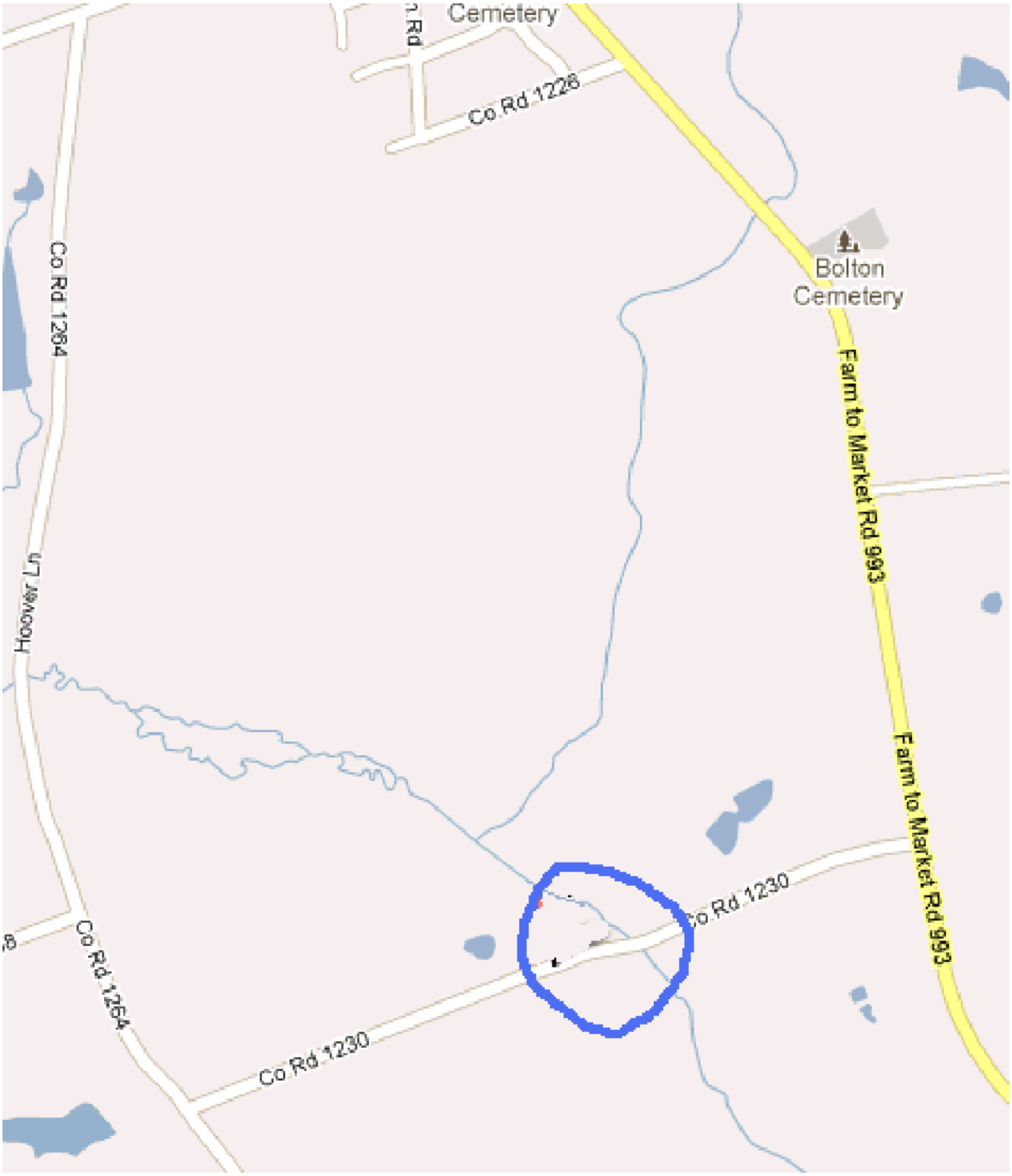
When these roads flood, water may cover the road to a depth of 4” to 6”, and this water may sweep across from one side of the road to another, making it very hazardous to drive across these areas.



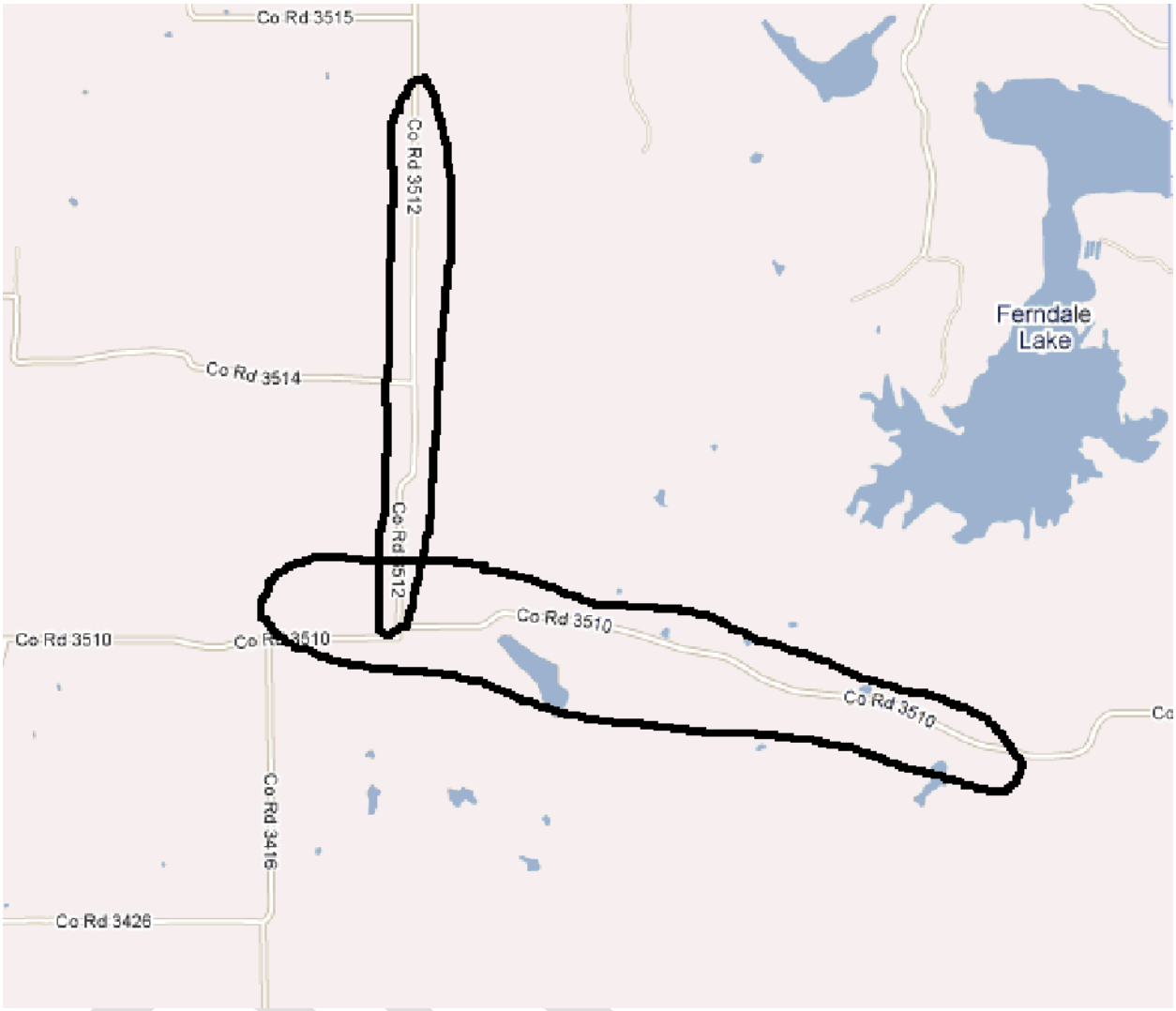
County Road 1330, approximately five miles south of Pittsburg, where the road passes south of Bennett Lake, is prone to flooding during heavy rain.



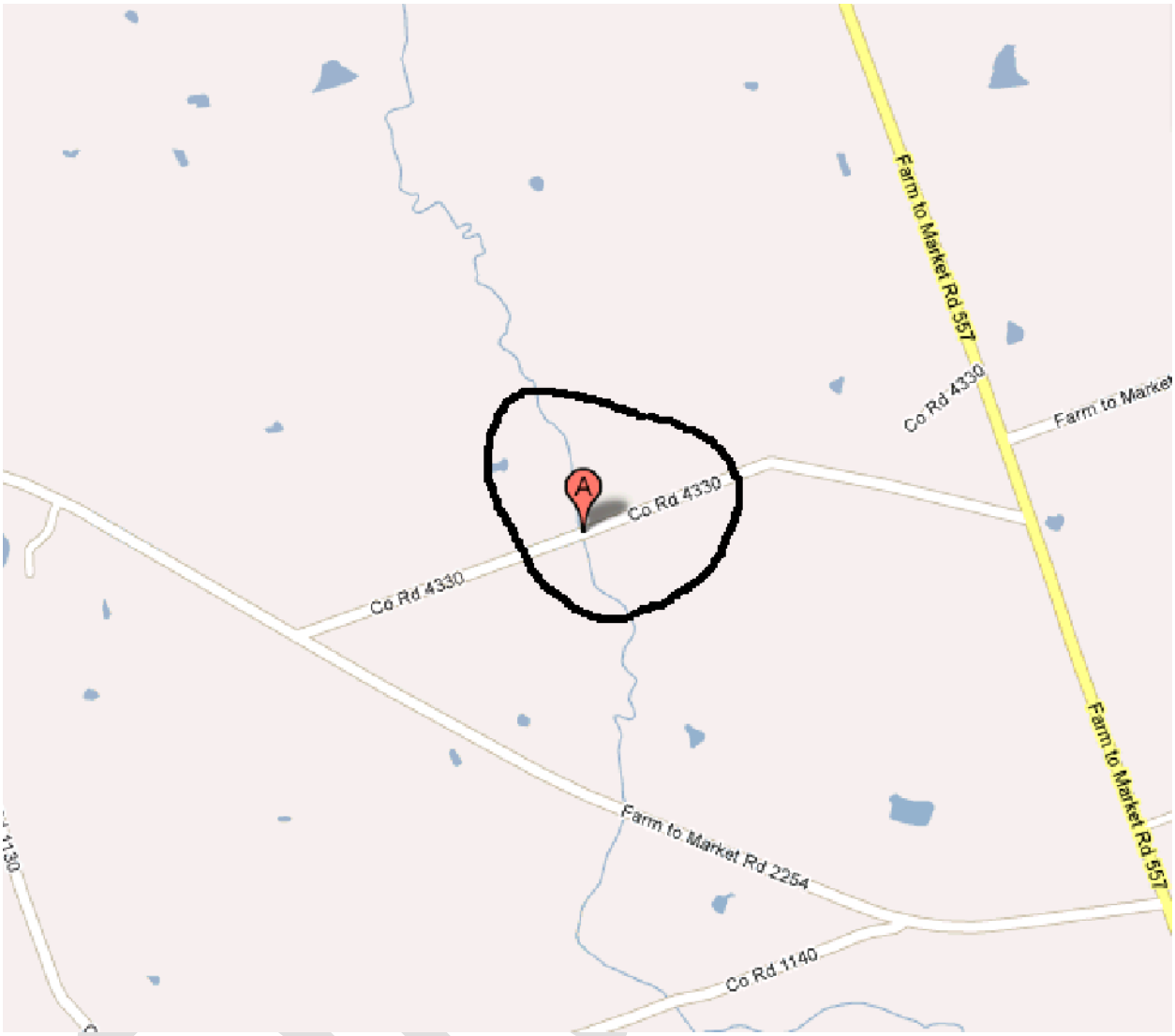
County Road 1344, approximately five miles south of Pittsburg, where the road crosses Reeves Creek, is prone to flooding during heavy rain.



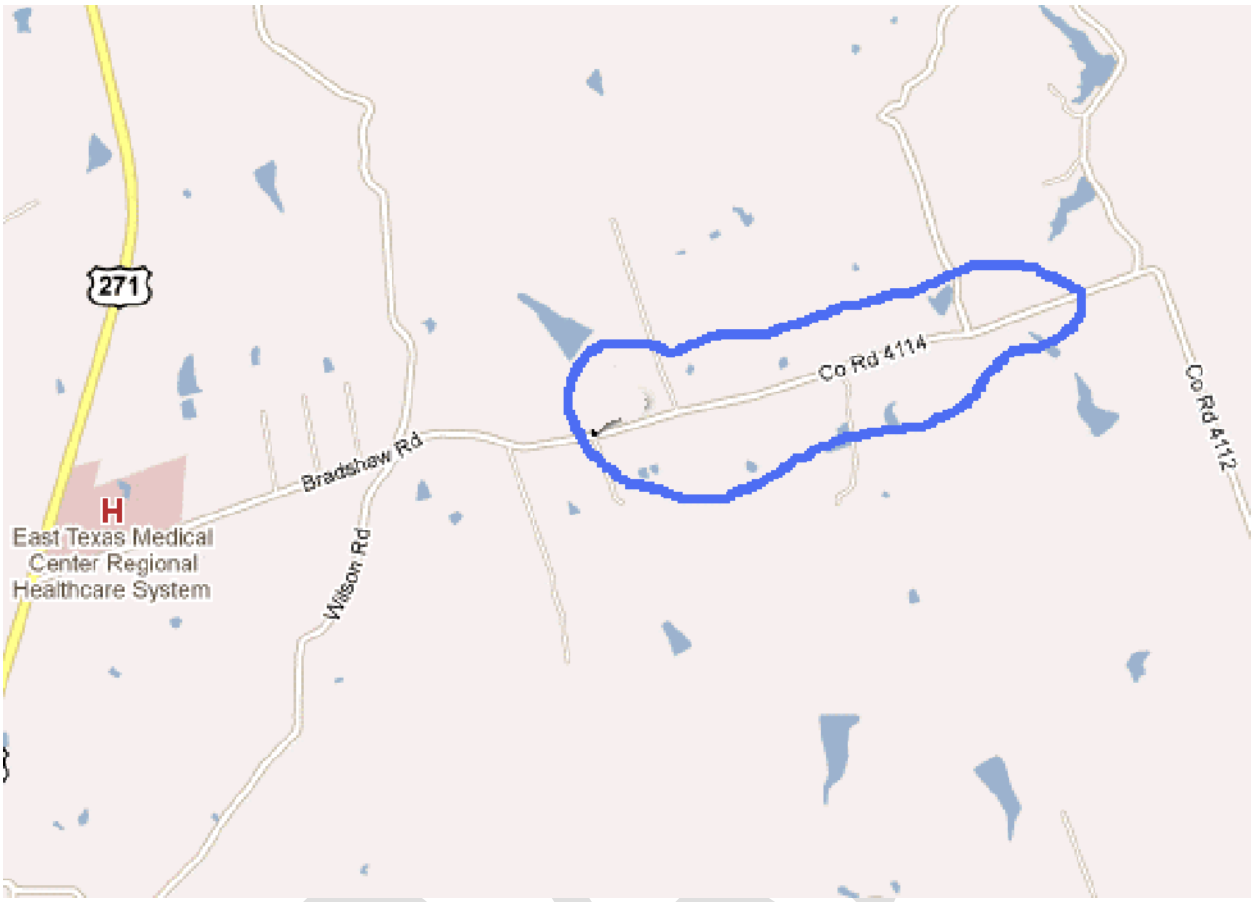
County Road 1230, approximately three miles south of Pittsburg, where the road crosses an un-named creek west of FM 993, is prone to flooding during heavy rain.



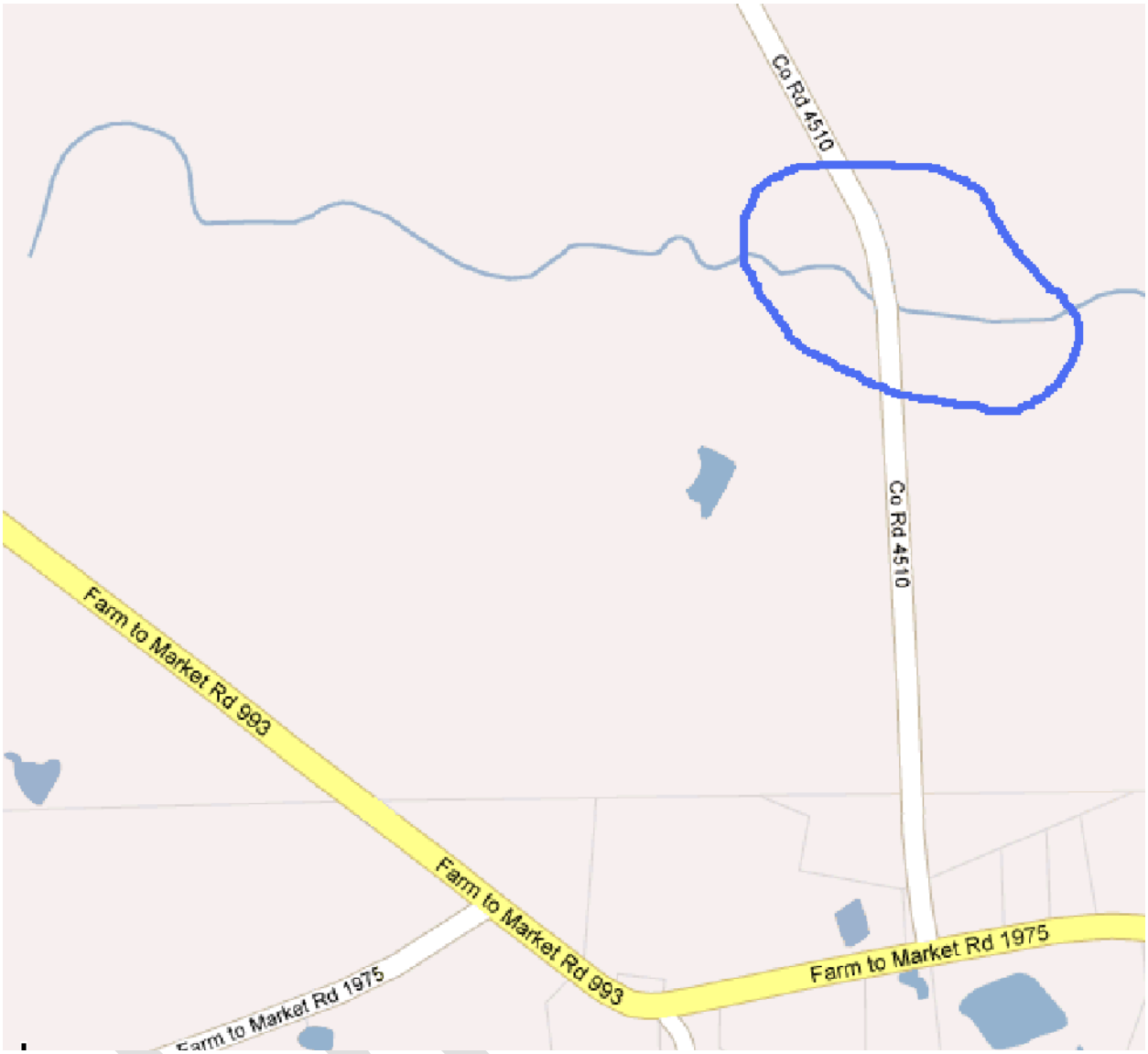
County Road 3510, approximately three miles southwest of Pittsburg and south of Ferndale Lake, and County Road 3512, west of the lake, are prone to flooding during heavy rain.



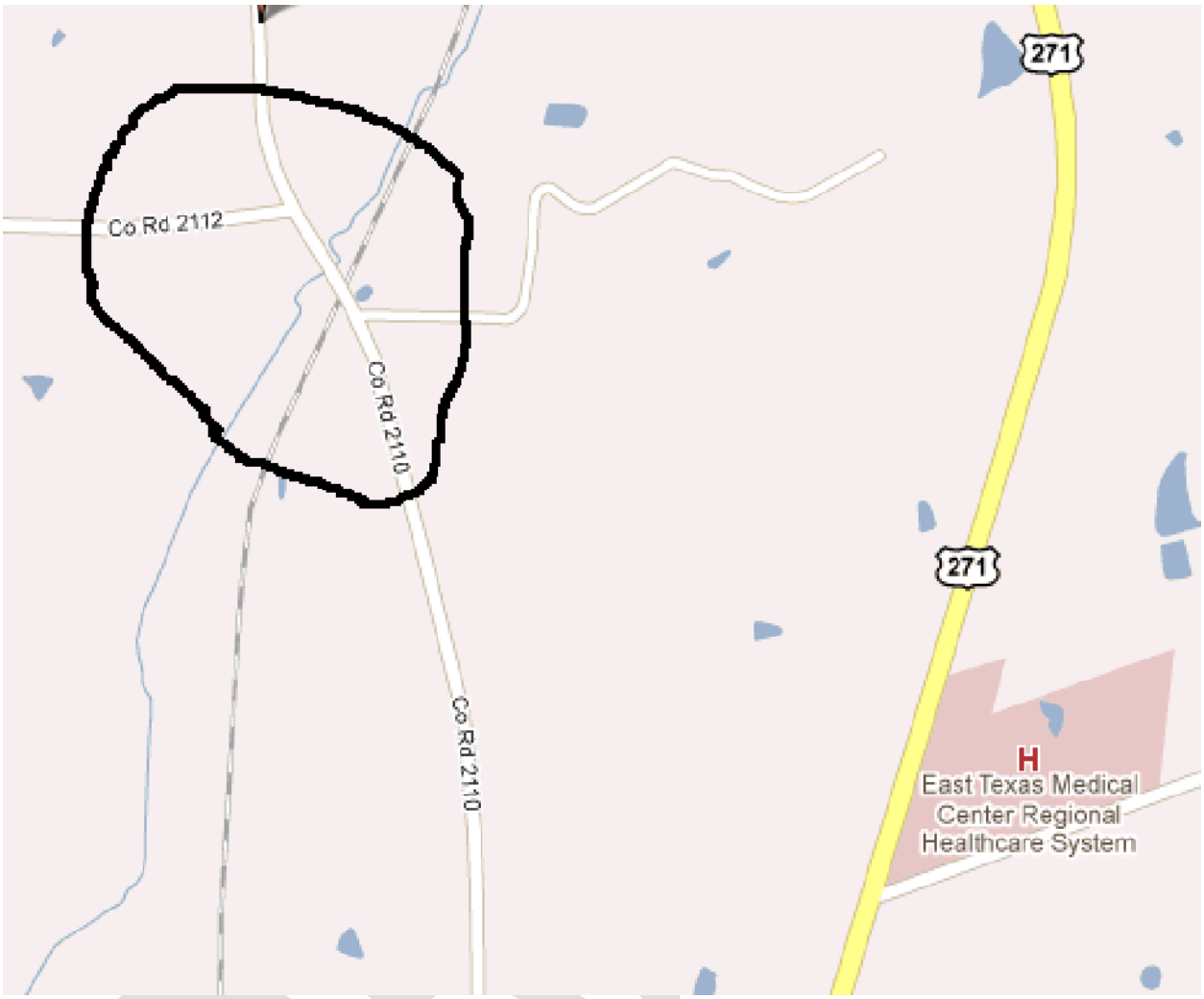
County Road 4330, approximately one mile southeast of Pittsburg, is prone to flooding during heavy rain.



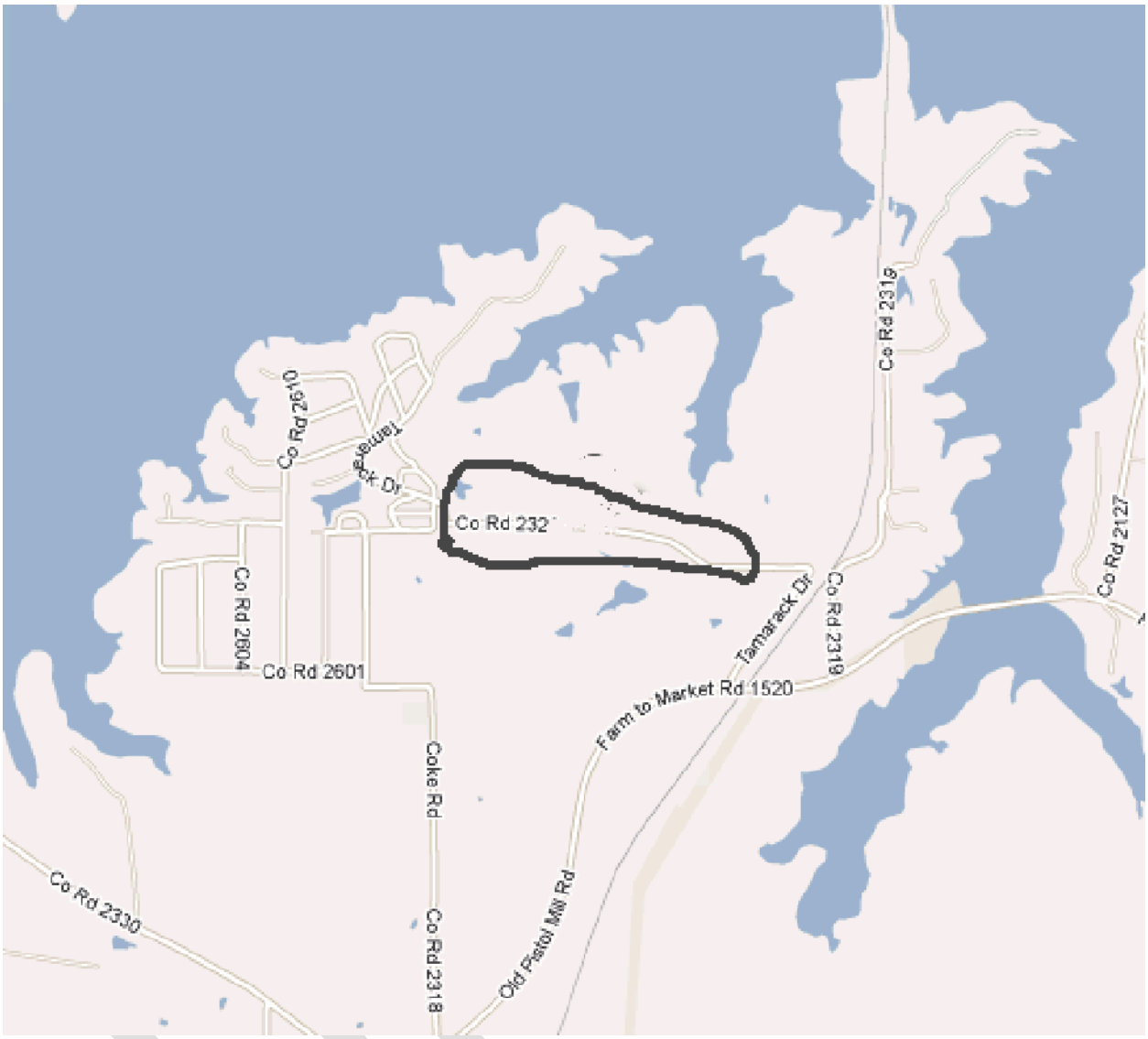
County Road 4114, approximately one-half mile north of Pittsburg, is prone to flooding during heavy rain.



County Road 4114, approximately one mile southeast of Pittsburg, is prone to flooding during heavy rain.



County Road 2110, approximately one mile north of Pittsburg, is prone to flooding during heavy rain.

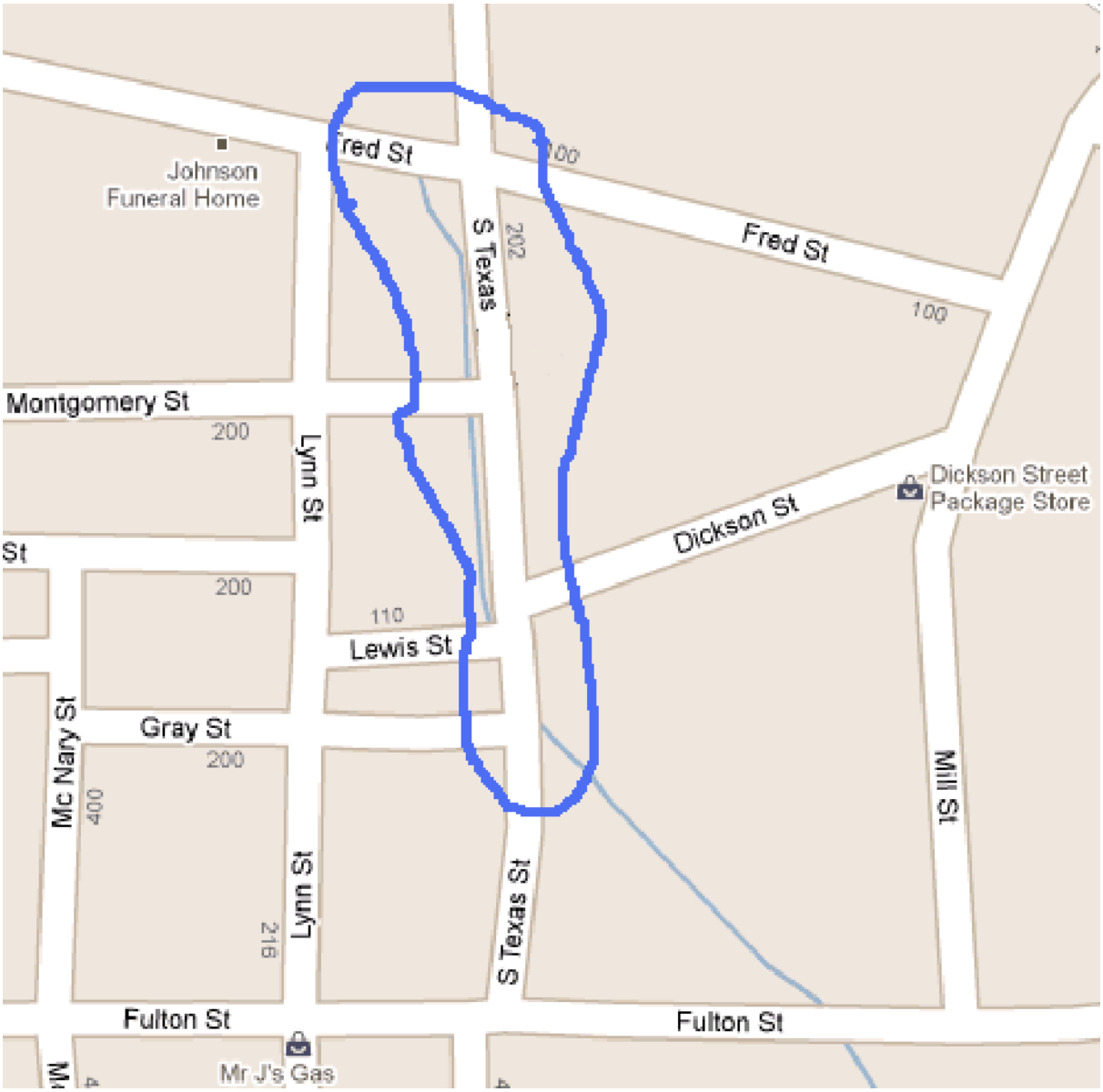


County Road 2320, approximately one mile northwest of Pittsburg near Lake Bob Sandlin, is prone to flooding during heavy rain.

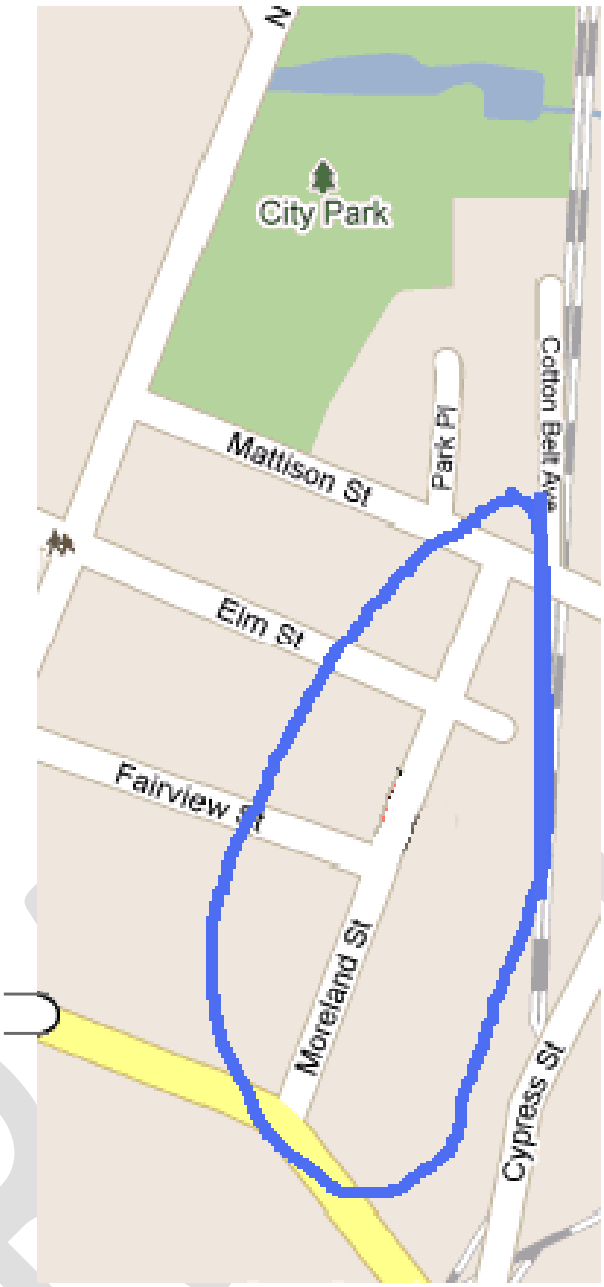
County Road 2402, approximately three miles west of Pittsburg, is prone to flooding during heavy rain.

Flood-prone areas in the City of Pittsburg

There are two locations within the City of Pittsburg which are prone to short-term flooding during heavy rains. Both are low-lying roads, or roads with limited drainage, and have experienced flooding. It is anticipated that any future flooding would be limited to these two locations, affecting only the roads, and would not affect any structures.



South Texas Street between Fred Street and Gray Street is prone to flooding during heavy rain.



Moreland Street between Highway 11 and Matheson Street is prone to flooding during heavy rain.

ASSESSING VULNERABILITY

Estimating Potential Losses

Possible Tornado Magnitude and Extent of Loss: Although Camp County could be affected by an F4 tornado, most occurrences are F1 or F2, and at a frequency of one every four to five years. When a tornado strikes, a small portion of the population will be without power and other utilities for a period of up to 72 hours; limited tree debris may be found in the area; roofs on some buildings may be damaged. In rare cases, a limited number of buildings may be structurally damaged or destroyed. A remote possibility of injuries or deaths exists, but prediction of the number is not possible. The average financial loss for a tornado event has been less than $100,000, but some more severe tornados resulted in losses approaching $1 million. Most vulnerable facilities are of sturdy construction; however, some smaller care facilities are of typical wood-frame construction and could sustain more severe damage. A tornado striking the City of Pittsburg would cause more damage than one affecting the rural areas of the county.

Possible Windstorm Magnitude and Extent of Loss: Severe thunderstorms usually move through Camp County rapidly with a duration of approximately 30 minutes to one hour. Sporadic power outages affecting up to one-quarter of the county can be expected to last four to eight hours. All critical facilities have auxiliary power, and the power outages caused by these storms is usually just an inconvenience for residents and local businesses. In most cases, damage is limited to fallen trees and branches, sometimes blocking a roadway, or causing limited structural damage to residential and out buildings. The accompanying wind, most often in the 58 – 70 mph range, may cause damage to metal or shingle roofing on structures. Camp County experiences several storms per year, but only two or three fall into the “severe storm” category. Financial losses (including cleanup costs) per severe storm can be expected to run $5,000 - $100,000 county-wide, with storms which affect the City of Pittsburg generally expected to cause more property damage than storms which affect the rural areas of the county.

Possible Hailstorm Magnitude and Extent of Loss: Hailstorms usually move through Camp County rapidly, with a duration of less than 30 minutes. Sporadic power outages affecting up to one-quarter of the county can be expected to last four to eight hours. All critical facilities have auxiliary power, and the power outages caused by these storms is usually just an inconvenience for residents and businesses. Most damage is limited to dented vehicles, roof damage, and fallen trees and branches, sometimes blocking a roadway, or causing limited structural damage to buildings. Hail may cause damage to vehicles or other equipment, crops, animals that have no shelter, and to roofing on structures. Camp County experiences two or three serious hailstorms per year. Financial losses (including cleanup costs) can be expected to run $5,000 - $100,000 county-wide, with storms which affect the City of Pittsburg generally expected to cause more property damage than storms which affect the rural areas of the county.

Possible Severe Winter Storm Magnitude and Extent of Loss: A severe winter storm could result in some parts of the county being without power due to accumulated ice on power lines and overhanging trees. Some roadways may ice over and become impassable for a short period of time. A limited number of motorists may attempt to negotiate iced roads and may become stranded or involved in automobile accidents. Actual storm damage will be limited to utilities and trees, and in rare cases, structures. All vulnerable facilities are adequately prepared to cope with winter storms. The most significant financial loss is to utilities, and costs for repairing power and telephone lines can vary greatly. In most cases, not more than $10,000 to $20,000 per storm will be spent on reinstating these utilities.

Possible Wildfire Magnitude and Extent of Loss: Although Camp County experiences numerous grass and brush fires each year. Typical Camp County fires result in grass and undergrowth on a limited and small area of uninhabited acreage (1-10 acres) being burned. In rare cases, one or two buildings may be damaged or destroyed. These are usually storage sheds or out-buildings, and not residences or commercial structures. It’s highly

unlikely that any vulnerable facility would ever be threatened by a wildfire. A remote possibility of injuries or even deaths exist, but the likelihood of more than one injury in any given incident is extremely remote, and if an injury occurred, it would probably be the result of the injured person attempting to fight the fire. Annual monetary losses due to wildfires is not likely to exceed $10,000. The most likely area of wildfire threat to the City is in its southwest quadrant. The Pittsburg Fire Department has successfully protected the City since 1905, and has provided rural fire service since 1955. Camp County has contracted with the City of Pittsburg for fire-rescue services in Camp County.

Possible Drought Magnitude and Extent of Loss: Camp County experiences drought every two to three years. Damage is primarily limited to agricultural losses, in the rural portions of the county. Annual monetary loss to drought is not likely to exceed $50,000. While the City of Pittsburg may need to institute water conservation policies in a time of drought, losses within the city should be limited to landscape plantings.

Possible Flood Magnitude and Extent of Loss: The primary hazard of flood in Camp County is from slow-rising lakes and streams, and flash flooding of low-lying roadways during heavy rain. Flooding in Camp County should not be severe, although some lower-lying roadways may become submerged and impassable. A limited number of motorists may become stranded due to flooded roadways. In rare cases, rising lake levels could result in flooding of residential and commercial structures near the lakeshores. No vulnerable facilities are located in areas threatened by flood. Floodwaters in this area are slow moving, consequently, the possibility of injuries or deaths are highly remote. Damage will be limited to vehicles, and in very rare cases, structures. In most cases, losses would be less than $50,000.

Vulnerability and Risk Assessment

Local officials used the Vulnerability and Risk Assessment Worksheet as provided by the Texas Department of Public Safety, Division of Emergency Management, to determine vulnerability to each hazard.

Tornado, Windstorm, Hailstorm, Severe Winter Storm, and Drought all have a countywide impact, including the City of Pittsburg. Wildfire can be expected anywhere in the county, but is more likely a threat in certain areas, as previously described and mapped in this document. Only certain parts of the county and city are at risk from Flood, as previously described and mapped in this document.

Vulnerability Group	High Risk – People and facilities located in areas that have previously experienced impacts from hazards and/or in areas where impacts from hazards are possible and probable.		
People	12,716		
Housing Units	5,671– Occupied Housing Units		
Critical & Special Facilities	Critical facility type	Rural Camp County	Pittsburg
	Ambulance service	1	Same as County;
	Child care	0	3
	Churches	12	21
	Clinics	1	Same as County
	Dentists	0	2
	Fire stations	2	2
	Govt. offices - county	4	N/A
	Government offices - city	N/A	4
	Hospital	1	Same as County
	Newspaper	0	1
	Nursing home	0	2
	Pharmacies	1	2
	Physicians	12	Same as County
	Police stations	0	1
	Retirement communities	0	0
	Schools	0	5

	Nursery schools and Kindergartens	0	3
	Sheriff	1	0
	Veterinarian	0	2
	Total critical facilities	**22**	**49**

Infrastructure		
US Highways	US271	
State Highways	Hwy. 11	
State Farm-to-Market Roads	21, 556, 557, 993, 1519, 1520, 1521, 1522, 1975, 2057, 2254, 2454, 2455, 3042, 3384	
Miles of Road	Rural Camp County	Pittsburg
Total:	462	43
Bridges		
State	Rural Camp County	Pittsburg
32	20	0
Railroads		
Total Miles	Rural Camp County	Pittsburg
31	26	5
Dams		
	25	1
Haz-Mat Pipeline (miles)		
	118	0.5
EPA Regulated Facilities	19	

Flood – Specific areas identified previously in this Plan, beginning on page 73.		
Vulnerability Group	Low Risk – Limited to shallow water covering roadways, which poses minimal threat to persons	
People	Camp County - 0	Pittsburg - 0
Housing Units	Camp County- 0	Pittsburg- 0
Critical Facilities	Camp County- 0	Pittsburg- 0
Infrastructure and Lifelines	Camp County- 11 county roads	Pittsburg- 2 city streets
HAZMAT Facilities	Camp County - 0	Pittsburg- 0
Commercial Facilities	Camp County - 0	Pittsburg - 0

Neither Camp County nor the City of Pittsburg have experienced any losses from flood other than temporary blocking of roadways. There are no structures located in the areas known to be affected by flood.

Camp County and the City of Pittsburg Infra-Structure Property Values are shown below. Damage which could be caused by hazards listed in this plan would be a direct expense on the Infrastructure, City or County government.

In most past incidents, loss to any property has averaged less than 10% of its total value. In the case of flood damage, since all past and expected future flood events are limited to roadways with no damage beyond washouts of small portions of the road, no expected loss to structures is anticipated.

The following table lists critical infrastructure values, as of the last Camp County Appraisal District update. These values were current as of December 12, 2017.

Amenity	Address	Value
UT Health Hospital - Pittsburg	2701 US 271 N.	$28,237,572
Olympic Rehabilitation Center	2801 US 271 N.	$1,908,000
Camp County EMS	122 Church	$242,367
Camp County Jail	126 Church	$268,765
Camp County Courthouse	126 Church	$1,362,154
Camp County Annex	115 North	$294,142
Camp County Barn	221 Mill	$87,728
Pittsburg City Hall	200 Rusk	$342,286
Pittsburg Police Department	520 S. Greer Blvd.	$323,654
Pittsburg Fire Department	514 S. Greer Blvd.	$531,763
Pittsburg City Operations Center	203 W. Fulton Street	$137,608
Pittsburg Public Library	613 Quitman	$431,484
Northeast Texas Rural Heritage Museum	204 W. Marshall Street	$375,023
Pittsburg Water Operations	123 Market Street	$73,213
Pittsburg Wastewater Treatment Facility - Dry Creek Plant	1351 FM 2254	$406,200

Amenity	Address	Value
Pittsburg W/W Sparks Branch Plant	1246 FM 557	$684,639
Pittsburg Water Treatment Plant	1000 Broach Street	$82,447
Pittsburg Elevated Storage Tank	103A Fulton Street	$494,900
Pittsburg Elevated Storage Tank	601A Victory Street	$428,700
Pittsburg #6 Well	320A Mount Pleasant Street	$8,250
Pittsburg #8 Well & Storage Tank	224 Fulton Street	$8,250
Pittsburg #7 Well & Storage Tank	201A Hillside Avenue	$8,500
Pittsburg #5 Well & Storage Tanks	601A S. Greer Boulevard	$4,000
Pittsburg Old Fire House Pump & Storage	609A Cypress Street	$47,900
Pittsburg #10 Well	215 Basin Street	$8,250
Pittsburg #9 Well	FM 3384	$5,500
Pittsburg #4 Well	429A Terry Street	$8,500
Pittsburg Collins Circle Lift Station	112 Collins Circle	$6,960
Pittsburg Rusk St. Lift Station	430 Rusk Street	$6,960
Pittsburg Town & Co. Shopping L/S	901A N. Greer Boulevard	$6,960
Pittsburg Head Start Lift Station	404 Broach Street	$6,960
Pittsburg Laurel Ridge Lift Station	400 Broach Street	$6,960
PISD High School	300 Texas Street	$1,099,790
PISD Middle School	313 Broach Street	$4,581,950
PISD Intermediate School	233 Lafayette Street	$167,450
PISD Primary School	405 Broach Street	$267,410
PISD Elementary School	106 Fulton Street	$3,707,670
PISD Administration Building	402 Broach Street	$878,360

Camp County and the City of Pittsburg Residential Property Values

There are approximately 4,500 housing units in rural Camp County, outside the City of Pittsburg. This figure includes approximately 3,900 site-built homes, with a total value of *$312 million; and about 600 mobile homes or manufactured housing, valued at $16.5 million, for an average of $27,500 each. This is the most recent official estimate, as of December 12, 2017. The median value for site-built homes is approximately $87,100, with 84% of the homes valued at or below $135,000 and 16% valued over $150,000.

There are approximately 1,422 housing units within the City of Pittsburg. The median value for all homes in the city is approximately $72,000, with 53% of the homes valued at or below $65,000 and 47% valued over $80,000. The new homes built since 2010 have an average cost of $80,000.

Camp County and the City of Pittsburg Commercial Property Values

There are 409 commercial buildings in Camp County, and 26 industrial plants. These buildings have a total value of $96.4 million, and contain equipment valued at approximately $106 million. The median value is approximately $145,000 - $175,000, with 46% of the buildings valued below $145,000 and 54% valued over $175,000. Replacement cost for the Pilgrim’s Pride Processing Plant buildings is estimated at $97,000,000.

There are 265 commercial buildings in the City of Pittsburg, with a total value of $53 million, containing property valued at $13.6 million. The 12 industrial sites within the City are valued at $12.8 million, with equipment valued at $27.5 million. The median value for these buildings is approximately $100,000, with 46% of the buildings valued below $100,000 and 54% valued over $100,000.

Potential Losses due to Flooding

As reported in the Assessing Vulnerability and Risk Section, the City of Pittsburg wastewater treatment plant is near the floodplain, but there are no structures within the floodplain.

The number of structures within the actual floodplain in rural Camp County is unknown, because the County has never been mapped, and therefore does not have a FIRM. However, the county has never experienced flooding which affected any structure. Flooding has been limited to roadways only. No other infrastructure, structures, or critical facilities are at risk of flooding either in the county or the city.

The City of Pittsburg participates in the National Flood Insurance Program (NFIP) and has no Repetitive Loss properties listed. Unincorporated Camp County is not currently a participant in the NFIP, primarily because the county has never been mapped by FEMA. Committee members could recall past incidents of flash flooding, but none could recall a major flood having occurred.

The Hazard Mitigation Planning Team used a matrix system to assist in prioritizing each hazard. The matrix is a method of using frequency and severity (as defined on pages 3031) to categorize each hazard into a risk classification that assists in ranking hazards by level of potential impact.

FREQUENCY	Highly Likely	A	A	B	C
	Likely	A	B	B	C
	Occasional	B	B	C	D
	Unlikely	C	C	D	D
		Class A / Substantial	Class B / Major	Class C / Minor	Class D /
		SEVERITY			

Classification A: High-Risk condition, with the highest priority for mitigation and contingency planning (immediate action is needed).

Example of Losses: Death or potentially fatal injury, complete shutdown of facilities and critical services for more than 30 days, more than 50% of property located in affected area is severely damaged.

Classification B: Moderate-to-High Risk condition, with secondary priority for mitigation and contingency planning (prompt action is needed).

Example of Losses: Permanent disability, severe injury/illness, complete shutdown of facilities or critical services for more than 14 days, more than 25 % of property in affected area is severely damaged.

Classification C: Risk condition sufficiently high to require consideration for further mitigation and planning.

Examples of Losses: Injury or illness not resulting in disability, complete shutdown of facilities and critical services for more than 7 days, more than 10% of property located in affected area is severely damaged.

Classification D: Low-risk condition, with possible additional mitigation contingency planning needed (advisory in nature).

Examples of Losses: Treatable first-aid injury, complete shutdown of facilities and critical services for 1 day or less, less than 10% of property located in affected area is severely damaged.

Vulnerability and Risk Assessment

The Team used the Vulnerability and Risk Assessment Worksheet provided by the Texas Department of Public Safety, Division of Emergency Management, to determine each jurisdiction’s vulnerability to each hazard.

2023 Camp County Risk Assessment Priority

	Class A	Class B	Class C	Class D
Tornado	A			
Windstorm		B		
Hailstorm			C	
Severe Winter Storm		B		
Wildfire			C	
Drought		B		
Flood			C	

2023 City of Pittsburg Risk Assessment Priority

	Class A	Class B	Class C	Class D
Tornado	A			
Wind Storm		B		
Hail Storm		B		
Severe Winter Storm		B		
Wildfire			C	
Drought			C	
Flood			C	

PRIORITIZING HAZARDS

Based on these analyses, each jurisdiction rated each of the following hazards according to priority:

CAMP COUNTY

PRIORITY	HAZARD	CLASSIFICATION
1	Tornado	**A**
2	Severe Winter Storms	**B**
3	Drought	**B**
4	Windstorm	**B**
5	Hailstorm	**C**
6	Wildfire	**C**
7	Flood	**C**

CITY OF PITTSBURG

PRIORITY	HAZARD	CLASSIFICATION
1	Tornado	**A**
2	Severe Winter Storms	**B**
3	Hailstorm	**B**
4	Windstorm	**B**
5	Drought	**C**
6	Wildfire	**C**
7	Flood	**C**

Possible Tornado Magnitude and Extent of Loss: Although Camp County could be affected by an F4 tornado, most occurrences are F1 or F2, and at a frequency of less than one per year. When a tornado strikes, a small portion of the population will be without power and other utilities for a period of one to 72+ hours; limited tree debris may be found in the area; roofs on some buildings may be damaged. In rare cases, a limited number of buildings may be structurally damaged or destroyed. A remote possibility of injuries or deaths exists, but prediction of the number is not possible. Average financial losses for a tornado event has been less than $100,000, but some more severe tornados resulted in losses approaching $1 million. Some of the vulnerable facilities are of sturdy construction, however, several are of typical wood-frame or lightweight metal construction and could sustain more severe damage. Average tornado damage could be expected to be less than $500,000, mostly in

the unincorporated county.

Possible Wind Storm Magnitude and Extent of Loss: Severe thunderstorms and high winds usually move through Camp County rapidly and the duration of typical severe storms occurring in Camp County is approximately 30 minutes to one hour. Sporadic power outages affecting up to one quarter of the county can be expected to last four to eight hours. Many vulnerable facilities have auxiliary power, and the power outages caused by these storms is usually nothing more than an inconvenience for residences and local businesses. In most cases damage is limited to fallen trees and branches, sometimes blocking roadway, or causing limited structural damage to residential and out buildings. The accompanying wind, most often in the 58 – 70 mph range, may cause damage to metal or shingle roofing on structures. Camp County experiences an average of 12 storms per year, but only two or three fall into the “severe storm” category. Financial losses (including cleanup costs) per severe storm can be expected to run $5,000 - $500,000 county-wide.

Possible Hail Storm Magnitude and Extent of Loss: Severe thunderstorms and hail usually move through Camp County rapidly, and the duration of typical severe storms is approximately 30 minutes to one hour. In most cases, hail causes limited structural damage to residential and out buildings, as well as cosmetic damage to vehicles and machinery. Camp County experiences an average of two hail storms per year, bringing hail of from .75” to 2.75” in diameter. Financial losses per hail storm can be $5,000 - $100,000 county-wide, although these losses are not usually reported to the NCDC.

Possible Severe Winter Storm Magnitude and Extent of Loss: A winter storm could result in some parts of the county being without power due to accumulated ice on power lines and overhanging trees. Some roadways may ice over and become impassable for a short period of time. In some cases, a limited number of motorists will attempt to negotiate the iced roads and may become stranded or involved in automobile accidents. Damage will be limited to utilities and trees, and in rare cases, structures. All vulnerable facilities are adequately prepared to cope with winter storms. The most significant financial loss is to utilities, and costs for repairing power and telephone lines can vary greatly. In most cases, not more than $100,000 will be spent on reinstating these utilities, mostly in the county.

Possible Wildfire Magnitude and Extent of Loss: Although Camp County experiences numerous grass and brush fires each year, few if any qualify as true wildfires. Typical wildfires in Camp County result in grass and undergrowth on a limited and small area of un-inhabited acreage (1-10 acres) will be burned. In rare cases, a limited number of one or two buildings may be damaged or destroyed. These are usually storage sheds or out-buildings, and not residences or commercial structures. It is highly unlikely that any vulnerable facility would ever be threatened by a wildfire. A remote possibility of injuries or even deaths exist, but the likelihood of more than one injury is extremely remote, and the most likely person to be injured would be a citizen trying to fight the fire. Annual monetary loss due to wildfires is not likely to exceed $10,000 limited almost entirely to the un-incorporated areas of the county.

Possible Drought Magnitude and Extent of Loss: Camp County experiences drought less than once each year. Damage is primarily limited to agricultural losses. A remote possibility of injuries or even deaths exist (particularly among the elderly and weak), but the likelihood of more than one injury is extremely remote. Annual monetary losses to droughts is not likely to exceed $5,000, with most damage in the un-incorporated county.

Possible Flood Magnitude and Extent of Loss: The primary hazard of flood in Camp County is from slow-rising lakes and streams, and flash flooding of low-lying roadways during heavy rain. Flooding in Camp County is not expected to be severe, although some low-lying roadways may become submerged and impassable. In rare cases, a limited number of motorists may become stranded in those flooded roadways. No vulnerable facilities are located in areas threatened by flood. Floodwaters in this area are slow moving, and the possibility of injuries or deaths is highly remote.

The City of Pittsburg is a participant in the National Flood Insurance Program. **There are no structures located within the floodplain, and no repetitive loss properties.** Camp County does not participate in the NFIP because it has not yet been mapped.

ANALYZING DEVELOPMENT TRENDS

The City of Pittsburg adopted the ICC International Building Code, 2012 Edition, the NCC National Electrical Code, 2011 edition, and the ICC International Plumbing Code, 2012 edition, on June 10, 2013; and adopted the International Residential Code, 2015 edition, on August 8, 2016. Permits are required to build within the City. Article 3.05: Flood Damage Prevention designates the chief building official as the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain management. **The City of Pittsburg is a participant in the National Flood Insurance Program**. **There are no structures located within the floodplain, and no repetitive loss properties within the City.**

Camp County does not have zoning, a comprehensive plan, a capital improvements program, nor any current or on-going mitigation projects. Public awareness programs have been initiated, such as placing information about FEMA and Smart911 on the County website (**http://www.co.Camp.tx.us/**). This plan will be used as a tool to spark discussion and encourage implementation of additional mitigation measures.

Growth Pattern - City of Pittsburg

The City of Pittsburg has increased slightly in population over the last 20 years, as the 1990 Census reported 4,007 people inhabited the City, while the 2010 Census found 4,497 inhabitants, an increase of about 12%, slightly less than 1% per year.

Growth Pattern - Camp County

Camp County's population has been growing; it has increased by about 25% over the past 20 years, slightly more than 1% per year. These growth rates are not likely to cause tremendous additional development. In comparison, the State of Texas as a whole has increased in population some 48% over the same 20-year period, about 2.4% per year.

No changes in development impacted the overall vulnerability of either jurisdiction.

HAZARD MITIGATION STRATEGY

The purpose of hazard mitigation is to reduce property damage and risks to human life prior to the hazard event. Plan goals describe the overall direction that Camp County, the City of Pittsburg, community organizations, businesses, and citizens can take to work toward mitigating risks that derive from natural hazards.

Hazard Mitigation Goals

Goal 1: Protect Life and Property

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from hazards. Improve data collection and hazard assessments to make improvements to regulatory measures regarding new development, and to identify and retro-fit existing structures to reduce repetitive damage.

Goal 2: Increase Public Awareness

Implement public outreach and education programs to increase public awareness of the risks associated with natural hazards. Provide information on resources and funding sources to assist in implementing mitigation activities

Goal 3: Preserve and Protect Natural Resources

Take advantage of opportunities to improve long-range management and use of flood prone areas by using multi-objective approaches. For example, to preserve open space or create parkland by applying for funding to acquire land in the floodplain, while at the same time accomplishing the goal to ensure that development occurs outside the floodplain.

Goal 4: Develop Effective Partnerships for Mitigation Action Implementation

Strengthen communication and coordinate participation among business owners, citizens, community organizations, and public agencies to gain a vested interest in implementing mitigation measures. Organize public and private partnerships to assist with the implementation of specific mitigation action items.

Goal 5: Improve Efficiency in Delivery of Emergency Services

Strengthen emergency operations by increasing collaboration and coordination with State and Federal programs to improve training, provide communication improvements, equipment and mapping improvements. Coordinate and integrate mitigation activities, where appropriate, with emergency operation plans and procedures.

Relationship to the State Hazard Mitigation Plan

The State of Texas has developed the following goals:

1. Reduce or eliminate hazardous conditions that may cause loss of life.
2. Reduce or eliminate hazardous conditions that may inflict injuries.
3. Reduce or eliminate hazardous conditions that can cause property damage.
4. Reduce or eliminate hazardous conditions that degrade important natural resources.
5. Reduce or eliminate repetitive losses due to frequent probability of occurrence.
6. Lessen economic impact within communities when hazards occur.

Source: State of Texas Hazard Mitigation Plan 2010-2013, page 187, found at: **http://www.dps.texas.gov/dem/documents/txhazmitplan.pdf** *and State of Texas Hazard Mitigation Plan, 2013 Update, pages 189-190, found at* ***http://www.dps.texas.gov/dem/downloadable forms.htm#mitigation.***

The hazard mitigation goals of Camp County and the City of Pittsburg agree with and complement the State mitigation goals.

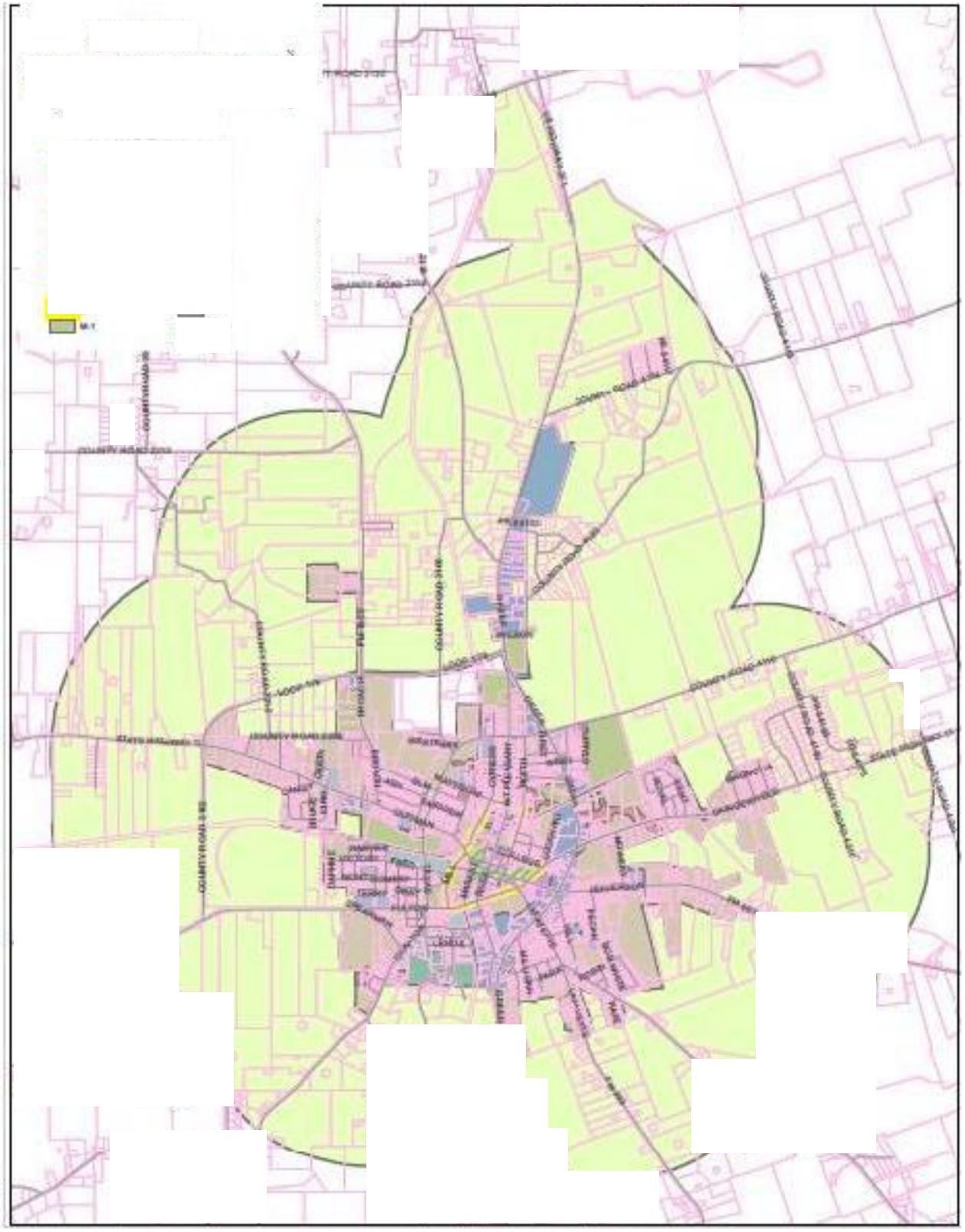
Relationship to the National Flood Insurance Program

The Camp County and City of Pittsburg Action Plan supports the objectives of the National Flood Insurance Program, to enable property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal Government which states that, if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the Federal Government will make flood insurance available within the community as a financial protection against flood losses.

The City of Pittsburg is a participant in the National Flood Insurance Program, and plans to continue its compliance and participation. Camp County (currently a non-participant) would like to become a participant in the NFIP, but is still waiting for FEMA flood maps to be issued for the rest of Camp County (outside the City of Pittsburg).

The City of Pittsburg Code of Ordinances, Article 3.05, Flood Damage Prevention, names the Chief Building Official as the floodplain administrator (§3.05.041), lists the duties of that office (§3.05.042), states that a permit is required for any development (§3.05.008), lists permit procedures (§3.05.043), variance procedures (§3.05.044), lists flood hazard reduction standards (§3.05.071-2), and standards for subdivision proposals (§3.05.073). The complete text of all these referenced ordinances may be found at the following web address:
http://z2codes.franklinlegal.net/franklin/Z2Browser2.html?showset=pittsburgset.
The City will continue to enforce these Ordinances, as they have in the past.

The City of Pittsburg website's Planning and Zoning page (**http://www.pittsburgtexas.com/departments/planning-zoning**) offers an interactive zoning map, and a downloadable copy of the static zoning map, which is reproduced on the next page.



Hazard Mitigation Objectives

The Hazard Mitigation Planning Committee developed a list of possible objectives for consideration by Camp County and the City of Pittsburg; each jurisdiction then chose which objectives it wishes to include in its individual mitigation strategy. Objectives are categorized here by jurisdiction and by hazard.

Camp County

Multi-Hazard

1. Improve the ability to warn citizens of impending or ongoing hazard events, through any or all of the following: local radio, television, and cable providers; website announcements and e-mail blasts; Smart911 automated emergency calling system; emergency warning sirens; and any other available method. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm)*

2. Improve local self-sufficiency to increase survivability during the first few hours after an event and decrease cascading potential for risks that occur prior to the arrival of State, FEMA, Red Cross, and other disaster teams. *(Flood, wildfire, tornado)*

3. Develop public and private partnerships with businesses, service organizations, and other community groups to work together to lessen risks and cascading potential through hazard mitigation, pre-planning, and cooperative mitigation actions. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm)*

4. Develop, enhance and implement education programs to increase awareness of natural hazards and encourage the use of mitigation actions to reduce risk to citizens, public infrastructure, private property owners, businesses and schools. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm)*

5. Increase training opportunities for citizens, to encourage their involvement in mitigation efforts. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm)*

6. Maintain, support and encourage the County Hazard Mitigation Planning Committee by scheduling regular meetings to review the Plan and suggest any needed revisions. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm)*

Tornado

1. Improve the ability to notify citizens of tornado watches and warnings, through use of any of the following: local radio, television, and cable providers; website announcements and e-mail blasts; automated emergency calling systems; emergency warning sirens; and any other available method. *(Note: The County subscribes to Smart911 notification system, available to all jurisdictions in the county, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Harden public structures to protect the structure and its contents, and to provide a safe place for humans during a storm and to reduce effects of hazards on existing buildings.

3. Build community storm shelters, as funds permit.

4. Educate the public about the dangers of tornadoes and the mitigation actions each family can take.

Windstorm

1. Develop or improve and use public warning systems to warn of imminent or expected storms. *(Note: The County subscribes to Smart911 notification system, available to all jurisdictions in the county, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Provide community outreach and education to individuals and businesses concerning recommended mitigation actions for homes and businesses to take in preparation for windstorms.

Hailstorm

1. Develop or improve and use public warning systems to warn of imminent or expected storms. *(Note: The County subscribes to Smart911 notification system, available to all jurisdictions in the county, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Provide community outreach and education to individuals and businesses concerning recommended mitigation actions for homes and businesses to take in preparation for hailstorms.

Severe Winter Storm

1. Develop or improve and use the ability of public warning systems to warn of imminent or expected severe winter storms. *(Note: The County subscribes to Smart911 notification system, available to all jurisdictions in the county, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Plan for public response to severe storms and prolonged icy conditions; develop procedures to de-ice roads, sidewalks and public access points to critical facilities.

3. Increase public awareness of the dangers of walking and driving on icy sidewalks and roads; educate the public in ways to avoid injury and accidents in icy weather.

Wildfire

1. Issue, publicize and enforce county-wide burn bans when drought and/or wind conditions increase the danger that wildfire may occur.

2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities.

3. Implement all available measures to reduce the potential magnitude of a wildfire event on public-owned property and to reduce effects of hazards on new and existing buildings.

4. Develop public information programs to create a greater awareness of the risk of wildfire, and to encourage individuals to implement mitigation strategies on their own property.

5. Coordinate with the Texas A&M Forest Service to schedule educational events and obtain literature for public distribution.

Drought

1. Issue burn bans during drought conditions; publicize burn bans when in effect; enforce compliance.

2. Maintain awareness of the local soil moisture index, and take steps to conserve public water supplies, before the situation becomes critical.

3. Increase public awareness of ways to conserve water, prevent loss of valuable topsoil, and reduce the effects of drought.

Flood

1. Ensure that critical facilities are protected from flood.

2. Improve the long-range management and use of flood-prone areas by the diligent enforcement of local ordinances to regulate new development within the floodplain.

3. Encourage retrofitting of existing structures that are at risk to reduce effects of hazards on existing buildings.

4. Develop public information programs to create a greater awareness of the danger of flood, and to help citizens mitigate flood risks when planning future development.

The City of Pittsburg

Multi-Hazard

1. Improve the ability to warn citizens of impending or ongoing hazard events, through use of any or all of the following: local radio, television, and cable providers; website announcements and e-mail blasts; automated emergency calling systems; emergency warning sirens; and any other available method. (Note: The County subscribes to Smart911 notification system, and makes it available to the city, to notify residents of emergency situations and recommended actions to increase public safety.) *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

2. Improve local self-sufficiency to increase survivability during the first few hours after an event and decrease cascading potential for risks that occur prior to the arrival of State, FEMA, Red Cross, and other disaster teams. *(Flood, wildfire, tornado.)*

3. Implement ordinances to ensure that new development meets current flood-proofing, wind resistance, and other appropriate standards; encourage retrofitting of existing structures to reduce effects of hazards on new and existing buildings. *(Flood, wildfire, tornado, wind storm, hail storm.)*

4. Develop public and private partnerships with businesses, service organizations, and other community groups to work together to lessen risks and cascading potential through hazard mitigation, pre-planning, and cooperative mitigation actions. *(Flood, wildfire, tornado, wind storm.)*

5. Develop, enhance and implement education programs to increase awareness of natural hazards and encourage the use of mitigation actions to reduce risk to citizens, public infrastructure, private property owners, businesses and schools. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

6. Increase training opportunities for citizens, to encourage their involvement in mitigation efforts. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

7. Maintain, support and encourage the City Hazard Mitigation Planning Committee by scheduling regular meetings to review the Plan and suggest any needed revisions. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

8. Assign staff or a contract employee to continue to research data useful to the hazard mitigation planning process; ensure that all such data is available to the members of the Planning Committee. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

Tornado

1. Improve the ability to notify citizens of tornado watches and warnings, through use of any of the following: local radio, television, and cable providers; website announcements and e-mail blasts; automated emergency calling systems; emergency warning sirens; and any other available method. *(Note: Camp County subscribes to the Smart911 notification system, and makes it available to the city, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Harden public structures to protect the structure and its contents, and to provide a safe place for humans during a storm and to reduce effects of hazards on existing buildings.

3. Build community storm shelters, as funds permit.

4. Educate the public about the dangers of tornadoes and the mitigation actions each family can take.

Windstorm

1. Develop or improve and use public warning systems to warn of imminent or expected storms. *(Note: Camp County subscribes to Smart911 notification system, and makes it available to the city, to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Provide community outreach and education to individuals and businesses concerning recommended mitigation actions for homes and businesses to take in preparation for windstorms.

Hailstorm

1. Develop or improve and use public warning systems to warn of imminent or expected storms. *(Note: Camp County and the City of Pittsburg utilize the Smart911 citizen notification system to notify residents of emergency situations and recommended actions to increase public safety.)*

2. Provide community outreach and education to individuals and businesses concerning recommended mitigation actions for homes and businesses to take in preparation for hailstorms.

Severe Winter Storm

1. Develop or improve and use the ability of public warning systems to warn of imminent or expected severe winter storms. *(Note: Camp County and the City of Pittsburg utilize the Smart911 citizen notification system to notify residents of emergency situations and recommended actions to increase public safety.)*
2. Plan for public response to severe storms and prolonged icy conditions; develop procedures to de-ice roads, sidewalks and public access points to critical facilities.
3. Increase public awareness of the dangers of walking and driving on icy sidewalks and roads; educate the public in ways to avoid injury and accidents in icy weather.

Wildfire

1. Publicize and enforce county-wide burn bans when drought and/or wind conditions increase the danger that wildfire may occur.

2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities.

3. Implement all available measures to reduce the potential magnitude of a wildfire event on public-owned property and to reduce effects of hazards on new and existing buildings.

4. Develop public information programs to create a greater awareness of the risk of wildfire, and to encourage individuals to implement mitigation strategies on their own property.

5. Coordinate with the Texas A&M Forest Service to schedule educational events and obtain literature for public distribution.

Drought

1. Publicize county burn bans when in effect; enforce compliance.

2. Maintain awareness of the local soil moisture index, and take steps to conserve public water supplies, before the situation becomes critical.

3. Increase public awareness of ways to conserve water, prevent loss of valuable topsoil, and reduce the effects of drought.

Flood

1. Ensure that critical facilities are protected from flood.

2. Improve the long-range management and use of flood-prone areas by the diligent enforcement of local ordinances to regulate new development within the floodplain.

3. Encourage retrofitting of existing structures that are at risk to reduce effects of hazards on existing buildings.

4. Develop public information programs to create a greater awareness of the danger of flood, and to help citizens mitigate flood risks when planning future development.

Mitigation Action Items

A lengthy list of proposed Action Items was developed by the Planning Committee and presented to each participating jurisdiction for approval. The following Action Items were selected as being appropriate for the protection of local citizens.

Multi-Hazard

1. Maintain a current list of all local media: television, radio, cable; including telephone numbers, fax numbers, e-mail addresses and names of media contacts for PSA distribution. Provide this list to all EMCs and PIOs within the county; update list as needed, and share updates with other jurisdictions. Develop a relationship with all local media, to encourage rapid sharing and distribution to the public of information about imminent or developing natural hazards. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

2. Coordinate with local jurisdictions' information technology departments to place warnings on local websites when appropriate. If possible, give EMC authority and access

to post such warnings on website directly, from any location. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

3. Inventory equipment and supplies owned by the jurisdiction which could be useful during a natural hazard event. Consider search for and rescue of stranded citizens; transportation of injured or special needs individuals; debris removal; infrastructure repair; communications during an emergency; location, size and condition of shelter facilities; first aid supplies, water, food, paper products, cots, blankets, pillows and other necessary items. *(Flood, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

4. Maintain a current list of personnel trained and ready to respond in an emergency. Record training of each, and collect file copies of training certificates as appropriate. Consider scheduling local classes in first aid, CPR, NIMS, etc. Include local HAM radio clubs or individual operators for possible assistance with emergency communications; consult local industry for possible volunteers trained in useful skills; contact local hospitals, clinics and other medical personnel to determine surge capacity. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

5. Maintain a current list of local and regional resources, including grocery stores, department stores, discount stores, sporting goods stores, rental outlets, farm supply stores, distribution centers, warehouses, gasoline stations, transportation companies, restaurants, caterers, churches and fraternal or benevolent organizations which might be able to assist in an emergency. Contact the managers, owners, directors, presidents or other organizational leaders to discuss possible partnerships. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

6. Schedule public meetings to discuss hazard mitigation topics; invite community leaders, emergency responders and members of the public to suggest ways to improve local emergency response. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm, lightning, extreme heat.)*

7. Develop public and private partnerships with businesses, service organizations, and other community groups to work together on local mitigation projects, planning, and cooperative mitigation actions. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

8. Develop, enhance and implement education programs to increase awareness of natural hazards and encourage the use of mitigation actions to reduce risk to citizens, public infrastructure, private property owners, businesses and schools. Public officials will include hazard mitigation messages in their newsletters, web pages, and speeches, as appropriate. The EMC will accept opportunities to speak to service clubs and school groups about hazard mitigation, and will encourage other emergency management professionals to do the same. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

9. Increase training opportunities for citizens, to encourage their involvement in mitigation efforts. Partner with ETCOG, TDEM, TFS, TEEX, FEMA, and others, to bring free and low- cost mitigation training to the people of our city, county, and region. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

10. Sponsor a booth at local festivals, offering brochures and training information to the public. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

11. Include information on the jurisdiction's website about free training available by internet or in local or regional classes. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

12. Send PSAs to media contacts to publicize any training opportunities. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

13. Appoint appropriate personnel to attend regular meetings of the County and City Hazard Mitigation Planning Committee, to review the Plan and suggest any needed revisions. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

14. Instruct and train the local EMC in the jurisdiction's chosen Mitigation Action Items, including record-keeping and the need to report results to the Planning Committee. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

15. Maintain records of property values, including the regular addition of any new development data, and information about any losses due to natural hazards. Provide this information to the County Hazard Mitigation Planning Committee, to be used when revising the Plan. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

16. Watch for new ideas in mitigation; attend training whenever possible; search the internet regularly for "best practices" information, including ideas from other states. Share any new information with others in the local jurisdictions, on the Planning Committee, and throughout the region. *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

17. Apply for NOAA's Storm Ready Communities designation (for more information, visit: **http://www.stormready.noaa.gov/howto.htm**). *(Flood, drought, wildfire, tornado, severe winter storm, wind storm, hail storm.)*

Tornado

1. Improve the ability to notify citizens of tornado watches and warnings, through use of the following: local radio, television, and cable providers; website announcements and email blasts; Smart911 automated emergency calling system; emergency warning sirens; and any other available method.

2. Assign one person the task of monitoring local media during tornado watch or warning times; this person should have the contact list and know the personnel to contact at each media location. If watch or warning information is not being displayed appropriately, the designated person should contact media to request on-air updates for public safety.

3. Coordinate with the IT Department to place tornado warnings and watches on local websites when appropriate. If possible, give the EMC authority and access to post such warnings on the website directly, from any location.

4. Incorporate the use of the automated emergency calling system, Smart911, into local emergency management procedures; determine cost of use, and train the EMC and local officials in how and when to use this resource.

5. Open the County Courthouse and City Hall to the public during storms, to provide a safe place for humans to shelter.

6. Build community storm shelters, as funds permit; seek grant funding to build needed storm shelters; participate in ETCOG family storm shelter project.

7. Educate the public about the dangers of tornadoes and the mitigation actions each family can take.

8. Sponsor a booth at local events, to hand out free literature about the danger of tornadoes and what people can do to reduce the risk of damage to their homes and businesses.

9. Place links on public websites to important sites, such as the National Weather Service (**http://www.srh.noaa.gov**), and to other informational sites, such as the tornado project online (**http://www.tornadoproject.com/**).

10. Watch for new ideas in tornado mitigation; attend training whenever possible; search the internet regularly for "best practices" information, including ideas from other states. Share any new information with others in the local jurisdiction, on the Planning Committee, and throughout the region.

11. Consider requiring RV parks and mobile home parks to provide safe rooms; consider offering tax incentives to those who do so.

Windstorm

1. Use public warning systems to warn of imminent or expected windstorms.

2. Coordinate with the IT Department to place severe weather warnings on local websites when appropriate. If possible, give EMC authority and access to post such warnings on website directly, from any location.

3. Require RV parks and mobile home parks to provide safe rooms for residents to use during windstorms; offer tax incentives to those who do so.

Hailstorm

1. Develop or improve and use public warning systems to warn of imminent or expected hailstorms.

2. Assign one person the task of monitoring local media during times when severe weather is expected; this person should have the contact list and know the personnel to contact at each media location. If severe weather information is not being displayed appropriately, the designated person should contact media to request on-air updates for public safety.

3. Coordinate with the IT Department to place severe weather warnings on local websites when appropriate. If possible, give the EMC authority and access to post such warnings on website directly, from any location.

4. Incorporate the use of the county's automated emergency calling system, Smart911, into local emergency management procedures; determine cost of use, and train the EMC and local officials in how and when to use this resource.

5. Provide shelter for supplies and equipment at critical facilities.

6. Provide community outreach and education to individuals and businesses concerning recommended mitigation actions for homes and businesses to take in preparation for hailstorms.

7. Promote the use of roofing materials that better resist hail damage.

Severe Winter Storm

1. Develop or improve and use the ability of public warning systems to warn of imminent or expected severe winter storms.

2. Ensure that the jurisdiction's website has an active link to the local NOAA weather forecast, and that any severe weather alerts are prominently displayed on the local jurisdiction's home page.

3. Assign one person to publicize any traffic advisories issued due to severe weather; make sure that all local media receive the information promptly.

4. Plan for public response to severe storms and prolonged icy conditions; develop procedures to de-ice roads, sidewalks and public access points to critical facilities.
5. Stock up on sand, salt, cat litter, and other common, inexpensive ice mitigation aids, prior to the start of the winter season. Make sure employees know when, where, and how to deploy these items for maximum effectiveness.

6. Increase public awareness of the dangers of walking and driving on icy sidewalks and roads; educate the public in ways to avoid injury and accidents in icy weather.

7. Develop PSAs about safety while walking and driving in icy conditions; distribute to local media.

8. Work with local utility companies to coordinate efforts to trim tree branches that are close to power lines, and to promptly respond to notice of power outages due to trees

falling on lines during icy weather. Include a public education campaign to publicize the telephone number to call to report power outages and trees blocking roads.

9. Train public works employees to respond safely and appropriately to trees across roadways, including proper safety precautions to take when power lines are down.

Wildfire

1. Issue, publicize and enforce total, county-wide burn bans when drought increase the danger that wildfire may occur.

2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities.

3. Assist the local Fire Department in applying for grant funding to purchase needed equipment; assist them in qualifying for grants and writing applications, if needed.

4. Seek out grant opportunities, and publicize them to all possible grantees.

5. Seek training opportunities, and publicize them to all emergency responders.

6. Develop and use mutual aid agreements with adjoining jurisdictions, to improve response capabilities.

7. Implement all available measures to reduce the potential magnitude of a wildfire event on public-owned property. Schedule regular mowing of grass, trimming of trees and shrubs; consider plowing a firebreak in hazard areas.

8. Develop public information programs to create a greater awareness of the risk of wildfire, and to encourage individuals to implement mitigation strategies on their own property.

9. Coordinate with the Texas A&M Forest Service to schedule educational events and obtain literature for public distribution.

10. Provide literature about wildfire prevention and loss mitigation to the public library, to all local school libraries, and to all public offices for free distribution.

11. Sponsor a booth at local events, to hand out free literature about the dangers of wildfire and what people can do to reduce the risk of fire damage to their homes and businesses.

12. Place links on public websites to free FEMA training in wildfire mitigation, and to other informational sites, such as Texas A&M Forest Service.

13. Work with Texas A&M Forest Service to develop a Community Wildfire Protection Plan.

Drought

1. Issue burn bans during drought conditions; publicize burn bans and enforce compliance.

2. Assign one person to monitor drought conditions, including the soil moisture index; this person should coordinate with other local jurisdictions, be aware of all burn bans in effect in nearby locations, and advise decision-makers if a burn ban is needed in this jurisdiction.

3. Communicate with local law enforcement and judiciary about the importance of enforcing local burn bans, and procedures to follow if violations are observed.

4. Make sure that any current burn bans are posted on the jurisdiction's website, and communicated to all local media by PSA distribution.

5. Notify the public of the local soil moisture index, especially when it is low, and take steps to conserve public water supplies, before the situation becomes critical. Include the current soil moisture index and information about water conservation practices on the jurisdiction's website, and in PSAs sent to all local media, as appropriate.

6. Increase public awareness of ways to conserve water, prevent loss of valuable topsoil, and reduce the effects of drought. Coordinate this effort with local agriculture agents; local Farm Bureau staff members; agricultural science, earth science, and natural science teachers at local schools, and other interested parties.

7. Obtain educational materials about water conservation and drought mitigation; distribute these at local libraries, schools, public offices, and at a booth at public gatherings.

8. Apply for Drought Ready Communities designation (for more information, visit: **http://drought.unl.edu/portals/0/docs/DRCGuide.pdf**).

Flood

1. Place links on local websites offering free FEMA training for independent study via the internet, such as IS-271 "Anticipating Hazardous Weather and Community Risk," or IS-279 "Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures."

2. Seek state and FEMA sponsored training in flood mitigation for key personnel.

3. Increase drainage capacity in sites that are prone to flooding.

4. Construct retention ponds to minimize flash flooding.

5. Install low water crossing barriers, similar to railroad crossing barriers.

6. Work with state and federal agencies to maintain current flood maps (City), and to obtain flood maps for the rural areas of Camp County, which has never been mapped (County).

7. Promote the “Turn Around Don’t Drown” campaign.

Implementation of Action Items

The Mitigation Planning Team prioritized the actions using the STAPLE+E criteria, a planning tool used to evaluate alternative actions. The following table explains the STAPLE+E criteria.

STAPLE+E	Criteria Explanation
S – Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community's social and cultural values.
T – Technical	Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
A – Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
P – Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
L – Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
E – Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
E – Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

The County and the City each selected the action items felt to be most relevant and practical for implementation. The mitigation actions with highest priority were the most cost effective and most compatible with the communities' social and cultural values. The team selected the actions for the initial implementation phase of the plan based on the hazard priority ranking, ease of implementation and available funding.

Items rated A are anticipated to be completed within the first year of plan implementation; items rated B will require two to three years; items rated C are expected to require four years or more to complete. Within each category, numbers reflect priority; thus, A-1 will be implemented prior to A-2, and so on down the list.

The chart on the following pages shows the priority of implementation of action items, the responsible agency, and the anticipated cost. A notation of N/A in the cost column means that the action item will not add a measurable amount of expense to the jurisdiction's budget but will be incorporated in the responsible agency's daily duties.

Mitigation actions	Camp County	City of Pittsburg	Responsible Agency	Anticipated Cost
Multi-Hazard 1	**A-1**	**A-1**	**EMC & Mayor**	**N/A**
Multi-Hazard 2	**A-2**	**A-2**	**Commissioners / Council**	**N/A**
Multi-Hazard 3	**A-3**	**A-3**	**EMC**	**N/A**
Multi-Hazard 4	**A-4**	**A-4**	**Commissioners & City Manager**	**N/A**
Multi-Hazard 5	**B-1**	**B-1**	**EMS**	**N/A**
Multi-Hazard 6	**B-2**	**B-2**	**EMC & Mayor**	**N/A**
Multi-Hazard 7	**A-5**	**A-5**	**EMC**	**N/A**
Multi-Hazard 8	**A-6**	**A-6**	**EMC**	**N/A**
Multi-Hazard 9	**A-7**	**A-7**	**Fire Chief**	**N/A**
Multi-Hazard 10	**A-8**	**A-8**	**EMC & Fire Chief**	**N/A**
Multi-Hazard 11	**B-3**	**B-3**	**Fire Dept.**	**N/A**
Multi-Hazard 12	**A-9**	**A-9**	**EMC & City Manager**	**N/A**
Multi-Hazard 13	**A-10**	**A-10**	**EMC & Mayor**	**N/A**
Multi-Hazard 14	**A-11**	**A-11**	**Commissioners / Council**	**N/A**
Multi-Hazard 15	**A-12**	**A-12**	**Commissioners / Council**	**N/A**
Multi-Hazard 16	**A-13**	**A-13**	**Tax Assessor**	**N/A**
Multi-Hazard 17	**A-14**	**A-14**	**EMC**	**N/A**
Multi-Hazard 18	**A-15**	**A-15**	**Commissioners / Council**	**N/A**

Mitigation actions	Camp County	City of Pittsburg	Responsible Agency	Anticipated Cost
Tornado				
Tornado 1	A-2	A-2	EMC & Commissioners / Council	N/A
Tornado 2	A-3	A-3	EMC & Commissioners / Council	N/A
Tornado 3	A-4	A-4	EMC	N/A
Tornado 4	A-1	A-1	EMC & Commissioners / Council	N/A
Tornado 5	C-1	C-1	Commissioners / Council	N/A
Tornado 6	C-2	C-2	Commissioners / Council	$150,000
Tornado 7	B-1	B-1	Commissioners / Council	N/A
Tornado 8	A-6	A-6	Fire Dept. & EMS	N/A
Tornado 9	A-5	A-5	IT Dept.	N/A
Tornado 10	B-2	B-2	EMC & Fire Dept.	N/A
Tornado 11	C-3	C-3	Commissioners / Council	N/A
Windstorm				
Windstorm 1	A-1	A-1	EMC & Commissioners / Council	N/A
Windstorm 2	A-2	A-2	EMC & IT Dept.	N/A
Windstorm 3	A-3	A-3	Commissioners / Council	N/A
Hailstorm				
Hailstorm 1	A-4	A-4	Commissioners / Council	N/A
Hailstorm 2	A-5	A-5	Public Information Office	N/A
Hailstorm 3	A-3	A-3	EMC & IT Dept.	N/A
Hailstorm 4	A-2	A-2	EMC & Commissioners / Council	N/A
Hailstorm 5	A-1	A-1	Commissioners / Council	N/A
Hailstorm 6	B-1	B-1	Fire Dept. & EMS	N/A
Hailstorm 7	B-2	B-2	Commissioners / Council	N/A
Severe Winter Storm				
Severe Winter Storm 1	A-4	A-4	EMC & Commissioners / Council	N/A
Severe Winter Storm 2	A-3	A-3	IT Dept.	N/A

Mitigation actions	Camp County	City of Pittsburg	Responsible Agency	Anticipated Cost
Severe Winter Storm 3	A-5	A-5	Public Information Office	N/A
Severe Winter Storm 4	A-1	A-1	County Commissioners & City Public Works	N/A
Severe Winter Storm 5	A-2	A-2	County Commissioners & City Public Works	N/A
Severe Winter Storm 6	B-3	B-3	Public Information Office	N/A
Severe Winter Storm 7	B-2	B-2	Public Information Office	N/A
Severe Winter Storm 8	B-4	B-4	County Commissioners & City Public Works	N/A
Severe Winter Storm 9	B-1	B-1	County Commissioners & City Public Works & Fire Dept.	N/A
Wildfire				
Wildfire 1	A-1	A-1	County Commissioners & Law Enforcement & IT Dept. & PIO	N/A
Wildfire 2	B-1	B-1	Commissioners / Council & Fire Dept.	About $75,000 for new brush truck & equipment
Wildfire 3	B-2	B-2	Commissioners / Council & EMC	N/A
Wildfire 4	B-3	B-3	EMC	N/A
Wildfire 5	A-4	A-4	EMC & Fire Chief	N/A
Wildfire 6	A-3	A-3	Commissioners / Council	N/A
Wildfire 7	A-2	A-2	County Commissioners & City Public Works	N/A
Wildfire 8	B-8	B-8	Public Information Office & Fire Dept.	N/A
Wildfire 9	B-4	B-4	Fire Dept.	N/A
Wildfire 10	B-5	B-5	Fire Dept.	N/A

Mitigation actions	Camp County	City of Pittsburg	Responsible Agency	Anticipated Cost
Wildfire 11	B-6	B-6	Fire Dept. & EMS	N/A
Wildfire 12	B-7	B-7	IT Dept.	N/A
Wildfire 13	B-9	B-9	Fire Dept.	N/A
Drought				
Drought 1	A-1	A-1	County Commissioners & Law Enforcement & IT Dept. & PIO	N/A
Drought 2	A-4	A-4	Commissioners / Council & EMC	N/A
Drought 3	A-3	A-3	Commissioners / Council	N/A
Drought 4	A-2	A-2	IT Dept.	N/A
Drought 5	A-5	A-5	Public Information Office	N/A
Drought 6	A-6	A-6	Public Information Office	N/A
Drought 7	A-7	A-7	Public Information Office	N/A
Drought 8	B-1	B-1	Commissioners / Council	N/A
Flood				
Flood 1	A-3	A-3	IT Dept.	N/A
Flood 2	A-2	A-2	EMC	N/A
Flood 3	B-1	B-1	County Commissioners & City Public Works	About $500 per site
Flood 4	C-2	C-2	County Commissioners & City Public Works	About $900 per pond
Flood 5	C-1	C-1	County Commissioners & City Public Works	About $3,000 per crossing
Flood 6	C-3	A-4 (No added cost)	EMC	About $125,000 to map County
Flood 7	A-1	A-1	Law Enforcement	N/A

Funding to meet the costs of the above action items is expected to be raised through a combination of sources, including but not limited to: local funding from tax revenues and any other available sources; a specific bond issue if needed for any given project; public-private partnerships; state grants; FEMA grants such as HGMP; and any other source which may become available.

Projects Completed Under Expiring Plan

Camp County

1. Camp County has adopted Smart911 emergency notification system, and uses it when needed. The Camp County website **(http://www.co.camp.tx.us/)** includes a link for citizens to register their telephone numbers, to ensure prompt notification in times of emergency. The County also uses a Facebook page to post public notices: **https://www.facebook.com/CampCountyTexas/**

2. Camp County Emergency Medical Service, as of the date of this document, operates eight (8) ambulances, all of which are staff with at least one paramedic. Connect with Camp County EMS via its Facebook page at: **https://www.facebook.com/CampCountyEMS**

3. Camp County issues Burn Ban notices when conditions warrant; these notices are posted in a prominent position on the County website; burn bans are enforced by local law enforcement officers.

4. An early detection lightning warning system is in place at Broach Park Recreation Complex, a county park.

City of Pittsburg

1. The City of Pittsburg has adopted Smart911 emergency notification system, and uses it when needed. They city's website has a link for citizens to enroll in the system. Instructions are included which advises that if a person has trouble enrolling themselves in this free service, that bi-lingual City of Pittsburg staff at city hall can assist them. The City of Pittsburg also Facebook to connect with citizens and post preparedness and emergency notice for the public.

2. The City of Pittsburg Fire Department, is a "combination career and volunteer department," and covers the City of Pittsburg from two stations for fire and rescue-related issues, and provides the same to Camp County under a contractual agreement.

3. Lightning detection warning systems have been installed to provide warnings to all school campuses, city parks and related outdoor recreation areas of Pittsburg.

4. The City of Pittsburg adopted the ICC International Building Code, 2012 Edition, the NCC National Electrical Code, 2011 edition, and the ICC International Plumbing Code, 2012 edition, on June 10, 2013; and adopted the International Residential Code, 2015 edition, on August 8, 2016. Permits are required to build within the City. Article 3.05: Flood Damage Prevention designates the chief building official as the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain management.

5. The City has ordinances for outdoor burning and for weed control, both designed to help prevent the spread of fire. uses code enforcement to require the mowing of weeds, to prevent the spread of fire. The entire current version of the Code of Ordinances for the City of Pittsburg may be found on the Internet at: Ordinances | Pittsburg, TX (pittsburgtx.gov)

The following table lists all Mitigation Action Items found in the 2012 Camp County HMAP, and describes what has been done to implement those actions.

Action Item	Result
Thunderstorm	
Thunderstorm #1. Install warning systems to detect lightning near the area.	Done: Lightning detection warning systems have been installed to provide warnings to all school campuses, city parks and related outdoor recreation areas of Pittsburg.
Thunderstorm #2. Partner with local television/radio meteorologist to enlist their citizen "weather watchers" to pass emergency information to Camp County 911 Dispatch Center as well as to their sponsoring broadcast station.	Done: Several local responders have participated in a "SkyWarn" storm spotter training program.
Thunderstorm #3. Camp County and City of Pittsburg participate in a citizen alerting system funded by the East Texas COG – Smart911.	Done: Smart911 is in place, and is used when needed.
Tornado	
Tornado #1. Improve ability to warn citizens prior to, during or after hazard events funding and operating an audible siren system in the City of Pittsburg, and funding operating "Smart911" or similar public warning system.	Done: Smart911 is in place, and is used when needed. Fixed-position sirens are not utilized in Camp County or the City of Pittsburg. As a backup, social media and sirens/public address systems on public safety vehicles may be used to alert the public.
Tornado #2. Partner with local television/radio meteorologist to enlist their citizen "weather watchers" to pass emergency information to Camp County 911 Dispatch Center as well as to their sponsoring broadcast station for accompanied TV and radio announcement.	Done: Several local responders have participated in a "SkyWarn" storm spotter training program.
Tornado #3. Develop and maintain a current operations plan for tornado response.	Done: Plan is on file along with other Emergency Management Plans, in the EMC's office, Sheriff's Office, Pittsburg Police and Fire Departments, and the EOC.

Action Item	Result
Tornado #4 The City of Pittsburg Emergency Management Coordinator and the Camp County Emergency Management Coordinator will work closely together to train public safety responders on tornado-related action items listed in this plan, and to solicit their support to identify actions that need to be addressed to support this plan.	Done: Training, cooperation, and discussion of hazard mitigation activities are ongoing.
Wildfire	
Wildfire #1. Improve ability to warn citizens prior to and during wildfire events by funding and operating "Smart911" or similar reverse 911 alert system.	Done: Smart911 is in place, and is used when needed.
Wildfire #2. The City of Pittsburg Code Enforcement Officer and the Camp County Environmental Enforcement Officer will Monitor trash, dangerously dense undergrowth, and other potential wildfire fuel sources and will coordinate with local fire marshal, fire departments, and private property owners enforcing regulations and ordinances to insure removal of possible fuel supplies and reducing risk to existing structures.	Done: The City has ordinances for outdoor burning and for weed control, both designed to help prevent the spread of fire. These ordinances can be found at the following website: Ordinances | Pittsburg, TX (pittsburgtx.gov)
Wildfire #3 The City of Pittsburg Emergency Management Coordinator and the Camp County Emergency Management Coordinator will work closely together to train public safety responders on action items listed in this plan, and to solicit their support to identify actions that need to be addressed to support this plan.	Done: training, cooperation, and discussion of hazard mitigation activities are ongoing.

Action Item	Result
Drought	
Drought #1. Develop, enhance and Implement teducation programs aimed at mitigating effects of drought hazard for farmers and ranchers.	Done by Texas A&M Agricultural Extension Agent for Camp County, who works with citizens in all jurisdictions, both rural and City. This is a continuing program.
Drought #2. City of Pittsburg pass ordinance providing for implementation of mandatory water rationing during drought conditions. Camp County Commissioners Court issue mandatory water conservation orders during drought conditions.	Done: City Ordinances refer to Vernon's Texas Code Annotated Water Code §11.1272 Drought Contingency Plans, which may be found at: **http://law.onecle.com/texas/water/11.1272.html** Not Done: The County does not operate a water utility, and does not regulate water use from private wells or from utility companies.
Flooding	
Flooding #1. In the early spring of each year, the Camp County Commissioners and the City of Pittsburg Street Department will each conduct a visual survey of low-lying bridges and highway culverts within their jurisdiction to determine if brush and debris would block the flow of up-coming rains. If debris is present, it will be removed.	Done regularly, as part of standard operating procedures, by the County Commissioners (Road & Bridge crews) and by the City Street Department. This is an ongoing activity.
Flooding #2. In the early spring of each year, the Camp County Commissioners, and the City of Pittsburg Street Department, will inventory barricade supplies and ensure that adequate materials are on hand to block off and barricade temporarily flooded roadways.	Done regularly, as part of standard operating procedures, by the County Commissioners (Road & Bridge crews) and by the City Street Department. This is an ongoing activity.
Flooding #3. Improve ability to warn citizens prior to, during or after hazard events. Camp County and City of Pittsburg utilize Smart911 and social media outlets to help disseminate warnings to citizens.	Done: Smart911 is in place, and is used when needed.

Action Item	Result
Flooding #4. City of Pittsburg adopt zoning ordinances which regulate development in identified flood hazard zones. Camp County adopt subdivision regulations that regulate development in identified flood-hazard areas.	City - Done: Permits are required to build within the City. City Ordinance Article 3.05: Flood Damage Prevention designates the chief building official as the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain management. County - Done: Although Camp County has not been mapped by FEMA, and the County cannot undertake this project due to the excessive cost of mapping, the County does have new regulations prohibiting building within an area that is prone to flooding.
Flooding #5. Upon approval and adoption of this plan, the Camp County Hazard Mitigation Officer will coordinate Camp County participation in the National Flood Insurance Program (NFIP) with the County Judge and the Camp County Commissioners	Not done: Camp County has not been mapped by FEMA, and the County cannot undertake this project due to the excessive cost of mapping and the low risk of flood to any existing structures.
Flooding #6. The City of Pittsburg will continue to participate in NFIP.	Done: The City of Pittsburg continues to participate in the NFIP.
Flooding #7	Done: training, cooperation, and discussion of hazard mitigation activities are ongoing.

Winter Storm	
Winter Storm #1. Improve ability to warn citizens prior to, during or after hazard events by funding and operating "Smart911" or similar 911 reverse alert system.	Done: Smart911 is in place.
Winter Storm #2. Partner with local television/radio meteorologist to enlist their citizen "weather watchers" to pass emergency information to Camp County 911 Dispatch Center as well as to their sponsoring broadcast station.	Done: Several local responders have participated in a "SkyWarn" storm spotter training program.
Winter Storm #3. Develop a debris management plan addressing the relationship between winter storm damage and debris management, and providing for reduction and removal of such debris resulting in reduction of risk to existing structures.	Done: Both the City and the County now have a debris management plan, which is updated regularly, and followed as part of standard operating procedures.
Winter Storm #4 The City of Pittsburg Emergency Management Coordinator and the Camp County Emergency Management Coordinator will work closely together to train members of the Camp County Sheriff's Department, the City of Pittsburg Police Department, the Camp County Road and Bridge Supervisor, and the Pittsburg Street Department Supervisor, in the Winter Storm action item #3 and to solicit their support to identify actions that need to be addressed to support this plan, and to report them to the County Hazard Mitigation Officer.	Done: training, cooperation, and discussion of hazard mitigation activities are ongoing.
Dam Failure	**Note: Dam Failure is no longer a hazard to be mitigated by Camp County or the City of Pittsburg.**
Dam Failure #1. Improve ability to warn citizens prior to, during or after hazard events by funding and operating "Smart911" or similar reverse 911 alert system.	Done: Smart911 is in place.

Dam Failure #2. Camp County Sub-Division Regulations will be utilized to ensure that construction does not take place within the inundation area below any dam in the county.	Not done: the County has determined that the local dams pose no hazard requiring mitigation.
Dam Failure #3. The Camp County Hazard Mitigation Officer will conduct an annual survey of each of the dams in the County during early spring to insure that no obvious weaknesses are present. If weaknesses are found to exist, the owner of the dam will be contacted and advised to repair the dam before spring rains.	Not done: the County has determined that the local dams pose no hazard requiring mitigation.
Dam Failure #4 The City of Pittsburg Emergency Management Coordinator and the Camp County Emergency Management Coordinator will work closely together to train public safety responders on action items listed in this plan, and to solicit their support to identify actions that need to be addressed to support this plan.	Done: training, cooperation, and discussion of hazard mitigation activities are ongoing.

Changes in Priorities Since Previous Plan Adoption

1. The previous hazard of “Dam Failure” has been removed from this revised Plan, after analysis and evaluation as described on page 24.
2. The previous hazard of “Thunderstorm” has been divided into “Windstorm” and “Hailstorm,” with separate mitigation actions for each.
3. The previous hazard of “Thunderstorm” (which included rain, lightning, wind and hail) was prioritized as “C” by both jurisdictions; while “Hailstorm” is still prioritized as “C” by the County, “Windstorm” is now ranked as “B” by both jurisdictions, and “Hailstorm” is ranked as “B” by the City.

PLAN REVIEW, EVALUATION, AND IMPLEMENTATION

Monitoring, Evaluation and Updating

The Camp County Emergency Management Department will be responsible to monitor and evaluate the Hazard Mitigation Action Plan throughout the year, with the assistance of other members of the Hazard Mitigation Planning Committee. The Camp County EMC will monitor and evaluate the planning process, public involvement, how hazards change, previous occurrence data, changes in vulnerability and impacts, the integration process, changing goals, and any changes in risk assessment. All these aspects will be discussed by the Committee at its annual meeting each January. Throughout the implementation, monitoring and evaluation phases, the public will be invited and encouraged to comment on the Plan, and to assist in its implementation, evaluation and revision.

The Camp County EMC will monitor the implementation of mitigation actions identified in the Plan. To facilitate plan maintenance, the Camp County EMC will be the point of contact for hazard mitigation-related issues and serve as the coordinator on the plan update. During the five-year planning cycle, the Camp County EMC will undertake the following initiatives:

- Maintain and update a mitigation action table showing all Action Items and progress.
- Conduct annual site visits and obtain or develop reports of completed or initiated mitigation actions to incorporate in the plan revision as needed.
- Monitor and document any natural disasters affecting the jurisdictions during the planning cycle and incorporate into a revised Risk Assessment section as needed.
- Organize annual January meetings with the Mitigation Planning Committee to discuss relevant hazard mitigation issues, provide status updates, and discuss available grant opportunities.
- Watch for and disseminate hazard mitigation funding information and applications.
- Convene a meeting of the Committee following a natural disaster or when funding is announced to prioritize and submit potential mitigation actions for funding.

- Watch for information about any training from TDEM or FEMA in hazard mitigation planning, and for any new requirements that may be announced.
- Post a copy of the current Plan on the Camp County website, and deliver paper copies to the local library, the Courthouse, the Tax Assessor's Office, the Chamber of Commerce, City Hall, and other public places. Include information about how interested persons can participate in Plan implementation and revision.

The Camp County EMC will compile, document, and incorporate all changes derived from the activities listed above into a revised plan document which will be submitted to TDEM for review prior to the end of the fifth year of the plan.

Evaluation

The Plan will be evaluated annually by the Camp County EMC to determine the effectiveness of its projects, programs, and policies. The EMC will be responsible for scheduling and organizing the Committee meetings, collecting, analyzing and incorporating annual reports, and providing revised drafts to the Committee. Each year, at a minimum during the January meeting, the EMC and Committee members will assess the current version of the Plan and determine the improvements necessary for the plan update. The EMC will also evaluate the Committee itself, to determine if other agencies or individuals should be added to the planning team. The public will be invited to attend these annual meetings. Those who attend will be welcomed and encouraged to actively participate.

A thorough examination of the Plan will take place during the January meeting of the third year of the process to ensure an updated plan at the end of the planning cycle. At this meeting, the EMC and committee will review the goals and action items to determine their relevance to changing local situations, as well as changes in state or federal policy, and to ensure they are addressing current and expected conditions. The Committee will look at any changes in local resources that may influence the plan implementation (such as

funding) and program changes to determine need for reassignment. The Committee will review all portions of the Plan to determine if this information should be updated or modified, given any new available data. The Committee will evaluate the content of the Plan using the following criteria:

- Are the mitigation actions effective?
- Are there any changes in land development that affect mitigation priorities?
- Do the goals, objectives, and action items meet social, technical, administrative, political, legal, economic, and environmental criteria as defined in FEMA's STAPLE-E analysis?
- Are the goals, objectives, and mitigation actions relevant, given any changes in the local area?
- Are the goals, objectives, and mitigation actions relevant, given any changes to state or federal regulations or policy?
- Is there any new data that affects the Risk Assessment portion of the Plan?
- Do any additional hazards pose a threat to the jurisdictions which should be mitigated?

If it appears necessary to hire a contractor to assist in Plan revisions, funding should be sought during the third year of the planning cycle, so that the contractor can be hired and revisions can be made during the fourth year. The completed document should be submitted to TDEM as soon as possible, ideally by the end of the fourth year, so that TDEM and FEMA approval may be obtained before the end of the fifth year of the planning cycle.

Update and Revision

The Planning Team will review the Plan every year during the January meeting, and will note any updates needed to reflect the results of the annual reports and on-going plan evaluation by the EMC. Throughout the planning cycle, the EMC will compile new information and incorporate it into the Plan. The EMC will also assess and incorporate

recommendations expressed by TDEM or FEMA into the plan revision. In January of the third year of the planning cycle, the entire Plan will be evaluated and the need for revisions assessed. If it appears necessary to hire a contractor to assist in Plan revisions, funding should be sought during the third year of the planning cycle, so that the contractor can be hired and revisions can be made during the fourth year. The completed document should be submitted to TDEM as soon as possible, ideally by the end of the fourth year, so that TDEM and FEMA approval may be obtained before the end of the fifth year of the planning cycle. After FEMA has approved the revised Plan, the jurisdictions will again formally adopt the Plan by Resolution.

Incorporation into Existing Planning Mechanisms

Camp County

The Camp County Hazard Mitigation Action Plan is used to aid the development of the Camp County Emergency Management Plan, **Annex P, Hazard Mitigation**. The Plan is used by the County Commissioners Court at any time when zoning is being considered.

City of Pittsburg

The City of Pittsburg has adopted the International Building Code, 2012 Edition, the NCC National Electrical Code, 2011 edition, and the ICC International Plumbing Code, 2012 edition, on June 10, 2013; and adopted the International Residential Code, 2015 edition, on August 8, 2016. Permits are required to build within the City. Article 3.05: Flood Damage Prevention designates the chief building official as the floodplain administrator to administer and implement the provisions of this article and other appropriate sections of 44 CFR (National Flood Insurance Program regulations) pertaining to floodplain

management. The current Code of Ordinances for the City of Pittsburg may be found at: **Ordinances | Pittsburg, TX (pittsburgtx.gov)**

City officials will review the recommendations contained in this Plan and update development ordinances to ensure that the city can continue to prevent development in the floodplain, promote sound planning practices regarding subdivision design, and require best management practices wherever possible.

The following table further details how the City and County will incorporate this Plan into their existing planning mechanisms, and describes future expansive capabilities.

Planning Mechanism	Incorporation Process	Expansive Capabilities
City and County Staff	The City and County are small and have few employees; however, the staff are highly involved in the planning process and the implementation of identified hazard mitigation actions. The staff will be able to assist the planning team in the monitoring and updating process.	Hire a new staff member to head the Mitigation Planning team
City of Pittsburg Public Works and Camp County Road & Bridge	The managers of these divisions will use this plan to improve preparedness and plan for better service delivery during emergency situations.	Train managers and staff in emergency preparedness and mitigation techniques; hire additional staff as budget allows.

Planning Mechanism	Incorporation Process	Expansive Capabilities
Floodplain City Ordinance and County Floodplain Management Plan	The Plan will be used in updating and maintaining the City's floodplain management program. The Plan will be consulted for NFIP compliance, flood risk, and extent. Information from these sections will be reviewed for inclusion in other plans. Camp County will review the HMAP prior to revising its Floodplain Management Plan and/or when developing any new plans.	The City of Pittsburg can participate in the NFIP's Community Rating System. Camp County unincorporated areas need to be flood mapped. Then the County can participate in the NFIP and the CRS.
Annual Budget Review – City and County	The City and County will review the Plan and mitigation actions when conducting annual budget reviews. When allocating funds for upcoming operating and construction budgets, high priority mitigation actions will be reviewed during City Council / Commissioners Court meetings. Each identified staff member/planning Team member will be responsible for bringing mitigation actions to the meeting to discuss feasibility of the potential project in terms of the availability of funds, grant assistance, and preliminary cost benefit review. Mitigation actions will be implemented whenever possible, within budgetary constraints.	Increased budget for mitigation activities, which could include hiring Mitigation staff for planning, developing and carrying out mitigation projects.

Planning Mechanism	Incorporation Process	Expansive Capabilities
Emergency Operations Procedures – City and County	Camp County and the City of Pittsburg have a state-approved Emergency Management Plan, which is updated regularly. This HMAP is referred to and included in the Emergency Management Plan, Annex P, and is incorporated therein by reference. This Plan will be consulted during updates to the local Emergency Management Plan for the City and County. Risk assessment and vulnerability data will be analyzed in conjunction with the review, renewal, and re-writing of the Emergency Operations procedures and Emergency Management Plan.	Increased training in emergency management and hazard mitigation for current staff members; hiring and training new staff members. Camp County and the City of Pittsburg need to revise Annex P of their Emergency Management Plan to reflect the changes and updates in this revised HMAP.
Grant Applications	The Plan will be consulted when grant funding opportunities arise, and funding will be sought for mitigation projects whenever possible.	Training in grant writing for current staff members; hiring a new staff member with grant writing experience, or hiring a contractor to write grant applications for mitigation projects.
Capital Improvement Plans (CIP)	Camp County and the City of Pittsburg do not have a CIP in place. County and City departments will review the risk assessments and mitigation strategy sections of the HMAP prior to adopting any proposed CIP.	The jurisdiction could develop Capital Improvement Plans.

Once this revised HMAP is adopted, Camp County and participating jurisdictions will implement the listed actions based on priority and the availability of funding. The County currently implements policies and programs to reduce loss to life and property from hazards. The mitigation actions developed for this Plan enhance this ongoing effort and will be implemented through other program mechanisms where possible.

Camp County and the City of Pittsburg will integrate implementation of their mitigation actions with other plans and policies such as construction standards and emergency management plans, and ensure that these actions, or proposed projects, are reflected in other planning efforts. Coordinating and integrating components of other plans and policies into goals and objectives of the Plan will further maximize funding and provide possible cost-sharing of key projects, thereby reducing loss of lives and property and mitigating hazards affecting the area.

Planning team members from each participating jurisdiction will work to integrate the hazard mitigation strategies into other plans and codes as they are developed. Participating team members will conduct periodic reviews of plans and policies, once per year at a minimum, and analyze the need for amendments.

Camp County and the City of Pittsburg will review and revise, as necessary, the long-range goals and objectives in strategic plan and budgets to ensure that they are consistent with this mitigation action plan. Additionally, the County and City will work to advance the goals of this hazard mitigation plan through their routine, ongoing, long-range planning, budgeting, and work processes.

The step-by-step process for implementation of any policy change at the local government level in Camp County or the City of Pittsburg is as follows:

1. Change is proposed by an elected official or other interested party.
2. Proposal is placed on the local agenda of the governing body.
3. Agenda is published at least 10 days in advance of the meeting at which it will be discussed, so members of the public have an opportunity to attend the discussion meeting. Publication is made by posting the agenda on a public bulletin board in the City Hall (Pittsburg) or County Courthouse (Camp) and by posting on the agency's website. Notice may also be printed in the local newspaper.
4. Proposal is discussed at the public meeting, including any comments by members of the public in attendance.
5. Proposal is voted on by the governing body.
6. If the proposal is passed, the change is implemented by the appropriate local authority.

Continued Public Involvement

Camp County and the City of Pittsburg are dedicated to public involvement during the implementation, monitoring and evaluation phases of this Hazard Mitigation Action Plan. Copies of the Plan will be available for public review and comment at the County Courthouse; at City Hall in Pittsburg; at the ETCOG office; on the Camp County website; on the City of Pittsburg website; and on the ETCOG website. The websites will include contact information and a link to a survey form which people can use to direct their comments, concerns and suggestions to the Planning Committee.

Camp County and the City of Pittsburg will hold an annual public meeting to discuss the Plan, with each participant encouraged to contribute to Plan improvement. The date, time and location of each annual meeting will be publicized well in advance, and all interested persons will be encouraged to attend. Those who attend will be welcomed and encouraged to actively participate in the discussions. For future years, the planning process will remain the same, with emphasis on attempts to increase public participation, through review and comment, as described above. In the future, neighboring administrators, EMCs and other stakeholders will be personally invited to attend the annual HMAP planning meetings, by individual e-mail or telephone invitations, as well as by publication of the meeting agenda in the usual places.

DOCUMENTATION OF THE PLANNING PROCESS

Throughout the planning process, efforts were made to solicit input from the general public; from neighboring community leaders; from first responders; from non-profit organizations and volunteer groups such as the Red Cross and Salvation Army; from local industry professionals; and from all levels of government within Camp County and the City of Pittsburg. Two public meetings were held, with agendas publicized in advance. These agendas were posted at City Hall and in the County Courthouse, as well as on the County and City websites. The following people participated in this revision:

Name	Title	Agency	Jurisdiction
A.J. Mason	Camp County Judge	Administration	Camp County
George French	Commissioner, Pct. 1	Administration	Camp County
Tommy Rozell	Commissioner, Pct. 2	Administration	Camp County
Perry Weeks	Commissioner, Pct. 3	Administration	Camp County
Steve Lindley	Commissioner, Pct. 4	Administration	Camp County
Sandra Knight	County Clerk	Administration	Camp County
David Abernathy	Mayor	Administration	City of Pittsburg
Rico Willis	Mayor Pro Tem	Administration	City of Pittsburg
Bette Holcomb	Council Member	Administration	City of Pittsburg
Todd Diviney	Council Member	Administration	City of Pittsburg
Larry Hamilton	Council Member	Administration	City of Pittsburg
Stacy Dorsett	City Secretary	Administration	City of Pittsburg

The following stakeholders were invited but did not participate in this revision:

Name	Title	Agency	Location	Type of contact
Scott Lee	County Judge	Franklin Co.	Mt. Vernon, TX	publication
Robert W. Zinn	EMC	Franklin Co.	Mt. Vernon, TX	publication
Doug Reeder	County Judge	Morris Co.	Daingerfield, TX	publication
Brandon Singletary	EMC	Morris Co.	Daingerfield, TX	publication
Kent Cooper	County Judge	Titus Co.	Mt.Pleasant, TX	publication
Larry McRae	EMC	Titus Co.	Mt.Pleasant, TX	publication
Todd Tefteller	County Judge	Upshur Co.	Gilmer, TX	publication
Marc Nichols	EMC	Upshur Co.	Gilmer, TX	publication
Kevin White	County Judge	Wood Co.	Quitman, TX	publication
Tully Davidson	EMC	Wood Co.	Quitman, TX	publication

During future revisions, each of these stakeholders will be personally invited by e-mail and/or telephone, and asked to attend a meeting or send a representative, and/or review the document and send comments or suggestions, which will be incorporated into the document.

Appendix I: National Climatic Data Center Weather History

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
CAMP CO.	3/24/1962	17:00	Tornado	F1	0	0	0.00K	0.00K
CAMP CO.	4/28/1963	15:00	Tornado	F2	0	0	0.00K	0.00K
CAMP CO.	5/1/1967	7:30	Tornado	F2	0	0	2.50K	0.00K
CAMP CO.	12/21/1967	8:00	Tornado	F0	0	0	0.00K	0.00K
CAMP CO.	1/20/1973	19:30	Tornado	F1	0	0	0.25K	0.00K
CAMP CO.	5/3/1979	17:20	Tornado	F2	0	0	250.00K	0.00K
CAMP CO.	4/7/1980	18:00	Tornado	F0	0	0	0.00K	0.00K
Pittsburg	10/18/1993	18:40	Tornado	F0	0	0	0.00K	0.00K
Pittsburg	10/18/1993	19:00	Tornado	F0	0	0	0.00K	0.00K
NEWSOME	9/26/1996	13:20	Tornado	F0	0	1	10.00K	0.00K
MATINBURG	5/2/2009	19:56	Tornado	EF0	0	0	0.00K	0.00K
PITTSBURG	4/13/2014	14:46	Tornado	EF0	0	0	500.00K	0.00K
CAMP (ZONE)	4/10/2008	4:00	Strong Wind	44 kts. EG	0	0	1.00K	0.00K
CAMP CO.	6/7/1974	9:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	1/31/1983	12:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	11/23/1983	1:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	5/27/1984	23:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	9/1/1984	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	5/22/1987	18:55	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	8/5/1987	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	4/1/1988	17:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	11/15/1988	18:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	5/5/1989	0:22	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	7/2/1989	14:55	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
CAMP CO.	4/27/1990	18:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
GCAMP CO.	4/13/1991	12:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	5/3/1991	3:40	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
CAMP CO.	5/3/1991	15:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	5/4/1991	18:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	3/4/1992	21:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
CAMP CO.	11/24/1992	17:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pittsburg	1/23/1993	20:10	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
Pittsburg	5/9/1993	16:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pittsburg	5/9/1993	17:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pittsburg	5/9/1993	17:40	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pine	8/2/1993	17:25	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
Pittsburg	10/19/1993	21:20	Thunderstorm Wind	52 kts.	0	0	5.00K	0.00K
CAMP CO.	8/20/1994	16:25	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Green Hill	8/20/1994	16:25	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Mount Pleasant	8/20/1994	16:40	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Sulphur Springs	10/21/1994	5:05	Thunderstorm Wind	65 kts.	0	0	0.00K	0.00K
Cumby	10/21/1994	5:10	Thunderstorm Wind	70 kts.	0	0	0.00K	0.00K
Pittsburg	10/21/1994	5:20	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Pittsburg	11/4/1994	22:30	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
Pittsburg	1/18/1995	5:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Leesburg	4/10/1995	17:14	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pittsburg	4/19/1995	17:30	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
Leesburg	10/1/1995	18:12	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Pittsburg	11/10/1995	22:45	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
PITTSBURG	1/18/1996	0:35	Thunderstorm Wind	65 kts.	0	0	0.00K	0.00K
PITTSBURG	2/20/1997	18:10	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
PITTSBURG	2/20/1997	18:12	Thunderstorm Wind	63 kts.	0	0	0.00K	0.00K
PITTSBURG	6/17/1997	1:00	Thunderstorm Wind	70 kts.	0	0	0.00K	0.00K
PITTSBURG	2/26/1998	0:30	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
PITTSBURG	6/4/1998	21:55	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
PITTSBURG	8/3/1998	15:00	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
PITTSBURG	11/10/1998	1:30	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
PITTSBURG	4/26/1999	9:30	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
PITTSBURG	1/29/2001	2:30	Thunderstorm Wind	65 kts. E	0	0	6.00K	0.00K
PITTSBURG	5/16/2003	16:51	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PITTSBURG	4/30/2004	23:53	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PITTSBURG	6/2/2004	18:40	Thunderstorm Wind	58 kts. EG	0	0	0.00K	0.00K
PITTSBURG	6/2/2004	19:05	Thunderstorm Wind	58 kts. EG	0	0	50.00K	0.00K
PITTSBURG	8/27/2005	16:15	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
NEWSOME	4/13/2007	21:05	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	6/20/2007	15:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FAKER	3/3/2008	7:27	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
LEESBURG	4/10/2008	6:05	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	4/10/2008	6:20	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
PITTSBURG	5/10/2008	8:35	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	5/27/2008	10:46	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PINE	5/27/2008	11:20	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
PITTSBURG	6/10/2009	20:42	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PITTSBURG	4/24/2010	2:00	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
LEESBURG	5/20/2010	12:45	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
LEESBURG	10/24/2010	13:51	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
CAMP (ZONE)	4/15/2011	14:30	High Wind	50 kts. EG	0	0	0.00K	0.00K
FAKER	4/25/2011	18:01	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
PITTSBURG	4/25/2011	18:01	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
PITTSBURG	4/25/2011	18:12	Thunderstorm Wind	60 kts. EG	0	1	10.00K	0.00K
HARVARD	4/25/2011	18:56	Thunderstorm Wind	60 kts. EG	0	0	250.00K	0.00K
PITTSBURG	6/5/2011	16:20	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
PITTSBURG	6/28/2011	18:45	Thunderstorm Wind	57 kts. EG	0	0	250.00K	0.00K
PITTSBURG	6/28/2011	18:45	Thunderstorm Wind	57 kts. EG	0	0	2.00K	0.00K
PITTSBURG	6/28/2011	18:45	Thunderstorm Wind	57 kts. EG	0	0	0.00K	0.00K
PITTSBURG	5/30/2012	3:45	Thunderstorm Wind	52 kts. EG	0	0	40.00K	0.00K
MATINBURG	8/9/2012	18:45	Thunderstorm Wind	53 kts. EG	0	0	0.00K	0.00K
HARVARD	12/19/2012	23:15	Thunderstorm Wind	60 kts. EG	0	0	20.00K	0.00K
PITTSBURG	12/19/2012	23:25	Thunderstorm Wind	57 kts. EG	0	0	0.00K	0.00K
LEESBURG	1/29/2013	18:45	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
LEESBURG	3/31/2013	7:53	Thunderstorm Wind	56 kts. EG	0	0	20.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
HARVARD	5/21/2013	15:45	Thunderstorm Wind	55 kts. EG	0	0	20.00K	0.00K
PITTSBURG	5/21/2013	15:55	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PITTSBURG	7/23/2014	17:30	Thunderstorm Wind	56 kts. EG	0	0	1.00K	0.00K
PITTSBURG	10/2/2014	17:20	Thunderstorm Wind	57 kts. EG	0	0	0.00K	0.00K
PITTSBURG	10/13/2014	4:21	Thunderstorm Wind	55 kts. EG	0	0	40.00K	0.00K
HOLLY SPGS	4/9/2015	16:36	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
HOLLY SPGS	4/9/2015	16:36	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
LEESBURG	4/24/2015	19:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LEESBURG	4/24/2015	19:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PINE	5/10/2015	23:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PINE	5/10/2015	23:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FAKER	5/10/2015	23:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
FAKER	5/10/2015	23:15	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NEWSOME	5/25/2015	16:15	Thunderstorm Wind	52 kts. EG	0	0	30.00K	0.00K
NEWSOME	5/25/2015	16:15	Thunderstorm Wind	52 kts. EG	0	0	30.00K	0.00K
LEESBURG	12/27/2015	13:37	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
LEESBURG	12/27/2015	13:37	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
PITTSBURG	12/27/2015	14:45	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	12/27/2015	14:45	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	12/27/2015	15:00	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	12/27/2015	15:00	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PITTSBURG	12/27/2015	15:12	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
PITTSBURG	12/27/2015	15:12	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
LEESBURG	7/15/2016	14:42	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
PITTSBURG	7/15/2016	14:54	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
CAMP CO.	3/20/1978	18:00	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	5/3/1979	17:37	Hail	1.50 in.	0	0	0.00K	0.00K
CAMP CO.	4/7/1980	17:30	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/7/1980	18:00	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	3/27/1984	19:00	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/22/1985	19:10	Hail	0.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/23/1985	13:30	Hail	0.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/14/1986	1:22	Hail	0.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/19/1986	14:45	Hail	2.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/3/1989	21:40	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	3/22/1991	9:05	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP CO.	4/26/1991	22:50	Hail	0.75 in.	0	0	0.00K	0.00K
CAMP CO.	11/19/1991	12:15	Hail	1.00 in.	0	0	0.00K	0.00K
CAMP CO.	5/11/1992	21:19	Hail	0.75 in.	0	0	0.00K	0.00K
CAMP CO.	5/15/1992	15:52	Hail	1.75 in.	0	0	0.00K	0.00K
Pittsburg	4/13/1993	19:37	Hail	0.75 in.	0	0	0.00K	0.00K
Pittsburg	10/18/1993	19:00	Hail	0.75 in.	0	0	0.00K	0.00K
Pittsburg	4/10/1995	17:14	Hail	1.00 in.	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
Pittsburg	4/19/1995	17:36	Hail	1.00 in.	0	0	0.00K	0.00K
Pittsburg	4/19/1995	17:40	Hail	1.75 in.	0	0	15.00K	0.00K
Pittsburg	5/1/1995	0:00	Hail	1.75 in.	0	0	0.00K	0.00K
PITTSBURG	6/7/1996	11:30	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	7/4/1996	15:37	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	7/8/1996	17:28	Hail	0.88 in.	0	0	0.00K	0.00K
LEESBURG	9/20/1996	19:07	Hail	0.75 in.	0	0	0.00K	0.00K
NEWSOME	10/21/1996	13:45	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	10/21/1996	13:47	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	4/22/1997	5:30	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	4/26/1997	21:08	Hail	1.00 in.	0	0	0.00K	0.00K
PITTSBURG	6/13/1997	18:11	Hail	0.88 in.	0	0	0.00K	0.00K
PINE	6/13/1997	18:14	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	6/17/1997	1:00	Hail	1.75 in.	0	0	0.00K	0.00K
PITTSBURG	10/25/1997	15:20	Hail	0.88 in.	0	0	0.00K	0.00K
PITTSBURG	3/2/1999	15:18	Hail	1.00 in.	0	0	0.00K	0.00K
PITTSBURG	3/24/1999	22:15	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/10/2000	15:00	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/26/2000	22:30	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	4/23/2000	15:01	Hail	1.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/12/2001	3:28	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	5/6/2001	21:50	Hail	0.75 in.	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
LEESBURG	5/5/2003	9:27	Hail	1.00 in.	0	0	0.00K	0.00K
PITTSBURG	5/5/2003	10:20	Hail	1.00 in.	0	0	0.00K	0.00K
PITTSBURG	5/5/2003	14:55	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	4/26/2005	0:40	Hail	1.00 in.	0	0	0.00K	0.00K
PITTSBURG	4/3/2007	22:30	Hail	1.25 in.	0	0	0.00K	0.00K
LEESBURG	4/13/2007	21:05	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	1/8/2008	8:57	Hail	0.88 in.	0	0	0.00K	0.00K
PITTSBURG	2/25/2008	20:24	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/10/2010	14:20	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	10/24/2010	13:38	Hail	2.50 in.	0	0	0.00K	0.00K
LEESBURG	10/24/2010	13:43	Hail	2.00 in.	0	0	0.00K	0.00K
HARVARD	10/24/2010	13:52	Hail	2.75 in.	0	0	0.00K	0.00K
PITTSBURG	10/24/2010	14:00	Hail	1.00 in.	0	0	0.00K	0.00K
NEWSOME	4/25/2011	18:38	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/31/2013	8:07	Hail	0.88 in.	0	0	0.00K	0.00K
PITTSBURG	4/3/2014	21:35	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	4/27/2014	18:20	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	10/6/2014	4:15	Hail	1.00 in.	0	0	0.00K	0.00K
LEESBURG	12/23/2015	7:39	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	12/23/2015	7:39	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/30/2016	15:56	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	3/30/2016	15:56	Hail	0.75 in.	0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
LEESBURG	2/27/2017	17:45	Hail	0.75 in.	0	0	0.00K	0.00K
LEESBURG	2/27/2017	17:55	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	2/27/2017	18:10	Hail	0.75 in.	0	0	0.00K	0.00K
PITTSBURG	4/10/2017	18:17	Hail	1.75 in.	0	0	0.00K	0.00K
CAMP (ZONE)	1/6/1997	12:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	1/14/1997	6:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	12/22/1998	18:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	1/26/2000	12:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	12/12/2000	20:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	12/24/2000	23:00	Ice Storm		0	0	0.00K	0.00K
CAMP (ZONE)	2/19/2006	17:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	3/7/2008	13:42	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	1/28/2009	2:40	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	1/7/2010	18:00	Cold/wind Chill		0	0	30.00K	0.00K
CAMP (ZONE)	2/11/2010	15:00	Heavy Snow		0	0	0.00K	0.00K
CAMP (ZONE)	3/21/2010	0:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	1/9/2011	7:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	2/3/2011	22:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	12/25/2012	16:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	1/15/2013	6:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	11/24/2013	16:00	Winter Weather		0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
CAMP (ZONE)	12/6/2013	0:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	1/5/2014	16:00	Cold/wind Chill		0	0	0.00K	0.00K
CAMP (ZONE)	2/7/2014	12:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	2/11/2014	15:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	3/2/2014	15:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	1/11/2015	0:00	Winter Weather		0	0	0.00K	0.00K
CAMP (ZONE)	2/23/2015	8:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	2/25/2015	1:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	3/4/2015	22:00	Winter Storm		0	0	0.00K	0.00K
CAMP (ZONE)	5/1/1996	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	6/1/1998	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	7/1/1998	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	8/1/2005	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	12/1/2005	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	1/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	2/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	3/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	4/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	5/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	6/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	7/1/2011	0:00	Drought		0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
CAMP (ZONE)	8/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	9/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	10/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	11/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	12/1/2011	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	1/1/2012	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	2/1/2012	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	3/1/2012	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	7/1/2013	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	8/1/2013	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	9/1/2013	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	8/11/2015	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	9/1/2015	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	10/1/2015	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	10/25/2016	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	11/1/2016	0:00	Drought		0	0	0.00K	0.00K
CAMP (ZONE)	12/1/2016	0:00	Drought		0	0	0.00K	0.00K
PITTSBURG	2/20/1997	18:00	Flash Flood		0	0	0.00K	0.00K
PITTSBURG	2/16/2001	6:30	Flash Flood		0	0	0.00K	0.00K
PITTSBURG	6/20/2007	15:40	Flash Flood		0	0	0.00K	0.00K
PITTSBURG	7/31/2007	11:39	Flash Flood		0	0	0.00K	0.00K
LEESBURG	5/2/2009	20:14	Flash Flood		0	0	0.00K	0.00K
LEESBURG	10/13/2009	11:15	Flash Flood		0	0	0.00K	0.00K
NEWSOME	10/22/2009	5:35	Flash Flood		0	0	0.00K	0.00K
PITTSBURG	9/20/2013	10:00	Flash Flood		0	0	0.00K	0.00K

Location	Date	Time	Type	Magni-tude	Deaths	Injuries	Property Damage	Crop Damage
PITTSBURG	12/13/2015	7:00	Flash Flood		0	0	0.00K	0.00K
PITTSBURG	12/27/2015	15:00	Flash Flood		0	0	30.00K	0.00K
LEESBURG	12/27/2015	19:50	Flash Flood		0	0	0.00K	0.00K
NEWSOME	4/29/2016	19:53	Flash Flood		0	0	0.00K	0.00K

The above table contains all data provided on the NCDC website "Storm Events Database" for the jurisdictions Storm Events Database | National Centers for Environmental Information (noaa.gov)

Appendix II: Adoption of 2012 HMAP

Resolution
CAMP COUNTY

A RESOLUTION OF CAMP COUNTY, TEXAS ADOPTING THE CAMP COUNTY HAZARD MITIGATION PLAN

WHEREAS, certain areas of Camp County, Texas, are subject to periodic flooding and other natural and man-caused hazards with the potential to cause damages to people and properties within the area; and

WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, to assist cities and counties in meeting this requirement the East Texas Council of Governments, with the assistance of its contractor, Gary R. Traylor & Associates, Inc. of Tyler, Texas has initiated development of a county-wide, multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of Camp County, including the County of Camp.

NOW THEREFORE, BE IT RESOLVED that the Camp County Commissioners Court hereby:

1. Adopts the Camp County Hazard Mitigation Action Plan.

2. Vest the County Judge of Camp County with the responsibility, authority. and means to:
    (a) Inform all concerned parties of this action.
    (b) Develop an Addendum to this Hazard Mitigation Action Plan if the Counties unique situation warrants such and addendum.
3. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Action Plan.

Passed, Approved and adopted this 13 day of Fe-e-u-(44. ,2012.

Camp County Judge

449-777
Thomas Cravey

Commissioner, Pre ct 1

art Townseritr

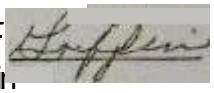
Conrissioner, P inc 2

Steve Hudnall

Commissioner, Precinct 3

7/(-S:4$_{4}$_2^{1}-7-r-Ve Norman Townsend 

Commissioner, Precinct 4

/_7'.prish-e– 

Vernon Griffin

RESOLUTION NO. 785-12

CITY OF PITTSBURG

A RESOLUTION OF PITTSBURG, TEXAS ADOPTING THE CAMP COUNTY HAZARD MITIGATION PLAN

WHEREAS, certain areas of **PITTSBURG.** TEXAS, are subject to periodic flooding and otner natural and man caused hazards with the potential to cause damages to people and properties within the area; and

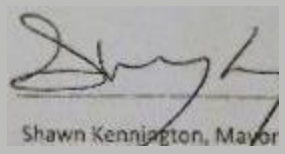
WHEREAS, *under* the Disaster Mitigation Act of 2000, tne United States Federal Emergency Management Agency (FEMA) requires that local jurisdictions have in place a 1-EtylA- approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1. 2004; and

WHEREAS, to assist cities arid counties in meeting this requirement the East Texas Council of Governments, with the assistance of its contractor, Gary R. I raylor & Associates, *Inc.* of Tyler, Texas has initiated development of a county-wide, multi-jurisdictional Hazard Mitigation Plan covering member jurisdictions of Camp County, inclading the CITY **OF PITTSBURG.**

NOW THEREFORE, BE IT RESOLVED THAT:

1. The Camp County Hazard Mitigation Action Plan is approved in its entirety.
2. The City of Pittsburg will pursue available funding opportunities for :mplementation *of* the proposals designated therein, and will upon receipt of such funding ur other necessary resources seek to implement the actions contained in the mitigation strategies;
3. The CITY OF PITTSBURG vest with the mayor the responsibility, authority, and means to:
   (a) Inform all concerned parties of this action; and
   Assure that the Hazard Mitigation Action plan will be reviewed at least annually; and that any needed adjustments will be presented to the Commissioner's Court for consideration, and
4 Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Action Plan.

Passed, Approved and adopted this 13 day of fepruary, 2012.



ARES!: AS,)
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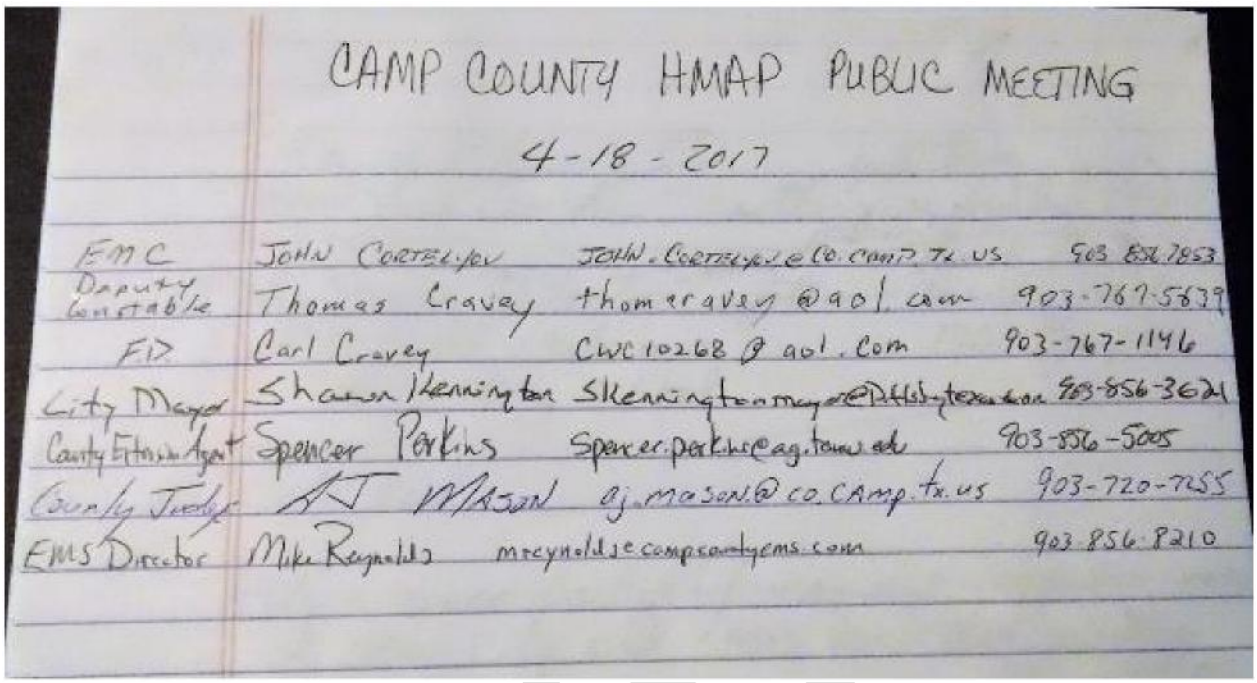
Ma retpackstn,Yty Secretary

Appendix III: Additional Verification of Participation



CAMP COUNTY HMAP PUBLIC MEETING

4-18-2017

EMC	JOHN CORTELYOU	JOHN.CORTELYOU@CO.CAMP.TX.US	903 856 7853
Deputy Constable	Thomas Cravey	thomcravey@aol.com	903-767-5639
FD	Carl Cravey	CWC10268@aol.com	903-767-1146
City Mayor	Shawn Kennington	SKennington mayor@pittsburgtexas.com	903-856-3621
County Extension Agent	Spencer Perkins	Spencer.perkins@ag.tamu.edu	903-856-5005
County Judge	AJ MASON	aj.mason@co.camp.tx.us	903-720-7555
EMS Director	Mike Reynolds	mreynolds@campcountyems.com	903 856 8210

CAMP COUNTY HMAP – Second Public Meeting
December 12, 2017

Name	Title	Agency	Email	phone
JOHN CORTELYOU	EMC	CAMP CO.	JOHN.CORTELYOU@CO.CAMP.TX.US	903-856-7853
Carl Cravey	Fire chief	Pittsburg FD	CWC10268@aol.com	903-767-1146
Thomas Cravey	Deputy Constable	Camp Co Constable	thomcravey@aol.com	903-767-5639
Shawn Kennington	Mayor	City	SKennington mayor@pittsburgtexas.com	903-856-8738
AJ Mason	County Judge	Camp County	aj.mason@co.camp.tx.us	903-856-3845
Mike Reynolds	EMS Director	Camp County EMS	mreynolds@campcountyems.com	903-856-8210