Hazard Mitigation Action Plan

Limestone County & the Cities of Coolidge, Groesbeck, Kosse, Mexia, Tehuacana, and Thornton

July 2025

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EXECUTIVE SUMMARY

Limestone County and the Cities of Coolidge, Groesbeck, Kosse, Mexia, Tehuacana, and Thornton participated in the development of this plan. Limestone County and its participating jurisdictions' Mitigation Action Plan (MAP) is intended to protect citizens, property, and local economies from natural hazards. The MAP's sole purpose is to guide local officials and the community at large in taking actions based on a solid understanding of the community's vulnerabilities and reduce the impacts of those hazards that are most likely to strike. In addition to developing an outline for proactive actions, this MAP enables Limestone County and its participating jurisdictions to apply for pre- and post-disaster mitigation funding that would otherwise be unavailable. This funding will assist the communities to implement their desired goals and objectives summarized in this plan.

Hereafter when referencing the Limestone County and its participating jurisdictions Mitigation Action Plan as a whole, it will be the intent that it includes all jurisdictions within Limestone County and its participating jurisdictions.

High Hazard Potential Dams

At the present time, there are no high-hazard potential dams located within Limestone County. As such, high-hazard potential dams are not addressed within the MAP.

Significant Changes in Development Since Last Update

In the period between this update and the last revision of the plan (2019), no significant development has occurred within Limestone County in hazard-prone areas. While there has been a slight decrease in population, the relative vulnerability of each community remains the same.

Consideration of Changes in Community Priorities

As part of the update process, changes in community priorities were considered throughout the entirety of the plan update. While the majority of priorities remained the same for each participating community, all communities echoed the challenges faced due to significantly limited budgets and the need to leverage state and federal funding sources to implement mitigation actions and reduce community risk. All communities also emphasized the need to prioritize each mitigation action for their community due to having limited personnel availability to implement and manage mitigation projects.

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COMMUNITY PROFILE

Understanding the geographic, demographic, and infrastructural characteristics of Limestone County is essential to informing a comprehensive and effective hazard mitigation strategy. This section discusses, in detail, each of these characteristics so as to better define Limestone County and the cities within the county from a geographic, demographic, economic, and infrastructural perspective.

1. Geography

Limestone County is situated in east-central Texas. It shares borders with the following counties (Maschino, 2020):

- **North**: Hill County
- **Northeast**: Navarro County
- **East**: Freestone County
- **Southeast**: Leon County
- **South**: Robertson County
- **Southwest**: Falls County
- **West**: McLennan County

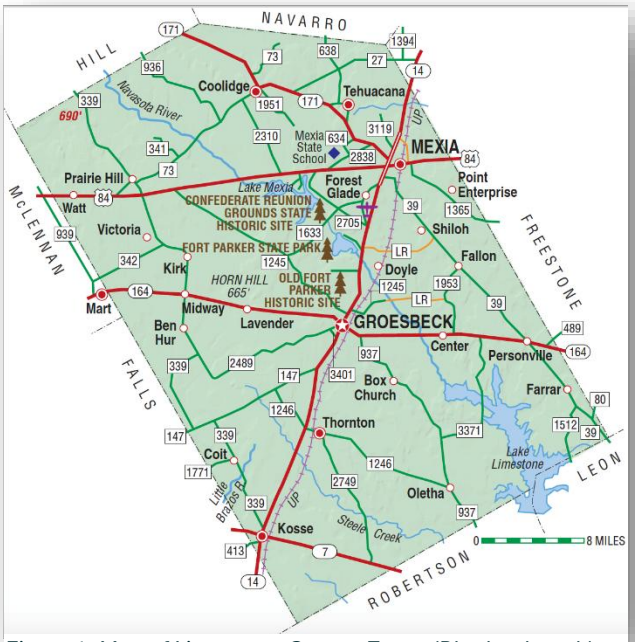


Figure 1: Map of Limestone County Texas (Plocheck, n.d.)

The county's geographic center is approximately near the city of Groesbeck, at latitude 31.5° N and longitude 96.6° W. Terrain ranges from 375 to 665 feet above sea level, characterized by level to rolling prairies. The county extends across 933.2 square miles, with approximately 3% of the county being water area (United States Census Bureau, 2023).

The average annual temperature ranges from an average low of 37°F in January to an average high of 96°F in July. Average annual precipitation is nearly 38 inches supporting a growing season of approximately 255 days (Texas State Historical Association, 2021).

Limestone County's soils are diverse, supporting various vegetation types, including (Texas State Historical Association, 2021):

- **Northern Area**: Mesquite, blackjack oak, pecan, bois d'arc, and elm trees, along with Indian grass and Texas winter grass.
- **Southern Area (Post Oak Savannah)**: Tall grasses, post oak, and blackjack oak.

The county is endowed with several natural resources, including clays (kaolin and ceramic), limestone, industrial sand, glauconite, lignite coal, oil, and gas. Limestone County's hydrology is defined by (Maschino, 2020):

- **Lake Limestone**: A significant reservoir on the Navasota River, utilized for water supply, recreation, and power generation cooling.
- Lake Mexia and Springfield Lake: Notable water bodies.
- **Navasota River and its tributaries**: Waterways traverse the county, providing essential riparian zones and agricultural irrigation.

- **Groundwater**: The Wilcox Group in the eastern part of the county offers adequate supplies to meet expected water demands, with thicker zones capable of yielding in excess of 500 gallons per minute (United States Geological Survey, 1987).

2. Demographics

Limestone County, Texas, has experienced moderate population decline over recent years. According to the U.S. Census Bureau's estimates, the population was 22,153 in 2020, slightly decreasing from 23,384 in 2010 (United States Census Bureau, 2023). This period represents a 5.26% decrease in population.

The county encompasses several incorporated cities, with their populations as of the 2020 Census reported as follows (United States Census Bureau, 2023):

- **Coolidge**: 950 residents
- **Groesbeck**: 4,328 residents
- **Kosse**: 464 residents
- **Mexia**: 7,459 residents
- **Tehuacana**: 283 residents
- **Thornton**: 526 residents

In terms of demographics, the county's population is predominantly White, with a significant Black or African American community and a growing Hispanic or Latino population. The median age is approximately 40 years, indicating a relatively balanced age distribution. Educational attainment varies, with a portion of the population holding a high school diploma or higher, while others have pursued post-secondary education.

Economically, Limestone County has a diverse employment base, including sectors such as manufacturing, healthcare, retail, and agriculture. The median household income and employment rates have remained relatively stable, reflecting the county's steady economic environment.

3. Infrastructure

Limestone County, Texas, is served by a comprehensive transportation infrastructure that supports both local and regional connectivity. The county falls under the jurisdiction of the Texas Department of Transportation's (TxDOT) Waco District, which oversees planning, design, construction, operation, and maintenance of the state transportation system in this region (Texas Department of Transportation, 2025).

Several key highways traverse Limestone County, facilitating the movement of people and goods:

- **State Highway 164 (SH 164)**: Extending approximately 54.42 miles, SH 164 runs from near Waco to Buffalo, passing through towns such as Mart and Groesbeck within Limestone County.
- **State Loop 442**: Notably, this loop in Tehuacana retains its original pavement from 1929, making it one of Texas's oldest state roads still with its initial surface (Smith, 2023).

TxDOT's Waco District has outlined several projects in its Rural Transportation Improvement Plans (RTIP) to enhance the transportation network in Limestone County:

- **2021-2024 RTIP**: This plan detailed specific projects aimed at improving road conditions and safety within the county (Texas Department of Transportation, 2020).
- **2023-2026 RTIP**: Building upon previous plans, this RTIP included additional projects to further develop the county's transportation infrastructure (Texas Department of Transportation, 2022).

- **2025-2028 RTIP**: The latest plan continues to prioritize infrastructure enhancements, reflecting ongoing commitments to regional development (Texas Department of Transportation, 2024).

Public transit services in Limestone County are coordinated by the Heart of Texas Rural Transportation District, managed by the Heart of Texas Council of Governments. This agency provides transportation options to residents, ensuring access to essential services and opportunities.

A. PLANNING PROCESS

General Introduction content for the section

1. Preparation of the Plan

The initial development of the Limestone County MAP began in 2010. Over the following years, the county undertook a detailed and inclusive process to identify hazards, assess risks, engage stakeholders, and develop actionable mitigation strategies. The following key activities were conducted during this phase:

- **March 28, 2011**: A countywide public workshop was held to introduce the mitigation planning process, educate attendees on the distinction between structural and non-structural mitigation, and solicit community input.
- **September 20, 2011**: A follow-up public meeting was convened to review draft materials and gather additional stakeholder feedback.
- **2014**: The initial MAP received "Approval Pending Adoption" status from the Texas Division of Emergency Management (TDEM) and the Federal Emergency Management Agency (FEMA). All participating jurisdictions subsequently adopted the plan through formal resolutions.

Pursuant to the five-year update requirement, Limestone County began revising the MAP in 2018. The revision process included securing funding, conducting new assessments, updating public engagement efforts, and integrating changes in risk conditions and community priorities.

- **2018**: Limestone County Emergency Management coordinated efforts to secure funding and initiate the plan update.
- **2019**: A revised draft of the plan was completed. Updated public input was gathered via community surveys, online postings, and a public meeting.
- **2020**: Limestone County formally adopted the updated and revised MAP upon received "Approval Pending Adoption" status from TDEM and FEMA. All participating jurisdictions subsequently adopted the plan through formal resolutions.

The current MAP was developed using the 4-step process defined in FEMA's Local Mitigation Planning Handbook (Federal Emergency Management Agency, 2023) as demonstrated in Figure 2. The schedule of activities included:

- **September 2024**: Limestone County began soliciting grant funding to support the update of the plan.
- **November 2024**: Limestone County solicited vendors for quotes/proposals to support the update of the plan.
- **December 2024**: Limestone County executed an agreement with the selected vendor for updating the plan.
- **March 24, 2025**: Limestone County established a local mitigation planning team to work directly with the vendor to review and update the plan.
- **March 28, 2025**: Mitigation Planning Team Meeting held (meeting notes located in Appendix 14).
- **April 5, 2025**: Draft MAP made available to the public for review and comment.
- **April 24, 2025**: Public meeting held in Groesbeck to solicit additional input.
- **May 2025**: MAP was submitted to TDEM for review.

Figure 2: Mitigation Planning Process (Federal Emergency Management Agency, 2023)

a. Planning Area & Resources

Limestone County and the participating jurisdictions determined that maintaining a multi-jurisdictional plan that encompassed the entirety of the county would best support each jurisdiction while limiting the demand on local resources that are already in heavy demand. Additionally, this determination was supported by each jurisdiction sharing similar needs and capabilities, facing similar threats and hazards, and having positive working relationships that have extended for more than two decades. The scope of the planning efforts for this update centered on considering how circumstances had changed since the previous plan was adopted. The structure of the plan was adapted to reflect an orderly approach to the Plan Review Checklist (Federal Emergency Management Agency, 2023).

b. Local Mitigation Planning Team

The following individuals comprise the local Mitigation Planning Team (MPT):

Name & Title	Jurisdiction/Agency
Hon. Richard Duncan, County Judge	Limestone County
Matt Groveton, Emergency Management Coordinator	Limestone County
Hon. Tonia Bruckner, Mayor	City of Coolidge
Chris Henson, City Manager	City of Groesbeck
Hon. Brooks Valls, Mayor	City of Kosse
Joshua Barron, City Manager	City of Mexia
Hon. James Tranam, Mayor	City of Tehuacana
Hon. Paul Miller, Mayor	City of Thornton
Victoria Winstead, City Manager	City of Thornton
Boyce Wilson, Owner	MBW Management
Buffy Waldie, Teacher	Mart ISD & City of Groesbeck resident

c. Participating Jurisdictions

Jurisdictions participating in this plan did so by seeking information from the local jurisdiction's stakeholders, providing direct input on the plan, developing mitigation actions, and soliciting involvement from the public. Participation for each jurisdiction was active, with MPT members coordinating directly with the vendor by telephone, email, and in-person meetings. Additionally, participating jurisdictions provided access to all plans and documents needed to effectively and efficiently update the plan. Participating jurisdictions include:

- Limestone County
- City of Coolidge
- City of Groesbeck
- City of Kosse
- City of Mexia
- City of Tehuacana
- City of Thornton

2. Local & Regional Participation

In the development of the MAP, a wide range of stakeholders were involved in a robust, participatory planning process. This included neighboring communities, local and regional agencies engaged in hazard mitigation, entities with regulatory authority over development, as well as representatives from businesses, academia, and non-profit organizations.

Limestone County collaborated with the cities of Coolidge, Groesbeck, Kosse, Mexia, Tehuacana, and Thornton as participating jurisdictions. These jurisdictions formed the core of the planning partnership and shared data, conducted joint public outreach, and coordinated mitigation actions. Surrounding counties were invited to participate in efforts to update the plan during face-to-face meetings conducted in the region, though none did. Hazard event data for the surrounding counties was used to further inform this plan.

Local fire departments, police departments, emergency medical services, Limestone Medical Center, Parkview Regional Hospital, school districts, businesses, houses of worship, non-profits, water departments, wastewater departments, and utility providers were encouraged through direct face-to-face contact to participate in the planning process as both members of the MPT and to provide public comment. Only one person opted to participate in the MPT.

Agencies with the authority to regulate development, including County Commissioners, City Council Members, and code enforcement officers provided insight into land use policies, floodplain management ordinances, and building codes.

3. Public Involvement

The public was given multiple opportunities to be involved in the Limestone County Hazard Mitigation Action Plan (MAP) planning process. Their feedback was actively sought and incorporated using several methods, in alignment with FEMA guidance outlined in the Local Mitigation Planning Handbook (Federal Emergency Management Agency, 2023) and Policy Guide (Federal Emergency Management Agency, 2022). The specific methods used in Limestone County include:

a. Public Meetings

The MPT held public meetings to educate and engage stakeholders and community members:

- An initial public workshop was held on March 28, 2011, to explain the planning process, mitigation, and hazard impacts.
- A follow-up public meeting occurred on September 20, 2011, where feedback and concerns were further discussed.
- Additional meetings were held during the 2019 and 2025 plan update process, which again invited public input.

Public notices were posted in public buildings, such as the Limestone County Courthouse, and at participating jurisdiction city halls.

b. Public Participation in the Mitigation Planning Team

Members of the public were afforded the opportunity to participate as contributing members on the MPT.

c. Community Survey

Surveys were distributed to residents by the MPT and later broadcast online and through social media. The survey results were included in the plan to inform risk perceptions and mitigation priorities from the public's perspective. Appendix 12 contains the survey utilized to collect input from the public. Appendix 13 provided an analysis of the data collected that informed the entirety of the MAP update.

d. Online & Physical Draft Access

A draft of the plan was:

- Posted online at the MBW Management website (http://www.mbwmanagement.com/) for public review and comment.
- Physically available at the County Courthouse and the Emergency Operations Center, ensuring those without internet access could also participate.

e. Incorporation of Public Feedback

The plan incorporated input from public meetings, surveys, and online/physical comment opportunities into:

- The risk assessment, prioritizing hazards based on public concern.
- The mitigation action plan, aligning strategies with community feedback.
- The plan maintenance section, including ongoing public involvement through future reviews and updates.

This robust public involvement process helped ensure the final mitigation plan reflected the community's priorities, needs, and risk perceptions, fulfilling the federal requirement for meaningful public participation.

4. Incorporation of Existing Plans, Studies, Reports, & Technical Information

The Limestone County Mitigation Planning Committee (LCMPC) undertook a systematic review of relevant plans, studies, and data sources to ensure the mitigation plan was both comprehensive and aligned with existing efforts. The following summarizes this process:

a. Identification & Collection

A wide array of documents was reviewed, including:

- Local emergency management plans,
- Building and fire codes,
- Floodplain ordinances,
- Electrical codes and zoning ordinances,
- Master plans and comprehensive plans,
- Economic development and demographic data,
- Historical hazard data and National Climatic Data Center records,
- FEMA Flood Insurance Rate Maps (FIRMs) and NFIP participation records,
- Historical disaster declaration records and past mitigation grant activity

b. Integration & Cross-Referencing

The plan directly incorporated these resources by:

- Aligning mitigation actions with existing responsibilities and capabilities outlined in emergency operations plans.
- Using current ordinances and codes to assess regulatory capabilities.
- Identifying gaps and opportunities for policy enhancements based on reviewed documents.
- Utilizing data to calculate loss estimates and identify vulnerabilities.
- Referencing building code effectiveness grading and NFIP community status to guide flood mitigation priorities.

c. Alignment with Regional & State Goals

The MAP aligned local mitigation priorities with regional goals established by the Heart of Texas Council of Governments (HOTCOG) in the original 2005 Regional Hazard Mitigation Action Plan and statewide mitigation strategies through:

- Participation in HOTCOG planning processes,
- Leveraging data and resources made available at the regional level, and
- Supporting broader resilience objectives through coordinated planning.

B. HAZARD ANALYSIS

Limestone County and its participating jurisdictions face a range of natural hazards that have historically impacted lives, property, and local economies. This hazard analysis evaluates the county's exposure to eight primary natural hazards — drought, extreme heat, flood, hail, tornadoes, severe wind, severe winter weather, and wildfires — based on historical data, local hazard experience, and expert assessment. Some of these hazards are interconnected (e.g., drought creates more fuel for wildfires) and some hazards may be characterized as elements of a broader hazard agent. For example, lengthy narratives on thunderstorms are omitted, as wind and hail, which are common during thunderstorms, are addressed at length in this MAP. It should be noted that some hazards, such as severe winter storms, may impact a large area yet cause little damage, while other hazards, such as tornadoes, may impact a small area but cause extensive damage.

Each hazard is examined in terms of probability, severity, potential impacts, and spatial extent across the county. By identifying and understanding these risks, this section provides the technical foundation for the development of targeted mitigation strategies designed to protect vulnerable populations, enhance community resilience, and reduce long-term losses. This risk-informed approach aligns with FEMA's Local Mitigation Planning Policy Guide (Federal Emergency Management Agency, 2022) and supports informed decision-making at all levels of local government. Appendix 15 provides the summary profiles of each hazard addressed in the plan for each community participating in the plan.

1. Drought

Table 1: Uniform Hazard Profile - Drought

Probability of Occurrence: LIKELY	**Potential Severity:** MINOR	**Risk Level:** HIGH
Warning Time: >12 hours	**Probable Duration:** Weeks to Months	**Seasonal Pattern:** Any season, intensity increases during summer months
Cascading Potential:	Water Shortage, Crop Failure, Widespread Animal Death, Unemployment, Business Shutdown	
Existing Warning Systems:	• Media Outlets • Social Media • National Weather Service	

Drought is a recurring and impactful natural hazard in Limestone County, posing significant risk to the region's agricultural economy, water resources, and overall community well-being. As a slow-onset hazard, drought conditions develop over time and can persist for extended periods, leading to widespread consequences.

The extent of drought in Limestone County can be characterized using the U.S. Drought Monitor classification system, which includes five levels of drought intensity. Based on historical data (National Oceanic and Atmospheric Administration, 2025), drought events throughout the county have ranged in intensity from D0 to D4 on the U.S. Drought Monitor Scale with the most common extent of drought being

classified as D2. The extent of drought is uniform across the planning area – jurisdictions can expect droughts ranging from D0 to D4.

Table 2: U.S. Drought Monitor Classifications

Drought Monitor Scale	Description
D0 (Abnormally Dry)	Precursor to drought; short-term dryness slowing planting and growth
D1 (Moderate Drought)	Some damage to crops and pastures; streams, reservoirs, or wells low
D2 (Severe Drought)	Crop or pasture losses likely; water shortages common
D3 (Extreme Drought)	Major crop/pasture losses; widespread water shortages or restrictions
D4 (Exceptional Drought)	Exceptional and widespread crop/pasture losses; emergency conditions

(National Oceanic and Atmospheric Administration, 2025)

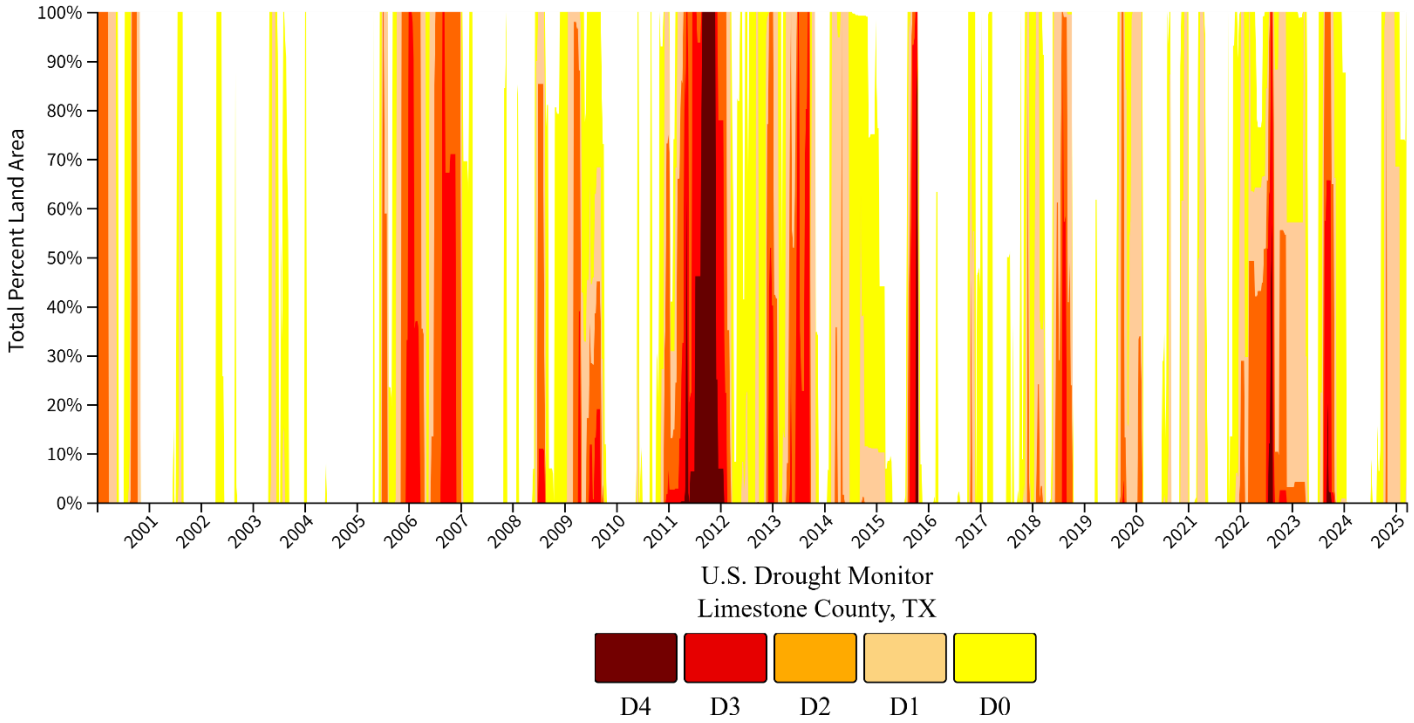


Figure 3: Historical Drought Conditions (National Oceanic and Atmospheric Administration, 2025)

a. Vulnerability

Vulnerabilities to drought within Limestone County include:

- **Agricultural vulnerability**: As a predominantly rural and agriculture-reliant county, extended drought significantly impacts livestock and crop yields.
- **Increased wildfire risk**: Drought conditions increase fuel loads, exacerbating the likelihood and severity of wildfires.
- **Water scarcity**: Reduced rainfall affects groundwater recharge, reservoir levels (e.g., Lake Limestone, Lake Mexia), and water quality.

- **Economic losses**: Drought has historically led to significant financial losses within the farming and ranching sectors.

Table 3: Vulnerable Critical Facilities - Drought

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital
All bodies of water within the county	

2. Extreme Heat

Table 4: Uniform Hazard Profile - Extreme Heat

Probability of Occurrence: LIKELY	**Potential Severity:** LIMITED	**Risk Level:** HIGH
Warning Time: >12 hours	**Probable Duration:** Days to Months	**Seasonal Pattern:** Late Spring through Early Fall
Cascading Potential:	Elderly And Homebound Individuals may need assistance, Heat stroke victims, Power outages/Rolling brownouts, Water shortages due to increased evaporation rate	
Existing Warning Systems:	• Media Outlets • Social Media • National Weather Service	

Extreme heat is a significant natural hazard for Limestone County, particularly during the summer months. This hazard is characterized by prolonged periods of high temperatures and elevated humidity levels that can have serious consequences for public health, infrastructure, agriculture, and energy systems.

In Limestone County, extreme heat is defined as temperatures exceeding the average high by 10 degrees or more and persisting over several days. Historical records and local testimony indicate that the county has experienced temperature extremes up to 114°F, with high humidity further exacerbating the effects.

To quantify the intensity of extreme heat events, the National Weather Service Heat Index is used, which considers both air temperature and relative humidity. Based on this index, the hazard intensity ranges in Limestone County may be classified as follows:

Table 5: Heat Index Scale with Expected Impacts

Heat Index (ºF)	Classification	Human Health Impacts	Agricultural Impacts
90 – 103	Caution	- Fatigue likely with prolonged exposure - Minimal risk with adequate hydration	- Initial signs of heat stress in livestock (reduced feed intake) - Delayed crop growth
104 – 124	Extreme Caution	- Increased risk of heat cramps and heat exhaustion - Heat illness possible in sensitive individuals	- Livestock experience moderate stress (reduced milk/egg production) - Crop yields decline due to dehydration and photosynthesis inefficiencies
125 – 129	Danger	- Heat stroke becomes possible with prolonged exposure or physical activity - High-risk for elderly, outdoor workers, and those without cooling	- High livestock mortality risk without shade/cooling - Severe moisture loss in crops; potential for wilting and fruit/flower drop
103+	Extreme Danger	- Heat stroke is highly likely; medical emergency - High likelihood of fatalities without prompt intervention	- Emergency conditions for agriculture - Potential for large-scale crop failure - Critical dehydration and death of livestock without mitigation

Given past occurrences, as identified in Appendix 1, the extent of extreme heat is uniform across the planning area and jurisdictions can anticipate ambient temperature extremes up to 114 degrees Fahrenheit with extreme heat events that fall within the Caution to Extreme Caution categories with the duration of each event lasting days to weeks, posing risks particularly to vulnerable populations such as the elderly, young children, individuals with chronic illnesses, and outdoor workers.

a. Vulnerability

Vulnerabilities to extreme heat within Limestone County include:

- **Health Impacts**: Increased risk of heat-related illnesses such as heat exhaustion and heat stroke.
- **Infrastructure**: Strain on electric grid due to higher cooling demands; potential for road surface deterioration.
- **Agriculture**: Stress on crops and livestock, leading to potential economic losses.
- **At-Risk Populations**: Populations with minimal or no access to air conditioning or healthcare services are more at risk.

Table 6: Vulnerable Critical Facilities - Extreme Heat

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital
All bodies of water within the county	

3. Flood

Table 7: Uniform Hazard Profile - Flood

Probability of Occurrence: LIKELY	**Potential Severity:** LIMITED	**Risk Level:** HIGH
Warning Time: >12 hours	**Probable Duration:** Minutes to Days	**Seasonal Pattern:** Late Fall through Spring
Cascading Potential:	Downed Trees, washed out roads and bridges, damaged buildings, displaced personnel, utility outages, slower response times (emergency services), city personnel diverted from normal everyday duties	
Existing Warning Systems:	• Media Outlets • Outdoor Warning Sirens • Emergency Alert System • Emergency Notification System • Social Media • National Weather Service	

Flooding is one of the most significant natural hazards in Limestone County, Texas, and occurs throughout Limestone County and its participating jurisdictions, with both flash flooding and riverine flooding presenting threats to people, property, and infrastructure. The hazard is particularly significant due to the county's proximity to the Navasota River, Lake Limestone, Lake Mexia, and various smaller streams and drainage systems.

a. Flash Flooding

Flash flooding in Limestone County is typically caused by slow-moving thunderstorms or heavy rainfall events. It can occur with little warning and is characterized by rapid onset and swift, high-velocity water movement. The County is especially vulnerable when drought conditions precede heavy rainfall, as hardened soil has limited capacity to absorb water. Flash floods can generate "walls" of water 2-4 feet high, with strong enough force to uproot trees, damage buildings, and sweep away vehicles and infrastructure.

b. Riverine Flooding

Riverine flooding, while less frequent than flash flooding, occurs when excessive rainfall over time causes rivers, such as the Navasota River, and other bodies of water to exceed their banks. These events typically develop more slowly but can cover larger areas and persist for longer. Riverine flood events in Limestone County have reached up to five feet in depth and 150 feet in width, extending over a mile in length in some cases.

c. Extent of Hazard

The extent of flood hazards across Limestone County is considered uniform, meaning all jurisdictions within the county are at risk of experiencing similar floodwater depths and floodplain widths. Flood depths can exceed five feet, and flood widths can extend beyond 150 feet, particularly during large-scale rainfall events. Firmettes for Limestone County are included in Appendix 2. A comprehensive list of flooding and flash flooding events for Limestone County is provided in Appendix 3. Repetitive Loss Properties are identified in Appendix 4.

d. Vulnerability

Vulnerabilities to flooding events within Limestone County include:

- **Health Impacts**: Potential for loss of life due to flooded structures and roadway flooding.
- **Infrastructure**: Damage to drainage infrastructure and roadways, particularly gravel and oil-top roadways located throughout the county.
- **Agriculture**: Loss of both crop and livestock due to drowning (livestock) and oversaturation (crop).
- **At-Risk Populations**: Populations located in or near identified floodplains.

Table 8: Vulnerable Critical Facilities - Flood

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

e. National Flood Insurance Program (NFIP) Participation

This flooding risk informs Limestone County's participation in the National Flood Insurance Program (NFIP), floodplain management efforts, and prioritization of mitigation actions that aim to reduce flood vulnerability, including drainage improvements, infrastructure hardening, and public awareness campaigns. Community Status Report findings for Limestone County and its jurisdictions, including Community Rating System (CRS) status, is presented in the table below:

Table 9: Community Status Report Data for Limestone County

Community Name	Initial FHBM	Initial FIRM	Current Effective Map Date	Reg-Emerg Date	Participating Community
Limestone County	10/25/1977	6/1/1987	9/16/2011	6/1/1987	Yes
City of Coolidge	6/11/1976	11/1/1989	9/16/2011	11/1/1989	Yes
City of Groesbeck	12/10/1976	10/15/1985	9/16/2011	10/15/1985	Yes
City of Kosse	6/11/1976	7/6/1982	9/16/2011	7/6/1982	Yes
City of Mexia	3/15/1974	8/1/1980	9/16/2011	8/1/1980	Yes
City of Thornton	11/5/1976	9/16/2011	9/16/2011	11/5/1977	No

(Federal Emergency Management Agency, 2022)

4. Hail

Table 10: Uniform Hazard Profile - Hail

Probability of Occurrence: LIKELY	**Potential Severity:** LIMITED	**Risk Level:** LIMITED
Warning Time: 3 – 6 Hours	**Probable Duration:** Minutes to Hours	**Seasonal Pattern:** Year Round
Cascading Potential:	Traffic hazards, slower response time (Emergency Services), damaged vehicles, damaged buildings, possible injuries and/or deaths	
Existing Warning Systems:	• Media Outlets • Outdoor Warning Sirens • Emergency Alert System • Emergency Notification System • National Weather Service	

Hail is a recurring severe weather hazard in Limestone County, primarily associated with strong thunderstorms. Hail forms when updrafts within storm systems carry raindrops into extremely cold atmospheric layers, where they freeze and accumulate into hailstones. Once the stones are too heavy to be supported by the updrafts, they fall to the ground, potentially causing significant damage.

The extent of hail in Limestone County is measured using the TORRO Hailstorm Intensity Scale (Tornado and Storm Research Organisation, 2025), which correlates hailstone diameter with potential damage. Based on historical data (hail events are documented in Appendix 5), hail events in the county have and may continue to reach up to 3.5 inches in diameter, corresponding to H8 on the TORRO Scale. This level of hail intensity is classified as very destructive, capable of causing widespread damage to vehicles, roofs, windows, aircraft, and agriculture. The extent of hail in the planning area is uniform with jurisdictions being able to expect hailstones with a TORRO value ranging from H0 to H8.

Table 11: TORRO Hailstorm Intensity Scale

Scale	Intensity Category	Typical Hail Diameter (mm)	Typical Damage Impacts
H0	Hard hail	5	No damage
H1	Potentially damaging	5-15	Slight general damage to plants and crops
H2	Significant	10-20	Significant damage to fruit, crops, and vegetation
H3	Severe	20-30	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60	Bodywork of grounded aircraft dented; brick walls pitted
H7	Destructive	50-75	Severe roof damage, risk of serious injuries
H8	Destructive	60-90	Severe damage to aircraft bodywork
H9	Super hailstorms	75-100	Extensive structural damage, Risk of severe or even fatal injuries to persons caught in the open
H10	Super hailstorms	>100	Extensive structural damage, Risk of severe or even fatal injuries to persons caught in the open

(Tornado and Storm Research Organisation, 2025)

Table 12: Relative Hail Size Chart (SAE)

Hail Size (inches)	TORRO Scale	Item of Relevant Size
1/4	H0	Pea
1/2	H1	Mothball, peanut
3/4	H2	Penny
7/8	H3	Nickel
1	H4	Quarter
1 1/4	H5	Half Dollar
1 1/2	H5	Ping pong ball
1 3/4	H6	Golf ball
2	H7	Egg, lime
2 1/2	H7	Tennis ball
2 3/4	H8	Baseball
3	H9	Apple, orange
4	H9	Softball
4 1/2	H10	Grapefruit
> 4 1/2	H10	

(National Oceanic and Atmospheric Administration, 2025)

a. Vulnerability

Vulnerabilities to hail events in Limestone County include:

- **Residential and Commercial Structures**: Roofs, windows, and siding are particularly vulnerable to large hailstones, especially in structures with aging or non-impact-resistant materials. Mobile homes, common in rural areas, are more susceptible to damage from large hail.

- **Critical Infrastructure**: Power lines and communication systems may be disrupted by hail damage, especially when accompanied by strong winds. Emergency response capabilities could be temporarily reduced if damage occurs to first responder facilities or equipment.
- **Agriculture**: Hail presents a major risk to crops such as corn, cotton, and hay, which are significant to Limestone County's rural economy. Livestock can be injured during exposure to severe hail events if adequate shelter is unavailable.
- **Vehicles and Equipment**: Vehicles left outdoors, including farm machinery and public safety vehicles, are at high risk of damage from large hail.
- **Socioeconomic Considerations**: With a poverty rate of approximately 19.1% and a median home value of $84,800, many residents may lack adequate insurance or financial resilience to recover from property losses. Rural populations may also face challenges in accessing rapid repairs and temporary housing assistance after damaging events.

Table 13: Vulnerable Critical Facilities - Hail

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

5. Severe Wind

Table 14: Uniform Hazard Profile - Severe Wind

Probability of Occurrence: LIKELY	**Potential Severity:** MINOR	**Risk Level:** HIGH
Warning Time: 6 – 12 Hours	**Probable Duration:** Minutes to Hours	**Seasonal Pattern:** Year Round
Cascading Potential:	Downed Trees and damaged buildings, displaced personnel, utility outages, slower response times (emergency services), city personnel diverted from normal everyday duties	
Existing Warning Systems:	• Media Outlets • Outdoor Warning Sirens • Emergency Alert System • Emergency Notification System • National Weather Service • Social media	

Severe wind is a significant natural hazard for Limestone County, Texas. Windstorms in this region are commonly associated with severe thunderstorms and may include straight-line winds, downbursts, microbursts, and macrobursts. These high-wind events can cause widespread damage to buildings, critical infrastructure, crops, and utilities across both rural and urban parts of the county. Severe wind is categorized by the Beaufort Wind Scale as depicted below:

Table 15: Beaufort Wind Scale

Force	Category	Wind Speed (knots)	Wind Speed (mph)	Impact
0	Calm	0	0	Smoke rises vertically
1	Light air	1-3	1-3	Smoke drifts with air
2	Light breeze	4-6	4-7	Weathervanes become active
3	Gentle breeze	7-10	8-12	Leaves and small twigs move
4	Moderate breeze	11-16	13-18	Small branches sway
5	Fresh breeze	17-21	19-24	Small trees sway
6	Strong breeze	22-27	25-31	Large branches sway
7	Near gale	28-33	32-38	Whole trees sway; difficult to walk
8	Gale	34-40	39-46	Twigs break off trees
9	Strong gale	41-47	47-54	Shingles blow off roofs
10	Storm	48-55	55-63	Trees uprooted; damage to buildings
11	Violent storm	56-63	64-73	Widespread damage
12	Hurricane	>63	>73	Violent destruction

(National Weather Service, 2022)

According to historical data, as presented in Appendix 6, windstorms with speeds of 50 to 80 knots (approximately 58 to 92 mph) are not uncommon. Limestone County can expect Force 11 winds in excess of 64 knots, in accordance with the Beaufort Wind Scale, throughout the planning area. The extent of severe windstorms is uniform throughout the planning region.

a. Vulnerability

Limestone County's vulnerabilities to severe winds are shaped by its demographic, structural, and geographic characteristics:

- **Aging Housing Stock and Manufactured Homes**: Many structures in the county—particularly older residential homes and mobile homes—are more susceptible to wind damage due to substandard anchoring or outdated construction standards.
- **Critical Infrastructure Exposure**: Public facilities such as schools, fire stations, and utilities may be vulnerable, especially where backup power or protective retrofits are lacking.
- **Economic Base and Agriculture**: The county's agricultural sector is at high risk from severe winds, which can destroy crops, damage equipment, and disrupt farming operations.
- **Power and Communication Lines**: Overhead lines are prone to being downed during wind events, leading to extended outages that affect emergency response, healthcare, and general community functioning.
- **Low-Income and Elderly Populations**: With nearly 20% of the population below the poverty line and another nearly 20% over the age of 65, vulnerable groups may have limited resources for preparedness and recovery.

Table 16: Vulnerable Critical Facilities - Severe Wind

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

6. Lightning, Thunderstorms, & Tornadoes

Table 17: Uniform Hazard Profile - Lightning, Thunderstorm, & Tornado

Probability of Occurrence: LIKELY	**Potential Severity:** SUBSTANTIAL	**Risk Level:** HIGH
Warning Time: Minimal or none	**Probable Duration:** Minutes to Hours	**Seasonal Pattern:** Year Round possibility; Most occur in April, June, and September
Cascading Potential:	Possible shut down of facilities and business, health facilities overwhelmed, possible need for shelter, disruption of essential services, interruption of primary and secondary roadways	
Existing Warning Systems:	• Media Outlets • Outdoor Warning Sirens • Emergency Alert System • Emergency Notification System • National Weather Service	

Thunderstorms, particularly those producing lightning, are a frequent and potentially hazardous occurrence in Limestone County, often accompanied by strong winds, hail, and flash flooding. Lightning is a deadly byproduct of thunderstorms and poses significant risk to life, property, and infrastructure.

While there is no standardized scale to measure lightning, the extent of associated thunderstorms can be evaluated through wind speeds (as high as 64 knots or greater) and hail size (up to 3.5 inches, classified as H8 on the TORRO scale) uniformly throughout the planning area. These conditions can severely impact homes, infrastructure, agriculture, and utilities.

Limestone County is located at the southernmost tip of Tornado Alley, and tornadoes are one of the most destructive natural hazards within the Heart of Texas region. They typically occur during spring and early summer but can form at any time of the year. Magnitude of tornadoes is measured along the Enhanced Fujita (EF) scale. The EF scale is driven by wind estimates, not measurements, based on the damage resulting from the winds. It uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to 28 different indicators. Based on historical data (tornado events are listed in Appendix 7), the extent of tornadoes in Limestone County is uniform – tornadoes up to an EF-4 on the Enhanced Fujita Scale can be expected.

Table 18: Enhanced Fujita Scale

EF Rating	3-second Gust (mph)
0	65-85
1	86-110
2	111-135
3	136-165
4	166-200
5	>200

(National Oceanic and Atmospheric Administration, 2025)

a. Vulnerability

Limestone County's vulnerabilities to thunderstorms, lightning, and tornadoes are shaped by its demographic, structural, and geographic characteristics and closely resemble the county's vulnerabilities to severe wind events.

- **Infrastructure**: Power infrastructure is especially susceptible to lightning strikes, leading to widespread outages.
- **Residential & Commercial Structures**: Residential and commercial buildings without lightning rods or surge protection are vulnerable to fire and electrical damage.
- **People Located Outdoors**: Outdoor workers, schoolchildren, and recreational users of county lakes (Lake Mexia and Lake Limestone) are at heightened risk during thunderstorm events.
- **Economy**: Economic losses from hail and wind damage to crops and structures are recurrent.

Table 19: Vulnerable Critical Facilities - Lightning, Thunderstorm, & Tornado

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

7. Severe Winter Weather

Table 20: Uniform Hazard Profile - Severe Winter Weather

Probability of Occurrence: LIKELY	**Potential Severity:** LIMITED	**Risk Level:** LIMITED
Warning Time: 6 – 12 Hours	**Probable Duration:** Minutes to Hours	**Seasonal Pattern:** November – March
Cascading Potential:	Possible need for shelters, elderly and homebound will need assistance, power outages, traffic hazards, slower response times (Emergency Services)	
Existing Warning Systems:	• Media Outlets • Emergency Alert System • Emergency Notification System • National Weather Service • Social media	

Severe winter weather poses a recurrent natural hazard in Limestone County, Texas, primarily in the form of freezing rain, sleet, ice accumulation, and occasional snowfall. While not as frequent or intense as in more northern regions, winter storms in this area can still produce significant disruptions to transportation, infrastructure, and public safety.

- **Ice Accumulations**: Freezing rain is the most common and dangerous form of winter precipitation in the area. Ice storms can cause hazardous travel conditions, damage to trees and utility lines, and prolonged power outages. Even a small accumulation of ice can create hazardous conditions.
- **Snowfall**: Snow accumulation is less frequent but can reach 4 to 8 inches during severe events. The entire county is susceptible to this range of snowfall, with the heaviest amounts typically reported in the northern half.
- **Wind Chill**: Winter storms often bring strong winds, which combined with low temperatures, can result in wind chills that amplify the risk of hypothermia and frostbite. Wind chill temperatures can approach or fall below 0°F during extreme events.

The magnitude of winter weather is measured utilizing the Winter Storm Severity Index (WSSI). The WSSI is constructed utilizing six factors: snow amount, snow load, ice accumulation, flash freeze, blowing snow, and ground blizzard. The WSSI is commonly utilized both as a predictive warning tool and reflective analysis resource.

Table 21: Winter Storm Severity Index (WSSI)

WSSI Descriptor	General Description of Impacts
None	No snow or ice forecast. No potential for ground blizzard conditions.
Limited	Small accumulations of snow or ice forecast. Minimal impacts, if any, expected. In general, society goes about their normal routine.
Minor	Roughly equated to NWS Advisory Level criteria. Minor disruptions, primarily to those who were not prepared. None to minimal recovery time needed.
Moderate	Roughly equated to NWS Warning Level criteria. Definite impacts to those with little preparation. Perhaps a day or two of recovery time for snow and/or ice accumulation events.
Major	Significant impacts, even with preparation. Typically, several days recovery time for snow and/or ice accumulation events.
Extreme	Historic. Widespread severe impacts. Many days to at least a week of recovery needed for snow and/or ice accumulation events.

(National Oceanic and Atmospheric Administration, 2025)

The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it feel much colder than ambient temperature and increases temperature-related risks during cold weather. The National Weather Service's Wind Chill Chart (National Oceanic and

Atmospheric Administration, 2025) identifies the relationship between ambient temperature, wind speed, and time until frostbite occurs.

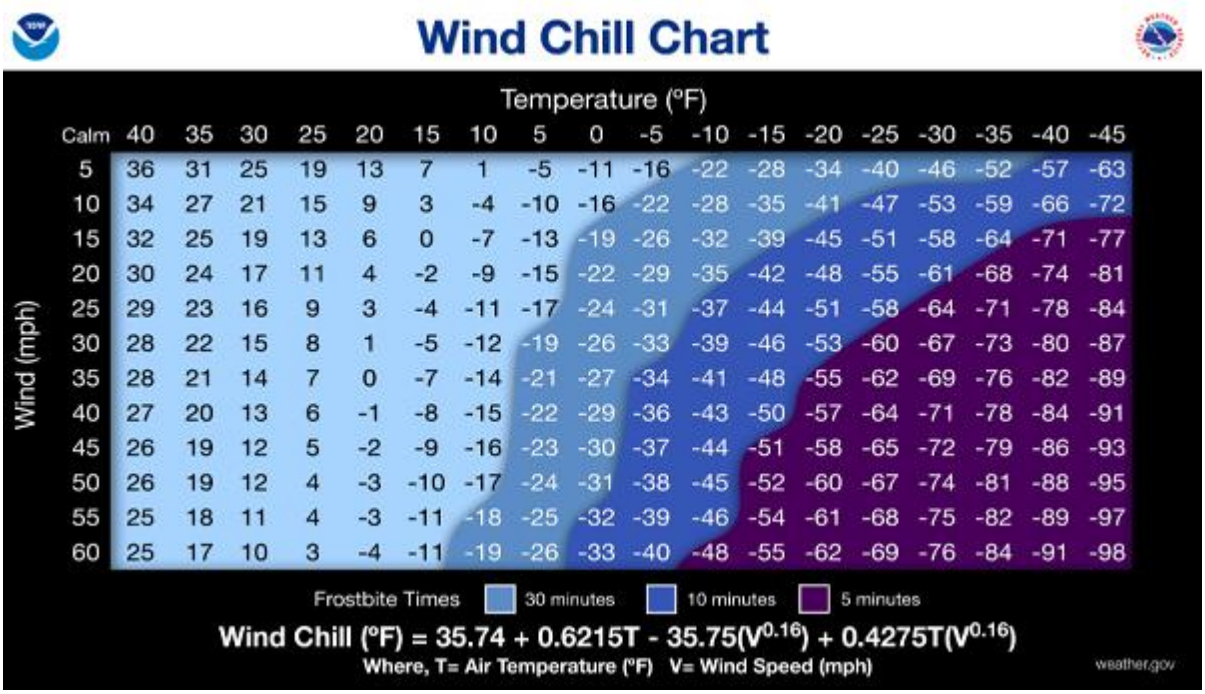


Figure 4: Wind Chill Chart (National Oceanic and Atmospheric Administration, 2025)

The extent of winter storms throughout the planning area is uniform – Limestone County and the jurisdictions participating in this plan can expect ice accumulations lasting more than 24 hours, snowfall ranging from 4-8 inches, and wind chills that fall below 0 degrees Fahrenheit. Based on the historical impacts of winter storms in the county (winter storm events are defined in Appendix 8), winter storm events ranging from Minor to Moderate in magnitude on the WSSI with 4-8 inches of ice or snow should be expected – the extent is uniform across the planning area.

a. Vulnerability

Limestone County's vulnerabilities to winter storms include:

- **Infrastructure Susceptibility**: Ice storms can down trees and power lines, disrupt electricity and communication. Roads, particularly in rural areas, become dangerous due to limited snow and ice removal capabilities.
- **Transportation Risks**: Icy conditions severely affect local roadways, increasing the risk of accidents and impeding emergency response.
- **Vulnerable Populations**: With nearly 20% of residents aged 65 and older, the county has a significant at-risk population who are more susceptible to cold-related illnesses such as hypothermia. Additionally, homeless and transient populations are at risk.
- **Rural and Isolated Areas**: Some residents live in remote areas with limited access to emergency services or warming centers during extreme cold events.
- **Economic Disruption**: Agriculture and ranching, central to the local economy, may suffer losses due to livestock exposure and delays in transportation of goods.

Table 22: Vulnerable Critical Facilities - Severe Winter Weather

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

8. Wildfires

Table 23: Uniform Hazard Profile - Wildfires

Probability of Occurrence: OCCASIONAL	**Potential Severity:** LIMITED	**Risk Level:** LIMITED
Warning Time: Minimal or none	**Probable Duration:** Hours to Days	**Seasonal Pattern:** Predominantly summer though frequency and severity throughout the year is increased by prolonged drought
Cascading Potential:	People with breathing problems will be affected, manpower shortage, loss of property and businesses, widespread crop destruction, widespread animal deaths	
Existing Warning Systems:	• Media Outlets • Emergency Alert System • Emergency Notification System • National Weather Service	

Wildfire is a significant natural hazard in Limestone County, particularly due to the county's rural composition, extensive grasslands, and frequent drought conditions. Wildfires in this region are typically classified as surface fires, though ground fires and crown fires can occur under extreme conditions.

Appendix 9 identifies the documented wildfires in Limestone County. These fires are mapped in Appendix 10. The Keetch-Byram Drought Index (KBDI), a key measure of drought and fire potential, is used to gauge fire danger. KBDI values range from 0 (no drought) to 800 (extreme drought), and wildfires become more likely as this number increases. Given local conditions, wildfires can escalate rapidly in intensity, especially during dry spells, high temperatures, and elevated wind events. Wildfires in

Limestone County have historically burned areas between 80 and 600 acres; Therefore, the risk of wildfire is uniform throughout the planning area – Limestone County and its cities can expect wildfires approaching or exceeding 600 acres.

a. Vulnerability

Several vulnerabilities make Limestone County susceptible to wildfire damage:

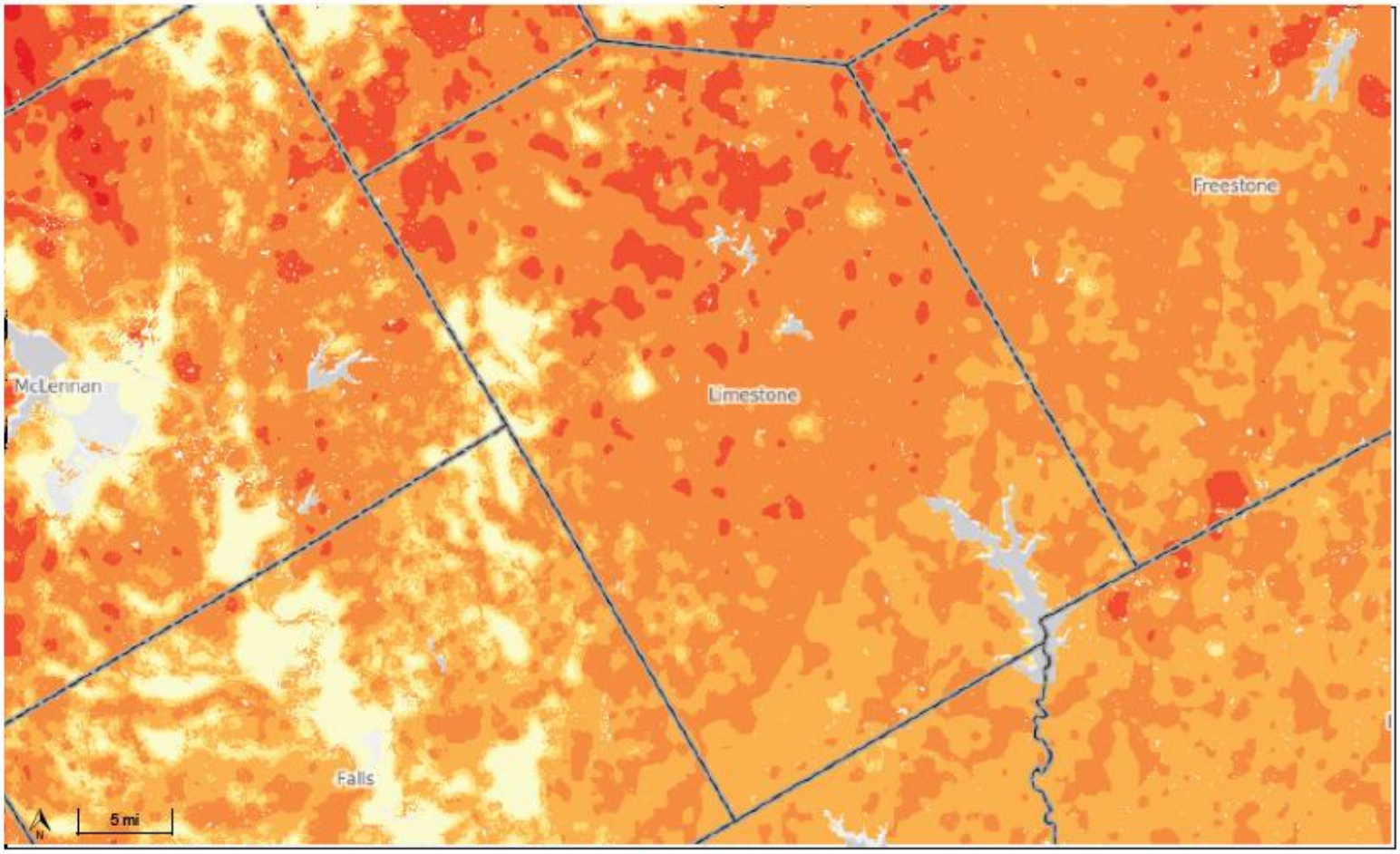
- **Wildland-Urban Interface (WUI)**: As development continues to expand into forested or brush-laden areas, homes, outbuildings, and critical infrastructure become increasingly vulnerable to encroaching wildfires. Limestone County WUI is mapped in Appendix 11.
- **Agricultural Losses**: A large portion of the county's economy is based on agriculture and ranching. Wildfires threaten pastureland, fencing, outbuildings, and livestock, resulting in direct economic losses.
- **Critical Infrastructure**: Power lines, water systems, and emergency access routes may be compromised during a wildfire event, complicating emergency response and community recovery.
- **Social Vulnerabilities**: Nearly 20% of the county's population lives in poverty, and another approximately 20% are aged 65 or older. These groups may have limited capacity to prepare for, respond to, or recover from wildfire events.
- **Drought Conditions**: Periodic droughts exacerbate wildfire risk by drying out vegetation and increasing fuel loads. This relationship underscores the importance of integrated drought and wildfire mitigation planning.

Table 24: Vulnerable Critical Facilities - Wildfires

Limestone County Courthouse	Mexia Police Department
Limestone County Sheriff's Office	Mexia ISD
Limestone County Emergency Operations Center	Mexia Water/Wastewater Department
Coolidge City Hall	Mexia State Supported Living Center
Coolidge Volunteer Fire Department	Tehuacana City Hall
Coolidge ISD	Tehuacana Volunteer Fire Department
Groesbeck City Hall	Thornton City Hall
Groesbeck Fire Department	Thornton Volunteer Fire Department
Groesbeck Police Department	East Lake Limestone Volunteer Fire Department
Groesbeck ISD	West Lake Limestone Volunteer Fire Department
Groesbeck Water/Wastewater Department	Lake Mexia Volunteer Fire Department
Kosse City Hall	Prairie Hill Volunteer Fire Department
Kosse Volunteer Fire Department	Shiloh Volunteer Fire Department
Mexia City Hall	Limestone Medical Center
Mexia Fire Department	Parkview Regional Hospital

Burn Probability

Limestone County



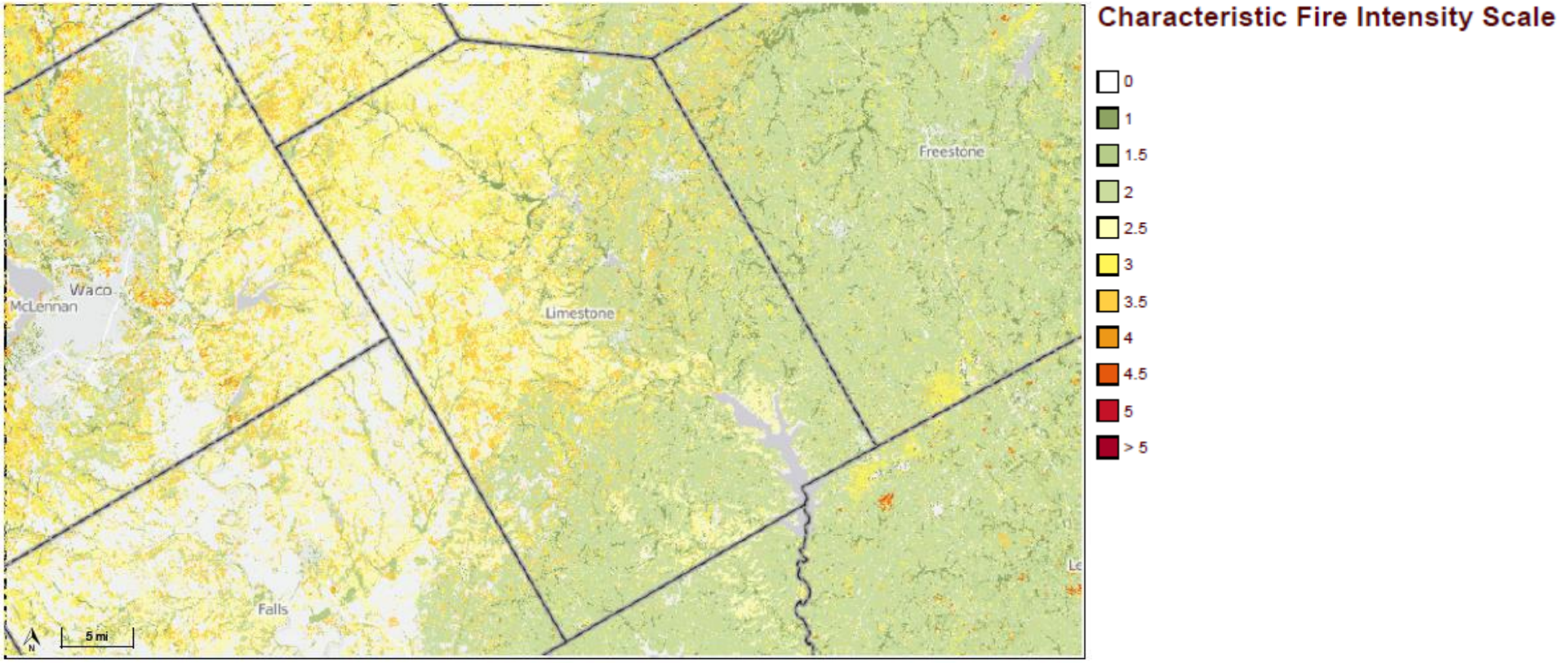
Report Created:
4/3/2025 - 12:09:08 AM

Texas Wildfire Risk Explorer
https://wrap.texaswildfirerisk.com

TEXAS A&M FOREST SERVICE

Characteristic Fire Intensity Scale

Limestone County



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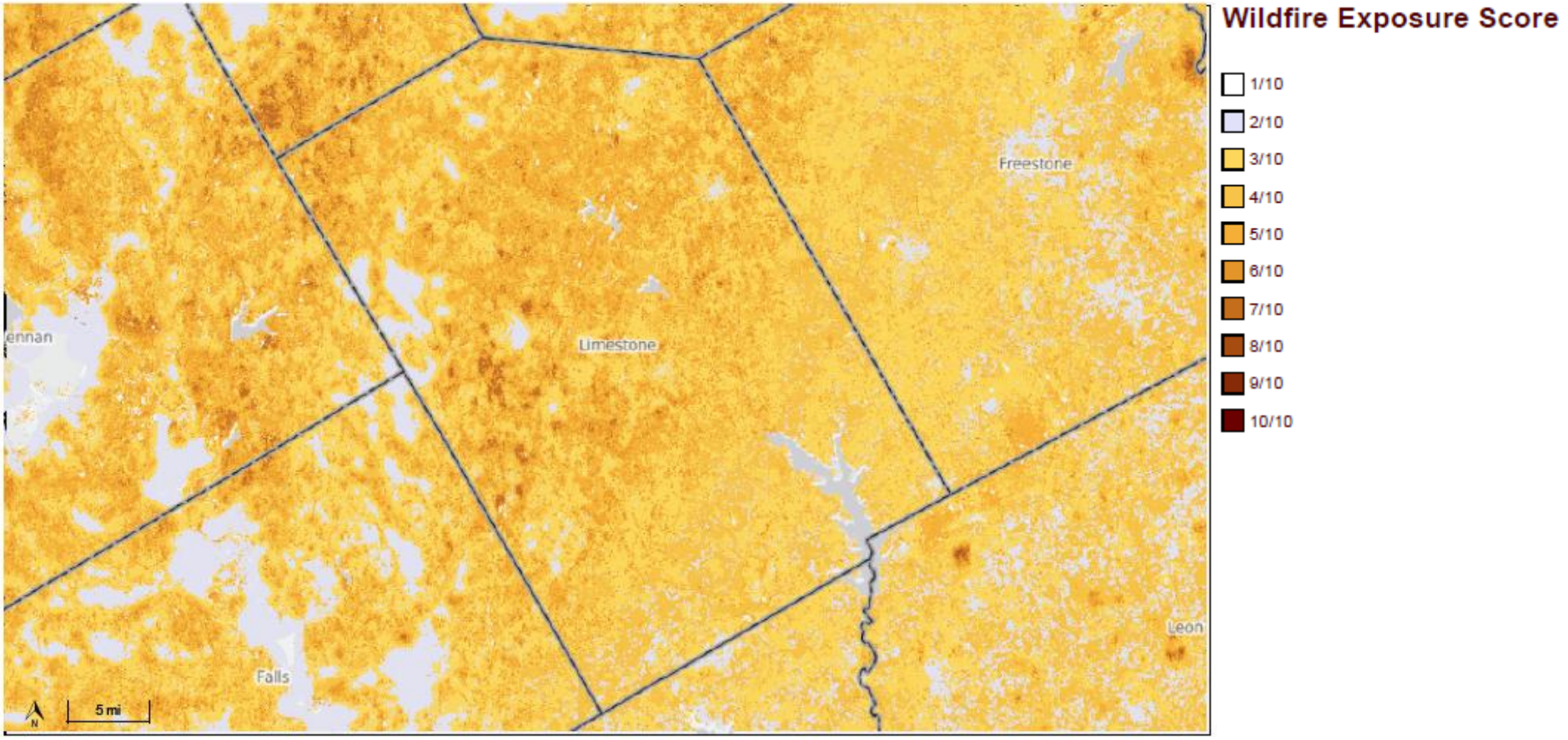
Texas Wildfire Risk Explorer
https://wrap.texaswildfirerisk.com

TEXAS A&M FOREST SERVICE

Wildfire Exposure Score

Limestone County



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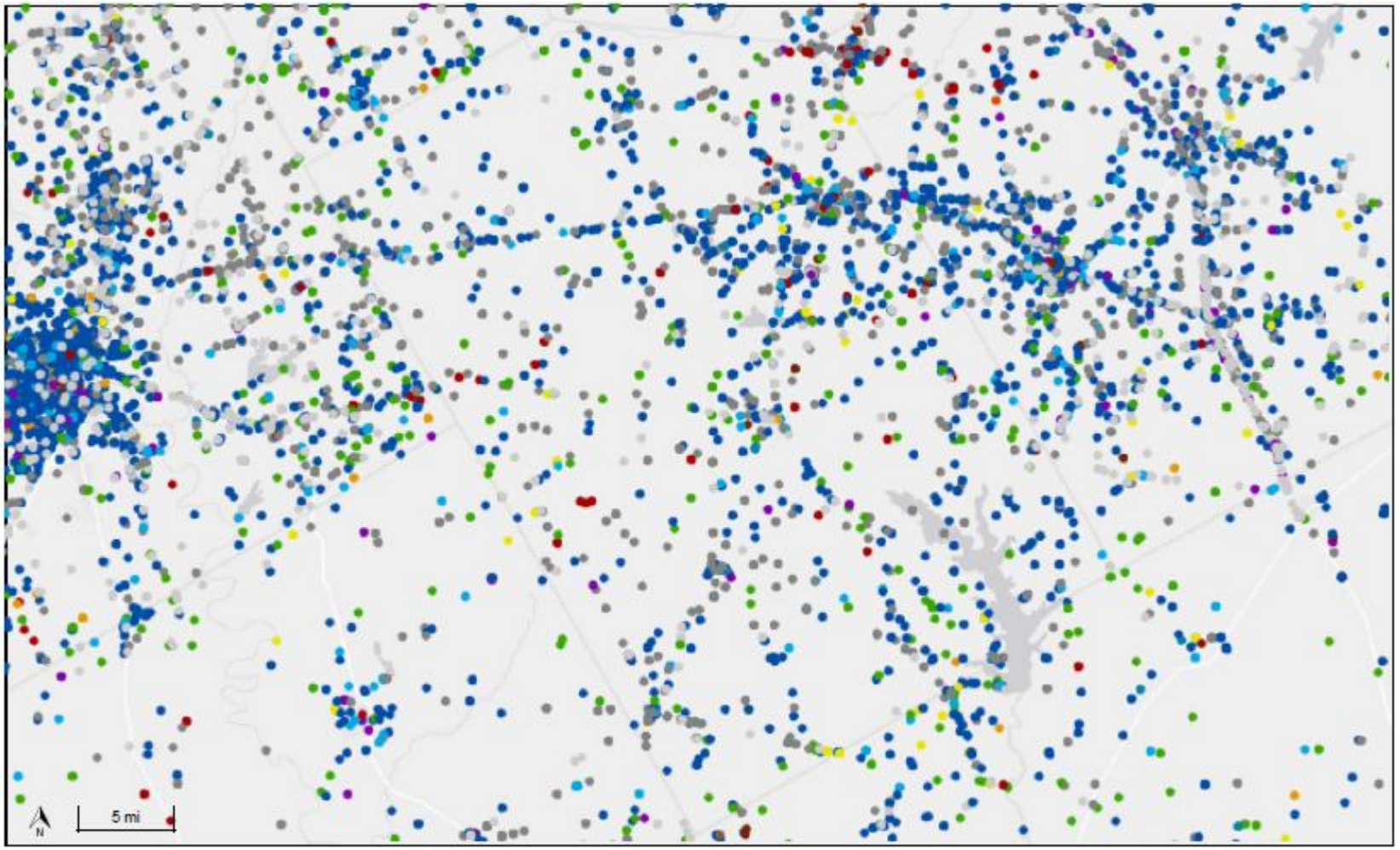
4/3/2025 - 12:10:14 AM

Texas Wildfire Risk Explorer
https://wrap.texaswildfirerisk.com

TEXAS A&M FOREST SERVICE

Wildfire Ignitions (2005-2024)

Limestone County



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Texas Wildfire Risk Explorer
https://wrap.texaswildfirerisk.com

TEXAS A&M FOREST SERVICE

9. Hazards Not Addressed in the Plan

Several hazards were assessed but not included in the plan due to Limestone County and its cities having either no risk or extremely limited risk that would be otherwise mitigated by the actions defined for other hazards that are assessed in the plan:

- **Dam Failure**: there are no high-hazard potential dams within Limestone County.
- **Earthquake**: there is an extremely limited risk of earthquakes occurring in Limestone County and no record of a past occurrence.
- **Hurricane**: While tropical depression tracks have passed through Limestone County, the risks associated with tropical depressions mirror that of tornados, flooding, and severe wind. As such, the mitigation actions addressing those hazards would also serve to mitigate the impacts of any tropical depression that were to pass through the county.
- **Landslide**: there is an extremely limited risk of landslide occurring in Limestone County and no record of a past occurrence.

C. MITIGATION STRATEGY

The mitigation strategy for Limestone County is a comprehensive, hazard-specific framework designed to reduce long-term risks to people, property, and the local economy from natural hazards. This strategy was developed by the Limestone County Mitigation Planning Team (MPT) and includes participation from all incorporated jurisdictions in the county: Coolidge, Groesbeck, Kosse, Mexia, Tehuacana, and Thornton. The overarching mission of hazard mitigation in Limestone County is:

To assist and empower the communities of Limestone County in proactively reducing their vulnerability to natural hazards and enhancing their resilience through sustained mitigation efforts.

1. Authorities, Policies, Programs, & Resources

Limestone County's mitigation strategy is supported by a comprehensive framework of authorities, policies, programs, and resources at the federal, state, and local levels, along with participation in national initiatives and grant programs.

a. Federal Authorities

- **Robert T. Stafford Disaster Relief and Emergency Assistance Act (DMA 2000 amendment, Section 322)**: Provides the statutory basis for local hazard mitigation planning.
- **FEMA regulations at 44 CFR Part 201.6**: Outline the requirements for local mitigation plans as a condition for receiving hazard mitigation assistance.

b. State Authorities

- **Texas Government Code, Chapter 418**: Provides state-level statutory basis for local emergency management activities, including hazard mitigation.

c. Hazard Mitigation Grant Program (HMGP) Projects

Limestone County received funding for the completion of this plan development through the Hazard Mitigation Grant Program in 2010. Pre-Disaster Mitigation funding secured in 2018 funded the update and revision of this plan.

d. Past Disaster Declarations Resulting in Public Assistance (PA) Funding

Since 2010, Limestone County has utilized Public Assistance Program Grant funds to recover from the impacts of the following disasters:

- DR-4029 Texas Wildfires

e. Project Impact, Pre-Disaster Mitigation, Hurricane Property Protection Mitigation

Limestone County utilized Pre-Disaster Mitigation funding acquired in 2018 to fund the update and revision of this MAP in 2019. Limestone County, or any participating jurisdiction, has not received funding from Project Impact or Hurricane Property Protection Mitigation funding. Limestone County and the participating jurisdictions are not located anywhere near the coastline.

f. Building & Fire Codes

Limestone County and the Cities of Coolidge, Groesbeck, Kosse, Tehuacana, and Thornton do not enforce building or fire codes. The City of Mexia enforces the following building and fire codes:

- 1994 Standard Codes; Building and Fire
- National Flood Insurance Program and Community Rating System

The responsibility of ensuring compliance with the code lies with the Code Enforcement Officer at each city. The permitting process starts with a citizen purchasing a building permit. At the time of purchase the building dimensions are given and inspected by the Code Enforcement Officer. The Code Enforcement Officer then follows up with a site visit to make sure buildings are in compliance with standard code, city codes and the National Flood Insurance Program. There have been no building variances given in the last 12 months.

g. Emergency Operations Plans

Limestone County coordinated the development of the multijurisdictional Emergency Operations Plan and serves as the plan's Primary Jurisdiction. The cities participating in this plan are signatories and secondary jurisdictions on the County's multijurisdictional Emergency Operations Plan.

h. Flood Plain Ordinances / Orders

Effective September 16, 2011, Limestone County Groesbeck, and Mexia require that all development within the 100-year floodplain to be permitted by the local jurisdiction. The responsibility of ensuring compliance with the code lies with the Code Enforcement Officer at each city. The permitting process starts with a citizen purchasing a building permit. At the time of purchase the building dimensions are given and inspected by the Code Enforcement Officer. The Code Enforcement Officer then follows up with a site visit to make sure buildings are in compliance with the National Flood Insurance Program. There have been no building variances given in the last 12 months.

i. Incorporated Planning Mechanisms

In summary, the following plans and activities were reviewed along with building codes, community development plans, master plans, floodplain management ordnances/orders, Building Code Effectiveness Grading Report, Hill County MAP, and Falls County MAP. The information was incorporated into this MAP by identifying hazards, mitigation goals, and timelines for improvement. All plans, including the Limestone County Emergency Operations Plan, will be incorporated by modification of this MAP and/or linking the mitigation action plan to these and other pertinent documents by way of the implementation of new or revising current policies, plans, and procedures. The Limestone County MAP has incorporated some features from other plans, ordinances/orders, and various technical information and input as deemed pertinent and relevant that may range from a mitigation action to a well-crafted turn of phrase.

2. Participation in the National Flood Insurance Program (NFIP)

As part of the local hazard mitigation strategy, NFIP participation is critical in managing flood risks, promoting sound floodplain development practices, and ensuring eligibility for federal disaster mitigation funding. The following table outlines each jurisdiction's participation in the NFIP:

Table 25: NFIP Participation in Limestone County

Community Name	Initial FHBM	Initial FIRM	Current Effective Map Date	Reg-Emerg Date	Participating Community
Limestone County	10/25/1977	6/1/1987	9/16/2011	6/1/1987	Yes
City of Coolidge	6/11/1976	11/1/1989	9/16/2011	11/1/1989	Yes
City of Groesbeck	12/10/1976	10/15/1985	9/16/2011	10/15/1985	Yes
City of Kosse	6/11/1976	7/6/1982	9/16/2011	7/6/1982	Yes
City of Mexia	3/15/1974	8/1/1980	9/16/2011	8/1/1980	Yes
City of Thornton	11/5/1976	9/16/2011	9/16/2011	11/5/1977	No

(Federal Emergency Management Agency, 2022)

Participating jurisdictions have formally adopted floodplain ordinances and maintain active participation in the NFIP to mitigate the financial and safety risks associated with flooding events. Additionally, each participating jurisdiction has appointed a floodplain administrator responsible for the implementation and enforcement of floodplain management requirements, including:

- Reviewing and regulating new and substantially improved construction in Special Flood Hazard Areas (SFHAs).
- Managing local floodplain data, including submitting map update requests to FEMA when necessary.
- Encouraging residents and developers to recognize flood risks and maintain flood insurance coverage.
- Conducting community education efforts to improve flood risk awareness and compliance.

3. Mitigation Goals

The goals below describe the focus areas the MPT has outlines to achieve the mitigation strategy. These goals represent the County's vision for reducing or avoiding losses from identified hazards. During the development of these goals, the MPT evaluated the goals from the 2019 plan update to determine if changes were warranted following a re-examination of risk and vulnerability within the county. Some mitigation goals from the 2019 plan have been included due to their continued relevance with no significant changes while others were removed. Additional goals were also identified by the MPT to reflect the ever-changing environments associated with mitigation planning. The State of Texas Hazard Mitigation Plan served as a foundation for the goal-setting process; Therefore, similarity exists between the goals defined in the State of Texas Hazard Mitigation Plan and the Limestone County MAP.

Goal 1: Protect public health and safety.

- Objective 1.1: Leverage community engagement to advise the public about health and safety precautions to guard against injury and loss of life from hazards.

- Objective 1.2: Maximize the utilization of the latest technology to provide adequate warning, communication, and mitigation of hazards events.
- Objective 1.3: Reduce adverse environmental, natural resource, and economic impacts from hazard events.
- Objective 1.4: Reduce the interruption of critical services and activities during and immediately following a hazard event.

Goal 2: Protect existing and new properties.

- Objective 2.1: Reduce repetitive losses to the National Flood Insurance Program
- Objective 2.2: Use the most cost-effective approaches to protect existing and new buildings and public infrastructure from hazards.
- Objective 2.3: Enact and enforce regulatory measures to ensure that development will not put people in harm's way or increase threats to existing and new properties.

Goal 3: Increase public understanding, support, and demand for hazard mitigation.

- Objective 3.1: Increase public awareness of the full range of natural and man-made hazards they face.
- Objective 3.2: Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards.
- Objective 3.3: Publicize and encourage the adoption of appropriate hazard mitigation measures.
- Objective 3.4: Encourage public policy to promote mitigation activities among the local jurisdictions.

Goal 4: Promote growth in a sustainable manner.

- Objective 4.1: Incorporate hazard mitigation into the long-range planning and development activities.
- Objective 4.2: Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.
- Objective 4.3: Utilize regulatory approaches to prevent the creation of future hazards to life and property.

Goal 5: Maximize the use of outside sources of funding.

- Objective 5.1: Maximize the use of outside sources of funding.
- Objective 5.2: Maximize participation of property owners in protecting their properties
- Objective 5.3: Maximize insurance coverage to provide financial protection against hazard events.
- Objective 5.4: Prioritize mitigation projects, based on cost effectiveness and starting with those sites facing the greatest threat to life, health and property.

4. Mitigation Actions (by Hazard and Participating Jurisdiction)

The following mitigation actions have been defined by each participating jurisdiction to this plan. The selection of mitigation actions considered:

- Past Hazard Mitigation Activities
- Cost-benefit review
- Comments and Concerns of Limestone County Citizens
- County Wide Meetings

- Community Surveys
- Comments left by citizens on the draft MAP.
- Hazard/Vulnerabilities Analyses
- Loss Estimates

Each mitigation action was developed by identifying several possible actions, conducting a benefit-cost review for each action, identifying organizations responsible for each action, identifying objectives relevant to actions, creating an implementation schedule, and prioritizing potential funding sources for each action. Prioritizing potential funding sources involved identifying the name, authority, and funding source of each program. Representatives of the participating jurisdictions, in coordination with the MPT and members of the public, chose what mitigation actions would go into this MAP. Three criteria were used to prioritize mitigation actions:

- Local Politics
- Local Budgetary Constraints
- Understanding of Jurisdiction and MPT Objectives

a. Flood Mitigation Action Items

Limestone County	Implement a program to keep water runoff areas free of debris to allow rapid runoff of flood waters
Location:	Countywide
Objective(s) Addressed:	1.4, 2.1, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$20,000.00
Potential Funding Source:	EMPG Grant Program, HMGP, Local Funds
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	12 months after securing funding
Effect on New Buildings:	This action will reduce the effects of flooding on new buildings by ensuring that floodwater can run off rapidly.
Effect on Existing Buildings:	This action will reduce the effects of flooding on existing buildings by ensuring that floodwaters can run off rapidly.
Cost Effectiveness:	Cost Effective – The cost of this project is relatively high, but the potential benefits would be reducing the property damage to homes, schools, businesses and critical infrastructure due to flooding.
Discussion: The proposed project would remove any debris that would obstruct the rapid runoff of a flash flood or other flooding event. By ensuring appropriate runoff, flood waters would be substantially less likely to damage new and existing structures or flood roadways.	

Limestone County	**Implement an aggressive public education campaign targeted toward improving participation in the National Flood Insurance Program.**
Location:	Countywide
Objective(s) Addressed:	2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.2, 5.3
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	Increased participation in the National Flood Insurance Program will reduce uninsured and underinsured property losses for new buildings within the county due to flooding.
Effect on Existing Buildings:	Increased participation in the National Flood Insurance Program will reduce uninsured and underinsured property losses for existing buildings within the county due to flooding.
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, the only advertisements for the NFIP are television and radio spots provided through the national FloodSmart program. Further supporting their initiatives through local public education activities would increase resident awareness of the NFIP. Increased awareness would likely lead to increased participation in the NFIP.	

Limestone County	**Flood proof critical facilities in A Zones, including attendant utility and sanitary facilities, to meet existing FEMA NFIP standards**
Location:	A Zones
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	New facilities within A Zones will be flood proof
Effect on Existing Buildings:	Existing facilities within A Zones will be flood proof
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, critical facilities within A Zones are not flood proof. This action will ensure that all critical facilities in such zones are retrofitted to be flood proof and watertight below the base flood elevation	

City of Coolidge	Relocate or flood proof critical facilities in A Zones, including attendant utility and sanitary facilities, to meet existing FEMA NFIP standards
Location:	A Zones
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	New facilities within A Zones will be flood proof
Effect on Existing Buildings:	Existing facilities within A Zones will be retrofitted to be flood proof or else relocated outside of the A Zones
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, critical facilities within A Zones are not flood proof. This action will ensure that all critical facilities in such zones are relocated outside of the zones or else retrofitted to be flood proof and watertight below the base flood elevation if the structure cannot be relocated.	

City of Coolidge	Purchase and install metal warning signs that show areas prone to flash flooding.
Location:	Citywide
Objective(s) Addressed:	1.1, 1.2, 1.3, 2.2, 3.1, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$7,000.00
Potential Funding Source:	PDM Grant, EMPG Grant, HMGP Grant
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	12 months after securing funding
Effect on New Buildings:	This action will reduce the effects of flooding on new buildings by increasing awareness of flood-prone areas within the city.
Effect on Existing Buildings:	This action will reduce the effects of flooding on existing buildings by reminding the citizens of the danger of flooding and taking proactive measures to protect life and property.
Cost Effectiveness:	Cost Effective – The cost of this project is low, but the potential benefits would be reducing the property damage and potential loss of life due to flooding.
Discussion: This would increase public awareness of flood hazards within the city while also reducing the potential for loss of life during flooding events.	

City of Coolidge	Catalog, evaluate, and update any floodplain regulations within the City to comply with the latest FEMA regulations
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – There is no cost for this project while having the benefit of reducing property damage due to flooding.
Discussion: This would prevent future construction of non-flood hardened structures in flood-prone areas. The prevention of such construction would decrease future property losses to floods.	

City of Groesbeck	Deepen and widen drainage ditches to eliminate flooding hazards.
Location:	Citywide
Objective(s) Addressed:	1.3, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$75,000.00
Potential Funding Source:	PDM Grant, HMGP Grant, EMPG Grant
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	Deeper and wider drainage ditches would allow for rapid runoff of storm water from properties with new buildings.
Effect on Existing Buildings:	Deeper and wider drainage ditches would allow for rapid runoff of storm water from properties with existing buildings.
Cost Effectiveness:	Cost Effective – The cost of this project is high, but the potential benefits would be reducing property damage due to flooding.
Discussion: This would minimize the possible effects of flooding in a low-lying area by ensuring the rapid water runoff can occur safely without damaging new or existing structures.	

City of Groesbeck	Establish coordinated flood warning education and outreach program for residents.
Location:	Citywide
Objective(s) Addressed:	1.1, 2.1, 2.2, 3.1, 3.2, 3.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	PDM Grant, EMPG Grant
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	Owners of new buildings would be more aware of their flooding risks and the potential mitigation actions that they can implement to reduce flooding losses.
Effect on Existing Buildings:	Owners of existing buildings would be more aware of their flooding risks and the potential mitigation actions that they can implement to reduce flooding losses.
Cost Effectiveness:	Cost Effective – The cost of this project is low, and the potential benefits would be reducing the property damage due to flooding by effectively educating residents on flood risks and appropriate prevention measures.
Discussion: This action would ensure that residents with new or existing structures are aware of the risk of flooding and what steps they can take to minimize or negate the likelihood of flooding damages.	

City of Groesbeck	Catalog, evaluate, and update any floodplain regulations within the City to comply with the latest FEMA regulations
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – There is no cost for this project while having the benefit of reducing property damage due to flooding.
Discussion: This would prevent future construction of non-flood hardened structures in flood-prone areas. The prevention of such construction would decrease future property losses to floods.	

City of Kosse	**Establish designated floodways and encroachment lines to prevent construction and landfilling in flood-prone areas.**
Location:	Citywide
Objective(s) Addressed:	1.3, 2.2, 2.3, 4.1, 4.3, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No Cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years
Effect on New Buildings:	The prevention of construction and landfilling would prevent new buildings from being raised in flood-prone areas.
Effect on Existing Buildings:	No effect on existing buildings.
Cost Effectiveness:	Cost Effective – There is no cost for this project and the potential benefits would be reducing the property damage due to flooding by preventing construction in flood-prone areas.
Discussion: This would minimize the possible effects of flooding in low-lying areas by preventing new buildings from being construction in areas with the greatest propensity for flooding.	

City of Kosse	**Require approved site control plans and storm water runoff plans before long-duration construction projects are permitted to begin.**
Location:	Citywide
Objective(s) Addressed:	1.3, 2.2, 2.3, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	Site control and storm water runoff plans would be required prior to new buildings being constructed; This would prevent the development of areas in a manner that would prohibit effective storm water runoff to reduce flooding.
Effect on Existing Buildings:	No effect on existing buildings.
Cost Effectiveness:	Cost Effective – There is no cost for this project and the potential benefits would be reducing the property damage to new structures due to flooding caused by inadequate storm water runoff.
Discussion: This would minimize the possible effects of flooding on newly constructed buildings by ensuring that stormwater runoff has been appropriately addressed for the property and type of construction project. This will be accomplished by ensuring that developers establish mechanisms that allow for effective storm water runoff, thereby preventing flooding in and around newly developed areas. Permits will not be granted until storm water drainage has been addressed appropriately.	

City of Kosse	Relocate or flood proof critical facilities in A Zones, including attendant utility and sanitary facilities, to meet existing FEMA NFIP standards
Location:	A Zones
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	New facilities within A Zones will be flood proof
Effect on Existing Buildings:	Existing facilities within A Zones will be retrofitted to be flood proof or else relocated outside of the A Zones
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, critical facilities within A Zones are not flood proof. This action will ensure that all critical facilities in such zones are relocated outside of the zones or else retrofitted to be flood proof and watertight below the base flood elevation if the structure cannot be relocated.	

City of Kosse	Catalog, evaluate, and update any floodplain regulations within the City to comply with the latest FEMA regulations
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – There is no cost for this project while having the benefit of reducing property damage due to flooding.
Discussion: This would prevent future construction of non-flood hardened structures in flood-prone areas. The prevention of such construction would decrease future property losses to floods.	

City of Mexia	Establish subdivision regulations that require flood-resistant construction methods be used in flood-prone areas.
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to utilize flood-resistant construction methods in order to minimize future flooding damage.
Effect on Existing Buildings:	Existing buildings would be required to implement flood-resistant construction methods if major remodeling or retrofitting is permitted in order to minimize future flooding damage.
Cost Effectiveness:	Cost Effective – There is no cost to this action and the potential benefits would be reducing the property damage due to flooding through regulation and sound flood-proofing practices.
Discussion: This would minimize the possible effects of flooding in flood-prone areas through effective structural and regulatory measures.	

City of Mexia	Catalog, evaluate, and update any floodplain regulations within the City to comply with the latest FEMA regulations
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – There is no cost for this project while having the benefit of reducing property damage due to flooding.
Discussion: This would prevent future construction of non-flood hardened structures in flood-prone areas. The prevention of such construction would decrease future property losses to floods.	

City of Mexia	Purchase and install automated floodgates at low water crossings
Location:	Citywide
Objective(s) Addressed:	1.1, 1.2, 1.3, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	To Be Determined
Potential Funding Source:	NFMF, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action would have no impact on new buildings.
Effect on Existing Buildings:	This action would have no impact on existing buildings.
Cost Effectiveness:	Cost Effective – The cost of this project is high, but the potential benefits would be reducing the potential for loss of life due to flooding.
Discussion: By installing automated floodgates at water crossings, residents would not be able to drive through areas with a high likelihood of flooding. This would drastically decrease the potential for the loss of life due to flooding events.	

City of Mexia	Relocate or flood proof critical facilities in A Zones, including attendant utility and sanitary facilities, to meet existing FEMA NFIP standards
Location:	A Zones
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	New facilities within A Zones will be flood proof
Effect on Existing Buildings:	Existing facilities within A Zones will be retrofitted to be flood proof or else relocated outside of the A Zones
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, critical facilities within A Zones are not flood proof. This action will ensure that all critical facilities in such zones are relocated outside of the zones or else retrofitted to be flood proof and watertight below the base flood elevation if the structure cannot be relocated.	

City of Tehuacana	Flood proof critical facilities in A Zones, including attendant utility and sanitary facilities, to meet existing FEMA standards
Location:	A Zones
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, Local Funds
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	New facilities within A Zones will be flood proof
Effect on Existing Buildings:	Existing facilities within A Zones will be flood proof
Cost Effectiveness:	Cost Effective – The cost of this project is low while providing a drastically increased potential to decrease property flood losses.
Discussion: Currently, critical facilities within A Zones are not flood proof. This action will ensure that all critical facilities in such zones are retrofitted to be flood proof and watertight below the base flood elevation	

City of Tehuacana	Catalog, evaluate, and update any floodplain regulations within the City to comply with the latest FEMA regulations
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – There is no cost for this project while having the benefit of reducing property damage due to flooding.
Discussion: This would prevent future construction of non-flood hardened structures in flood-prone areas. The prevention of such construction would decrease future property losses to floods.	

City of Thornton	Begin to participate in the National Flood Insurance Program (NFIP)
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$40,000
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings would be required to conform to the latest floodplain regulations, which would prevent buildings from being constructed in flood-prone areas and decrease property losses due to flooding.
Effect on Existing Buildings:	Existing buildings would be required to conform to existing and updated floodplain regulations, which would decrease property losses due to flooding and prevent reconstruction in flood-prone areas.
Cost Effectiveness:	Cost Effective – The benefit of NFIP participation outweighs the recurring cost of participating in the program.
Discussion: This would ensure that the city actively participates in the NFIP and can better support sustainable flood mitigation within the city.	

City of Thornton	Incorporate building codes that require flood-resistant construction techniques to be used when constructing new buildings or remodeling existing buildings for those properties located in flood-prone areas.
Location:	Citywide
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	New buildings would be required to implement flood-resistant construction techniques, decreasing future losses to property from flooding.
Effect on Existing Buildings:	Existing buildings would be required to implement flood-resistant construction techniques while undergoing remodeling, reducing future losses to existing buildings from flooding.
Cost Effectiveness:	Cost Effective – There is no cost for this project and the potential benefits would be reducing property damage due to flooding through structural modification.
Discussion: This action would provide a mechanism to enforce sound building practices to reduce flood losses for properties in areas with a high likelihood of flooding.	

City of Thornton	**Establish an open space preservation program that encourages rapid drainage of populated areas and limits construction of new structures within flood-prone areas.**
Location:	Citywide
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$85,000.00
Potential Funding Source:	NFMF, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	Properties containing new buildings would have the necessary drainage to prevent flooding damage while not damaging surrounding properties.
Effect on Existing Buildings:	Properties with existing buildings would have the necessary drainage to prevent flooding damage while not damaging surrounding properties.
Cost Effectiveness:	Cost Effective – The cost of this project is high, but the potential benefits would be reducing property damage due to flooding through sound environmental and land-use planning.
Discussion: A large area of the city is prone to flooding. By utilizing land use and environmental planning measures, the City can establish an open space preservation program that facilitates the runoff of storm waters and limits construction in areas that are the most prone to flooding.	

b. Severe Wind & Tornado Mitigation Action Items

As windstorms influence the same or similar types of hazards as tornadoes, including the threat to life and the destruction of property, mitigation actions identified for tornadoes will be effective in mitigating windstorm hazards as well. Thunderstorms and lightning are also considered in these areas.

Limestone County	Implement the Storm Ready Program from the National Weather Service
Objective(s) Addressed:	1.1,1.2, 2.1, 2.2, 3.1, 3.2,3.3, 3.4, 4.3, 5.2, 5.3, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$1,500.00
Potential Funding Source:	General Fund
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is relatively high, but the benefits would be to potentially reduce the risk of lives lost due to tornados.
Discussion: This program helps arm America's communities with the communication and safety skills needed to save lives and property–before and during the event. Storm Ready helps community leaders and emergency managers strengthen local safety programs. Storm-Ready communities are better prepared to save lives from the onslaught of severe weather through better planning, education, and awareness. No community is storm proof, but StormReady can help communities save lives.	

Limestone County	Construct a hardened "Community Safe Room"
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,500,000.00
Potential Funding Source:	PDM, HMGP, EMPG
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Three years after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the loss of life from tornados.
Discussion: By constructing a community "Safe Room" the County will be providing emergency shelter for its citizens who are unable to afford the cost of building a safe room for themselves, such as the elderly, disabled and the poor. This project will save untold numbers of lives in the area where the safe room is located.	

Limestone County	Retrofit existing buildings and implement design and construction for community shelters and/or public facilities.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of tornados on new buildings by adding and strengthening the shelters in the buildings.
Effect on Existing Buildings:	This action will reduce the effects of tornados on existing buildings by adding and strengthening the shelters in the buildings.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of tornados.
Discussion: Utilizing current specifications through FEMA publications, "safe" rooms will be installed at centralized critical facility locations	

City of Coolidge	Incorporate building codes that require wind-resistant construction techniques
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	Medium
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	New buildings would be required to implement wind-resistant construction techniques that minimize damage from high winds and tornadoes.
Effect on Existing Buildings:	This action would require existing buildings permitted for major modifications or repairs to implement wind-resistant construction techniques to mitigate damage from high winds and tornadoes.
Cost Effectiveness:	Cost Effective – There is no cost for the project outside of administrative staff time and the benefits would be to potentially reduce the damage to new and existing buildings from windstorms and tornados.
Discussion: This action would utilize regulatory measures to improve the structural capability for new and existing buildings to withstand windstorms and tornadoes. Currently no building codes within the city require the implementation of wind-resistant construction methods.	

City of Coolidge	**Develop and implement processes to ensure continued operation of utility infrastructure in easements and rights of ways remain free of obstruction from excessive debris and brush.**
Objective(s) Addressed:	1.3, 1.4, 2.1, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$30,000.00
Potential Funding Source:	HMGP, SHSP, PDM Grant, EMPG Grant, Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action would prevent the loss of utility and communication services to new buildings by reducing the likelihood of power and telephone outages due to downed lines caused by falling tree branches and other debris.
Effect on Existing Buildings:	This action would prevent the loss of utility and communication services to existing buildings by reducing the likelihood of power and telephone outages due to downed lines caused by falling tree branches and other debris.
Cost Effectiveness:	Cost Effective – The cost of this project is relatively high but the benefits would be to potentially reduce the loss of utility service and damage to new and existing buildings by reducing the potential for debris damage.
Discussion: The implementation of processes to ensure that tree branches, dead trees, and brush are cleared from utility infrastructure and rights of way would prevent much of the loss of utilities during windstorms and tornadoes. The reduction of potential debris also reduces the risk of damage to new and existing buildings.	

City of Groesbeck	Establish and conduct public education activities on the removal of potential debris near homes and businesses
Objective(s) Addressed:	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.3, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	General Fund, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of tornados and windstorms on new buildings by educating the owners on the most up to date methods of removing potential debris surrounding their home or business.
Effect on Existing Buildings:	This action will reduce the effects of tornados and windstorms on existing buildings by educating the owners on the most up to date methods for the removal of potential debris surrounding their home or business.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the damages caused by tornadoes and windstorms.
Discussion: By educating the public on effective debris reduction techniques, including the removal of trees and branches over structures and the effective storage of outdoor furniture and items, potential damages from these items when blown by the severe winds produced by windstorms or tornadoes will be reduced.	

City of Groesbeck	Establish a community forum to identify and address residential tornado and windstorm mitigation needs.
Objective(s) Addressed:	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.2, 5.3, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	This action will provide the owners of new buildings a mechanism to identify and address mitigation needs within the City, including structural modifications, land use planning, and regulatory measures.
Effect on Existing Buildings:	This action will provide the owners of existing buildings a mechanism to identify and address mitigation needs within the City, including structural modifications, land use planning, and regulatory measures.
Cost Effectiveness:	Cost Effective – The cost of this project is low, as the only cost is that of city administrative staff time, as compared to the potential benefits of reducing the risk to lives and property from tornados and windstorms.
Discussion: The use of a community forum increases public education and awareness of tornado and windstorm hazards while providing a mechanism for property owners and residents to discuss and share mitigation activities that they can incorporate to reduce the potential for the loss of life and property from tornadoes and windstorms.	

City of Kosse	Implement the utilization of advanced warning systems to notify residents of approaching windstorms and tornadoes
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$15,000.00
Potential Funding Source:	General Fund, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for loss of life caused by tornadoes and windstorms.
Discussion: Currently, the City relies on the county to alert its citizens on approaching storms. By establishing an agreement with the County, officials with the City of Kosse would have the capability to alert its residents of approaching weather hazards, including tornadoes and windstorms, without the delay in contacting the County.	

City of Kosse	**Implement local ordinances to require that utility lines from utility poles to residential and commercial structures be buried**
Objective(s) Addressed:	1.3, 2.1, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	The burial of utility lines from the service pole to the new building will reduce the damages caused by debris from tornadoes and windstorms
Effect on Existing Buildings:	Existing buildings permitted for structural modification would be required to bury utility lines in order to reduce potential damages from debris caused by tornadoes and windstorms
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage caused by tornadoes and windstorms.
Discussion: No city ordinances require the burial of utility lines. The implementation of such ordinances would decrease property damage by preventing the shearing of utility lines from new and existing structures. Furthermore, this would prevent the potential for loss of life due to electrocution by downed lines that are sheared from structures as a result of tornadoes and windstorms.	

City of Mexia	**Establish standard operating procedures to utilize social media platforms, including Facebook and Twitter, to disseminate warning of impending storm conditions.**
Objective(s) Addressed:	1.1, 1.2, 1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	3 months
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for loss of life caused by tornadoes and windstorms.
Discussion: Advanced warning for tornadoes and windstorms is accomplished by the county. By establishing local practices to utilize social media to provide additional information and alerts, residents will be more aware of the potential dangers of approaching storms, allowing them to take cover, thereby reducing the loss of life resulting from windstorms and tornadoes.	

City of Mexia	Acquire and integrate NOAA All-Hazards Weather Radios into school district campuses
Objective(s) Addressed:	1.1, 1.2, 1.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$3,000
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	Mexia ISD
Implementation Schedule:	12 months
Effect on New Buildings:	New school district buildings would be equipped with weather radios that would provide advanced warnings for severe windstorms and tornadoes
Effect on Existing Buildings:	Existing school district buildings would be equipped with weather radios that would provide advances warnings for windstorms and tornadoes
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage and loss of life caused by tornadoes and windstorms.
Discussion: Currently, the school district has one weather radio per campus. By expanding the number of weather radios throughout the campuses and ensuring that all school district buildings are equipped with a weather radio, advanced warnings will be received quicker than having to relay the message once received from a single point.	

City of Mexia	Establish public education initiatives to encourage the construction and utilization of safe rooms during severe weather events
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	Local funds, EMPG, SHSP, PDM, HMGP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New buildings will be more likely to construct a safe room within the building
Effect on Existing Buildings:	Existing buildings will be more likely to retrofit the building with a safe room
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage and loss of life caused by tornadoes and windstorms.
Discussion: No public education campaign exists within the city to encourage the construction and utilization of safe rooms to protect lives during severe weather events, including tornadoes and windstorms.	

City of Tehuacana	**Encourage and support, through public education, the avoidance of standing seam roofing to reduce wind damage to roofs**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	Local funds, SHSP, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months from the time funding is secured
Effect on New Buildings:	New buildings will be less likely to utilize roofing types that are the most susceptible to wind damage
Effect on Existing Buildings:	Existing buildings that require roofing repairs will be less likely to utilize roofing types that are the most susceptible to wind damage
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage caused by tornadoes and windstorms.
Discussion: Standing seam roofing has proven to be the most susceptible to wind damage, especially from windstorms and tornadoes. By educating the public on how prevent property damage by using alternate roofing types, overall property damage resulting from tornadoes and windstorms will be reduced.	

City of Tehuacana	**Implement a residential safe room program aimed at increasing the number of safe rooms in residences by leveraging grant funds**
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000,000
Potential Funding Source:	SHSP, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2 years from the time funding is secured
Effect on New Buildings:	New buildings could be equipped with safe rooms that protect from the loss of life
Effect on Existing Buildings:	Existing buildings could be retrofitted with safe rooms that protect from the loss of life
Cost Effectiveness:	Moderately Cost Effective – The cost of this project is high, but the potential benefit is reducing the potential for loss of life caused by tornadoes and windstorms.
Discussion: No safe room program is in place within the city. If grant funds can be secured to support such a program, new and existing buildings within the city could be enabled to incorporate safe rooms that reduce the potential for the loss of life resulting from windstorms and tornadoes.	

City of Thornton	**Leverage existing capabilities to disseminate sound personal mitigation practices to residents, including the mailing of materials with utility bills, including potential mitigation actions in newsletters, and posting information to website and social media platforms.**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	3 months
Effect on New Buildings:	Owners of new buildings will be more aware of the potential for windstorm and tornado occurrence and how to reduce the risk of property damage and loss of life through sound personal mitigation practices
Effect on Existing Buildings:	Owners of existing buildings will be more aware of the potential for windstorm and tornado activity and how to reduce the risk of property damage and loss of life through sound personal mitigation practices
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage and life safety concerns caused by tornadoes and windstorms.
Discussion: By enhancing public education initiatives within the city, residents will be more aware of the windstorm and tornado hazards that they face. Additionally, residents will be educated on how to prevent property damage and the loss of life resulting from tornadoes and windstorms.	

City of Thornton	**Support and encourage electrical utilities and communication service providers to use underground construction methods, where possible, to reduce power hazards, power outages, and communication outages resulting from tornadoes and windstorms**
Objective(s) Addressed:	1.3, 1.4, 2.2, 3.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	The loss of power and communications, damage from separated utility lines, and risk of electrocution following tornadoes and windstorms will be drastically reduced for new buildings.
Effect on Existing Buildings:	The loss of power and communications, damage from separated utility lines, and risk of electrocution following tornadoes and windstorms will be drastically reduced for existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the potential for property damage and life safety concerns caused by downed lines caused by tornadoes and windstorms.
Discussion: The City has no measures in place to encourage the burial of utility and communication lines. The burial of these lines aids in preventing outages and prevents electrocution from downed lines following tornadoes and windstorms.	

c. Wildfire Mitigation Action Items

Limestone County	Develop a county wildfire protection plan that addresses the specific wildfire-related concerns within each jurisdiction as well as the unincorporated areas and established actions to be implemented to reduce vulnerability and risk to wildfire losses.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$25,000
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	Emergency Management/Volunteer Fire Depts.
Implementation Schedule:	2 years after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through the education of how to protect buildings from wildfire
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through the education of how to protect buildings from wildfire
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Wildfire mitigation measures are not widely known in rural areas such as Limestone County. Developing a plan of action through working relationships with other agencies to include the Texas Forest Service would decrease the impact wildfires would have on the county through a more aggressive approach to combating the wildfires. The plan should contain specific actions to be taken that will decrease vulnerability and risk to wildfire losses, such as fuel reduction measures and other actions.	

Limestone County	Install fuels reduction and fire resistant landscaping at critical facilities.
Objective(s) Addressed:	1.1, 1.4, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000
Potential Funding Source:	General Fund, PDM Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings by ensuring the fuel for a wildfire is not near a building.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings by ensuring the fuel for a wildfire is not near a building.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: This action will reduce fuel loads at critical facilities while increase resiliency through added fire resistance.	

City of Coolidge	Lessen fire sources on public lands near residences by reducing the sources of ignition
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$3,000.00
Potential Funding Source:	General Fund
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	6 months
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings by removing sources of ignition from public lands near the buildings.
Effect on Existing Buildings:	This action will not reduce the effects of wildfire on existing buildings by removing fuels and sources of ignitions from public lands near the buildings.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: This program would remove ignition sources and fuel loads on public property near residential areas. This would decrease the likelihood of occurrence of wildfire damage to new and existing buildings while minimizing the impact to life safety.	

City of Coolidge	Create and implement a program to educate the public about reducing the fuel load around homes and buildings.
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	General Fund, EMPG, HMGP, SHSP, PDM
Lead Agency/Department Responsible:	Volunteer Fire Department
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings by ensuring that the fuel loads for wildfires are not around buildings.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings by ensuring that the fuel load for wildfires are not around buildings.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: This program would be to create and implement a program to educate the public through local print media and the internet about reducing the fuel load around homes and buildings.	

City of Groesbeck	Develop and design a program that places smoke detectors in the homes of the senior citizens and children
Objective(s) Addressed:	1.1, 1.2, 1.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	Wildfires
Estimated Cost:	High
Potential Funding Source:	$5,000.00
Lead Agency/Department Responsible:	EMPG Grant Program, HMGP
Implementation Schedule:	Volunteer Fire Department
Effect on New Buildings:	Two years after securing funding
Effect on Existing Buildings:	This action will reduce the effects of wildfire on new buildings through the installation of smoke alarms in buildings.
Cost Effectiveness:	This action will reduce the effects of wildfire on existing buildings through the installation of smoke alarms in buildings
Discussion: Wildfire mitigation measures are not widely known in small towns such as the City of Groesbeck. Installation of smoke alarms in all buildings would greatly increase the safety factor on the city through a more aggressive approach to combating the wildfires and preventing the loss of life due to wildfires.	

City of Groesbeck	Establish a vegetation management program to reduce the availability of dense fuels that contribute to wildfires
Objective(s) Addressed:	1.3, 1.4, 2.1, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$15,000.00
Potential Funding Source:	EMPG Grant Program, HMGP, SHSP, PDM
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings by removing large fuel loads that are present within the city.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings by removing large fuel loads that are present within the city.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Wildfire mitigation measures are not widely known in small towns such as the City of Groesbeck. By managing vegetation within the city and removing large fuel loads that contribute to wildfires, the likelihood of occurrence for wildfire will be decreased.	

City of Kosse	**Establish a fuel modification plan that addresses the modification of wildfire fuels within the wild land urban interface**
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 4.1, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	EMPG Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	City Maintenance Department/Volunteer Fire Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through long-term reduction of wildfire fuels.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through long-term reduction of wildfire fuels
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Establishing and implementing a plan for the long-term reduction and modification of wildfire fuels in the wild land urban interface will provide long-term mitigation of wildfire damages by reducing fuel loads and implementing heat-resistant vegetation that slows the movement of wildfires through the area.	

City of Kosse	**Conduct public education initiatives that target property owners and focus on the reduction and modification of wildfire fuels**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	Volunteer Fire Department
Implementation Schedule:	6 months are funding is secured
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through public education on the reduction and modification of wildfire fuels.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through public education on the reduction and modification of wildfire fuels
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: By educating residents on the reduction, removal, or modification of wildfire fuels around homes and businesses, the effects of wildfire on these properties will be reduced.	

City of Mexia	Utilize comprehensive public information capabilities, including print media, social networking, and websites to encourage active wildfire mitigation through vegetation management around homes and businesses
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	Fire Department
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through the public education on reducing wildfire fuels around businesses and homes.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through public education on reducing wildfire fuels around businesses and homes
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire through effective vegetation management.
Discussion: Effective vegetation management by property owners greatly reduced the risk and effects of wildfire on new and existing buildings. By educating the public on effective vegetation management activities, residents will possess the knowledge and capability of better managing vegetation to create defensible space around homes and businesses.	

City of Mexia	Begin participation in the FIREWISE program to increase public awareness of wildfire risks while reducing the risk of wildfires within the community
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No initial cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	Fire Department/City Administration
Implementation Schedule:	2 years
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through the education of the public on wildfire risk and mitigation.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through the education of the public on wildfire risk and mitigation
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Participation in the FIREWISE program provides number of resources to the city to combat wildfire occurrence and damages while providing mechanisms to educate the public on wildfire risk and mitigation techniques. Active participation in the program will decrease overall wildfire risk, including the potential for loss of life and property, through public education and the incorporation of mitigating techniques.	

City of Tehuacana	**Increase defensible space around public facilities to ensure continuity of government operations in the event of a wildfire occurrence**
Objective(s) Addressed:	1.3, 1.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	12 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through the increase of defensible space around existing public facilities
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire to the community
Discussion: By increasing defensible space around existing public facilities, the risk of interruption of government operations and loss of property can be drastically reduced.	

City of Tehuacana	**Implement open space preservation measures into existing master plans to reduce wildfire risk through effect land use planning**
Objective(s) Addressed:	1.3, 2.3, 4.1, 4.2, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through effective land use planning and fuel reduction.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through effective land use planning and fuel reduction
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: By incorporating open space preservation concepts that focus on wildfire prevention and fuel reduction into existing master plans, the future risk of wildfire occurrence and damage will be reduced.	

City of Thornton	Utilize social media capabilities, including Facebook and Twitter, to disseminate warning of approaching wildfires
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	3 months
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: As with tornadoes and other natural hazards, advanced warning is one of the most effective measures in preventing the loss of life. The use of social media will help residents to receive early warning of potential wildfire threats, thereby decreasing the potential for loss of life.	

City of Thornton	Establish emergency alerting capabilities, including the use of reverse-911 telephone notification systems, to provide advanced warning of wildfires that threaten life and property
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$15,000.00
Potential Funding Source:	EMPG Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	18 months after funding is secured
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through the advanced warning of potential wildfire threats.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through the advanced warning of potential wildfire threats
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Historically, existing emergency alerting technologies have not been used within the city to alert residents of impending wildfire impact. The use of emergency alerting tools would decrease the potential for property damage and loss of life from wildfires by decreasing notification time for residents to be alerted of an active wildfire that poses a threat to them or their property.	

City of Thornton	Encourage, through public education, the use of fire-resistant landscaping to establish defensible space around new and existing buildings
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	Volunteer Fire Department
Implementation Schedule:	3 months after funding is secured
Effect on New Buildings:	This action will reduce the effects of wildfire on new buildings through public education on fuel reduction and the implementation of defensible space.
Effect on Existing Buildings:	This action will reduce the effects of wildfire on existing buildings through public education on fuel reduction and the implementation of defensible space
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of wildfire.
Discussion: Utilizing public education activities to inform residents of the importance of defensible space and the utilization of fire-resistant landscaping to create defensible space will decrease fuel loads around new and existing buildings, thereby reducing the potential for loss of life and property from wildfires.	

d. Drought Mitigation Action Items

Limestone County	Create and implement a public education program on drought for the unincorporated areas of the county regarding water conservation and drought resistant landscaping.
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$400.00
Potential Funding Source:	General Fund
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	One year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings directly and could impact the building through future water conservation measures.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings directly and will impact the building through water conservation measures.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: During times of drought, the demand for potable water may exceed the capacity to produce sufficient potable water for domestic, sanitation and fire protection. The educational materials that will be displayed would educate the public about water conservation measures that they can take that would help ensure a sufficient supply of potable water for the public and Fire service.	

Limestone County	Develop and implement a drought contingency plan to include water conservation and mandatory water rationing.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$5,000.00
Potential Funding Source:	Local funds, SHSP, HMGP, PDM, EMPG
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will not reduce the effects of drought on new buildings directly but could impact the building through future building codes.
Effect on Existing Buildings:	This action will not reduce the effects of drought on existing buildings directly but could impact the building through future building codes.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: During times of drought, the demand for potable water may exceed the capacity to produce sufficient potable water for domestic, sanitation and fire protection. The drought contingency plan provides the ability to regulate the use of potable water for non-essential uses.	

City of Coolidge	Develop brochure to inform citizens on water conservation and safety precautions.
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$1,000
Potential Funding Source:	Local funds, HMGP, PDM, SHSP, EMPG
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	One year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Brochures would be developed from information from state and federal agencies by the City Administration, printed by the city and distributed to citizens through a mass mailing; they would also be on hand at public buildings.	

City of Coolidge	Develop and implement a drought contingency plan to include water conservation and mandatory water rationing.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, HMGP, PDM, EMPG, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: During times of drought, the demand for potable water for drinking, sanitation, Fire protection, may exceed the city's capacity to produce sufficient quantity. The drought contingency plan provides the ability to regulate the use of potable water for non-essential uses.	

City of Groesbeck	Plant drought resistant plants and trees around critical city facilities.
Objective(s) Addressed:	1.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$25,000.00
Potential Funding Source:	Local funds, PDM, HMGP
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: During times of drought, the demand for potable water for drinking, sanitation, Fire protection, may exceed the city's capacity to produce sufficient quantity. The planting of drought resistant plants and trees around critical facilities will reduce the demand for potable water for landscaping purposes.	

City of Groesbeck	Utilize public information capabilities, including social media and printed media, to inform the public of the importance of water conservation and water rationing during drought conditions
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating the public on the necessity for water conservation and rationing will decrease the consumption of water resources that rapidly become limited during drought.	

City of Kosse	Promote xeriscaping and low-water consumption activities through public education programs
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation and xeriscaping practices.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation and xeriscaping practices.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating the public on the necessity for water conservation and xeriscaping will decrease the consumption of water resources that rapidly become limited during drought.	

City of Kosse	Establish incentive programs that promote soil health, preserve soil moisture, and help to minimize the loss of crops and topsoil during drought events
Objective(s) Addressed:	1.2, 2.2, 3.3, 3.4, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$40,000
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2 years after securing funding
Effect on New Buildings:	No impact on new buildings
Effect on Existing Buildings:	No impact on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Agricultural losses make up most drought losses for the City. Utilizing an incentive program that encourages drought-resistant agricultural development and activities provides a mechanism to reduce the effects of drought within the area.	

City of Mexia	Encourage, through public education initiatives, agricultural drought management strategies that include the planning of crops that tolerate low moisture levels
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating local farmers on agricultural drought management strategies will lessen the economic effects of drought on the area	

City of Mexia	Establish ordinances to prioritize and control water use during drought events
Objective(s) Addressed:	1.3, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through the regulation of water use during times of drought.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through the regulation of water use during times of drought
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Regulating water use will help in protecting existing water resources that become limited during times of drought.	

City of Tehuacana	Educate the agricultural community on the availability of crop insurance programs that reduce economic losses during drought events
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.3, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating the agricultural community on the availability of crop insurance will decrease the economic losses that occur because of drought.	

City of Tehuacana	Promote planting windbreaks for farm crops and areas near building foundations
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000.00
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on the drying effects of wind during drought.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on the drying effects of wind during drought.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating the public on the how wind rapidly dries soil, resulting in foundation damages and the loss of crops, while encouraging the use of drought-resistant windbreaks to prevent the drying effect will decrease water consumption, property damages, and crop losses during drought events.	

City of Thornton	Incorporate drought-resistant water supply infrastructure into community development plans
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2 years after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through the long-term implementation of water conservation and drought-resistant infrastructure installation.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through the long-term implementation of water conservation and drought-resistant infrastructure installation.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Implementing the installation of water conserving and drought-resistant infrastructure into community plans will ensure the long-term drought mitigation occurs. The installation of water reclamation reservoirs that can be utilized to produce potable water will increase the availability of the already limited water resources during drought.	

City of Thornton	Distribute printed materials at City Hall to promote xeriscaping to reduce water use for landscaping purposes
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$800
Potential Funding Source:	Local funds, EMPG, HMGP, PDM
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	1 year after securing funding
Effect on New Buildings:	This action will reduce the effects of drought on new buildings through increased awareness on water conservation and xeriscaping practices.
Effect on Existing Buildings:	This action will reduce the effects of drought on existing buildings through increased awareness on water conservation and xeriscaping practices.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of drought.
Discussion: Educating the public on the necessity for water conservation and xeriscaping will decrease the consumption of water resources that rapidly become limited during drought.	

e. Extreme Heat Mitigation Action Items

Limestone County	Implement an extreme heat public awareness campaign to educate county residents about the effects and dangers of extreme heat.
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$1,000.00
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, HMGP, SHSP, local funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by educating residents about the effects and dangers of extreme heat.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by educating residents about the effects and dangers of extreme heat.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The project would increase public awareness and educate county residents about the effects and dangers of extreme heat and actions that can be taken to mitigate the effects.	

Limestone County	Retrofit existing shelters into "Cooling Centers" for special needs populations.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000
Potential Funding Source:	HMGP, SHSP, PDM, EMPG
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by eliminating potential overloading of circuits and potential fire danger.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by eliminating potential overloading of circuits and potential fire danger.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The project would identify a centralized location and retrofit the location with additional and more efficient air conditioners to better accommodate the facility.	

City of Coolidge	Install back-up power facilities at city-owned critical infrastructure.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000
Potential Funding Source:	PDM Grant Program, EMPG Grant Program, HMGP, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by eliminating damage to equipment and circuits from loss of power.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by eliminating damage to equipment and circuits from loss of power.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The installation of a generator at critical infrastructure would allow for continued operations during power outages that might occur from excessive heat events.	

City of Coolidge	Retrofit City Hall to create "Cooling Shelters" for Special Needs populations.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$1,000,000.00
Potential Funding Source:	HMGP, SHSP, PDM Grant Program, EMPG Grant Program,
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	No effect on new buildings.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by eliminating damage to equipment and circuits from loss of power.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The project would identify the centralized location with additional and more efficient air conditioners to better accommodate the facility so that it can be used as a cooling center for residents, particularly the at-risk population.	

City of Groesbeck	**Install back-up power facilities at city-owned critical infrastructure.**
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$250,000
Potential Funding Source:	SHSP, General Fund, PDM Grant Program, EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by eliminating damage to equipment and circuits from loss of power.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by eliminating damage to equipment and circuits from loss of power.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The installation of a generator would allow for continued operations during power outages that might occur during periods of extreme heat due to the heavy demand on the electrical grid, or from a windstorm and other disasters.	

City of Groesbeck	**Implement a public education program to educate residents about life safety concerns during extreme heat events**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, SHSP, General Fund, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by educating the residents of new buildings on the health and safety concerns related to extreme heat events.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by educating the residents of existing buildings on the health and safety concerns related to extreme heat events.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Educating the public about the risks associated with extreme heat events will reduce the potential for loss of life during such events.	

City of Kosse	Implement a public education program to educate residents about life safety concerns during extreme heat events
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, SHSP, General Fund, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by educating the residents of new buildings on the health and safety concerns related to extreme heat events.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by educating the residents of existing buildings on the health and safety concerns related to extreme heat events.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Educating the public about the risks associated with extreme heat events will reduce the potential for loss of life during such events.	

City of Kosse	Install quick-connect emergency generator hookups for air conditioning backup at critical facilities during electrical outages that result from increased electricity demand due to extreme heat
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$70,000
Potential Funding Source:	SHSP, General Fund, PDM Grant Program, EMPG Grant Program, HMGP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by eliminating damage to equipment and circuits from loss of power.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by eliminating damage to equipment and circuits from loss of power.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The installation of generator hookups would allow for continued operations during power outages that might occur during periods of extreme heat due to the heavy demand on the electrical grid, or from a windstorm and other disasters.	

City of Mexia	**Utilize new and existing public information assets to disseminate health and safety warnings to residents during extreme temperatures.**
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by alerting residents of health hazards due to extreme heat events.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by alerting residents of health hazards due to extreme heat events.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Alerting the public of extreme heat events and disseminating health and safety information will reduce the potential for loss of life during such events.	

City of Mexia	**Establish standard operating procedures to utilize capable facilities as cooling stations during extreme heat events**
Objective(s) Addressed:	1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	New public facilities may be utilized in a manner that will prevent illness and the loss of life
Effect on Existing Buildings:	Existing public facilities may be utilized in a manner that will prevent illness and the loss of life
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Utilizing capable public facilities as cooling stations during extreme heat events will aid in preventing the loss of life, as well as heat-related injuries and illnesses, to the most at-risk populations.	

City of Tehuacana	**Establish working relationships with local non-profit organizations to acquire air conditioning units for homes without air conditioning and without the means to purchase one.**
Objective(s) Addressed:	2.2, 3.1, 3.2, 3.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by providing a means for at-risk residents to acquire an air conditioner
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by providing a means for at-risk residents to acquire an air conditioner
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The lack of air conditioning during extreme heat events presents a major threat to human and pet life and health. By working with local organizations, these at-risk populations can prevent personal injury, illness or death by acquiring air conditioning for their homes when they have no other capability of doing so.	

City of Tehuacana	**Implement a public education program to educate residents about life safety concerns during extreme heat events**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, SHSP, General Fund, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of extreme heat on new buildings by educating the residents of new buildings on the health and safety concerns related to extreme heat events.
Effect on Existing Buildings:	This action will reduce the effects of extreme heat on existing buildings by educating the residents of existing buildings on the health and safety concerns related to extreme heat events.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Educating the public about the risks associated with extreme heat events will reduce the potential for loss of life during such events.	

City of Thornton	Establish procedures to utilize existing notification systems and public information assets to inform the public of extreme heat hazards
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	Residents of new buildings will be more aware of the health and safety concerns related to extreme heat events
Effect on Existing Buildings:	Residents of existing buildings will be more aware of the health and safety concerns related to extreme heat events
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: The city has no procedures in place to use emergency alerting capabilities to notify citizens of health and safety risks associated with extreme heat events. The utilization of such tools will assist in decreasing the risk to health, including the potential for loss of life, resulting from extreme heat events.	

City of Thornton	Implement and conduct public education programs to inform residents of the dangers of working or exercising outdoors during extreme heat events
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, SHSP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	No impact to new buildings
Effect on Existing Buildings:	No impact to existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of extreme heat.
Discussion: Educating the public of health risks associated with working or exercising outdoors will reduce the potential for loss of life and injury/illness from extreme heat events.	

f. Hail Mitigation Action Items

Limestone County	Install covered parking at county critical infrastructure to provide protection for county vehicles, employees, and residents from hail storms.
Objective(s) Addressed:	1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$60,000.00
Potential Funding Source:	HMGP, SHSP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of hail on new buildings by making the building more resistant to hail damage.
Effect on Existing Buildings:	This action will reduce the effects of hail on existing buildings through less damage to buildings and defraying cost of repairs
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: The project can be implemented by the County Commissioners and will provide great cost savings by preventing hail damage to county vehicles and potential injury to employees and residents by providing covered parking around critical infrastructure.	

Limestone County	Install hail resistant roofing on critical infrastructure buildings.
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$125,000
Potential Funding Source:	HMGP, Local Funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	This action will reduce the effects of hail on new buildings by making the building less resistant to hail damage
Effect on Existing Buildings:	This action will reduce the effects of hail on existing buildings through less damage to buildings and defraying cost of repairs
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: Damage from hail can be underestimated, although not preventable, damage and life safety risks from this hazard can be lessened by installing hail-resistant roofing on county-owned critical infrastructure facilities.	

City of Coolidge	**Build public overhead shelters for hailstorms throughout the city of Coolidge.**
Objective(s) Addressed:	1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$100,000.00
Potential Funding Source:	HMGP, General Fund, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: This program will lessen the potential injury to the citizens of Coolidge by providing them basic overhead cover in the event that they are caught out in a hailstorm, thereby reducing the potential loss of life and injury. The shelters would be implemented as an extension of existing public buildings and be constructed in the form of covered gathering areas.	

City of Coolidge	**Incorporate standard operating procedures for the activation of existing emergency alert systems as storms with a high propensity for hail approach**
Objective(s) Addressed:	1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: Utilizing existing advanced warning systems to alert residents of potential hailstorms will reduce the potential for loss of life or injuries resulting from hailstorms.	

City of Groesbeck	Update existing websites and social media platforms to address common types of hail damage and injuries and how to prevent them
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	This action will reduce the effects of hail on new buildings by educating residents on how to make the building more resistant to hail damage.
Effect on Existing Buildings:	This action will reduce the effects of hail on existing buildings through less damage to buildings and defraying cost of repairs by educating the public on how to prevent hail damage from occurring
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: This action will lessen the potential for property damage and injury by educating the public on ways to prevent such effects of hail.	

City of Groesbeck	Establish permit discounting mechanism to encourage the use of hardening products for roofing
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	New buildings will be more likely to be constructed with roofs capable of withstanding hail
Effect on Existing Buildings:	Existing buildings will be more likely to be retrofitted with hail-resistant roofing
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: By encouraging the construction or replacement of roofing with hardened roofing materials, the damages from hail can be reduced on both new and existing buildings.	

City of Kosse	Incorporate outdoor warning sirens
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$100,000.00
Potential Funding Source:	HMGP, PDM Grant Program, EMPG Grant Program, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	18 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: The installation of outdoor warning sirens will drastically reduce the potential for injury and the loss of life resulting from hail. In addition to installing warning sirens, the city will develop a policy for using the sirens to provide early notification of severe weather events, including hail.	

City of Kosse	Promote the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) through the existing public information capabilities to better document hail events to identify areas that are not properly protected.
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	Long-term effects would include the identification of new buildings lacking proper protection from hail damage
Effect on Existing Buildings:	Long-term effects would include the identification of existing buildings lacking proper protection form hail damage
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: Current hail documentation practices do not exist at the local level. Therefore, supportive information for decision-making and the implementation of protective measures is not available outside of the limited data provided by the NOAA Storm Event Database. By improving the capability to identify trends in hail within the city, it can better define appropriate mitigation actions to reduce damages to hail on new and existing buildings.	

City of Mexia	Increase public education and awareness of the potential severity of hailstorms
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of hail on new buildings by educating residents of the potential severity for hailstorms and the damages that hail can cause.
Effect on Existing Buildings:	This action will reduce the effects of hail on existing buildings by educating residents of the potential severity for hailstorms and the damages that hail can cause
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: This action will provide public education and awareness of potential hazards to life safety and building damage caused by hail. A better education population will likely take the recommended actions to reduce the risk to property and life.	

City of Mexia	Promote the use of impact-resistant roofing and window design to minimize structural damage resulting from hail
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will reduce the effects of hail on new buildings by promoting hail-resistant construction.
Effect on Existing Buildings:	This action will reduce the effects of hail on existing buildings by promoting hail-resistant construction techniques be used when remodeling or retrofitting existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: By promoting impact-resistant roofing and window design, the potential for hail damage to buildings that implement such designs will be reduced.	

City of Mexia	Increase public awareness of protective measures that can be taken during hailstorms to prevent injury and the loss of life
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: Increasing public awareness of protective measures from hail will reduce the potential for loss of life and injury resulting from hail.	

City of Mexia	Utilize housing authorities to educate residents on hailstorm mitigation measures
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	12 months
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: This action would utilize existing organizations to promote awareness of measures that can be taken to prevent damage to property and injury to persons by hail. This measure would have no cost to the city and would leverage existing relationships to increase public awareness.	

City of Tehuacana	Expand existing outdoor warning siren system
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$100,000.00
Potential Funding Source:	HMGP, PDM Grant Program, EMPG Grant Program, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	18 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: The expansion of the existing outdoor warning siren system will drastically reduce the potential for injury and the loss of life resulting from hail	

City of Tehuacana	Implement and conduct public education programs to inform residents of the dangers of hail
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, Local funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	Owners of new buildings will be more aware of construction methods that reduce damages from hail
Effect on Existing Buildings:	Owners of existing buildings will be more aware of construction methods that reduce damages from hail
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: Increasing public awareness of protective measures from hail will reduce the potential for loss of life and injury resulting from hail. Additionally, improving knowledge of hail-resistant construction materials and techniques will equip building owners with the capability of reducing hail damage to their property through building techniques and retrofitting.	

City of Thornton	Establish a community forum to identify and address residential hail mitigation needs
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	Mitigation measures for new buildings will be identified and potentially implemented by owners
Effect on Existing Buildings:	Mitigation measures for existing buildings will be identified and potentially implemented by owners
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: The development of a community capability to identify and address mitigation will assist in educating the public on mitigation techniques, encouraging property owners to implement mitigation techniques, and help to identify community-wide measure that need to be taken to reduce the risk to life and property from hail and other hazards.	

City of Thornton	Incorporate outdoor warning sirens
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$150,000.00
Potential Funding Source:	HMGP, PDM Grant Program, EMPG Grant Program, SHSP
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	18 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of hail.
Discussion: The installation of outdoor warning sirens will drastically reduce the potential for injury and the loss of life resulting from hail. In addition to installing warning sirens, the city will develop a policy for using the sirens to provide early notification of severe weather events, including hail.	

g. Winter Storm Mitigation Action Items

Limestone County	Establish a memoranda of understanding between the County and the Texas Department of Transportation to allow for the dissemination of warning messages on roadway signboards
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	12 months
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: The program will be used to purchase information signs to inform travelers of road conditions in other locations so they can make contingency plans. This will prevent travelers from becoming stranded between towns away from shelters.	

Limestone County	Establish procedures to maintain road sanding or salting capabilities during winter months when there is the greatest likelihood of winter storm events.
Objective(s) Addressed:	1.3, 1.4, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$60,000.00
Potential Funding Source:	HMGP, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	County Commissioners
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: The procedures would establish a capability for reducing the risk to life from severe weather events by ensuring that affected roads were sanded or salted when ice or snow accumulates.	

City of Coolidge	Implement and conduct public education programs to inform residents of the dangers of winter storms
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	HMGP, Local Funds, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This action will not reduce the effects of winter storm on new buildings.
Effect on Existing Buildings:	This action will not reduce the effects of winter storms on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: The programs would inform residents of the health and safety hazards caused by winter storms. By educating the public, the potential for loss of life, illness and injury will be decreased.	

City of Coolidge	Enhance early warning system by providing targeted facilities with weather radios.
Objective(s) Addressed:	1.1, 1.2, 2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$500.00
Potential Funding Source:	Local Funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2 months after securing funding
Effect on New Buildings:	This project will mitigate the effects of winter storms on new buildings by providing early warning of Winter Storms thereby permitting owners to take appropriate measures to reduce the effects of the storm.
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by providing early warning of Winter Storms thereby permitting owners to take appropriate measures to reduce the effects of the storm.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project is to enhance early warning system by providing weather radios to critical facilities that will allow appropriate measures to be taken to mitigate the potential damage that winter storms can cause.	

City of Groesbeck	Purchase back-up generators to maintain power to city hall.
Objective(s) Addressed:	1.2,1.4,2.2, 5.1, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$85,000.00
Potential Funding Source:	HMGP, SHSP, General Fund, PDM Grant Program, EMPG Grant Program
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	Two years after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by providing emergency power to the Groesbeck City Hall.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project is to enhance citizen safety by providing emergency generator in the event of a winter storm that may make travel conditions too hazardous for staff to leave City Hall. This project would also ensure the continuity of government, including emergency services, during winter storm events.	

City of Groesbeck	Establish road clearance and closure protocols to ensure that passable roads are deiced and hazardous roads are closed during winter storm events
Objective(s) Addressed:	1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Local funds
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	12 months
Effect on New Buildings:	This action will not reduce the effects of winter storm on new buildings.
Effect on Existing Buildings:	This action will not reduce the effects of winter storms on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: The program would establish standard operating practices that would ensure the protection of life and property by closing unsafe roads and deicing roads during winter storm events.	

City of Kosse	**Support and encourage the burial of power lines in new and existing subdivisions to alleviate downed power lines.**
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Not applicable
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	This project will mitigate the effects of winter storms on new buildings by preventing snow and ice from accumulating on nearby power lines and causing those lines to break.
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by preventing snow and ice from accumulating on nearby power lines and causing those lines to break.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project is to support and encourage utility provider decisions for the burial of power lines in new and existing subdivisions. This would alleviate the event of downed power lines due to ice accumulation during Winter Storms.	

City of Kosse	**Implement vegetation management ordinances that require the removal of branches and limbs that are at risk of collapse under ice accumulation in order to prevent injury, loss of life, damage to property, or obstruction of roadways.**
Objective(s) Addressed:	1.3, 2.2, 2.3, 3.4, 4.1, 4.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Not applicable
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months
Effect on New Buildings:	This project will mitigate the effects of winter storms on new buildings by reducing damages from falling limbs, branches, and trees under ice loads
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by reducing damages from falling limbs, branches, and trees under ice loads
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project will implement an ordinance that required that property owners manage vegetation to ensure that trees, branches and limbs that are not capable of withstanding ice accumulation are removed so that they do not pose a risk to life or property.	

City of Mexia	Support and encourage electric and communication providers to ensure that above-ground transmission lines continue to be functional under ice loading from winter storms
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 3.4, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Not applicable
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months
Effect on New Buildings:	This project will mitigate the effects of winter storms on new buildings by preventing snow and ice from accumulating on nearby power lines and causing those lines to break.
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by preventing snow and ice from accumulating on nearby power lines and causing those lines to break.
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project is to support and encourage utility providers to ensure that transmission lines are capable of withstanding ice loading, thereby preventing interruption of service. This would alleviate the event of downed power lines due to ice accumulation during winter storms.	

City of Mexia	Utilize existing public preparedness activities, including those activities of the CERT program, to inform and encourage citizens to implement mitigation actions to prevent the loss of life and property during winter storms
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Not applicable
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	3 months
Effect on New Buildings:	Owners and residents of new buildings will be more knowledgeable of ways to reduce the damage to or loss of property
Effect on Existing Buildings:	Owners and residents of existing buildings will be more knowledgeable of ways to reduce the damage to or loss of property
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This action will utilize public education activities to encourage residents and property owners to take appropriate actions to protect their property while minimizing exposure to winter storms. This will reduce the potential for loss of life and property damage resulting from winter storms.	

City of Tehuacana	**Implement public awareness programs that educate residents on the importance of having and using NOAA All-Hazards weather radios**
Objective(s) Addressed:	1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4, 4.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$2,000
Potential Funding Source:	EMPG, SHSP, PDM, HMGP, Local funds
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project will educate the public on the importance of receiving early notifications from the National Weather Service using weather radios. Advanced notification will reduce the loss of life from winter storm events.	

City of Tehuacana	**Establish standard operating procedures to utilize available public buildings as emergency warming areas during winter storms**
Objective(s) Addressed:	1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	No cost
Potential Funding Source:	Not applicable
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	6 months
Effect on New Buildings:	New public buildings may be used as emergency warming stations during winter storms
Effect on Existing Buildings:	Existing public buildings may be used as emergency warming stations during winter storms
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project will leverage new and existing public facilities as emergency warming stations to provide protection from the cold to residents. No processes are currently in place by the city to provide warming stations to residents. The provision of warming stations would decrease the potential for loss of life, injury, and illness due to winter storms.	

City of Thornton	Implement a program to trim trees and remove vegetative debris in the right of way
Objective(s) Addressed:	1.3, 1.4, 2.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$40,000
Potential Funding Source:	HMGP, PDM, SHSP, EMPG
Lead Agency/Department Responsible:	City Maintenance Department
Implementation Schedule:	6 months after securing funding
Effect on New Buildings:	This project will mitigate the effects of winter storms on new buildings by preventing vegetative debris from falling and severing power lines, which can cause damage to buildings
Effect on Existing Buildings:	This project will mitigate the effects of winter storms on existing buildings by preventing vegetative debris from falling and severing power lines, which can cause damage to buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project will remove tree limbs, branches, and dead trees, as well as other vegetative debris that can cause the interruption of electrical service and damage to homes. The interruption of electrical service during winter storms can present a threat to health and life. Furthermore, this project would reduce roadway hazards to drivers during winter storms, further preventing injury and loss of life.	

City of Thornton	Establish a volunteer outreach program to identify vulnerable populations, including the elderly and disabled, that need assistance during severe weather events
Objective(s) Addressed:	1.1, 3.1, 3.2, 3.3, 5.1, 5.2, 5.4
Priority (High, Medium, Low):	High
Estimated Cost:	$10,000
Potential Funding Source:	SHSP, EMPG
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	12 months after securing funding
Effect on New Buildings:	No effect on new buildings
Effect on Existing Buildings:	No effect on existing buildings
Cost Effectiveness:	Cost Effective – The cost of this project is low compared to the potential benefits of reducing the effects of a winter storm.
Discussion: This project would leverage volunteer resources within the city to identify and provide assistance to vulnerable populations within the city during winter storms. These activities would reduce the potential for loss of life due to winter storms.	

D. PLAN MAINTENANCE

This section of the plan outlines a structured, ongoing process for ensuring the plan remains current, effective, and integrated into local operations and planning mechanisms. This section is divided into three key components: continued participation of local jurisdictions and the public; monitoring, evaluation, and update of the plan; and integration of the MAP into other planning mechanisms.

1. Continued Participation

Limestone County and its participating jurisdictions have established a clear strategy for maintaining public participation after the Hazard Mitigation Action Plan (MAP) is approved. The jurisdictions intend to continue encouraging public involvement in future plan updates and implementation in the following ways:

a. Ongoing Public Access and Transparency

A copy of the approved MAP is maintained and available for public access at:

- The Limestone County Courthouse
- The Emergency Operations Center (EOC)
- City Halls of participating jurisdictions

Draft updates of the MAP are also posted in these locations and made available for public review and comment during each update cycle.

b. Online Availability

The plan is made available through the Limestone County website, allowing continuous public access and the ability for residents to submit feedback electronically.

c. Public Meetings and Surveys

Public meetings are convened at key phases in the planning and update cycle to inform residents and solicit their input. Online and in-person public surveys are conducted to gather resident perspectives on hazard concerns, priorities, and the effectiveness of mitigation strategies.

d. Stakeholder Engagement

The jurisdictions maintain engagement with key stakeholders – including public safety officials, schools, healthcare providers, utilities, and civic leaders – to ensure ongoing dialogue and integration of new information or concerns. These stakeholders are invited to participate in periodic updates or reviews through the Limestone County Mitigation Planning Team (MPT).

e. General Public Membership in the Planning Process

Citizens are welcomed as general members of the MPT, serving as an advisory body to help review progress and provide community insight into new or evolving risks

This multi-pronged approach ensures that Limestone County and its jurisdictions remain responsive to residents' needs, integrate evolving risk data, and support transparency and community engagement in long-term hazard mitigation efforts.

2. Monitoring, Evaluation, & Updates

The process for monitoring, evaluating, and updating the plan is as follows:

a. Monitoring Mitigation Action Progress/Status

Progress on each mitigation action will be tracked through an annual review. The Limestone County Emergency Management Coordinator (EMC) is responsible for coordinating these reviews with the participating jurisdictions. Participating jurisdictions will be responsible for reporting the progress on each mitigation action identified in the plan and defining any new mitigation actions that need to be included in the plan.

The process includes:

- Reviewing the status of each mitigation action (e.g., not started, in progress, completed).
- Identifying obstacles or delays.
- Assessing any changes in resources or priorities.
- Documenting success stories and sharing lessons learned.

The annual review will be coordinated in early fall, allowing for inclusion of information in budget and planning cycles.

b. Evaluating the Plan for Effectiveness

Evaluation is done to determine if the goals, objectives, and mitigation actions are still relevant based on changing risks and development patterns and achieving the intended outcomes, such as reducing vulnerability or enhancing resilience. The Limestone County Emergency Management Coordinator (EMC) is responsible for coordinating the evaluation of plan effectiveness by working with the MPT.

Evaluation criteria include:

- Progress toward achieving the mitigation goals.
- Completion status and effectiveness of actions taken.
- Changes in risk or vulnerability (e.g., new hazards or development).
- Availability of new data or technologies.
- Stakeholder feedback and public input.
- Information sources include post-disaster analyses, public input, and updates from partner agencies.

Evaluation of the plan will be conducted on a biennial basis and will be scheduled concurrently with the annual mitigation action review for that year, or after any major disaster affecting the planning area.

c. Updating the Plan

Updating the plan involves a comprehensive review of all section of the plan and also involves:

- Incorporating new data and technologies.
- Adjusting for completed or stalled actions.
- Engaging the public through meetings, surveys, and online access.
- Documenting new or revised authorities, programs, or regulations.

The Limestone County Emergency Management Coordinator (EMC) is responsible for updating the plan in coordination with the MPT. Plan updates will be conducted every five years.

This approach ensures that the mitigation plan remains a living document, responsive to emerging threats, evolving community needs, and the lessons learned from previous implementation efforts.

3. Integration of MAP into Other Planning Mechanisms

To integrate the ideas, information, and strategies from the Hazard Mitigation Action Plan into other planning mechanisms, the participating jurisdictions will follow a deliberate and structured process, as outlined below. This process aligns with FEMA's (2022) Local Mitigation Planning Policy Guide and Local Mitigation Planning Handbook (Federal Emergency Management Agency, 2023) to ensure that hazard mitigation becomes a core component of all relevant community planning and policy documents.

Limestone County and its participating jurisdictions (Coolidge, Groesbeck, Kosse, Mexia, Tehuacana, and Thornton) commit to integrating the mitigation strategy into broader local planning efforts by:

- Incorporating mitigation goals into comprehensive planning efforts (e.g., land use, housing, and economic development plans).
- Aligning local capital improvement plans (CIPs) with identified mitigation actions, particularly infrastructure retrofits and flood reduction projects.
- Embedding hazard vulnerability data into transportation, utility, and stormwater master plans to avoid placing new developments in high-risk areas.
- Updating building codes and ordinances using the mitigation strategy's findings to enhance resilience standards.
- Coordinating with local emergency operations plans (EOPs) to ensure continuity of operations and recovery align with pre-disaster mitigation actions.
- Engaging in annual review and cross-departmental coordination meetings to ensure ongoing alignment between the MAP and related policy documents.

Planning mechanisms for each participating jurisdiction include:

Table 26: Local Planning Mechanisms for HMAP Integration

Jurisdiction	Planning Mechanisms for Integration
Limestone County	County Comprehensive Plan, Emergency Operations Plan, Capital Improvements Program, Subdivision Ordinance, Development Code
City of Coolidge	Zoning Ordinance, Public Works Maintenance Plans, Fire Prevention Strategy
City of Groesbeck	Comprehensive Plan, Local Development Regulations, Floodplain Ordinance, Emergency Services Planning
City of Kosse	City Council Planning Directives, Infrastructure Maintenance Programs, Local Emergency Response Plans
City of Mexia	Zoning and Subdivision Regulations, Municipal Drainage Plans, Comprehensive Plan Updates
City of Tehuacana	Community Planning Documents, Utility Management Plans, Small Town Infrastructure Investments
City of Thornton	Local Ordinances, EOPs, Water Supply Management Plans, Fire Risk Reduction Initiatives

APPENDIX 1: EXTREME HEAT EVENTS

Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 27: Heat & Extreme Heat Events for Limestone County (1950-2024)

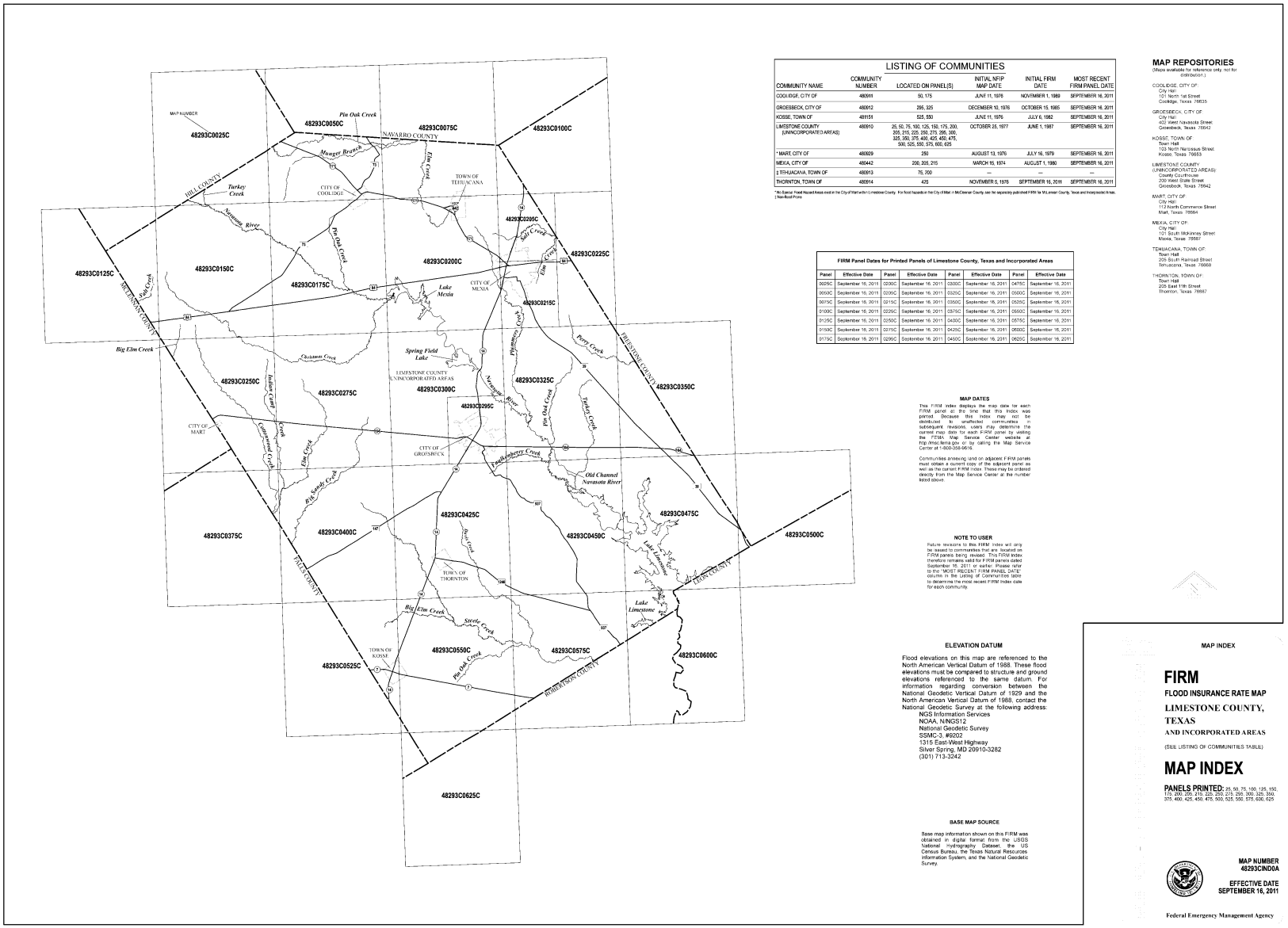
Begin Date	Begin Time	End Date	End Time	Event Type	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
7/1/1998	0	7/31/1998	2359	Heat	0	0	0	0	0	0	NEWSPAPER
8/1/1999	0	8/31/1999	0	Heat	0	0	0	0	0	0	UNKNOWN
7/1/2000	0	7/31/2000	2359	Heat	0	0	0	0	0	0	NEWSPAPER
8/1/2000	0			Heat	0	0	0	0	0	0	AWOS
9/1/2000	0	9/23/2000	2359	Heat	0	0	0	0	0	0	NEWSPAPER
8/1/2011	600	8/6/2011	221	Excessive Heat	0	0	0	0	0	0	Unknown
6/19/2019	1500	6/21/2019	1800	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
7/8/2019	1200	7/9/2019	1800	Heat	0	0	0	0	0	0	Official NWS Observations
7/16/2019	1200	7/17/2019	1800	Heat	0	0	0	0	0	0	Official NWS Observations
8/7/2019	1100	8/14/2019	1800	Heat	0	0	0	0	0	0	Official NWS Observations
8/17/2019	1100	8/21/2019	1900	Heat	0	0	0	0	0	0	Official NWS Observations
8/26/2019	1300	8/26/2019	1900	Heat	0	0	0	0	0	0	Official NWS Observations
7/10/2020	1200	7/13/2020	1900	Heat	0	0	0	0	0	0	Official NWS Observations
8/12/2020	1200	8/16/2020	1800	Heat	0	0	0	0	0	0	Official NWS Observations

8/28/2020	1200	8/31/2020	2359	Heat	0	0	0	0	0	0	Official NWS Observations
9/1/2020	0	9/1/2020	1900	Heat	0	0	0	0	0	0	Official NWS Observations
7/29/2021	1100	7/31/2021	1800	Heat	0	0	0	0	0	0	Official NWS Observations
8/1/2021	1100	8/1/2021	1800	Heat	0	0	0	0	0	0	Official NWS Observations
9/1/2021	1100	9/1/2021	1800	Heat	0	0	0	0	0	0	Official NWS Observations
6/11/2022	1100	6/13/2022	1800	Heat	0	0	0	0	0	0	AWOS
6/23/2022	1100	6/23/2022	1800	Heat	0	0	0	0	0	0	Official NWS Observations
7/6/2022	1100	7/31/2022	1800	Heat	0	0	0	0	0	0	Official NWS Observations
7/7/2022	1225	7/9/2022	2000	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
7/19/2022	1104	7/20/2022	2000	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
8/3/2022	1100	8/4/2022	1900	Heat	0	0	0	0	0	0	Official NWS Observations
6/14/2023	1200	6/29/2023	1900	Heat	0	0	0	0	0	0	Official NWS Observations
6/15/2023	2338	6/21/2023	1900	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
6/26/2023	1644	6/28/2023	1900	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
7/10/2023	1200	7/31/2023	2359	Heat	0	0	0	0	0	0	Official NWS Observations
7/12/2023	0	7/13/2023	1900	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
8/1/2023	1200	8/14/2023	1900	Heat	0	0	0	0	0	0	Official NWS Observations

8/1/2023	1200	8/14/2023	2000	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
8/17/2023	1200	8/27/2023	1900	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
8/17/2023	1200	8/27/2023	1900	Heat	0	0	0	0	0	0	Official NWS Observations
9/5/2023	1300	9/9/2023	1900	Heat	0	0	0	0	0	0	Official NWS Observations
9/7/2023	1800	9/8/2023	1900	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
9/23/2023	1800	9/24/2023	1900	Heat	0	0	0	0	0	0	Official NWS Observations
5/25/2024	1200	5/27/2024	1900	Heat	0	0	0	0	0	0	Official NWS Observations
6/24/2024	1100	6/30/2024	2359	Heat	0	0	0	0	0	0	Official NWS Observations
6/29/2024	1100	6/29/2024	1800	Excessive Heat	0	0	0	0	0	0	Official NWS Observations
7/1/2024	0	7/4/2024	1900	Heat	0	0	0	0	0	0	Official NWS Observations
7/30/2024	1100	7/31/2024	2359	Heat	0	0	0	0	0	0	Official NWS Observations
8/1/2024	0	8/3/2024	1900	Heat	0	0	0	0	0	0	Official NWS Observations
8/7/2024	1200	8/9/2024	1900	Heat	0	0	0	0	0	0	Official NWS Observations
8/13/2024	1200	8/23/2024	1900	Heat	0	0	0	0	0	0	Official NWS Observations
8/20/2024	1100	8/20/2024	2000	Excessive Heat	0	0	0	0	0	0	Official NWS Observations

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 2: FIRMETTES



LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANEL(S)	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE
COOLIDGE, CITY OF	480911	50, 175	JUNE 11, 1976	NOVEMBER 1, 1989	SEPTEMBER 16, 2011
GROESBECK, CITY OF	480912	295, 325	DECEMBER 10, 1976	OCTOBER 15, 1985	SEPTEMBER 16, 2011
KOSSE, TOWN OF	481151	525, 550	JUNE 11, 1976	JULY 6, 1982	SEPTEMBER 16, 2011
LIMESTONE COUNTY (UNINCORPORATED AREAS)	480910	25, 50, 75, 100, 125, 150, 175, 200, 205, 210, 225, 250, 275, 285, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600, 625	OCTOBER 25, 1977	JUNE 1, 1987	SEPTEMBER 16, 2011
* MART, CITY OF	480929	250	AUGUST 13, 1976	JULY 16, 1979	SEPTEMBER 16, 2011
MEXIA, CITY OF	480442	200, 205, 215	MARCH 15, 1974	AUGUST 1, 1980	SEPTEMBER 16, 2011
‡ TEHUACANA, TOWN OF	480913	75, 200	—	—	—
THORNTON, TOWN OF	480914	425	NOVEMBER 6, 1978	SEPTEMBER 16, 2011	SEPTEMBER 16, 2011

* No Special Flood Hazard Areas exist in the City of Mart within Limestone County. For flood hazards in the City of Mart in McLennan County, see the separately published FIRM for McLennan County, Texas and Incorporated Areas.
‡ Non-Flood Prone

FIRM Panel Dates for Printed Panels of Limestone County, Texas and Incorporated Areas

Panel	Effective Date	Panel	Effective Date	Panel	Effective Date	Panel	Effective Date
0025C	September 16, 2011	0200C	September 16, 2011	0300C	September 16, 2011	0475C	September 16, 2011
0050C	September 16, 2011	0205C	September 16, 2011	0325C	September 16, 2011	0500C	September 16, 2011
0075C	September 16, 2011	0215C	September 16, 2011	0350C	September 16, 2011	0525C	September 16, 2011
0100C	September 16, 2011	0225C	September 16, 2011	0375C	September 16, 2011	0550C	September 16, 2011
0125C	September 16, 2011	0250C	September 16, 2011	0400C	September 16, 2011	0575C	September 16, 2011
0150C	September 16, 2011	0275C	September 16, 2011	0425C	September 16, 2011	0600C	September 16, 2011
0175C	September 16, 2011	0295C	September 16, 2011	0450C	September 16, 2011	0625C	September 16, 2011

MAP REPOSITORIES
(Maps available for reference only, not for distribution.)

COOLIDGE, CITY OF:
City Hall
101 North 1st Street
Coolidge, Texas 76635

GROESBECK, CITY OF:
City Hall
402 West Navasota Street
Groesbeck, Texas 76642

KOSSE, TOWN OF:
Town Hall
109 North Narcissus Street
Kosse, Texas 76653

LIMESTONE COUNTY (UNINCORPORATED AREAS):
County Courthouse
200 West State Street
Groesbeck, Texas 76642

MART, CITY OF:
City Hall
112 North Commerce Street
Mart, Texas 76664

MEXIA, CITY OF:
City Hall
101 South McKinnes Street
Mexia, Texas 76667

TEHUACANA, TOWN OF:
Town Hall
205 South Railroad Street
Tehuacana, Texas 76686

THORNTON, TOWN OF:
Town Hall
205 East 11th Street
Thornton, Texas 76687

MAP DATES
This FIRM index displays the map date for each FIRM panel at the time that this index was printed. Because this index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website at http://msc.fema.gov or by calling the Map Service Center at 1-800-358-9616.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Map Service Center at the number listed above.

NOTE TO USER
Future revisions to this FIRM index will only be issued to communities that are located on FIRM panels being revised. This FIRM index therefore remains valid for FIRM panels dated September 16, 2011 or earlier. Please refer to the "EFFECTIVE/REVISED FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM index date for each community.

ELEVATION DATUM
Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

BASE MAP SOURCE
Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.

MAP INDEX

FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS

(SEE LISTING OF COMMUNITIES TABLE)

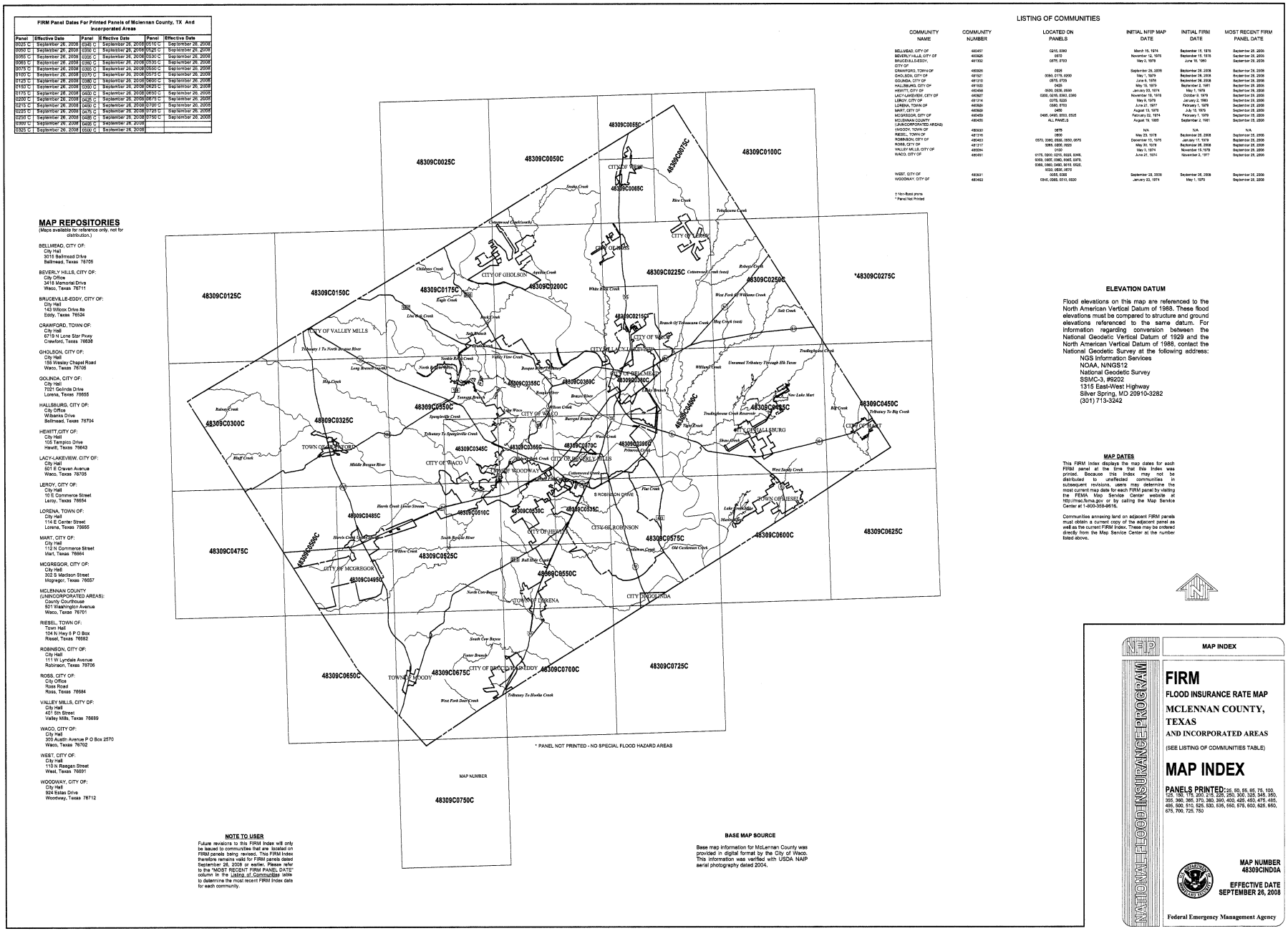
MAP INDEX

PANELS PRINTED: 25, 50, 75, 100, 125, 150, 175, 200, 205, 210, 225, 250, 275, 285, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600, 625

MAP NUMBER
48293CIND0A

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency



FIRM Panel Dates For Printed Panels of Mclennan County, TX And Incorporated Areas

Panel	Effective Date	Panel	Effective Date	Panel	Effective Date
0025 C	September 26, 2008	0340 C	September 26, 2008	0510 C	September 26, 2008
0050 C	September 26, 2008	0350 C	September 26, 2008	0525 C	September 26, 2008
0075 C	September 26, 2008	0360 C	September 26, 2008	0530 C	September 26, 2008
0100 C	September 26, 2008	0370 C	September 26, 2008	0535 C	September 26, 2008
0125 C	September 26, 2008	0380 C	September 26, 2008	0550 C	September 26, 2008
0150 C	September 26, 2008	0390 C	September 26, 2008	0575 C	September 26, 2008
0175 C	September 26, 2008	0400 C	September 26, 2008	0600 C	September 26, 2008
0200 C	September 26, 2008	0425 C	September 26, 2008	0625 C	September 26, 2008
0210 C	September 26, 2008	0450 C	September 26, 2008	0650 C	September 26, 2008
0225 C	September 26, 2008	0475 C	September 26, 2008	0725 C	September 26, 2008
0250 C	September 26, 2008	0485 C	September 26, 2008	0750 C	September 26, 2008
0300 C	September 26, 2008	0495 C	September 26, 2008		
0325 C	September 26, 2008	0500 C	September 26, 2008		

LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANELS	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE
BELLMEAD, CITY OF	480457	0210, 0360	March 15, 1974	September 15, 1976	September 26, 2008
BEVERLY HILLS, CITY OF	480626	0370	November 12, 1976	September 15, 1976	September 26, 2008
BRUCEVILLE-EDDY, CITY OF	481302	0075, 0100	May 2, 1978	June 15, 1980	September 26, 2008
CRAWFORD, TOWN OF	480626	0525	September 26, 2008	September 26, 2008	September 26, 2008
GHOLSON, CITY OF	481521	0050, 0175, 0200	May 1, 1979	September 26, 2008	September 26, 2008
GOLINDA, CITY OF	481310	0075, 0125	June 6, 1978	September 26, 2008	September 26, 2008
HALLSBURG, CITY OF	481522	0425	May 15, 1978	September 2, 1981	September 26, 2008
HEWITT, CITY OF	480468	0030, 0035, 0040	January 23, 1974	May 1, 1978	September 26, 2008
LACY-LAKEVIEW, CITY OF	480627	0200, 0210, 0340, 0360	November 15, 1978	October 5, 1979	September 26, 2008
LEROY, CITY OF	481314	0075, 0225	May 8, 1979	January 2, 1980	September 26, 2008
LORENA, TOWN OF	480628	0360, 0710	June 21, 1971	February 1, 1979	September 26, 2008
MART, CITY OF	480629	0450	August 13, 1976	July 15, 1976	September 26, 2008
MCGREGOR, CITY OF	480459	0480, 0485, 0500, 0525	February 22, 1974	February 1, 1979	September 26, 2008
MCLENNAN COUNTY (UNINCORPORATED AREAS)	480455	ALL PANELS	August 19, 1980	September 2, 1981	September 26, 2008
WOODWAY, TOWN OF	480630	0675	N/A	N/A	N/A
RIESEL, TOWN OF	481316	0650	May 23, 1978	September 26, 2008	September 26, 2008
ROBINSON, CITY OF	480463	0070, 0360, 0536, 0550, 0575	December 10, 1976	January 17, 1979	September 26, 2008
ROSS, CITY OF	481317	0265, 0350, 0525	May 30, 1978	September 26, 2008	September 26, 2008
VALLEY MILLS, CITY OF	480464	0150	May 3, 1974	November 15, 1979	September 26, 2008
WACO, CITY OF	480461	0175, 0200, 0210, 0325, 0345, 0350, 0355, 0360, 0365, 0375, 0380, 0390, 0480, 0510, 0525, 0530, 0535	June 21, 1974	November 2, 1977	September 26, 2008
WEST, CITY OF	480631	0025, 0050	September 26, 2008	September 26, 2008	September 26, 2008
WOODWAY, CITY OF	480462	0340, 0365, 0510, 0530	January 23, 1974	May 1, 1978	September 26, 2008

† Non-flood prone
* Panel Not Printed

MAP REPOSITORIES
(Maps available for reference only, not for distribution.)

BELLMEAD, CITY OF:
City Hall
3015 Bellmead Drive
Bellmead, Texas 76705

BEVERLY HILLS, CITY OF:
City Office
3418 Memorial Drive
Waco, Texas 76711

BRUCEVILLE-EDDY, CITY OF:
City Hall
143 Wilcox Drive #a
Eddy, Texas 76524

CRAWFORD, TOWN OF:
City Hall
6719 N Lone Star Pkwy
Crawford, Texas 76638

GHOLSON, CITY OF:
City Hall
155 Wesley Chapel Road
Waco, Texas 76706

GOLINDA, CITY OF:
City Hall
7021 Golinda Drive
Lorena, Texas 76655

HALLSBURG, CITY OF:
City Office
Wibanks Drive
Bellmead, Texas 76704

HEWITT,CITY OF:
City Hall
105 Tampico Drive
Hewitt, Texas 76643

LACY-LAKEVIEW, CITY OF:
City Hall
501 E Craven Avenue
Waco, Texas 76705

LEROY, CITY OF:
City Hall
10 E Commerce Street
Leroy, Texas 76654

LORENA, TOWN OF:
City Hall
114 E Center Street
Lorena, Texas 76655

MART, CITY OF:
City Hall
112 N Commerce Street
Mart, Texas 76664

MCGREGOR, CITY OF:
City Hall
302 S Madison Street
Mcgregor, Texas 76657

MCLENNAN COUNTY (UNINCORPORATED AREAS):
County Courthouse
501 Washington Avenue
Waco, Texas 76701

RIESEL, TOWN OF:
Town Hall
104 N Hwy 6 P O Box
Riesel, Texas 76682

ROBINSON, CITY OF:
City Hall
111 W Lyndale Avenue
Robinson, Texas 76706

ROSS, CITY OF:
City Office
Ross Road
Ross, Texas 76684

VALLEY MILLS, CITY OF:
City Hall
401 5th Street
Valley Mills, Texas 76689

WACO, CITY OF:
City Hall
300 Austin Avenue P O Box 2570
Waco, Texas 76702

WEST, CITY OF:
City Hall
110 N Reagan Street
West, Texas 76691

WOODWAY, CITY OF:
City Hall
924 Estes Drive
Woodway, Texas 76712

NOTE TO USER

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated September 26, 2008 or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM Index date for each community.

BASE MAP SOURCE

Base map information for McLennan County was provided in digital format by the City of Waco. This information was verified with USDA NAIP aerial photography dated 2004.

ELEVATION DATUM

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

MAP DATES

This FIRM Index displays the map dates for each FIRM panel at the time that this Index was printed. Because this Index may not be distributed to unaffected communities in subsequent revisions, users may determine the most current map date for each FIRM panel by visiting the FEMA Map Service Center website at http://msc.fema.gov or by calling the Map Service Center at 1-800-358-9616.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

MAP NUMBER
48309C0750C

MAP INDEX

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
MCLENNAN COUNTY, TEXAS
AND INCORPORATED AREAS
(SEE LISTING OF COMMUNITIES TABLE)

MAP INDEX

PANELS PRINTED: 25, 50, 75, 100, 125, 150, 175, 200, 210, 225, 250, 300, 325, 340, 350, 355, 360, 365, 370, 380, 390, 400, 425, 450, 475, 485, 495, 500, 510, 525, 530, 535, 550, 575, 600, 625, 650, 675, 700, 725, 750

MAP NUMBER
48309CIND0A

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.

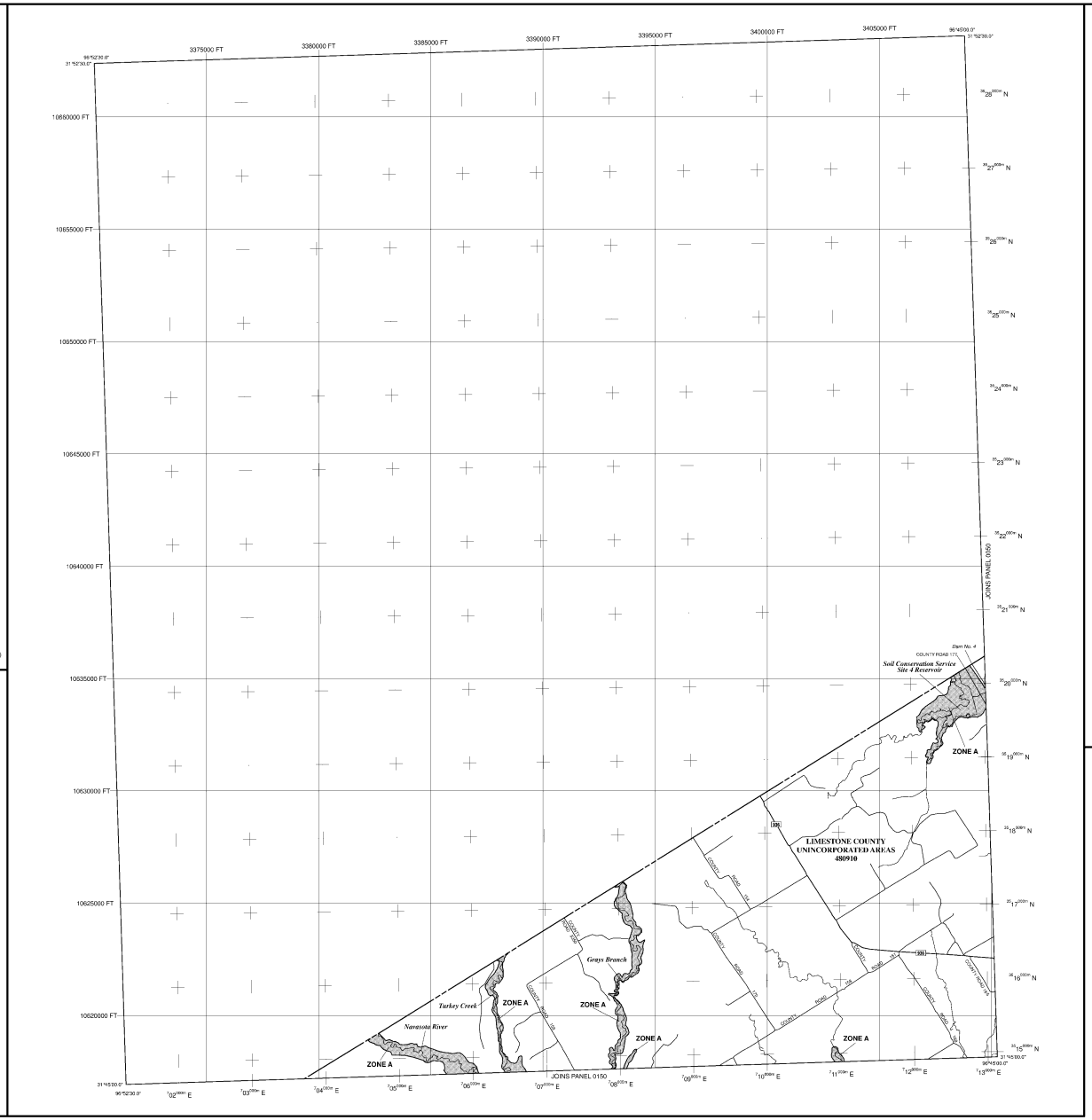
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study report* (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 800 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0025C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 25 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0025	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0025C
EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

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Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

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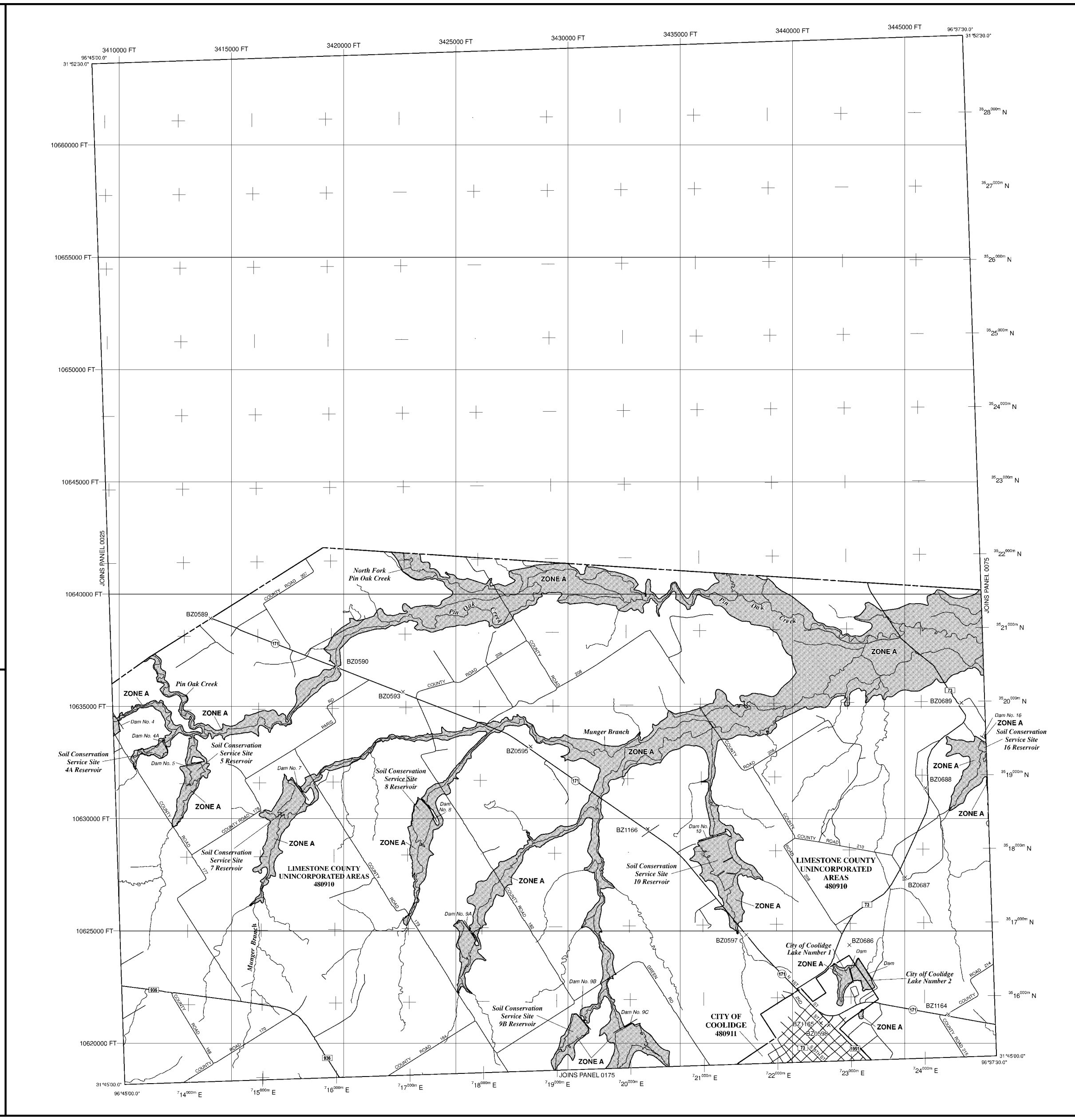

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
~~~~ 513 ~~~~ Base Flood Elevation line and value; elevation in feet*
(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

(A)———(A) Cross section line
(23)- - - - -(23) Transect line
97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000mN 1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
600 0 600 1200 METERS

NFIP | NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0050C

FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 50 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0050	C
COOLIDGE, CITY OF	480911	0050	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 48293C0050C

EFFECTIVE DATE SEPTEMBER 16, 2011

Federal Emergency Management Agency
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NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

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National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.

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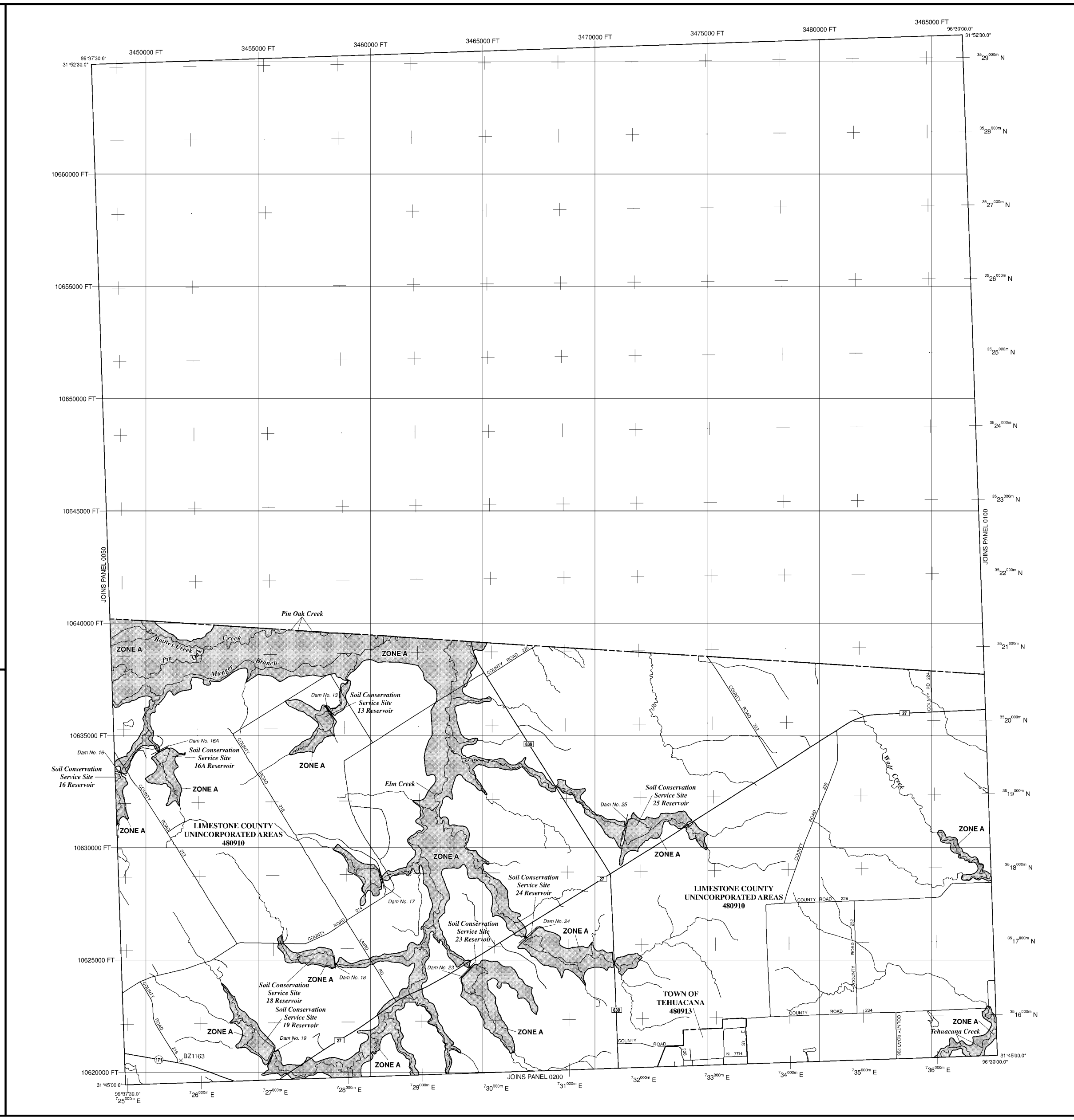

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	Floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
~~ 513 ~~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A	Cross section line
23 - - - 23	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
$^{42}75^{000m}$N	1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT	5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0075C

FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 75 OF 625

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0075	C
TEHUACANA, TOWN OF	480913	0075	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0075C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

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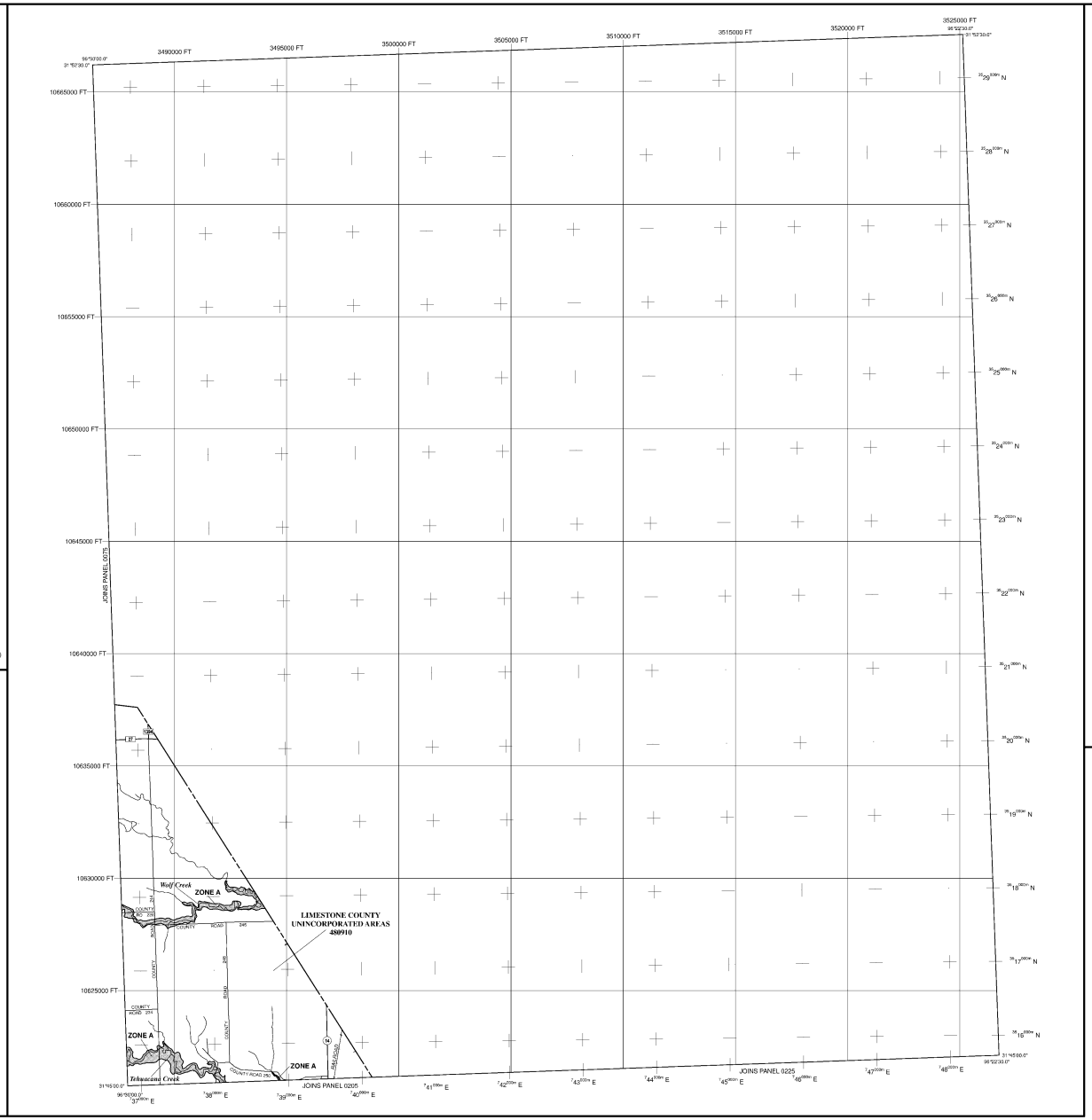

LEGEND

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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OTHER AREAS

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OTHERWISE PROTECTED AREAS (OPAs)

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- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 800 1200 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0100C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 100 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0100	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0100C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study report (which contains authoritative hydraulic data*) may reflect stream channel distances that differ from what is shown on this map.

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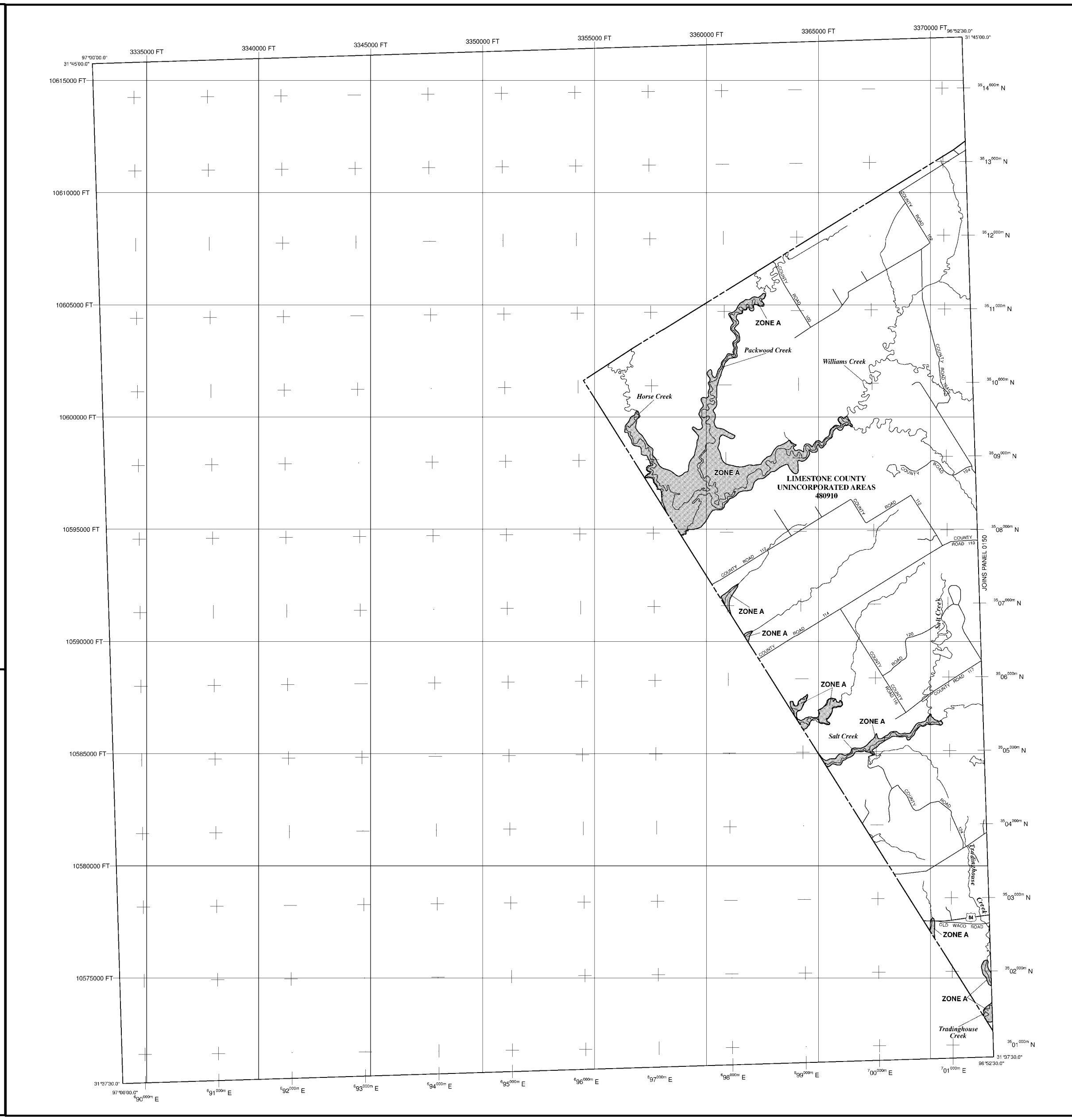
Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

~~~~ 513 ~~~~ Base Flood Elevation line and value; elevation in feet*

(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

(A)——(A) Cross section line

(23)- - - -(23) Transect line

97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

$^{42}75^{000m}$N 1000-meter Universal Transverse Mercator grid ticks, zone 14

6000000 FT 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic

DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)

• M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0125C

FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 125 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0125	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0125C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency
~~~~

NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

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SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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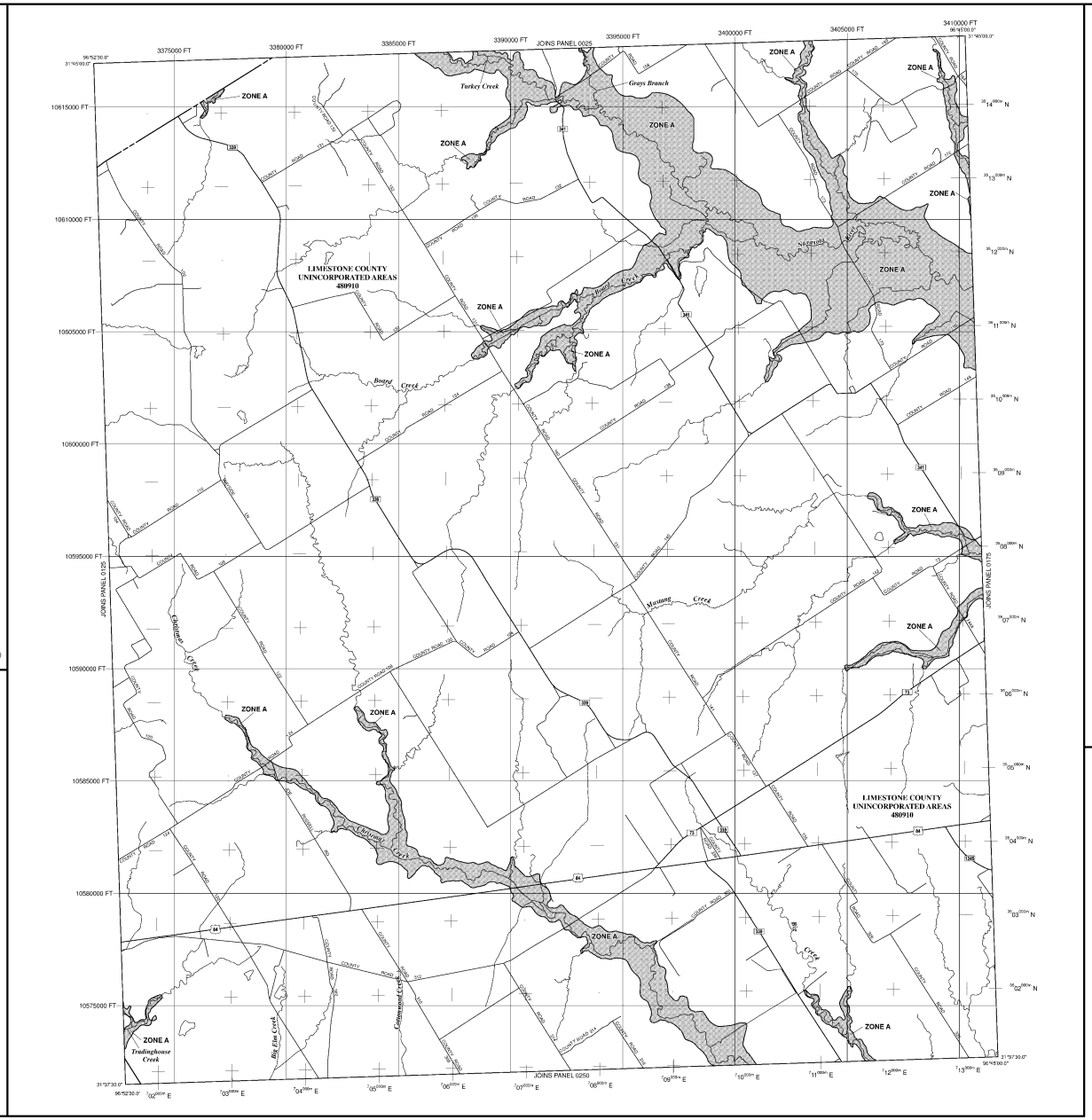

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
300 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0150C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 150 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0150	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0150C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

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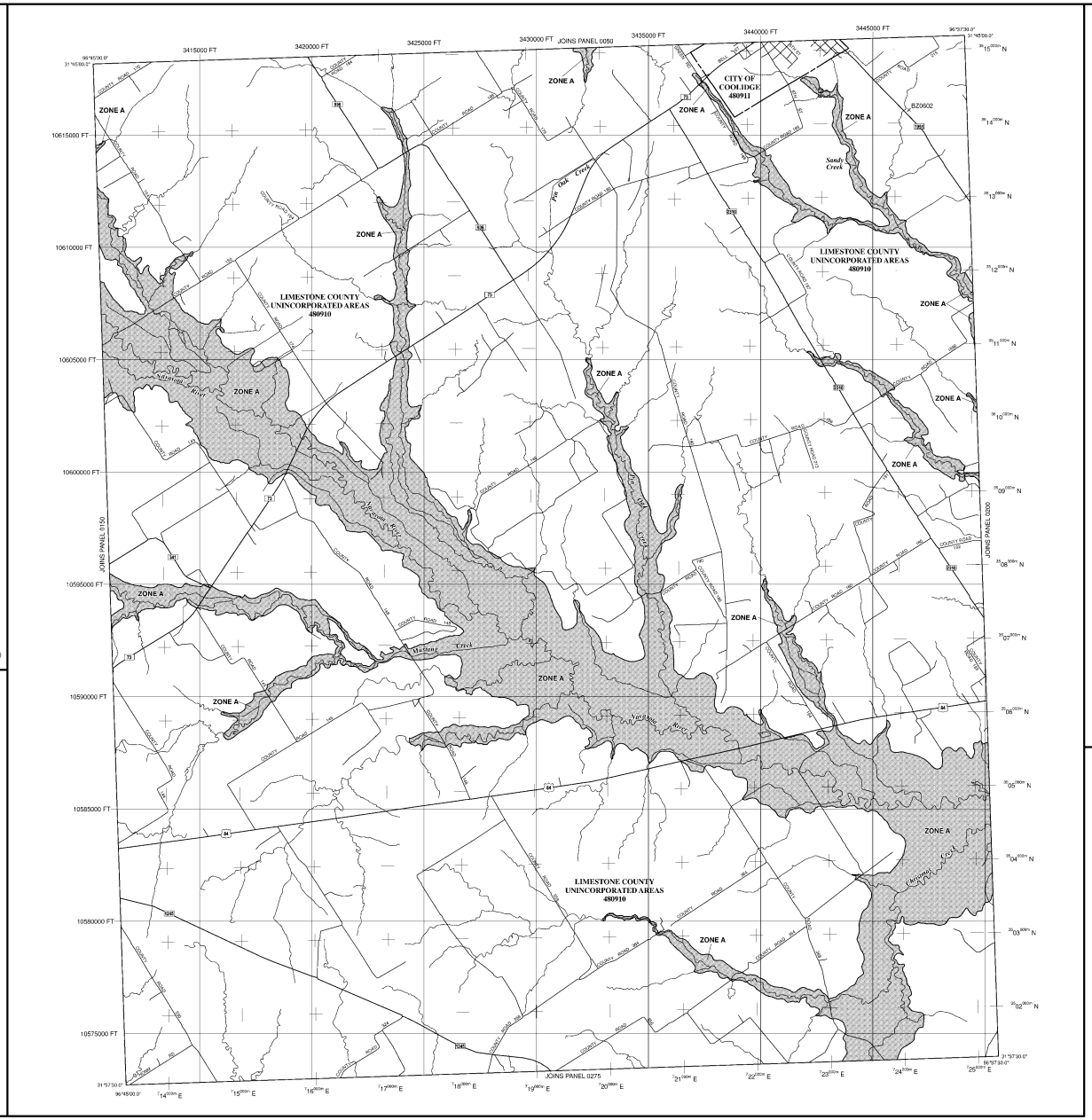

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

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ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

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Floodplain boundary

Floodway boundary

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Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 Base Flood Elevation line and value; elevation in feet*

(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A Cross section line

23 — 23 Transect line

97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

4475000mN 1000-meter Universal Transverse Mercator grid ticks, zone 14

6000000 FT 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic

DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
300 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0175C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 175 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0175	C
COOLIDGE, CITY OF	480911	0175	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0175C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

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NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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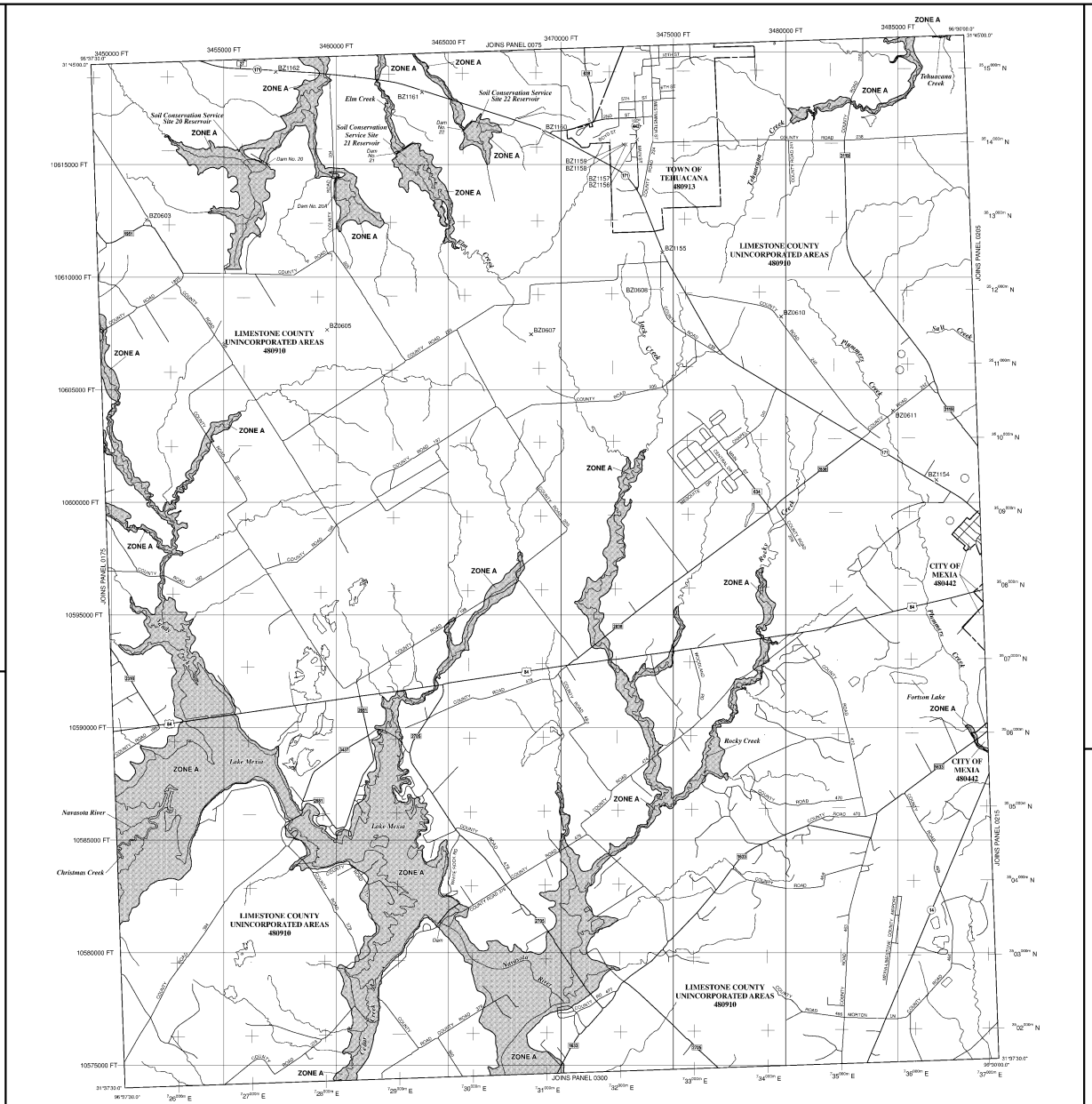

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
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- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
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- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
300 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0200C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 200 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0200	C
MEXIA, CITY OF	480442	0200	C
TEHUACANA, TOWN OF	480913	0200	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0200C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

NOTES TO USERS

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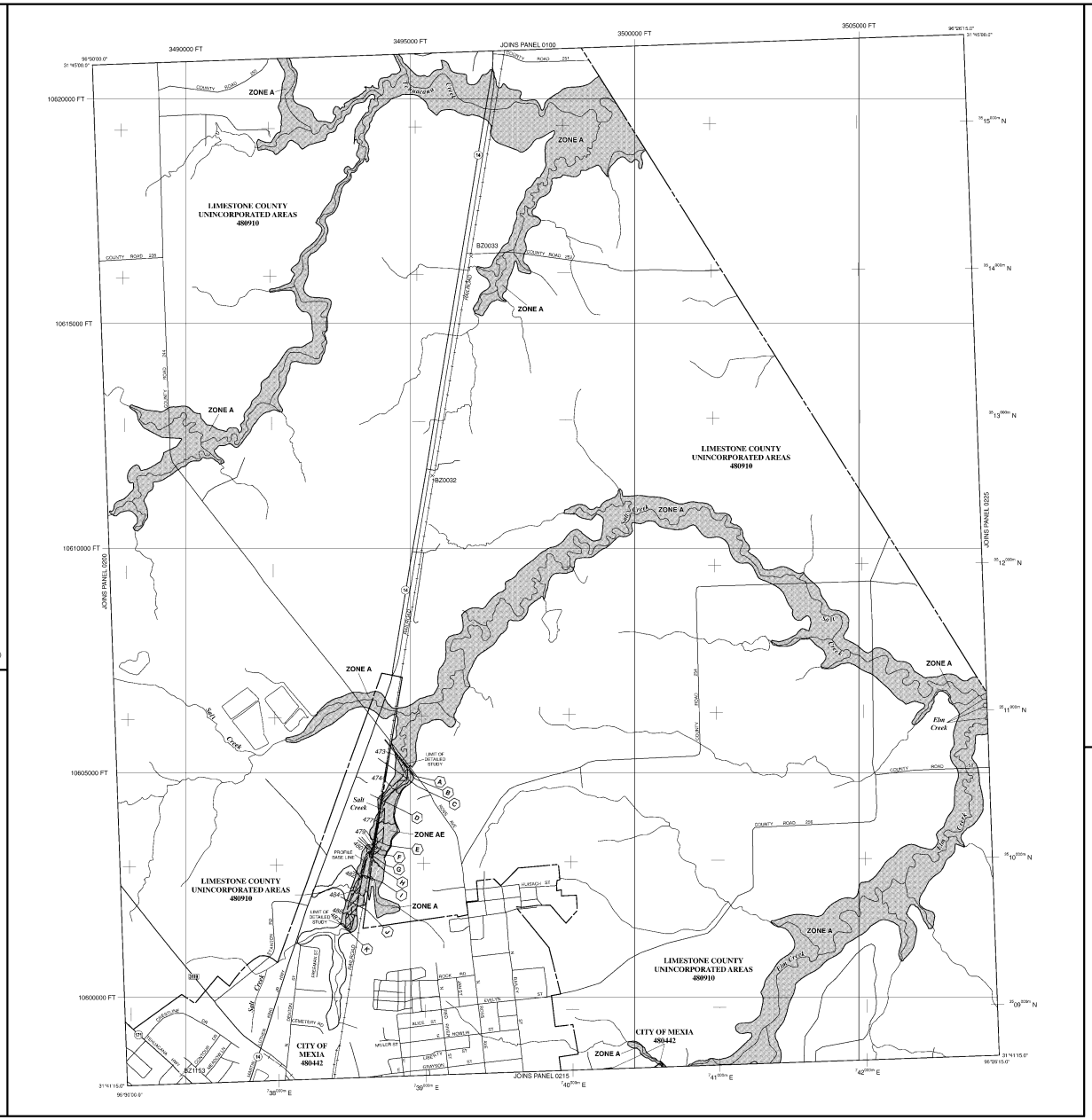

LEGEND

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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside the 0.2% annual chance floodplain.
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- Floodplain boundary
- Floodway boundary
- Zone D boundary
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- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

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- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
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MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0205C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 205 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0205	C
MEXIA, CITY OF	480442	0205	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0205C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency

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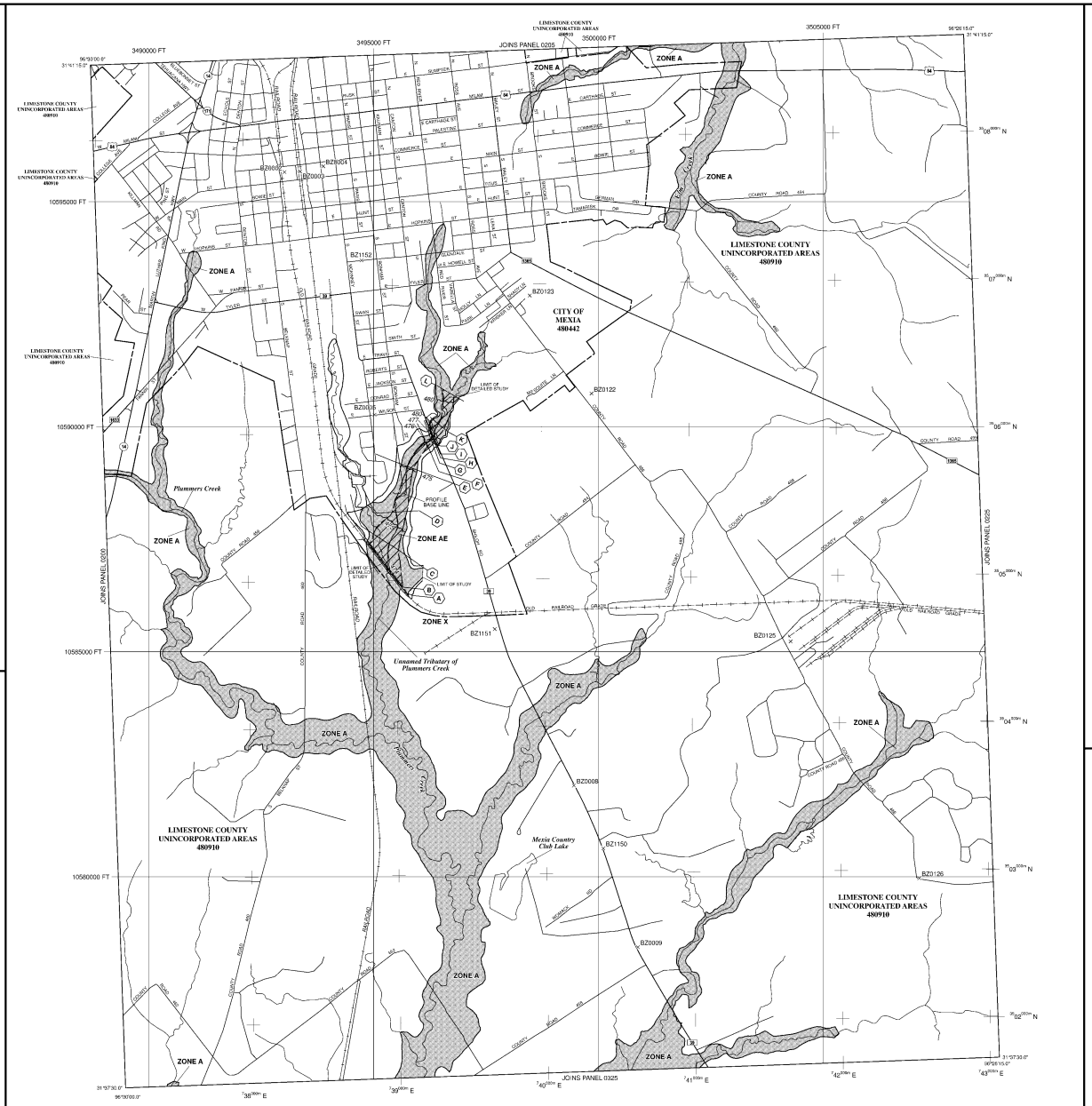

LEGEND

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FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

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September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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500 0 1000 2000 FEET
300 0 300 600 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0215C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 215 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0215	C
MEXIA, CITY OF	480442	0215	C

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48293C0215C

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Federal Emergency Management Agency

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Silver Spring, MD 20910-3282

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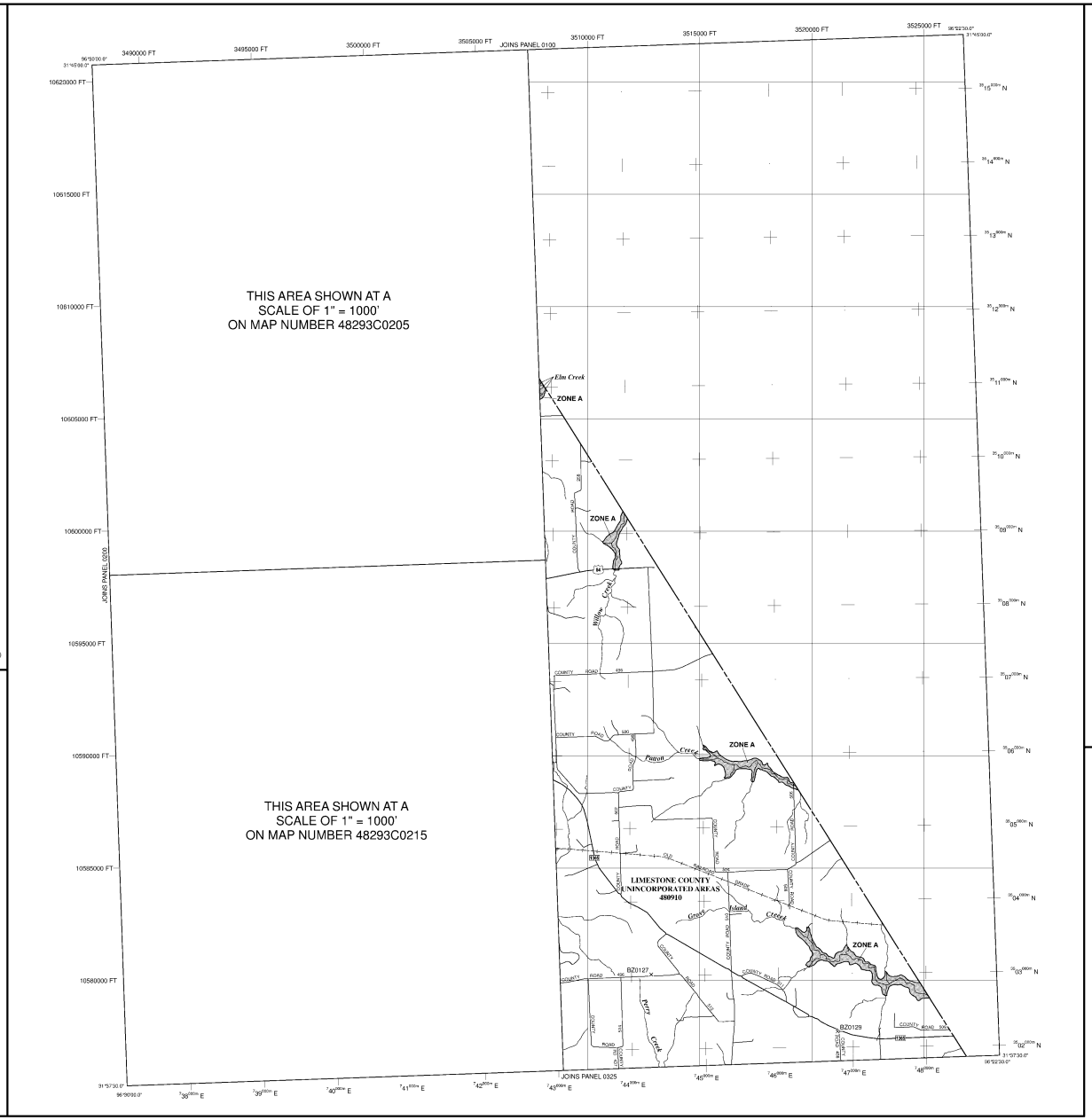
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4276000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
300 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0225C

FIRM

FLOOD INSURANCE RATE MAP

LIMESTONE COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 225 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

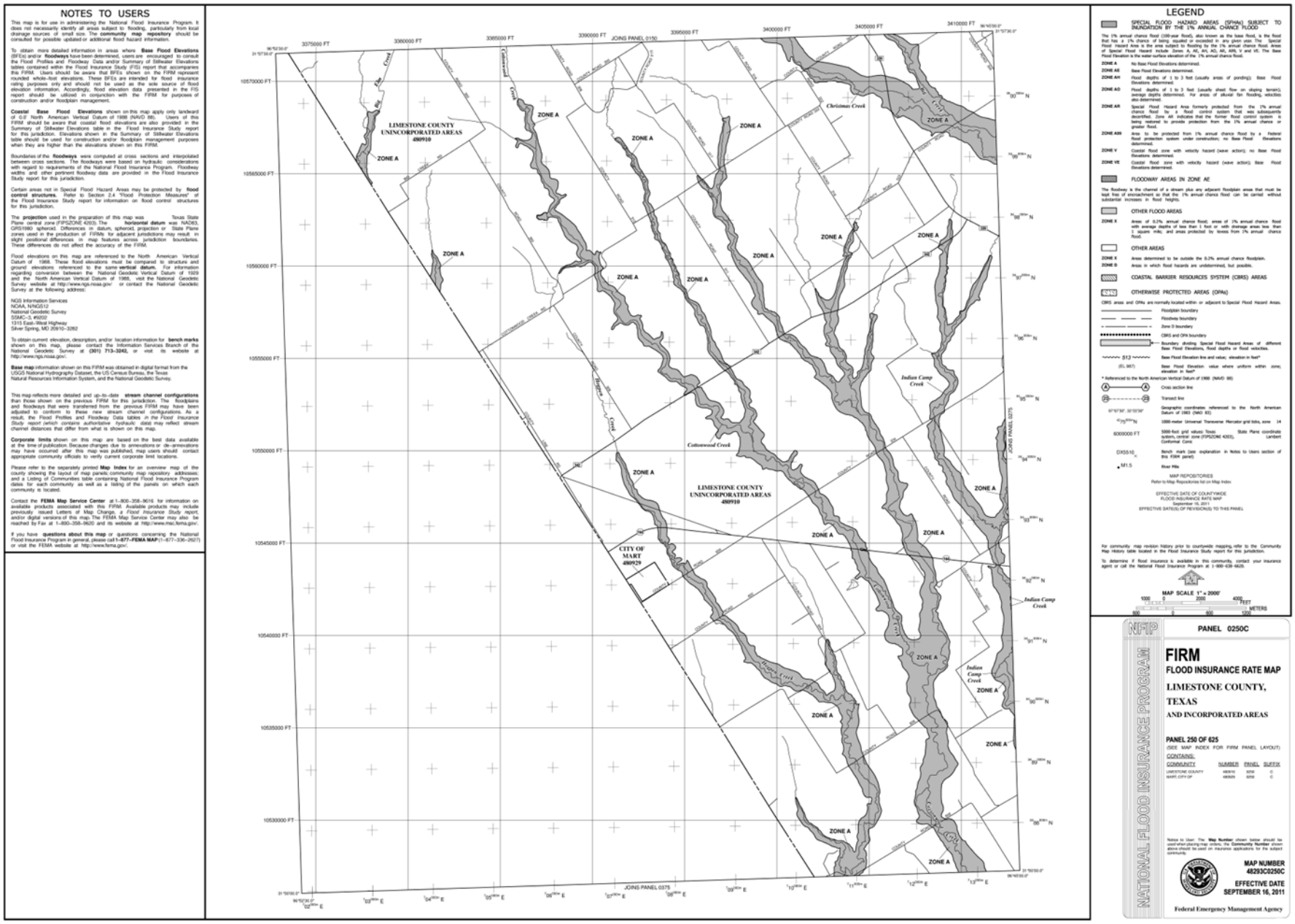
COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0225	C

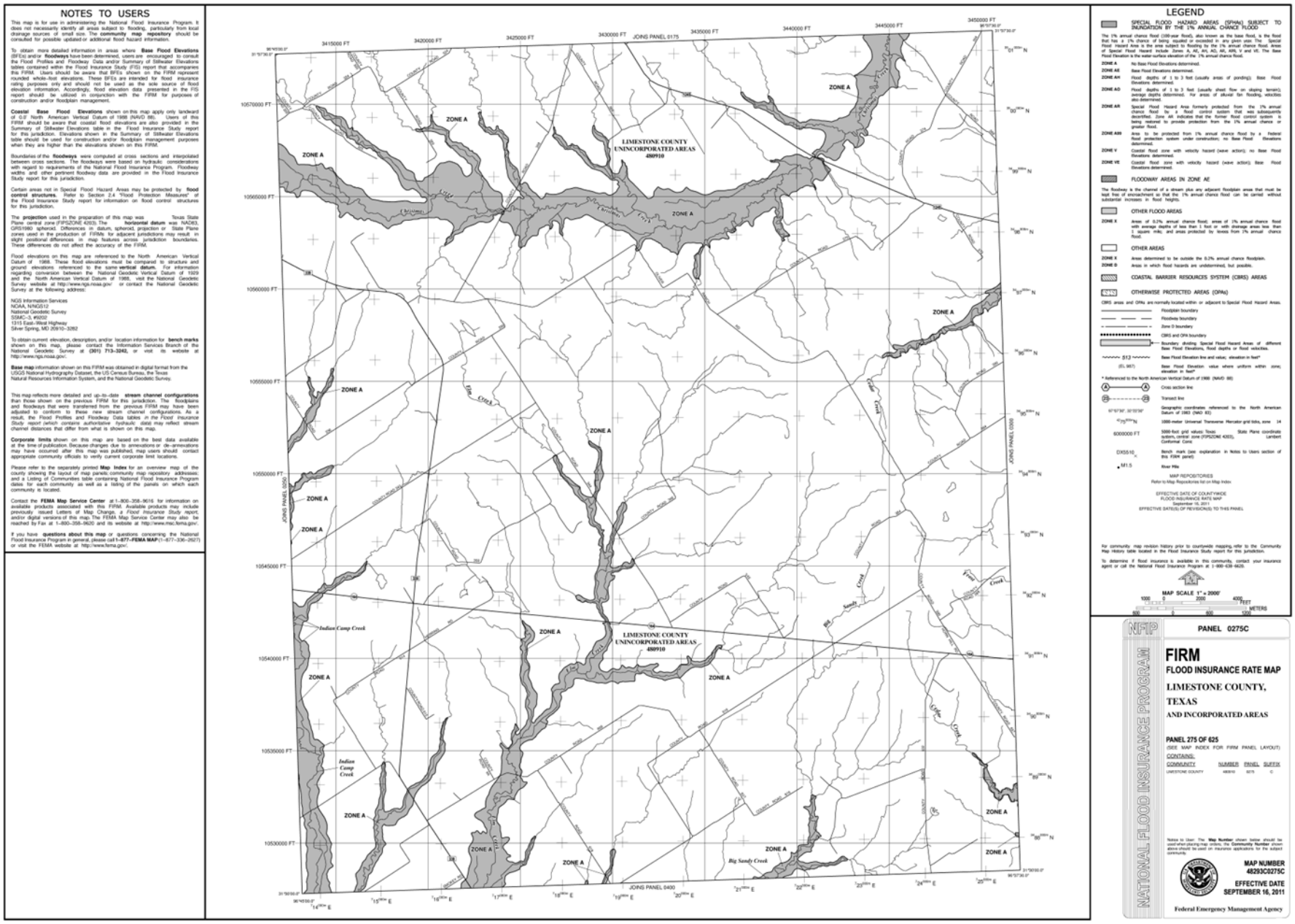
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0225C

EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency


NOTES TO USERS
LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
CITY OF MART 480929
ZONE A
Christmas Creek
Indian Camp Creek
Cottonwood Creek
JOINS PANEL 0150
JOINS PANEL 0375
JOINS PANEL 0275
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0250C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 250 OF 625
MAP NUMBER 48293C0250C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency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Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.
Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.
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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
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JOINS PANEL 0175
JOINS PANEL 0250
JOINS PANEL 0300
JOINS PANEL 0400
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
ZONE A
Indian Camp Creek
Big Sandy Creek
Elm Creek
Cedar Creek
Sandy Creek
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, ARR, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
OTHER FLOOD AREAS
ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
OTHER AREAS
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°07'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4°22'30"N — 1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
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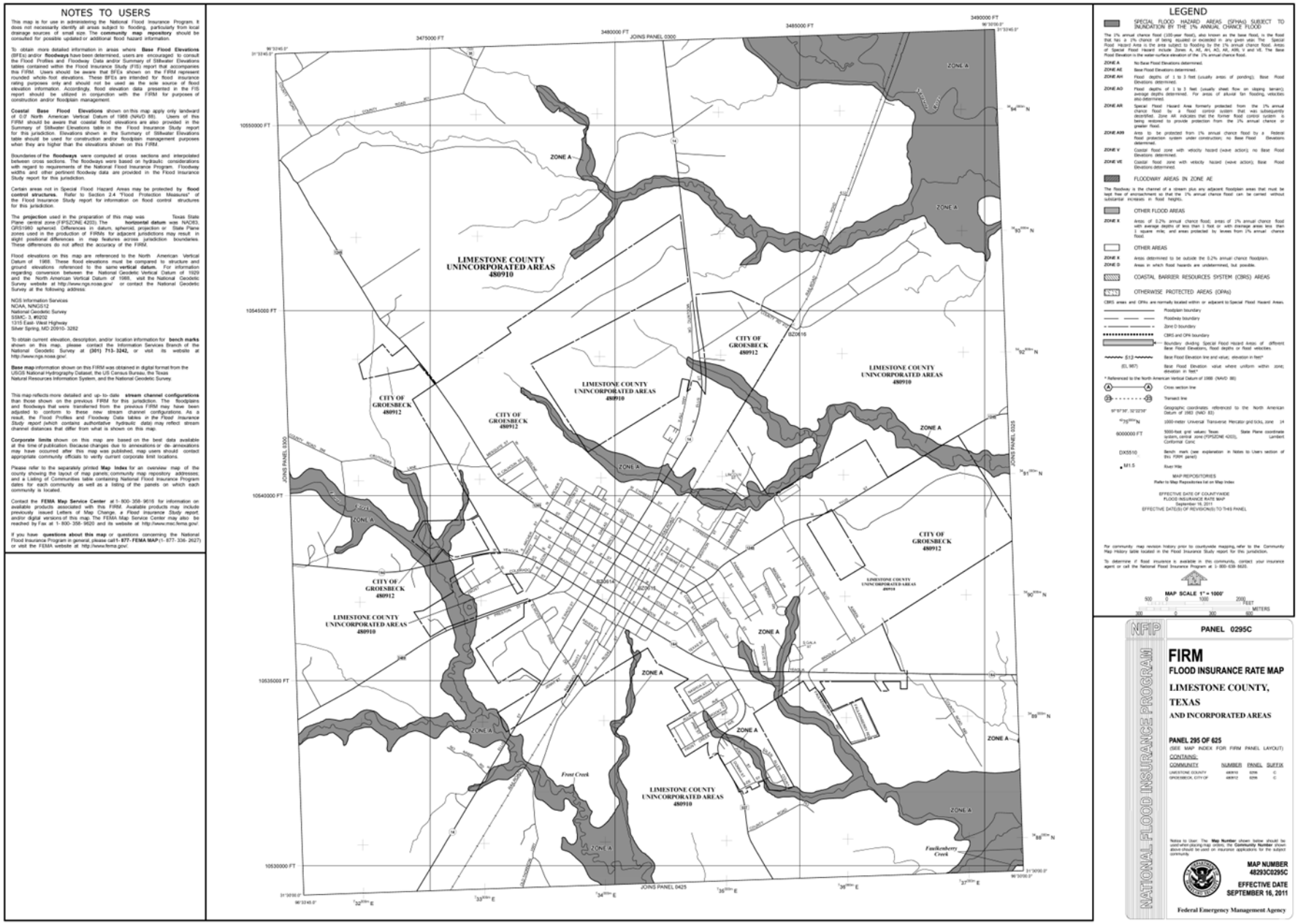
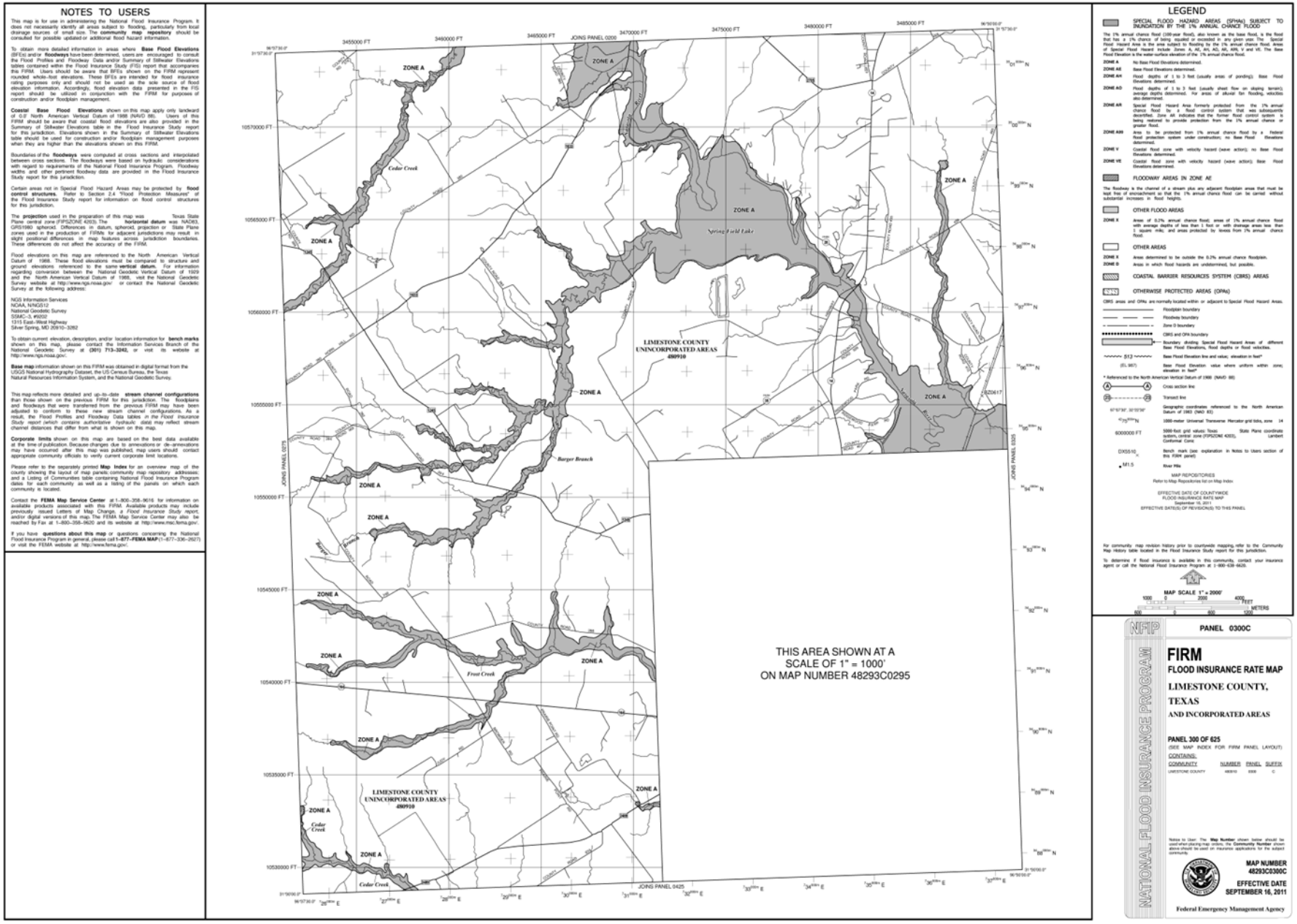
MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0275C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 275 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY — NUMBER — PANEL — SUFFIX
LIMESTONE COUNTY — 480910 — 0275 — C
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
48293C0275C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
CITY OF GROESBECK 480912
ZONE A
Front Creek
Faulkenberry Creek
JOINS PANEL 0300
JOINS PANEL 0325
JOINS PANEL 0425
JOINS PANEL 0320
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0295C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 295 OF 625
MAP NUMBER 48293C0295C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency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ZONE A
Cedar Creek
Spring Field Lake
Burger Branch
Front Creek
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
THIS AREA SHOWN AT A SCALE OF 1" = 1000' ON MAP NUMBER 48293C0295
JOINS PANEL 0200
JOINS PANEL 0275
JOINS PANEL 0325
JOINS PANEL 0425
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
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ZONE AE Base Flood Elevations determined.
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ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
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ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE
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OTHER FLOOD AREAS
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OTHERWISE PROTECTED AREAS (OPAs)
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Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
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(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
Cross section line
Transect line
97°07'30", 32°07'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4°mN 1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
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M1.5 River Mile
MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
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1000 0 2000 4000 FEET
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0300C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 300 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY NUMBER PANEL SUFFIX
LIMESTONE COUNTY 480910 0300 C
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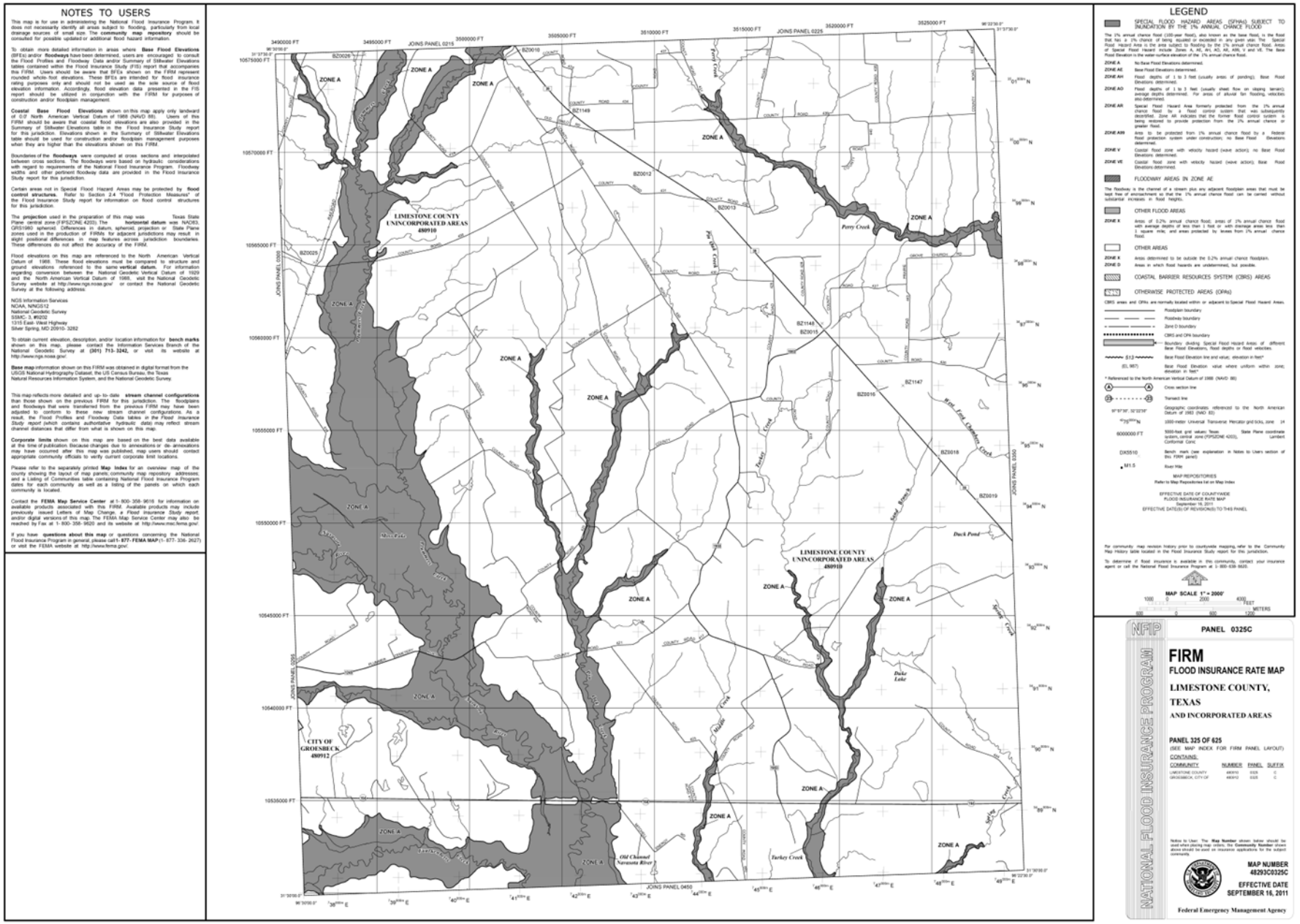
MAP NUMBER
48293C0300C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency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LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
CITY OF GROESBECK 480912
ZONE A
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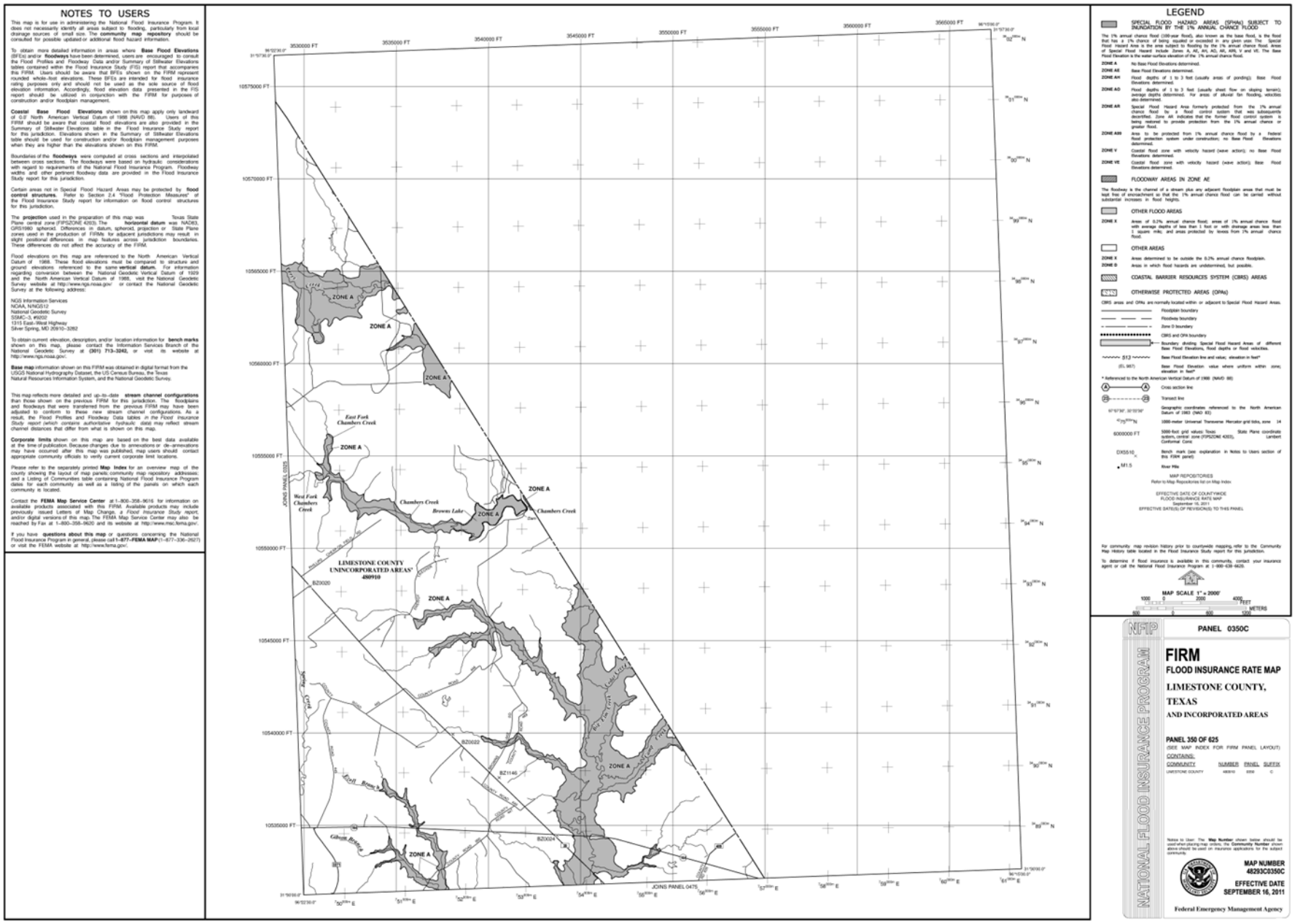
PANEL 0325C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 325 OF 625
MAP NUMBER 48293C0325C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency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National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
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3530000 FT
3535000 FT
3540000 FT
3545000 FT
3550000 FT
3555000 FT
3560000 FT
3565000 FT
10575000 FT
10570000 FT
10565000 FT
10560000 FT
10555000 FT
10550000 FT
10545000 FT
10540000 FT
10535000 FT
ZONE A
East Fork Chambers Creek
West Fork Chambers Creek
Chambers Creek
Browns Lake
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
BZ0020
BZ0022
BZ1146
BZ0024
Elliott Branch
Gibson Branch
JOINS PANEL 0325
JOINS PANEL 0475
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, ARR, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
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ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°07'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4°mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
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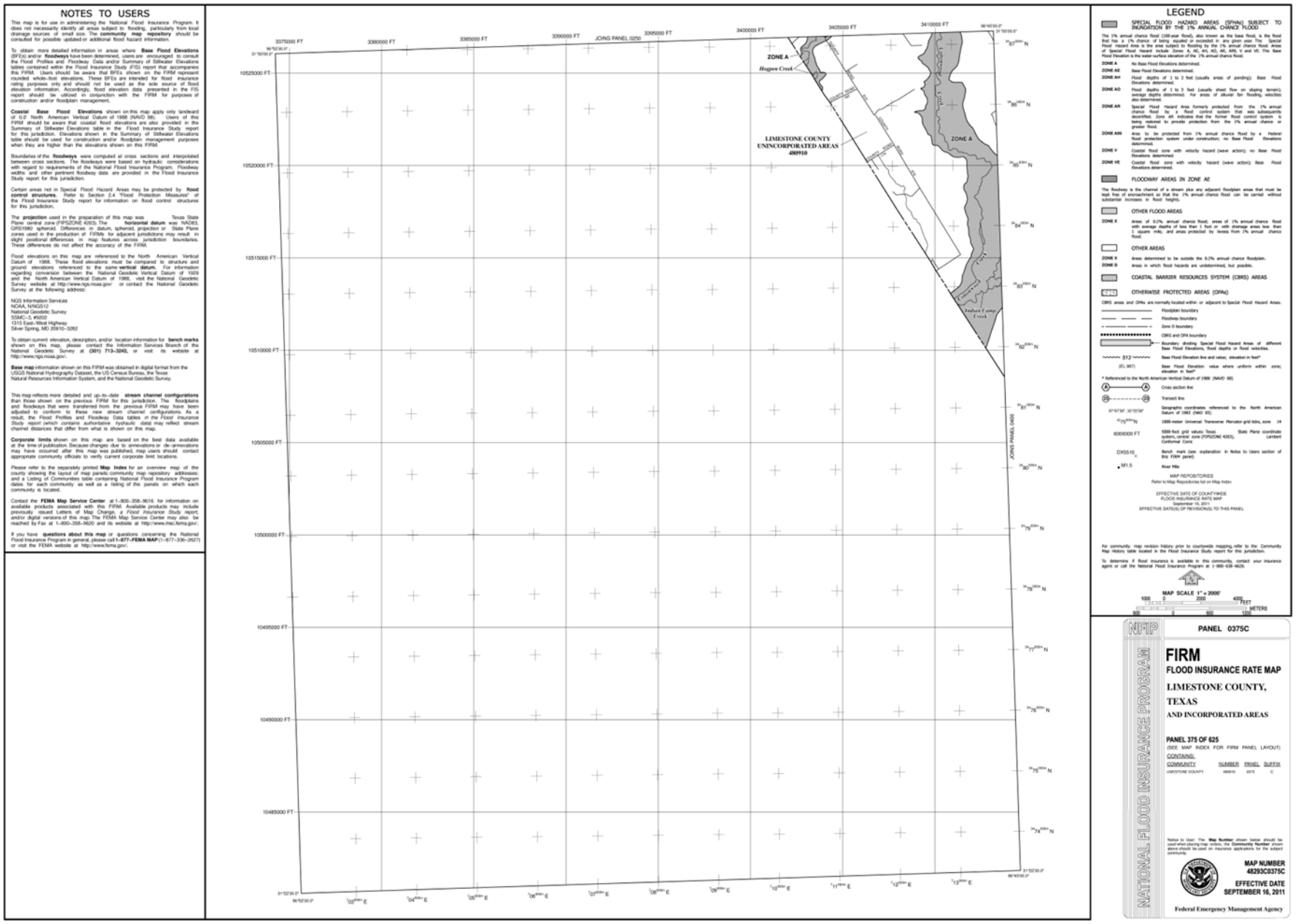
MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0350C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 350 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY NUMBER PANEL SUFFIX
LIMESTONE COUNTY 480910 0350 C
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.
MAP NUMBER
48293C0350C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency



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JOINS PANEL 0250

ZONE A
Hogpen Creek
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
ZONE A
Indian Camp Creek
JOINS PANEL 0400

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

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OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
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OTHERWISE PROTECTED AREAS (OPAs)

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Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
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DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0375C

FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS

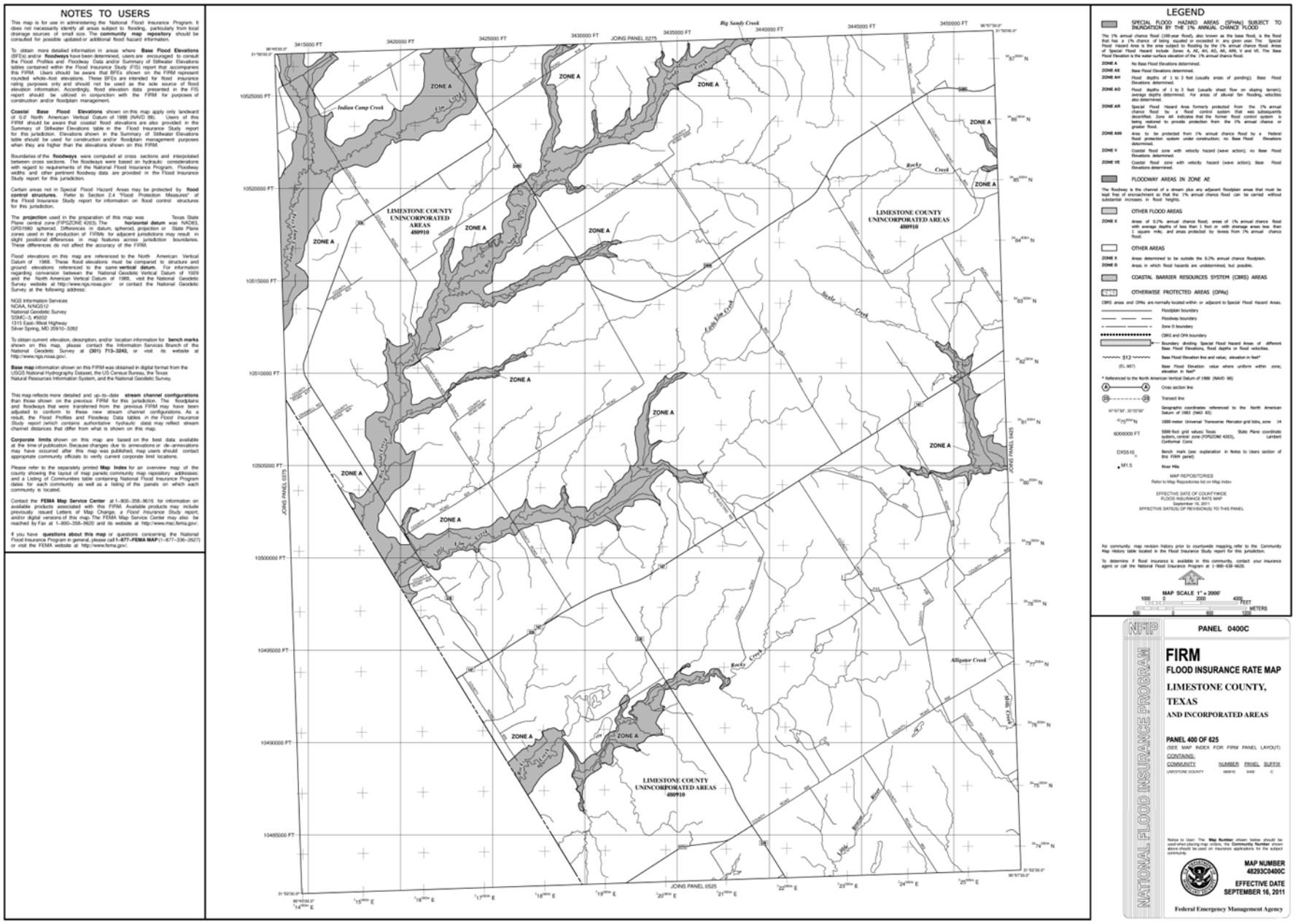
PANEL 375 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:

COMMUNITY	NUMBER	PANEL	SUFFIX
LIMESTONE COUNTY	480910	0375	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48293C0375C
EFFECTIVE DATE
SEPTEMBER 16, 2011

Federal Emergency Management Agency


NOTES TO USERS
LEGEND
ZONE A
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
Indian Camp Creek
Rocky Creek
Steele Creek
Little Elm Creek
Alligator Creek
Big Sandy Creek
JOINS PANEL 0375
JOINS PANEL 0425
JOINS PANEL 0525
MAP SCALE 1" = 2000'
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0400C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 400 OF 625
MAP NUMBER 48293C0400C
EFFECTIVE DATE SEPTEMBER 16, 2011
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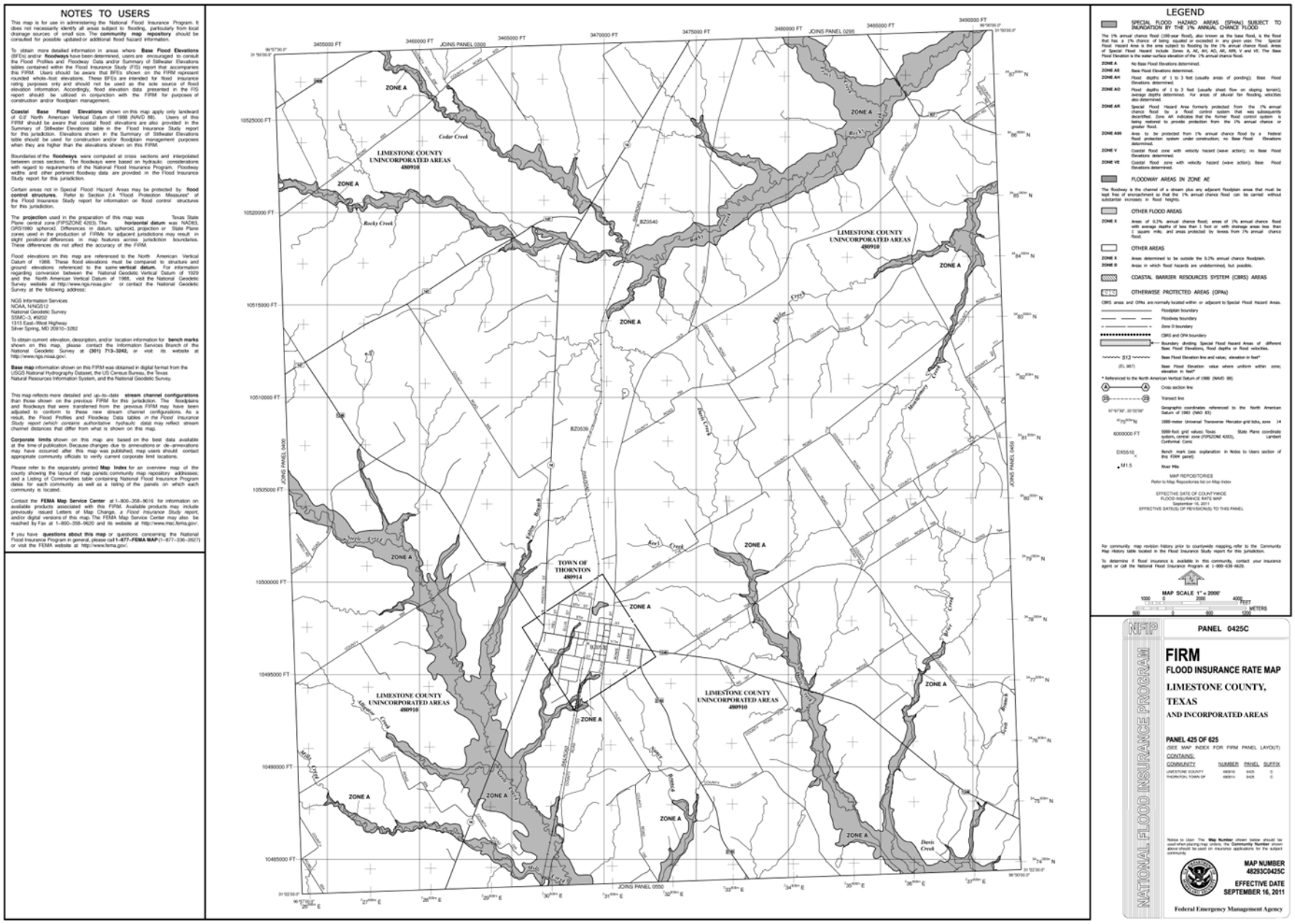
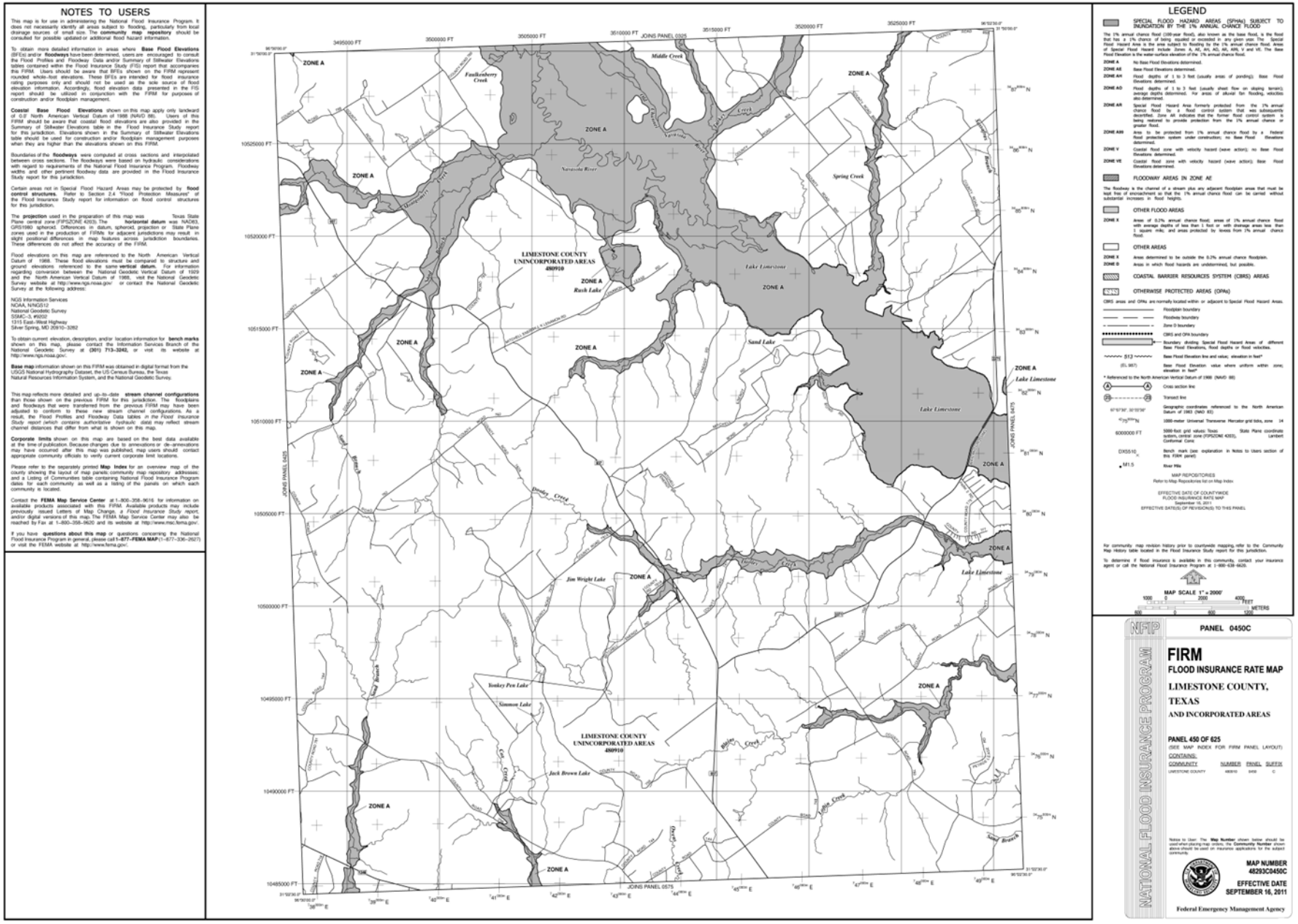

NOTES TO USERS
LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
TOWN OF THORNTON 480914
ZONE A
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0425C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 425 OF 625
MAP NUMBER 48293C0425C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency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3495000 FT
3500000 FT
3505000 FT
3510000 FT
3515000 FT
3520000 FT
3525000 FT
JOINS PANEL 0325
10525000 FT
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10515000 FT
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10505000 FT
10500000 FT
10495000 FT
10490000 FT
10485000 FT
JOINS PANEL 0425
JOINS PANEL 0475
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ZONE A
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
Middle Creek
Faulkenberry Creek
Navasota River
Spring Creek
Rush Lake
Lake Limestone
Sand Lake
Jim Wright Lake
Yonkey Pen Lake
Simmon Lake
Jack Brown Lake
Mud Branch
Dudley Creek
Thurber Creek
Blakes Creek
Cox Creek
Jack Creek
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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
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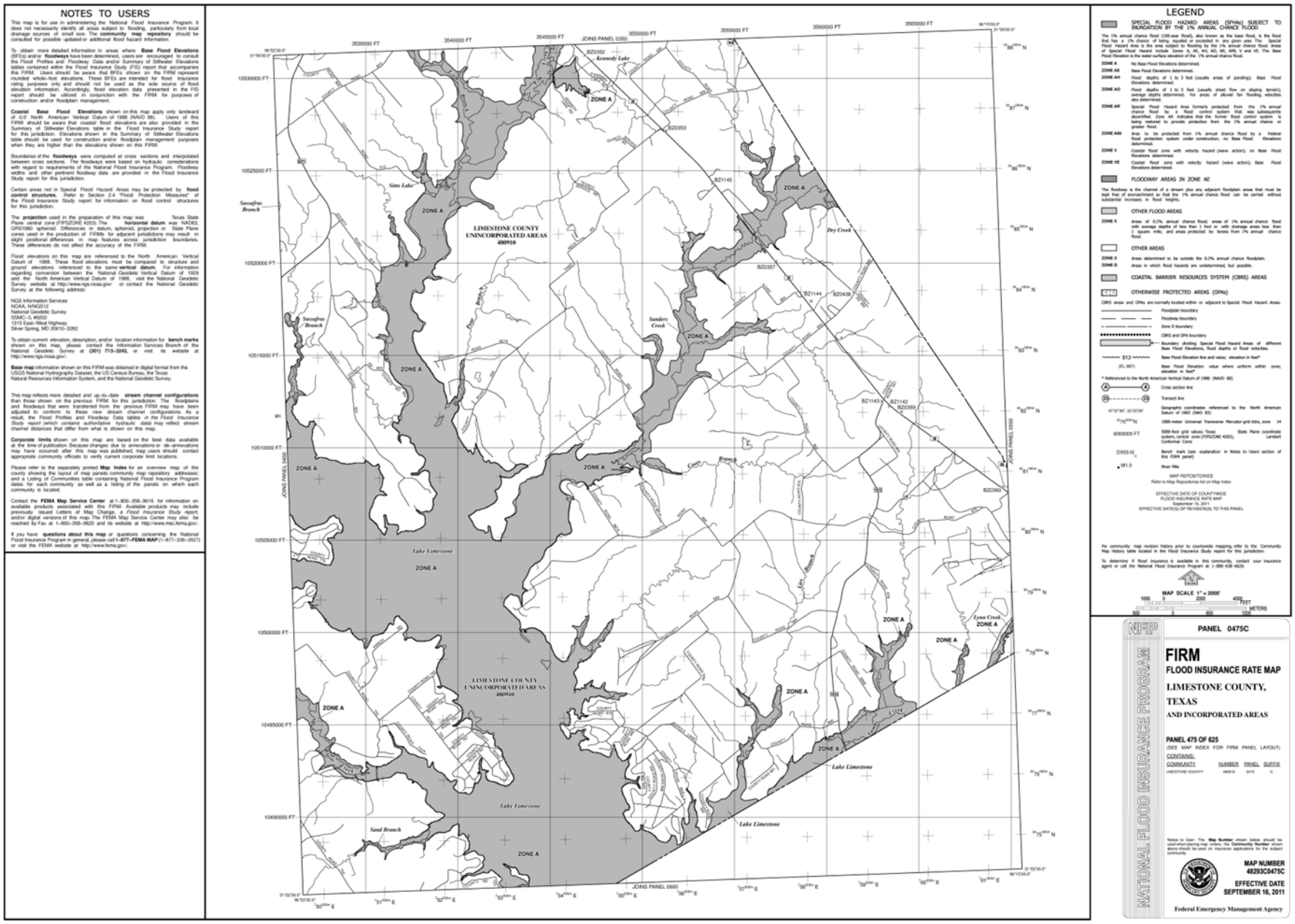
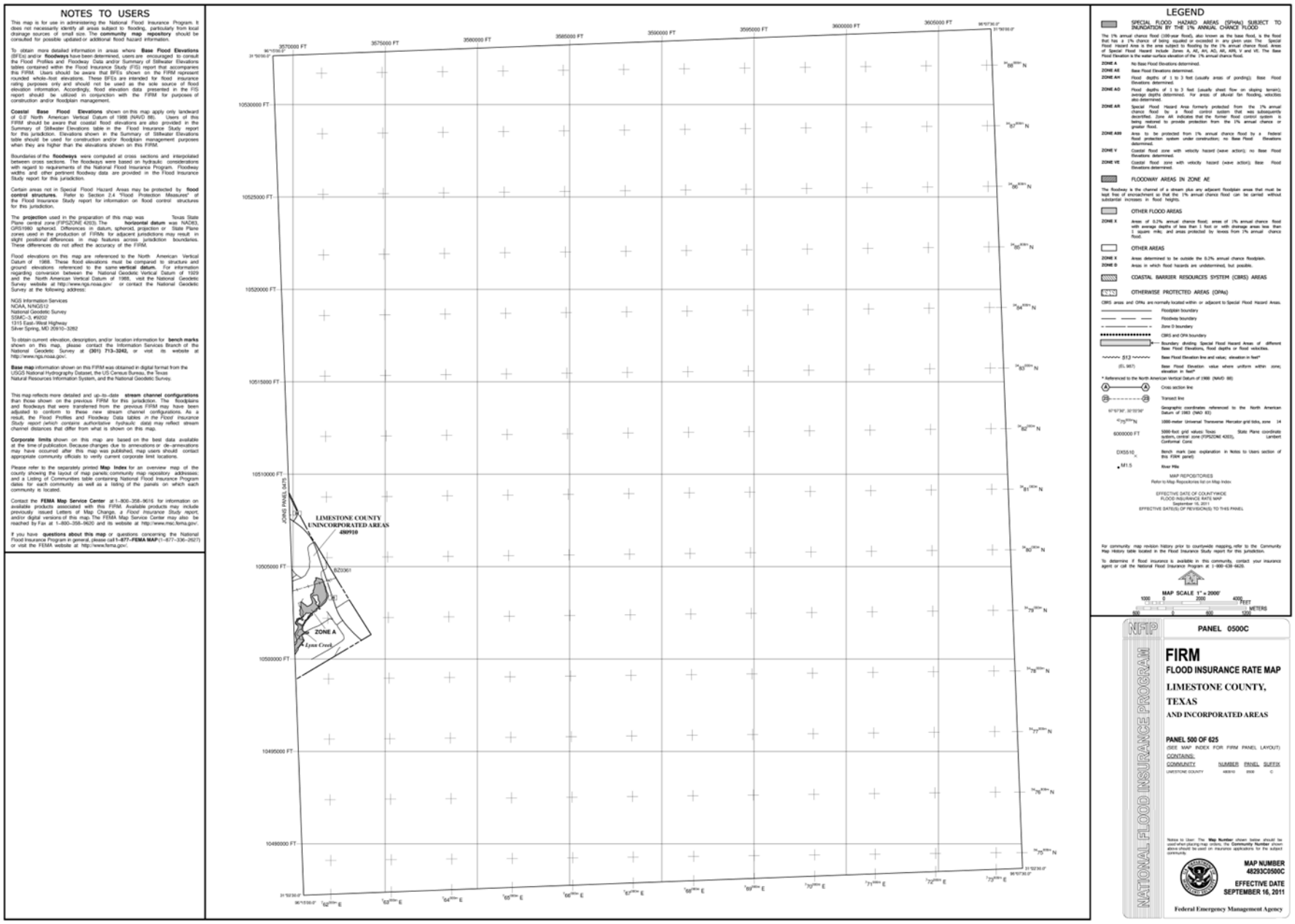
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0450C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 450 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY — NUMBER — PANEL — SUFFIX
LIMESTONE COUNTY — 480910 — 0450 — C
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
48293C0450C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
ZONE A
JOINS PANEL 0350
JOINS PANEL 0600
JOINS PANEL 0425
JOINS PANEL 0900
Kennedy Lake
Sims Lake
Sassafras Branch
Dry Creek
Sanders Creek
Lake Limestone
Lynn Creek
Sand Branch
MAP SCALE 1" = 2000'
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0475C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 475 OF 625
MAP NUMBER 48293C0475C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.
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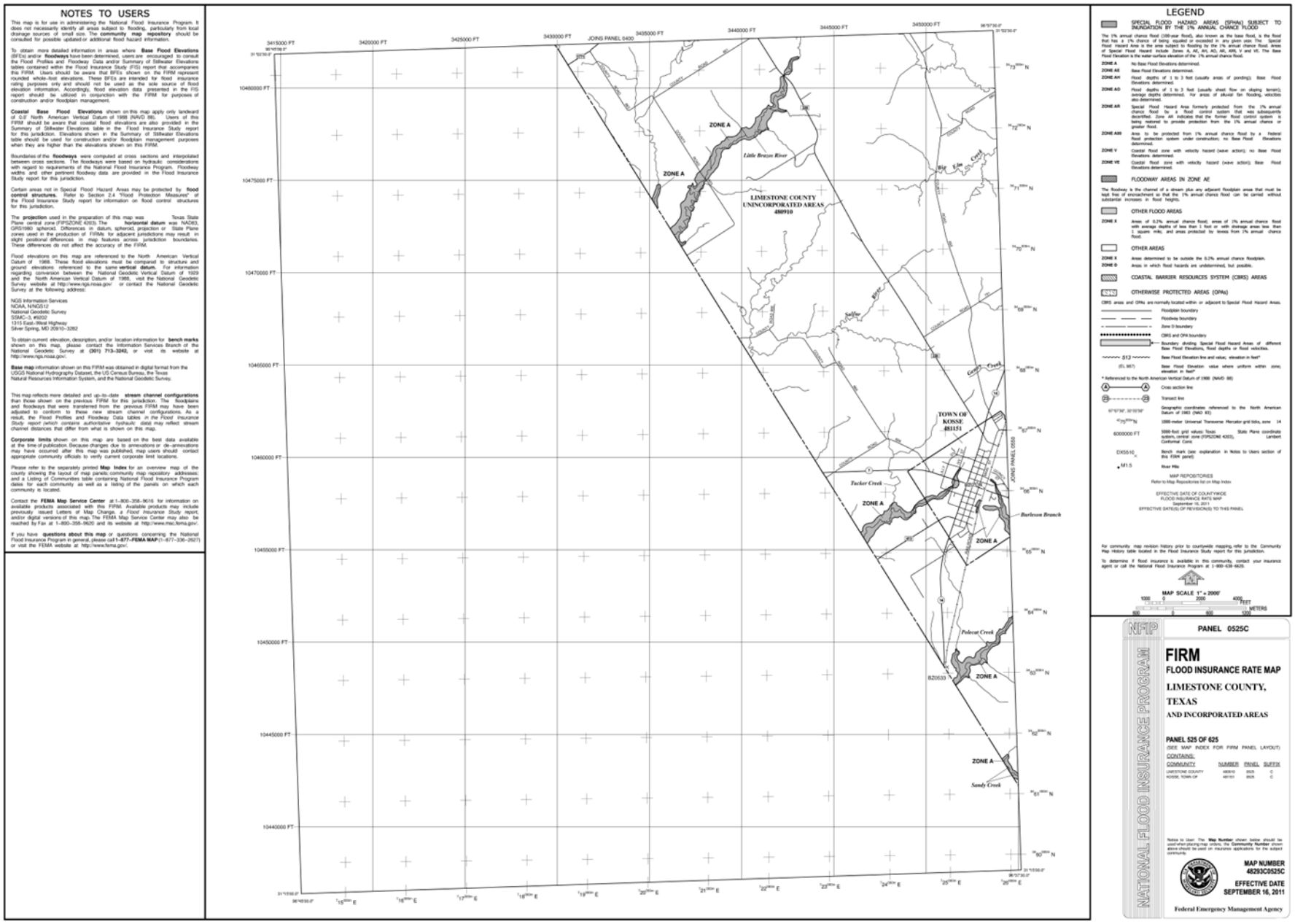
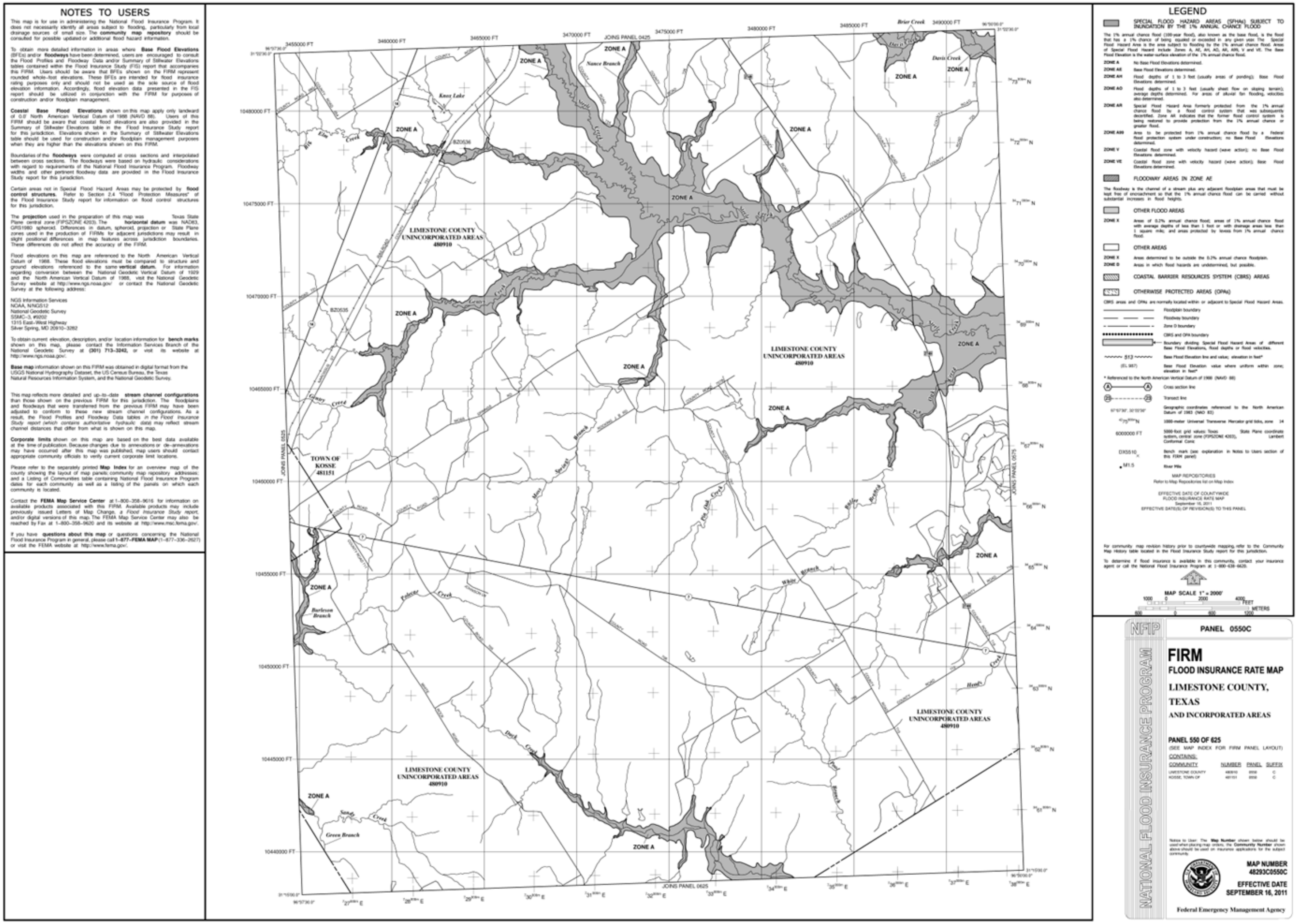
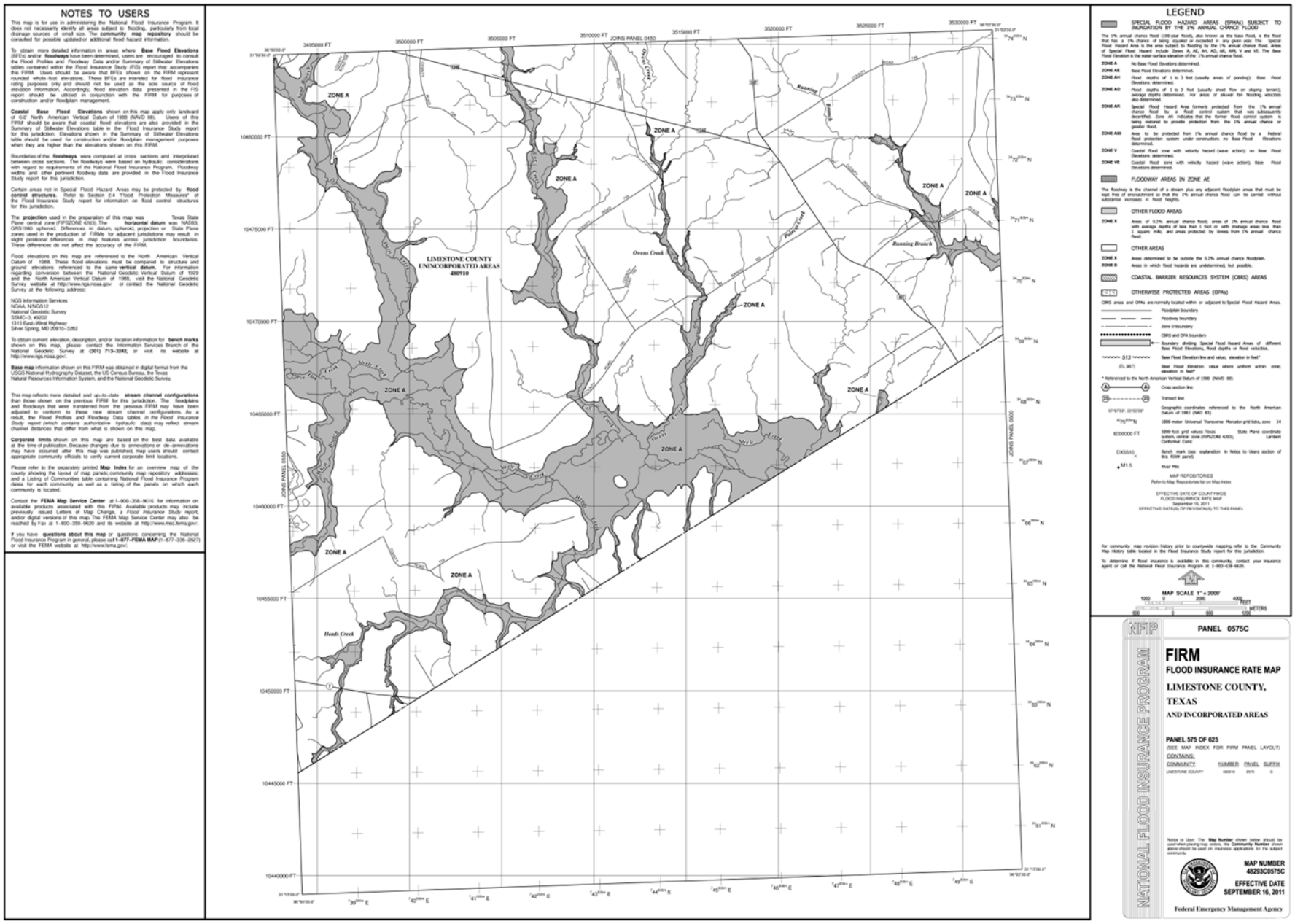
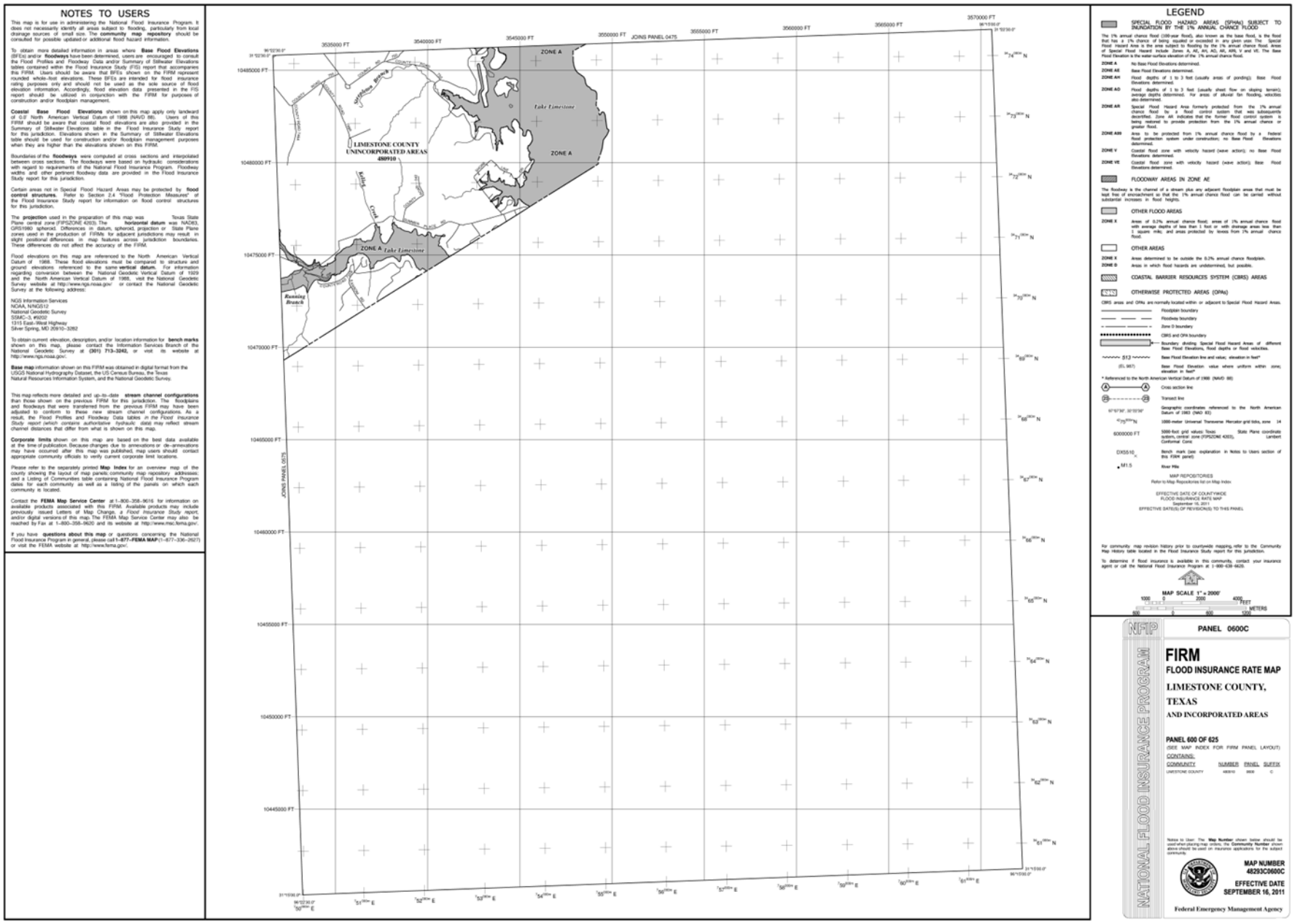
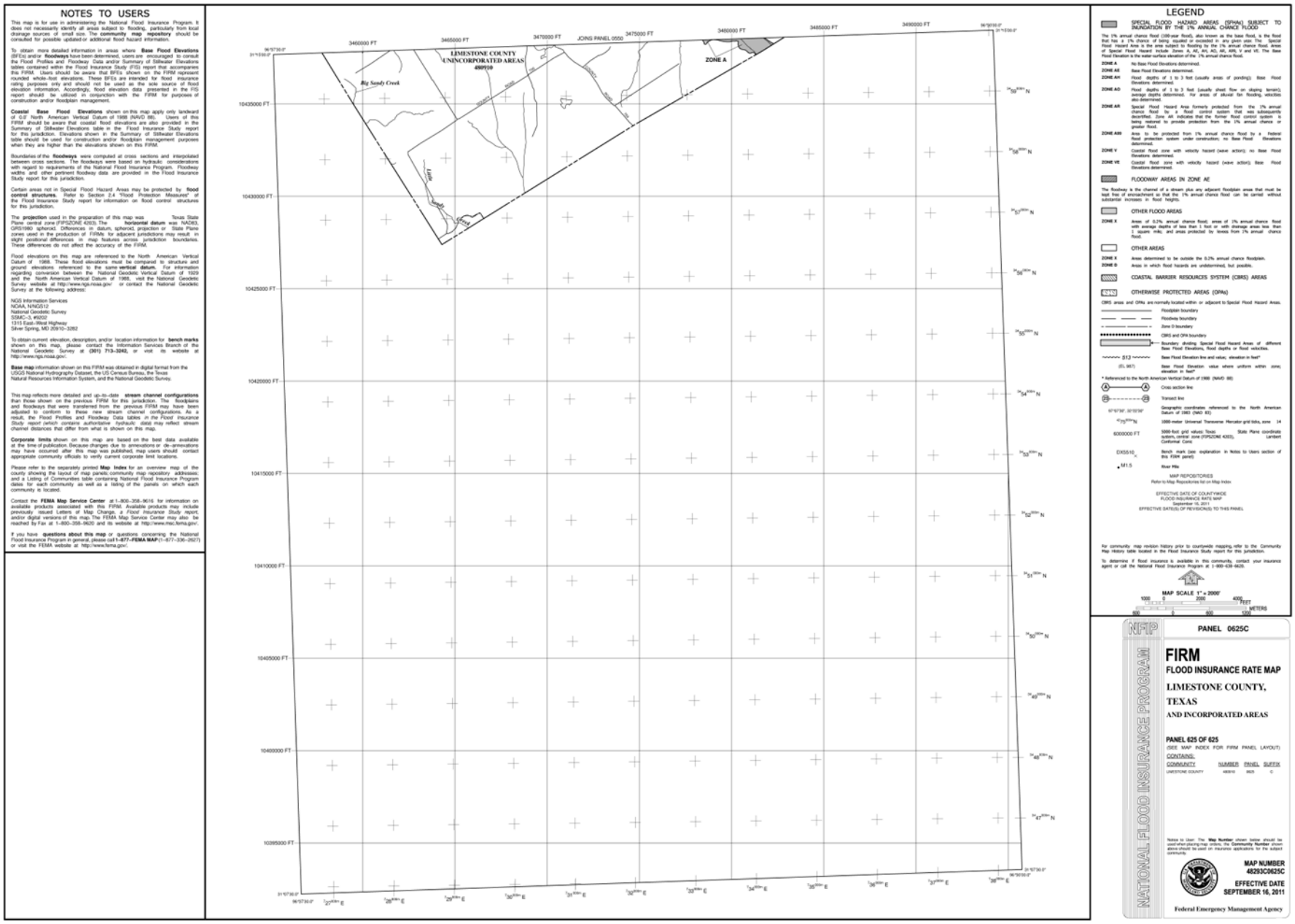
Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.
Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.
Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.
The projection used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.
Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:
NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.
Base map information shown on this FIRM was obtained in digital format from the USGS National Hydrography Dataset, the US Census Bureau, the Texas Natural Resources Information System, and the National Geodetic Survey.
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.
Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.
Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.
If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.
3570000 FT
3575000 FT
3580000 FT
3585000 FT
3590000 FT
3595000 FT
3600000 FT
3605000 FT
10530000 FT
10525000 FT
10520000 FT
10515000 FT
10510000 FT
10505000 FT
10500000 FT
10495000 FT
10490000 FT
JOINS PANEL 0475
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
ZONE A
Lynn Creek
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, ARR, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
OTHER FLOOD AREAS
ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
OTHER AREAS
ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°07'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
3767000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.
MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0500C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 500 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY — NUMBER — PANEL — SUFFIX
LIMESTONE COUNTY — 480910 — 0500 — C
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
48293C0500C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
LEGEND
JOINS PANEL 0400
JOINS PANEL 0450
ZONE A
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
TOWN OF
KOSSE
481151
Little Brazos River
Sulphur River
Coon Creek
Tucker Creek
Barleson Branch
Polecat Creek
Sandy Creek
820633
MAP SCALE 1" = 2000'
PANEL 0525C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY,
TEXAS
AND INCORPORATED AREAS
PANEL 525 OF 625
MAP NUMBER
48293C0525C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency
NATIONAL FLOOD INSURANCE PROGRAM


NOTES TO USERS
LEGEND
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
TOWN OF KOSSE 481151
ZONE A
ZONE AE
JOINS PANEL 0425
JOINS PANEL 0525
JOINS PANEL 0575
JOINS PANEL 0625
PANEL 0550C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 550 OF 625
MAP NUMBER 48293C0550C
EFFECTIVE DATE SEPTEMBER 16, 2011
Federal Emergency Management Agency
NATIONAL FLOOD INSURANCE PROGRAM


NOTES TO USERS
LEGEND
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
ZONE A
Owens Creek
Flume Creek
Running Branch
Heads Creek
JOINS PANEL 0450
JOINS PANEL 0550
JOINS PANEL 0600
MAP SCALE 1" = 2000'
NFIP
PANEL 0575C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 575 OF 625
MAP NUMBER
48293C0575C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
LEGEND
LIMESTONE COUNTY
UNINCORPORATED AREAS
480910
ZONE A
Lake Limestone
Running Branch
Mills Creek
JOINS PANEL 0475
JOINS PANEL 0575
MAP SCALE 1" = 2000'
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0600C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY,
TEXAS
AND INCORPORATED AREAS
PANEL 600 OF 625
MAP NUMBER
48293C0600C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency


NOTES TO USERS
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Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.
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The projection used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.
Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:
NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.
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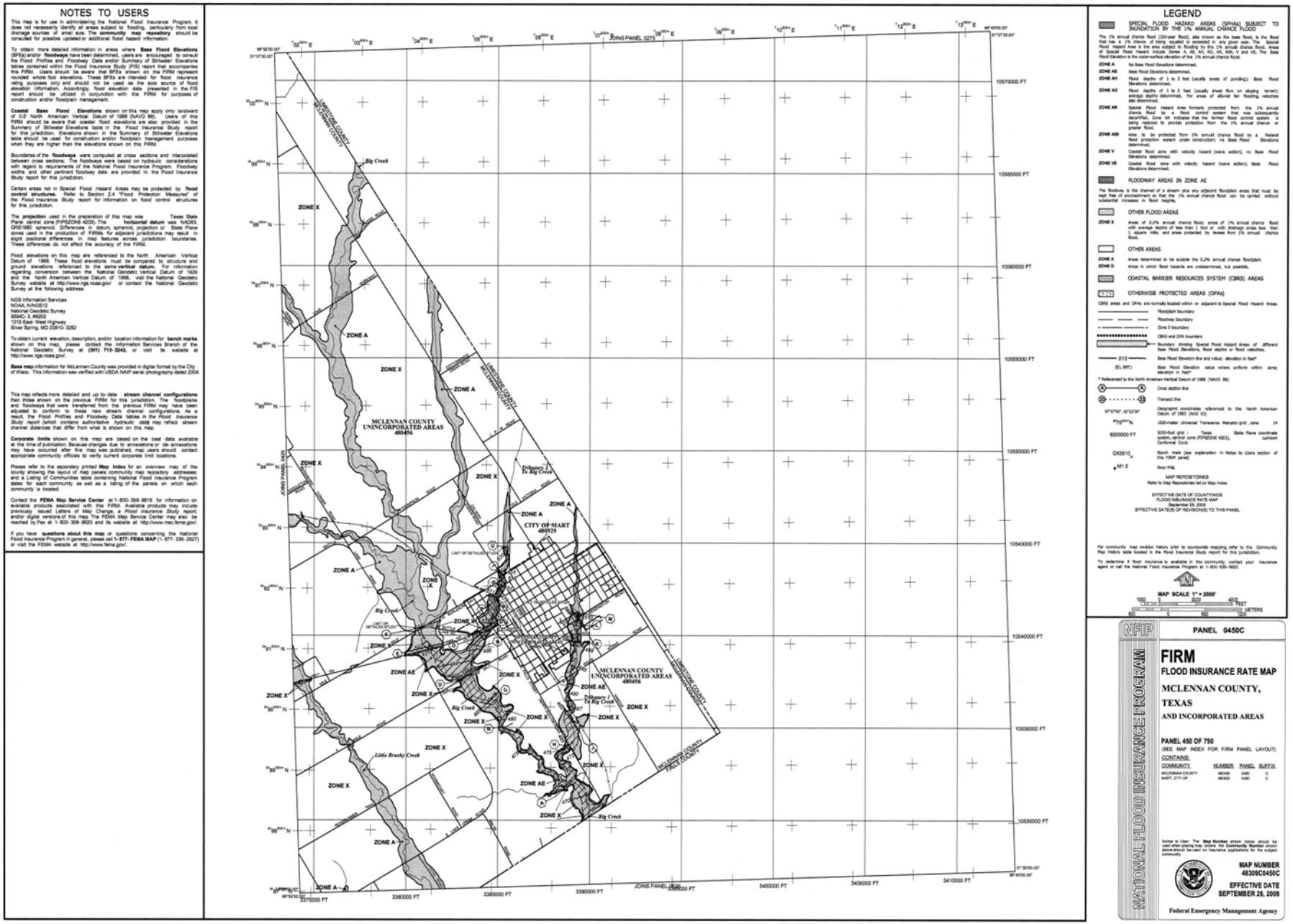
If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.
LIMESTONE COUNTY UNINCORPORATED AREAS 480910
JOINS PANEL 0550
ZONE A
Big Sandy Creek
Lake
3460000 FT
3465000 FT
3470000 FT
3475000 FT
3480000 FT
3485000 FT
3490000 FT
10435000 FT
10430000 FT
10425000 FT
10420000 FT
10415000 FT
10410000 FT
10405000 FT
10400000 FT
10395000 FT
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, ARR, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood
OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 Base Flood Elevation line and value; elevation in feet*
(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
1000-meter Universal Transverse Mercator grid ticks, zone 14
6000000 FT 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 16, 2011
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.
MAP SCALE 1" = 2000'
1000 0 2000 4000 FEET
500 0 600 1200 METERS
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0625C
FIRM
FLOOD INSURANCE RATE MAP
LIMESTONE COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 625 OF 625
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINING:
COMMUNITY NUMBER PANEL SUFFIX
LIMESTONE COUNTY 480910 0625 C
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
48293C0625C
EFFECTIVE DATE
SEPTEMBER 16, 2011
Federal Emergency Management Agency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Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.
Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.
The projection used in the preparation of this map was Texas State Plane central zone (FIPSZONE 4203). The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.
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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov/.
Base map information for McLennan County was provided in digital format by the City of Waco. This information was verified with USDA NAIP aerial photography dated 2004.
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.
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JOINS PANEL 0275
JOINS PANEL 0425
MCLENNAN COUNTY UNINCORPORATED AREAS 480456
CITY OF MART 480929
LIMESTONE COUNTY
MCLENNAN COUNTY
FALLS COUNTY
Big Creek
Little Brushy Creek
Tributary 1 To Big Creek
Tributary 2 To Big Creek
ZONE A
ZONE AE
ZONE X
LEGEND
SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Base Flood Elevation line and value; elevation in feet*
(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
Cross section line
Transect line
97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4°N 1000-meter Universal Transverse Mercator grid, zone 14
6000000 FT 3000-foot grid: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
DX510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 26, 2008
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.
MAP SCALE 1" = 2000'
PANEL 0450C
NFIP
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
MCLENNAN COUNTY, TEXAS
AND INCORPORATED AREAS
PANEL 450 OF 750
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
MCLENNAN COUNTY 480456 0450 C
MART, CITY OF 480929 0450 C
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
48309C0450C
EFFECTIVE DATE
SEPTEMBER 26, 2008
Federal Emergency Management Agency

APPENDIX 3: FLOODING EVENTS

Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 28: Flash Flooding & Flooding Events for Limestone County (1950-2024)

Begin Date	Begin Time	End Date	End Time	Event Type	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
4/4/1997	307	4/4/1997	500	Flash Flood	0	0	0	0	0	0	
4/4/1997	810	4/4/1997	1000	Flash Flood	0	0	0	0	0	0	
4/4/1997	1000	4/4/1997	1200	Flash Flood	0	0	0	0	0	0	
4/4/1997	1153	4/4/1997	1330	Flash Flood	0	0	0	0	0	0	
4/4/1997	2135	4/4/1997	2330	Flood	0	0	0	0	0	0	
12/20/1997	2055	12/20/1997	2300	Flash Flood	0	0	0	0	0	0	
1/5/1998	100	1/5/1998	300	Flash Flood	0	0	0	0	0	0	
1/5/1998	2200	1/5/1998	2345	Flash Flood	0	0	0	0	0	0	
1/6/1998	120	1/6/1998	330	Flash Flood	0	0	0	0	0	0	
1/6/1998	1736	1/6/1998	1930	Flash Flood	0	0	0	0	0	0	
1/7/1998	25	1/7/1998	300	Flash Flood	0	0	0	0	0	0	
1/7/1998	25	1/7/1998	230	Flash Flood	0	0	0	0	0	0	

1/7/1998	539	1/7/1998	800	Flash Flood	0	0	0	0	0	0	
4/4/1999	1410	4/4/1999	1410	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
5/4/2000	1022	5/4/2000	1030	Flash Flood	0	0	0	0	0	0	NEWSPAPER
6/11/2000	955	6/11/2000	955	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
6/11/2000	1630	6/11/2000	1630	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
7/16/2002	1025	7/16/2002	1205	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
12/3/2002	950	12/3/2002	1050	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
2/21/2003	30	2/21/2003	1400	Flash Flood	0	0	0	0	25000	0	LAW ENFORCEMENT
6/9/2004	2156	6/10/2004	156	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
6/10/2004	300	6/10/2004	600	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
6/26/2004	835	6/26/2004	935	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
6/26/2004	2149	6/26/2004	2349	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
8/10/2005	540	8/10/2005	800	Flash Flood	0	0	0	0	0	0	LAW ENFORCEMENT
3/28/2006	616	3/28/2006	1200	Flash Flood	0	0	0	0	50000	0	LAW ENFORCEMENT
5/6/2006	140	5/6/2006	400	Flash Flood	0	0	0	0	0	0	GENERAL PUBLIC
12/29/2006	2044	12/29/2006	2330	Flash Flood	0	0	0	0	0	0	Law Enforcement
1/13/2007	1103	1/13/2007	1700	Flash Flood	0	0	0	0	5000	0	Law Enforcement

3/12/2007	520	3/12/2007	830	Flash Flood	0	0	0	0	0	0	Law Enforcement
3/29/2007	1909	3/29/2007	2230	Flash Flood	0	0	0	0	0	0	Emergency Manager
5/26/2007	1130	5/26/2007	1330	Flash Flood	0	0	0	0	0	0	Law Enforcement
5/27/2007	938	5/27/2007	1138	Flash Flood	0	0	0	0	0	0	Law Enforcement
7/3/2007	1715	7/3/2007	2100	Flash Flood	0	0	0	0	0	0	Law Enforcement
7/14/2007	500	7/14/2007	700	Flash Flood	0	0	0	0	0	0	Law Enforcement
8/19/2008	733	8/19/2008	1100	Flash Flood	0	0	0	0	50000	0	Law Enforcement
10/6/2008	1800	10/6/2008	2000	Flash Flood	0	0	0	0	0	0	Newspaper
4/18/2009	900	4/18/2009	1700	Flash Flood	0	0	0	0	20000	0	Newspaper
4/28/2009	1037	4/28/2009	1945	Flash Flood	0	0	0	0	1000000	0	Trained Spotter
4/28/2009	1530	4/28/2009	1945	Flash Flood	0	0	0	0	0	0	Law Enforcement
10/26/2009	917	10/30/2009	1700	Flood	0	0	0	0	0	0	Law Enforcement
10/26/2009	917	10/28/2009	900	Flood	0	0	0	0	0	0	Law Enforcement
5/14/2010	1559	5/14/2010	1559	Flash Flood	0	0	0	0	0	0	Broadcast Media
6/9/2010	2018	6/9/2010	2018	Flash Flood	0	0	0	0	15000	0	Emergency Manager
6/10/2010	606	6/10/2010	930	Flash Flood	0	0	0	0	50000	0	Department of Highways
1/25/2012	700	1/25/2012	1500	Flood	0	0	0	0	10000	0	Newspaper
10/12/2013	1300	10/12/2013	1600	Flood	0	0	0	0	0	0	Newspaper
10/31/2013	357	10/31/2013	520	Flash Flood	0	0	0	0	50000	0	Law Enforcement

10/31/2013	400	10/31/2013	530	Flash Flood	0	0	0	0	15000	0	Newspaper
10/31/2013	530	10/31/2013	1400	Flood	0	0	0	0	0	0	Newspaper
5/10/2015	2328	5/11/2015	300	Flash Flood	0	0	0	0	0	0	Emergency Manager
5/11/2015	1104	5/11/2015	1304	Flood	0	0	0	0	0	0	Emergency Manager
5/25/2015	1550	5/25/2015	1756	Flash Flood	0	0	0	0	0	0	Emergency Manager
5/25/2015	1550	5/25/2015	1756	Flash Flood	0	0	0	0	0	0	Emergency Manager
6/17/2015	1846	6/17/2015	2015	Flash Flood	0	0	0	0	20000	0	Emergency Manager
6/17/2015	1910	6/17/2015	2015	Flash Flood	0	0	0	0	10000	0	Emergency Manager
6/17/2015	2015	6/17/2015	2215	Flood	0	0	0	0	0	0	Law Enforcement
10/23/2015	1430	10/24/2015	1330	Flash Flood	0	0	0	0	10000	0	Law Enforcement
10/24/2015	1020	10/24/2015	1330	Flash Flood	0	0	0	0	50000	0	Law Enforcement
10/24/2015	1330	10/25/2015	1315	Flood	0	0	0	0	0	0	Law Enforcement
10/31/2015	333	10/31/2015	630	Flash Flood	0	0	0	0	2000	0	Emergency Manager
12/27/2015	1007	12/27/2015	1600	Flash Flood	0	0	0	0	10000	0	Emergency Manager
12/27/2015	1007	12/27/2015	1600	Flash Flood	0	0	0	0	10000	0	Emergency Manager
12/27/2015	1043	12/27/2015	1600	Flash Flood	0	0	0	0	0	0	Law Enforcement
12/27/2015	1043	12/27/2015	1600	Flash Flood	0	0	0	0	0	0	Law Enforcement
12/27/2015	1145	12/27/2015	1600	Flash Flood	0	0	0	0	0	0	Law Enforcement
12/27/2015	1600	12/27/2015	1900	Flood	0	0	0	0	0	0	Law Enforcement

3/9/2016	300	3/9/2016	800	Flash Flood	0	0	0	0	0	0	Emergency Manager
3/9/2016	351	3/9/2016	600	Flash Flood	0	0	0	0	0	0	Emergency Manager
3/9/2016	357	3/9/2016	600	Flash Flood	0	0	0	0	0	0	Emergency Manager
3/9/2016	600	3/9/2016	1400	Flash Flood	0	0	0	0	5000	0	Law Enforcement
3/9/2016	746	3/9/2016	1100	Flash Flood	0	0	0	0	140000	0	Emergency Manager
3/9/2016	920	3/9/2016	1100	Flash Flood	0	0	0	0	5000	0	Newspaper
3/9/2016	924	3/9/2016	1130	Flash Flood	0	0	0	0	10000	0	Law Enforcement
3/9/2016	1150	3/9/2016	1800	Flash Flood	0	0	0	0	50000	0	Emergency Manager
4/17/2016	2011	4/17/2016	2030	Flash Flood	0	0	0	0	0	0	Emergency Manager
6/3/2016	1624	6/3/2016	1745	Flash Flood	0	0	0	0	0	0	Law Enforcement
6/13/2016	450	6/13/2016	1015	Flash Flood	0	0	0	0	5000	0	Emergency Manager
5/18/2019	1650	5/18/2019	1845	Flash Flood	0	0	0	0	50000	0	Emergency Manager
7/7/2020	1030	7/7/2020	1515	Flood	0	0	0	0	0	0	Emergency Manager
9/3/2020	335	9/3/2020	500	Flood	0	0	0	0	0	0	Emergency Manager
5/31/2021	1830	5/31/2021	2100	Flood	0	0	0	0	0	0	Trained Spotter
6/7/2021	1137	6/7/2021	1500	Flash Flood	0	0	0	0	12000	0	Emergency Manager
4/20/2023	1750	4/20/2023	1915	Flash Flood	0	0	0	0	10000	0	Emergency Manager
4/26/2023	1925	4/26/2023	2200	Flash Flood	0	0	0	0	0	0	Amateur Radio

4/28/2024	1420	4/28/2024	1700	Flash Flood	0	0	0	0	20000	0	Emergency Manager
4/28/2024	1422	4/28/2024	1700	Flash Flood	0	0	0	0	5000	0	Public
5/1/2024	1725	5/1/2024	2045	Flash Flood	0	0	0	0	5000	0	Emergency Manager
5/1/2024	1801	5/1/2024	2345	Flash Flood	0	0	0	0	50000	0	Emergency Manager
5/1/2024	1852	5/1/2024	1852	Flash Flood	0	0	0	0	100000	0	Emergency Manager
5/9/2024	1847	5/9/2024	2030	Flash Flood	0	0	0	0	0	0	Emergency Manager
5/12/2024	1245	5/12/2024	1400	Flash Flood	0	0	0	0	0	0	Trained Spotter
5/12/2024	1250	5/12/2024	1400	Flash Flood	0	0	0	0	0	0	Trained Spotter
5/24/2024	2102	5/24/2024	2300	Flash Flood	0	0	0	0	15000	0	Emergency Manager
5/30/2024	1550	5/30/2024	1800	Flash Flood	0	0	0	0	0	0	Emergency Manager
5/30/2024	1615	5/30/2024	1845	Flash Flood	0	0	0	0	0	0	Fire Department/Rescue
6/5/2024	845	6/5/2024	930	Flash Flood	0	0	0	0	5000	0	Emergency Manager

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 4: REPETITIVE LOSS PROPERTIES

Table 29: Repetitive Loss Properties in Limestone County

Reported City	NFIP RL	NFIP Severe RL	FMA RL	FMA Severe RL	NFIP Flood Zone	Occupancy Type	Orig Const Date	Orig NB Date	Post FIRM Const Ind	Pri Res?	Mit?	Ins?	Total Losses	Most Recent Date of Loss
LAKE MEXIA	Yes	Yes	Yes	Yes	A	Single family residence	7/1/1967	6/10/2009	No	Yes	No	No	13	4/11/2017
MEXIA	No	No	Yes	Yes	A	Single family residence	7/1/1974	10/30/2009	No	Yes	Yes	Yes	12	4/11/2017
MEXIA	Yes	Yes	No	Yes	X	Single family residence w/ exception of a mobile home or other	1/1/1969	8/18/2010	No	Yes	No	Yes	10	5/31/2024
MEXIA	No	No	No	Yes	X	Single family residence	7/1/1966	12/24/2008	No	No	Yes	No	9	10/31/2015
MEXIA	Yes	Yes	Yes	Yes	A	Single family residence	11/16/1978	11/18/2016	No	No	No	Yes	7	7/6/2020
LAKE MEXIA	Yes	Yes	No	Yes	A	Single family residence	6/1/1960	10/29/2013	No	No	No	No	6	5/11/2015
MEXIA	Yes	Yes	No	Yes	A	Single family residence	1/1/1900	4/10/1994	No	Yes	No	No	6	2/13/1997
LAKE MEXIA	Yes	No	No	No	A	Single family residence	7/1/1950	6/4/1987	No	No	No	No	5	12/22/1991
MEXIA	Yes	Yes	No	Yes	A	Single family residence	7/1/1965	11/8/1997	No	No	No	No	5	3/9/2016
Mexia	Yes	Yes	No	Yes	X	Single family residence	1/1/1972	3/15/1997	No	Yes	No	No	5	4/28/2009
MEXIA	Yes	Yes	No	Yes	A	Single family residence	11/30/1960	10/12/2010	No	Yes	No	No	5	3/9/2016
MEXIA	Yes	Yes	Yes	Yes	A	Single family residence	11/30/1975	3/26/2003	No	Yes	No	No	5	3/20/2012
MEXIA	Yes	Yes	No	Yes	A	Single family residence	1/1/1978	10/23/2016	No	No	No	Yes	5	7/7/2020
MEXIA	Yes	Yes	Yes	Yes	X	Single family residence w/	2/15/1964	12/28/2016	No	Yes	No	Yes	5	7/7/2020

						exception of a mobile home or other								
LAKE MEXIA	Yes	No	No	No	X	Single family residence	6/1/1965	8/29/2001	No	No	No	No	4	4/11/2017
MEXIA	Yes	No	No	No	A	Single family residence	7/1/2000	4/14/2008	Yes	No	No	No	4	3/9/2016
MEXIA	No	No	No	Yes	X	Single family residence	1/1/1971	1/10/2016	No	Yes	Yes	No	4	4/11/2017
MEXIA	Yes	No	No	No	A	Single family residence		10/31/1985	No	No	No	No	3	12/22/1991
LAKE MAXIA	Yes	No	No	No	A	Single family residence	7/1/1974	11/17/1986	No	No	No	No	3	12/27/1991
LAKE MEXIA	Yes	No	No	No	A	Single family residence	1/1/1900	12/10/1988	No	No	No	No	3	12/20/1991
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1974	2/25/1990	No	No	No	No	3	5/27/1994
LK MEXIA	Yes	No	No	No	A	Single family residence	7/1/1964	8/4/1987	No	No	No	No	3	12/22/1991
MEXIA	Yes	No	No	No	X	Single family residence	1/1/1970	11/25/2009	No	No	No	No	3	3/9/2016
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1950	9/25/1987	No	No	No	No	3	12/22/1991
MEXIA	Yes	No	No	No	A	Single family residence	1/1/1900	3/1/1991	No	No	No	No	3	3/9/2016
MEXIA	Yes	No	No	No	X	Single family residence	1/1/1981	3/31/2012	No	Yes	No	No	3	7/7/2020
MEXIA	Yes	No	No	No	A	Single family residence	12/31/1970	3/13/2014	No	Yes	No	No	3	3/9/2016
MEXIA	Yes	No	No	No	X	Single family residence	5/5/1972	3/28/2003	No	Yes	No	No	3	3/20/2012
MEXIA	Yes	No	No	No	A	Single family residence	5/1/1970	5/7/1989	No	Yes	No	No	3	12/16/2001
LAKE MEXIA	Yes	No	No	No	X	Single family residence	7/1/1974	3/17/1985	No	Yes	No	No	3	12/16/2001
MEXIA	Yes	Yes	No	Yes	A	Single family residence	1/1/1979	2/20/2013	No	Yes	No	No	3	3/9/2016
MEXIA	Yes	No	No	No		Non-residential building	7/1/1956	9/23/2023	No	No	No	Yes	3	4/9/2024
MEXIA	Yes	No	No	No	A	Single family residence	8/1/1979	5/7/1991	No	No	No	No	2	12/21/1991

MEXIA	Yes	No	No	No	A	Single family residence	1/1/1965	12/11/1997	No	No	No	No	2	4/28/2009
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1950	2/10/1989	No	No	No	No	2	12/21/1991
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1950	9/30/1991	No	No	No	No	2	12/21/1991
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1969	3/20/1991	No	No	No	No	2	12/22/1991
MEXIA	Yes	No	No	No	A	Single family residence	7/1/1967	6/25/1991	No	No	No	No	2	12/21/1991
MEXIA	Yes	No	Yes	No	X	Single family residence	7/1/1965	4/4/2006	No	No	No	No	2	3/9/2016
MEXIA	Yes	No	No	No	X	Single family residence	6/9/1992	4/22/2005	Yes	No	No	No	2	3/9/2016
GROESBECK	Yes	No	No	No	X	Single family residence	11/30/1979	7/3/2011	No	Yes	No	No	2	1/25/2012
MEXIA	Yes	No	No	No	A	Single family residence	10/1/1979	12/10/2004	No	Yes	No	No	2	3/20/2012
MEXIA	No	No	Yes	No	X	Single family residence	1/1/1978	8/13/2011	No	Yes	Yes	No	2	3/20/2012
MEXIA	No	No	No	No	A	Single family residence	8/18/2016	10/14/2010	Yes	Yes	Yes	No	2	3/9/2016
MEXIA	Yes	No	No	No	A	Single family residence w/ exception of a mobile home or other	8/8/1985	1/24/2014	No	Yes	No	Yes	2	10/24/2015

(Federal Emergency Management Agency, 2024)

APPENDIX 5: HAIL EVENTS

Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 30: Hail Events for Limestone County (1950-2024)

Begin Date	Begin Time	End Date	End Time	Magnitude	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
4/21/1958	1800	4/21/1958	1800	2.75	0	0	0	0	0	0	
5/20/1975	1440	5/20/1975	1440	1	0	0	0	0	0	0	
4/3/1976	2030	4/3/1976	2030	1.75	0	0	0	0	0	0	
4/24/1976	1520	4/24/1976	1520	1.75	0	0	0	0	0	0	
10/15/1979	1830	10/15/1979	1830	1.75	0	0	0	0	0	0	
3/21/1982	1425	3/21/1982	1425	1.75	0	0	0	0	0	0	
4/19/1982	1245	4/19/1982	1245	1	0	0	0	0	0	0	
10/6/1984	1725	10/6/1984	1725	1.75	0	0	0	0	0	0	
4/8/1986	1750	4/8/1986	1750	0.75	0	0	0	0	0	0	
2/20/1987	430	2/20/1987	430	0.75	0	0	0	0	0	0	
5/3/1987	2320	5/3/1987	2320	1	0	0	0	0	0	0	
5/3/1987	2340	5/3/1987	2340	1	0	0	0	0	0	0	
5/19/1987	1710	5/19/1987	1710	0.75	0	0	0	0	0	0	
5/9/1988	1900	5/9/1988	1900	3.5	0	0	0	0	0	0	
6/23/1988	1812	6/23/1988	1812	0.75	0	0	0	0	0	0	
11/26/1988	352	11/26/1988	352	1.75	0	0	0	0	0	0	
4/29/1989	1907	4/29/1989	1907	1.75	0	0	0	0	0	0	
4/29/1989	1950	4/29/1989	1950	1.75	0	0	0	0	0	0	
5/4/1989	2230	5/4/1989	2230	1	0	0	0	0	0	0	
6/7/1989	1815	6/7/1989	1815	1.75	0	0	0	0	0	0	
4/27/1990	1619	4/27/1990	1619	2.75	0	0	0	0	0	0	
4/28/1990	1657	4/28/1990	1657	1.75	0	0	0	0	0	0	
6/3/1990	1836	6/3/1990	1836	1	0	0	0	0	0	0	
4/29/1992	45	4/29/1992	45	0.75	0	0	0	0	0	0	

3/11/1993	1015	3/11/1993	1015	1	0	0	0	0	0	0	
7/11/1994	1630	7/11/1994	1630	1.75	0	0	0	0	0	0	
1/12/1995	1437	1/12/1995	1437	1	0	0	0	0	0	0	
4/20/1995	814	4/20/1995	814	0.75	0	0	0	0	0	0	
5/5/1995	2330	5/5/1995	2330	0.75	0	0	0	0	0	0	
6/10/1995	2320	6/10/1995	2320	0.75	0	0	0	0	0	0	
3/23/1996	1645	3/23/1996	1930		0	0	0	0	0	0	
3/23/1996	1645	3/23/1996	1930		0	0	0	0	0	0	
3/24/1996	2010	3/24/1996	2010	0.75	0	0	0	0	0	0	
4/12/1996	1915	4/12/1996	1915	1.75	0	0	0	0	0	0	
4/12/1996	1940	4/12/1996	1940	2.75	0	0	0	0	0	0	
4/12/1996	1940	4/12/1996	1940	0.88	0	0	0	0	0	0	
4/12/1996	2010	4/12/1996	2010	1	0	0	0	0	0	0	
4/19/1996	2050	4/19/1996	2050	1	0	0	0	0	0	0	
4/21/1996	1345	4/21/1996	2000	2.75	0	0	0	0	0	0	
4/21/1996	1345	4/21/1996	2000	2.75	0	0	0	0	0	0	
4/21/1996	1345	4/21/1996	2000	2.75	0	0	0	0	0	0	
4/21/1996	1345	4/21/1996	2000	2.75	0	0	0	0	0	0	
4/21/1996	1345	4/21/1996	2000	2.75	0	0	0	0	0	0	
4/28/1996	1815	4/28/1996	1815	0.75	0	0	0	0	0	0	
4/28/1996	1901	4/28/1996	1901	0.88	0	0	0	0	0	0	
4/28/1996	1940	4/28/1996	1940	2.5	0	0	0	0	0	0	
9/17/1996	2355	9/18/1996	505	0.88	0	0	0	0	0	0	
9/17/1996	2355	9/18/1996	505	0.88	0	0	0	0	0	0	
3/2/1997	30	3/2/1997	30	1	0	0	0	0	0	0	
5/27/1997	1553	5/27/1997	1553	1.75	0	0	0	0	0	0	
1/4/1998	2318	1/4/1998	2318	0.75	0	0	0	0	0	0	
1/5/1998	2020	1/5/1998	2020	0.88	0	0	0	0	0	0	
3/19/1998	300	3/19/1998	300	1.75	0	0	0	0	0	0	
6/5/1998	420	6/5/1998	420	0.88	0	0	0	0	0	0	UNKNOWN
1/21/1999	2140	1/21/1999	2140	2	0	0	0	0	0	0	LAW ENFORCEMENT
4/4/1999	1320	4/4/1999	1320	0.88	0	0	0	0	0	0	TRAINED SPOTTER
4/4/1999	1345	4/4/1999	1345	0.88	0	0	0	0	0	0	TRAINED SPOTTER

4/4/1999	1405	4/4/1999	1405	1.75	0	0	0	0	0	LAW ENFORCEMENT
5/17/1999	1810	5/17/1999	1810	0.75	0	0	0	0	0	LAW ENFORCEMENT
3/10/2000	1844	3/10/2000	1844	1	0	0	0	0	0	LAW ENFORCEMENT
3/26/2000	325	3/26/2000	325	1	0	0	0	0	0	FIRE DEPT/RESCUE SQUAD
7/1/2001	344	7/1/2001	344	1	0	0	0	0	0	TRAINED SPOTTER
4/7/2002	2045	4/7/2002	2045	1	0	0	0	0	0	BROADCAST MEDIA
4/8/2002	1940	4/8/2002	1940	1	0	0	0	0	0	BROADCAST MEDIA
12/30/2002	1720	12/30/2002	1720	1	0	0	0	0	0	LAW ENFORCEMENT
5/16/2003	1920	5/16/2003	1920	1.75	0	0	0	0	0	LAW ENFORCEMENT
11/17/2003	714	11/17/2003	714	0.75	0	0	0	0	0	GENERAL PUBLIC
5/31/2004	1856	5/31/2004	1856	0.75	0	0	0	0	0	FIRE DEPT/RESCUE SQUAD
5/31/2004	1900	5/31/2004	1900	0.75	0	0	0	0	0	TRAINED SPOTTER
6/4/2004	1905	6/4/2004	1905	0.88	0	0	0	0	0	LAW ENFORCEMENT
4/5/2005	1956	4/5/2005	1956	0.88	0	0	0	0	0	TRAINED SPOTTER
7/2/2005	2100	7/2/2005	2100	0.75	0	0	0	0	0	LAW ENFORCEMENT
4/25/2006	1610	4/25/2006	1610	1.75	0	0	0	0	5000	0	LAW ENFORCEMENT
4/29/2006	230	4/29/2006	230	0.75	0	0	0	0	0	0	LAW ENFORCEMENT
4/17/2007	1848	4/17/2007	1848	0.75	0	0	0	0	0	0	Law Enforcement
5/10/2007	1605	5/10/2007	1605	1.75	0	0	0	0	5000	0	Law Enforcement
5/10/2007	1624	5/10/2007	1624	1.5	0	0	0	0	3000	0	Public
4/25/2008	1627	4/25/2008	1627	1.75	0	0	0	0	5000	0	Trained Spotter
5/7/2008	1604	5/7/2008	1604	0.75	0	0	0	0	0	0	Emergency Manager
5/20/2010	1840	5/20/2010	1840	1	0	0	0	0	0	0	Law Enforcement
4/25/2011	1711	4/25/2011	1711	1	0	0	0	0	0	0	Amateur Radio
4/25/2011	1720	4/25/2011	1720	1.75	0	0	0	0	4000	0	Trained Spotter
4/25/2011	1722	4/25/2011	1722	1.75	0	0	0	0	10000	0	Broadcast Media
4/25/2011	1803	4/25/2011	1803	1.75	0	0	0	0	2000	0	Fire Department/Rescue
4/14/2014	940	4/14/2014	940	1	0	0	0	0	0	0	Trained Spotter
4/14/2014	950	4/14/2014	950	0.75	0	0	0	0	0	0	Broadcast Media
4/27/2014	2335	4/27/2014	2335	0.88	0	0	0	0	0	0	Social Media

4/9/2015	1521	4/9/2015	1521	1.5	0	0	0	0	5000	0	Trained Spotter
4/13/2015	1634	4/13/2015	1639	1.25	0	0	0	0	0	0	Public
4/13/2015	1635	4/13/2015	1638	1	0	0	0	0	0	0	Trained Spotter
4/13/2015	1820	4/13/2015	1822	1	0	0	0	0	0	0	Storm Chaser
4/17/2016	1917	4/17/2016	1917	1	0	0	0	0	0	0	Trained Spotter
2/20/2017	130	2/20/2017	130	0.88	0	0	0	0	0	0	Emergency Manager
2/20/2017	149	2/20/2017	149	0.75	0	0	0	0	0	0	Public
3/24/2017	1555	3/24/2017	1555	0.88	0	0	0	0	0	0	Trained Spotter
4/2/2017	752	4/2/2017	752	0.88	0	0	0	0	0	0	Trained Spotter
4/2/2017	802	4/2/2017	802	0.75	0	0	0	0	0	0	Emergency Manager
4/10/2017	2225	4/10/2017	2225	1.75	0	0	0	0	0	0	Trained Spotter
5/3/2017	1415	5/3/2017	1415	1	0	0	0	0	1000	0	Social Media
5/3/2017	1429	5/3/2017	1429	1.75	0	0	0	0	1000	0	Emergency Manager
5/3/2017	1432	5/3/2017	1432	1.75	0	0	0	0	0	0	Emergency Manager
5/3/2017	1439	5/3/2017	1439	1	0	0	0	0	0	0	Amateur Radio
5/3/2017	1445	5/3/2017	1445	1	0	0	0	0	0	0	Trained Spotter
4/3/2018	1151	4/3/2018	1151	1	0	0	0	0	0	0	Trained Spotter
4/3/2018	1202	4/3/2018	1202	0.88	0	0	0	0	0	0	Trained Spotter
4/3/2018	1636	4/3/2018	1636	1	0	0	0	0	0	0	Emergency Manager
4/13/2018	1948	4/13/2018	1948	0.88	0	0	0	0	0	0	Trained Spotter
11/12/2018	122	11/12/2018	122	1.75	0	0	0	0	0	0	Emergency Manager
5/18/2019	1613	5/18/2019	1613	1.25	0	0	0	0	0	0	Emergency Manager
6/9/2019	1515	6/9/2019	1515	1	0	0	0	0	0	0	Trained Spotter
6/20/2019	352	6/20/2019	352	1	0	0	0	0	0	0	Trained Spotter
2/9/2020	1937	2/9/2020	1937	1	0	0	0	0	0	0	Trained Spotter
3/21/2022	1929	3/21/2022	1929	1.5	0	0	0	0	0	0	Public
4/12/2022	1754	4/12/2022	1754	0.75	0	0	0	0	0	0	Trained Spotter
5/5/2022	1238	5/5/2022	1238	1	0	0	0	0	0	0	Emergency Manager
4/26/2023	1802	4/26/2023	1802	1.75	0	0	0	0	5000	0	Emergency Manager
4/26/2023	1900	4/26/2023	1900	1.75	0	0	0	0	5000	0	Amateur Radio
4/28/2023	1736	4/28/2023	1736	1.75	0	0	0	0	100000	0	Emergency Manager
4/28/2023	1738	4/28/2023	1738	1.5	0	0	0	0	0	0	Amateur Radio
6/10/2023	1858	6/10/2023	1858	1	0	0	0	0	0	0	Trained Spotter

4/28/2024	1400	4/28/2024	1400	1.25	0	0	0	0	0	0	Trained Spotter
5/9/2024	1805	5/9/2024	1805	1.75	0	0	0	0	4000	0	Fire Department/Rescue
5/9/2024	1825	5/9/2024	1825	1.25	0	0	0	0	0	0	Public
5/9/2024	1825	5/9/2024	1825	1.25	0	0	0	0	0	0	Public
5/9/2024	1845	5/9/2024	1845	0.88	0	0	0	0	0	0	Public
5/12/2024	854	5/12/2024	854	1.25	0	0	0	0	0	0	Public
5/23/2024	1757	5/23/2024	1757	1.75	0	0	0	0	8000	0	Emergency Manager

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 6: SEVERE WIND EVENTS

Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 31: Severe Wind Events for Limestone County (1950-2024)

Begin Date	Begin Time	Event Type	Wind Speed	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	SOURCE
6/5/1955	1730	Thunderstorm Wind	0	0	0	0	0	0	0	
6/8/1955	1900	Thunderstorm Wind	0	0	0	0	0	0	0	
9/7/1956	1600	Thunderstorm Wind	0	0	0	0	0	0	0	
4/24/1957	1615	Thunderstorm Wind	0	0	0	0	0	0	0	
3/16/1961	1930	Thunderstorm Wind	0	0	0	0	0	0	0	
4/11/1961	1745	Thunderstorm Wind	70	0	0	0	0	0	0	
4/27/1962	500	Thunderstorm Wind	0	0	0	0	0	0	0	
6/8/1962	2145	Thunderstorm Wind	0	0	0	0	0	0	0	
5/25/1973	1730	Thunderstorm Wind	0	0	0	0	0	0	0	
9/1/1980	1815	Thunderstorm Wind	0	0	0	0	0	0	0	
10/16/1980	615	Thunderstorm Wind	0	0	0	0	0	0	0	
10/6/1984	1750	Thunderstorm Wind	0	0	0	0	0	0	0	

2/23/1985	310	Thunderstorm Wind	0	0	0	0	0	0	0
4/19/1986	1655	Thunderstorm Wind	0	0	0	0	0	0	0
4/13/1987	745	Thunderstorm Wind	52	0	0	0	0	0	0
5/20/1988	2044	Thunderstorm Wind	0	0	0	0	0	0	0
8/5/1988	1432	Thunderstorm Wind	0	0	0	0	0	0	0
5/4/1989	2245	Thunderstorm Wind	0	0	0	0	0	0	0
7/13/1989	1900	Thunderstorm Wind	0	0	0	0	0	0	0
4/28/1990	1630	Thunderstorm Wind	0	0	0	0	0	0	0
5/12/1990	351	Thunderstorm Wind	0	0	0	0	0	0	0
6/3/1990	1815	Thunderstorm Wind	0	0	0	0	0	0	0
4/29/1992	50	Thunderstorm Wind	0	0	0	0	0	0	0
4/14/1993	645	Thunderstorm Wind	0	0	0	0	0	5000	0
5/26/1994	1749	Thunderstorm Wind	70	0	0	2	0	50000	0
5/29/1994	2110	Thunderstorm Wind	0	0	0	0	0	5000	0
5/29/1994	2115	Thunderstorm Wind	52	0	0	0	0	5000	0
5/5/1995	2140	Thunderstorm Wind	0	0	0	0	0	2000	0
5/5/1995	2250	Thunderstorm Wind	52	0	0	0	0	0	0

5/29/1995	945	Thunderstorm Wind	61	0	0	0	0	0	0	
6/10/1995	2320	Thunderstorm Wind	52	0	0	0	0	0	0	
6/1/1996	1250	Thunderstorm Wind	52	0	0	0	0	0	0	
7/4/1996	1700	Thunderstorm Wind		0	0	0	0	40000	0	
10/21/1996	2040	Thunderstorm Wind	52	0	0	0	0	0	0	
11/7/1996	110	Thunderstorm Wind	52	0	0	0	0	0	0	
11/7/1996	135	Thunderstorm Wind	70	0	0	0	0	170000	0	
11/7/1996	155	Thunderstorm Wind	61	0	0	0	0	0	0	
5/27/1997	1529	Thunderstorm Wind		0	0	0	0	2000	0	
5/27/1997	1620	Thunderstorm Wind		0	0	0	0	2000	0	
2/25/1998	2310	Thunderstorm Wind		0	0	0	0	0	0	
2/25/1998	2310	Thunderstorm Wind		0	0	0	0	15000	0	
2/25/1998	2320	Thunderstorm Wind		0	0	0	0	120000	0	
4/8/1998	355	Thunderstorm Wind	57	0	0	0	0	0	0	
6/4/1998	2100	Thunderstorm Wind		0	0	0	0	0	0	UNKNOWN
6/4/1998	2130	Thunderstorm Wind		0	0	0	0	0	0	LAW ENFORCEMENT
6/4/1998	2200	Thunderstorm Wind	65	0	0	0	0	25000	0	UNKNOWN

6/5/1998	435	Thunderstorm Wind	52	0	0	0	0	0	0	UNKNOWN
7/16/1998	1718	Thunderstorm Wind		0	0	0	0	2000	0	LAW ENFORCEMENT
7/16/1998	1718	Thunderstorm Wind	52	0	0	0	0	0	0	TRAINED SPOTTER
4/26/1999	741	Thunderstorm Wind	65	0	0	0	0	0	0	LAW ENFORCEMENT
5/17/1999	1810	Thunderstorm Wind		0	0	0	0	300	0	LAW ENFORCEMENT
3/10/2000	1844	Thunderstorm Wind		0	0	0	0	2000	0	LAW ENFORCEMENT
3/26/2000	325	Thunderstorm Wind	60	0	0	0	0	0	0	LAW ENFORCEMENT
5/28/2001	219	Thunderstorm Wind	58	0	0	0	0	0	0	LAW ENFORCEMENT
3/19/2002	2045	Thunderstorm Wind		0	0	0	0	1000	0	LAW ENFORCEMENT
5/1/2003	2050	Thunderstorm Wind	52	0	0	0	0	0	0	LAW ENFORCEMENT
6/12/2003	1755	Thunderstorm Wind	52	0	0	0	0	0	0	LAW ENFORCEMENT
6/15/2003	215	Thunderstorm Wind	52	0	0	0	0	2000	0	LAW ENFORCEMENT
6/1/2004	2228	Thunderstorm Wind	61	0	0	0	0	25000	0	LAW ENFORCEMENT
5/8/2005	656	Thunderstorm Wind	52	0	0	0	0	0	0	TRAINED SPOTTER
5/8/2005	715	Thunderstorm Wind	52	0	0	0	0	2000	0	NEWSPAPER
7/2/2005	2100	Thunderstorm Wind	50	0	0	0	0	10000	0	LAW ENFORCEMENT
7/2/2005	2106	Thunderstorm Wind	50	0	0	0	0	0	0	LAW ENFORCEMENT

7/2/2005	2115	Thunderstorm Wind	65	0	0	0	0	0	0	LAW ENFORCEMENT
7/2/2005	2120	Thunderstorm Wind	65	0	0	0	0	5000	0	LAW ENFORCEMENT
5/6/2006	114	Thunderstorm Wind	52	0	0	0	0	30000	0	OFFICIAL NWS OBS.
10/26/2006	1736	Thunderstorm Wind	61	0	0	0	0	0	0	Law Enforcement
3/29/2007	1720	Thunderstorm Wind	56	0	0	0	0	15000	0	Law Enforcement
3/30/2007	1705	Thunderstorm Wind	50	0	0	0	0	10000	0	Law Enforcement
9/5/2007	629	Thunderstorm Wind	52	0	0	0	0	6000	0	Emergency Manager
3/3/2008	523	Thunderstorm Wind	52	0	0	0	0	0	0	Emergency Manager
3/3/2008	525	Thunderstorm Wind	50	0	0	0	0	125000	0	Newspaper
3/3/2008	529	Thunderstorm Wind	50	0	0	0	0	5000	0	Public
3/3/2008	1735	Thunderstorm Wind	50	0	0	0	0	5000	0	Newspaper
4/23/2008	2226	Thunderstorm Wind	50	0	0	0	0	30000	0	Law Enforcement
8/3/2008	1910	Thunderstorm Wind	61	0	0	0	0	40000	0	Emergency Manager
10/6/2008	1752	Thunderstorm Wind	52	0	0	0	0	0	0	Amateur Radio
10/6/2008	1846	Thunderstorm Wind	50	0	0	0	0	0	0	Newspaper
12/27/2008	1050	Thunderstorm Wind	50	0	0	2	0	2000	0	Emergency Manager
2/10/2009	2150	Thunderstorm Wind	60	0	0	0	0	10000	0	Newspaper

2/10/2009	2200	Thunderstorm Wind	78	0	0	0	0	8000	0	State Official
2/10/2009	2215	Thunderstorm Wind	75	0	0	0	0	5000	0	Newspaper
2/10/2009	2217	Thunderstorm Wind	56	0	0	0	0	0	0	Emergency Manager
8/23/2009	1800	Thunderstorm Wind	61	0	0	0	0	15000	0	Newspaper
8/27/2009	1330	Thunderstorm Wind	50	0	0	0	0	7000	0	Newspaper
4/23/2010	2345	Thunderstorm Wind	61	0	0	0	0	10000	0	Emergency Manager
4/23/2010	2359	Thunderstorm Wind	65	0	0	0	0	20000	0	Emergency Manager
4/26/2011	1925	Thunderstorm Wind	70	0	0	0	0	75000	0	Trained Spotter
8/11/2014	1330	Thunderstorm Wind	52	0	0	0	0	2000	0	Law Enforcement
10/13/2014	300	Thunderstorm Wind	50	0	0	0	0	0	0	Law Enforcement
5/25/2015	1403	Thunderstorm Wind	50	0	0	0	0	0	0	Emergency Manager
5/25/2015	1550	Thunderstorm Wind	50	0	0	0	0	1000	0	Emergency Manager
5/25/2015	1604	Thunderstorm Wind	50	0	0	0	0	0	0	Emergency Manager
5/27/2015	17	Thunderstorm Wind	52	0	0	0	0	0	0	Public
5/10/2016	2000	Thunderstorm Wind	52	0	0	0	0	4000	0	Amateur Radio
5/10/2016	2020	Thunderstorm Wind	52	0	0	0	0	0	0	Emergency Manager
2/20/2017	133	Thunderstorm Wind	56	0	0	0	0	10000	0	Emergency Manager

2/20/2017	145	Thunderstorm Wind	43	0	0	0	0	1000	0	Trained Spotter
2/20/2017	222	Thunderstorm Wind	48	0	0	0	0	1000	0	Emergency Manager
4/2/2017	1030	Thunderstorm Wind	52	0	0	0	0	0	0	Emergency Manager
4/10/2017	2230	Thunderstorm Wind	52	0	0	0	0	0	0	Trained Spotter
5/11/2017	1700	Thunderstorm Wind	60	0	0	0	0	0	0	Emergency Manager
5/11/2017	1700	Thunderstorm Wind	60	0	0	0	0	0	0	Emergency Manager
7/6/2018	1622	Thunderstorm Wind	50	0	0	0	0	25000	0	Emergency Manager
10/13/2018	1424	Thunderstorm Wind	65	0	0	0	0	5000	0	NWS Storm Survey
4/13/2019	1112	Thunderstorm Wind	55	0	0	0	0	7000	0	Emergency Manager
4/13/2019	1115	Thunderstorm Wind	50	0	0	0	0	5000	0	Emergency Manager
4/13/2019	1150	Thunderstorm Wind	43	0	0	0	0	500	0	Emergency Manager
6/29/2019	1930	Thunderstorm Wind	48	0	0	0	0	75000	0	Trained Spotter
7/30/2019	1640	Thunderstorm Wind	43	0	0	0	0	1500	0	Trained Spotter
4/12/2020	450	Thunderstorm Wind	56	0	0	0	0	0	0	Emergency Manager
4/12/2020	458	Thunderstorm Wind	61	0	0	0	0	100000	0	Trained Spotter
4/12/2020	458	Thunderstorm Wind	56	0	0	0	0	0	0	Trained Spotter
4/12/2020	503	Thunderstorm Wind	61	0	0	0	0	50000	0	Public

4/12/2020	505	Thunderstorm Wind	61	0	0	0	0	100000	0	Emergency Manager
4/12/2020	505	Thunderstorm Wind	61	0	0	0	0	0	0	Emergency Manager
5/9/2021	1600	Thunderstorm Wind	50	0	0	0	0	5000	0	Public
5/9/2021	1603	Thunderstorm Wind	61	0	0	0	0	50000	0	Emergency Manager
5/9/2021	1604	Thunderstorm Wind	61	0	0	0	0	1000	0	Emergency Manager
5/9/2021	1615	Thunderstorm Wind	52	0	0	0	0	0	0	AWOS
6/8/2021	730	Thunderstorm Wind	50	0	0	0	0	2000	0	Emergency Manager
3/21/2022	1920	Thunderstorm Wind	53	0	0	0	0	0	0	Emergency Manager
4/12/2022	1817	Thunderstorm Wind	56	0	0	0	0	3000	0	Trained Spotter
4/12/2022	1826	Thunderstorm Wind	61	0	0	0	0	5000	0	Emergency Manager
5/21/2022	1906	Thunderstorm Wind	43	0	0	0	0	10000	0	Emergency Manager
5/21/2022	1915	Thunderstorm Wind	56	0	0	0	0	3000	0	Emergency Manager
5/21/2022	1918	Thunderstorm Wind	53	0	0	0	0	0	0	AWOS
5/21/2022	1922	Thunderstorm Wind	62	0	0	0	0	5000	0	Public
5/21/2022	1925	Thunderstorm Wind	61	0	0	0	0	5000	0	Emergency Manager
7/14/2022	1041	Thunderstorm Wind	52	0	0	0	0	0	0	Trained Spotter
8/17/2022	1612	Thunderstorm Wind	52	0	0	0	0	10000	0	Fire Department/Rescue

10/24/2022	2122	Thunderstorm Wind	45	0	0	0	0	10000	0	Trained Spotter
6/21/2023	1714	Thunderstorm Wind	52	0	0	0	0	10000	0	Trained Spotter
8/27/2023	1707	Thunderstorm Wind	48	0	0	0	0	5000	0	Emergency Manager
5/1/2024	1701	Thunderstorm Wind	52	0	0	0	0	5000	0	Emergency Manager
5/1/2024	1738	Thunderstorm Wind	61	0	0	0	0	0	0	Emergency Manager
5/1/2024	1741	Thunderstorm Wind	59	0	0	0	0	0	0	Emergency Manager
5/9/2024	1800	Thunderstorm Wind	61	0	0	0	0	0	0	Fire Department/Rescue
5/9/2024	1805	Thunderstorm Wind	55	0	0	0	0	2000	0	Emergency Manager
5/22/2024	1815	Thunderstorm Wind	61	0	0	0	0	20000	0	Emergency Manager
5/22/2024	1825	Thunderstorm Wind	61	0	0	0	0	20000	0	Emergency Manager
5/30/2024	1520	Thunderstorm Wind	50	0	0	0	0	0	0	Emergency Manager

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 7: TORNADO EVENTS

Mag: Magnitude; Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 32: Tornado Events for Limestone County (1950-2024)

Begin Date	Begin Time	End Date	End Time	Mag	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
2/12/1950	610	2/12/1950	610	F2	0	0	0	0	25000	0	
6/9/1962	1115	6/9/1962	1115	F0	0	0	0	0	0	0	
8/13/1963	1520	8/13/1963	1520	F0	0	0	0	0	0	0	
3/10/1973	611	3/10/1973	611	F4	0	0	0	0	0	0	
6/3/1973	1700	6/3/1973	1700	F2	0	0	0	0	250000	0	
5/25/1976	1515	5/25/1976	1515	F2	0	0	0	0	25000	0	
5/13/1985	1415	5/13/1985	1415	F0	0	0	0	0	0	0	
4/19/1986	1617	4/19/1986	1617	F1	0	0	2	0	250000	0	
4/27/1990	1540	4/27/1990	1540	F1	0	0	0	0	0	0	
4/27/1990	1540	4/27/1990	1540	F3	0	0	0	0	2500000	0	
4/27/1990	1645	4/27/1990	1645	F2	0	0	8	0	25000000	0	
4/27/1990	1705	4/27/1990	1705	F1	0	0	0	0	0	0	
4/12/1996	2010	4/12/1996	2013	F0	0	0	0	0	0	0	
4/28/1996	1800	4/28/1996	1803	F0	0	0	0	0	0	0	
3/30/2002	1321	3/30/2002	1335	F2	0	0	0	0	250000	0	LAW ENFORCEMENT
3/30/2002	1355	3/30/2002	1359	F0	0	0	0	0	3000	0	LAW ENFORCEMENT
12/29/2006	1342	12/29/2006	1408	F2	1	0	20	0	1000000	0	NWS Storm Survey

12/29/2006	1412	12/29/2006	1418	F0	0	0	0	0	10000	0	NWS Storm Survey
4/25/2011	1753	4/25/2011	1756	EF0	0	0	0	0	0	0	NWS Storm Survey
4/26/2011	1835	4/26/2011	1840	EF1	0	0	0	0	150000	0	NWS Storm Survey
4/26/2011	1848	4/26/2011	1849	EF0	0	0	0	0	0	0	NWS Storm Survey
4/26/2011	2057	4/26/2011	2058	EF0	0	0	0	0	0	0	NWS Storm Survey
1/16/2017	243	1/16/2017	248	EF0	0	0	0	0	300000	0	NWS Storm Survey
4/12/2020	505	4/12/2020	506	EF0	0	0	0	0	5000	0	Trained Spotter
3/21/2022	1908	3/21/2022	1918	EF0	0	0	0	0	200000	0	NWS Storm Survey
4/2/2023	1636	4/2/2023	1638	EF0	0	0	0	0	0	0	Storm Chaser
4/2/2023	1643	4/2/2023	1645	EFU	0	0	0	0	0	0	Storm Chaser
4/2/2023	1700	4/2/2023	1702	EF0	0	0	0	0	0	0	Trained Spotter
4/28/2024	1408	4/28/2024	1409	EF0	0	0	0	0	0	0	Trained Spotter
5/23/2024	1742	5/23/2024	1750	EF0	0	0	0	0	0	0	NWS Storm Survey
5/23/2024	1815	5/23/2024	1828	EF0	0	0	0	0	0	0	NWS Storm Survey

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 8: WINTER STORM EVENTS

Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 33: Winter Storm Events for Limestone County (1950-2024)

Begin Date	Begin Time	End Date	End Time	Event Type	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
11/24/1996	1400	11/25/1996	1200	Winter Storm	0	0	0	0	0	0	
1/12/1997	2000	1/13/1997	800	Winter Weather	0	0	0	0	0	0	
12/22/1998	0	12/24/1998	2359	Ice Storm	0	0	0	0	0	0	EMERGENCY MANAGER
1/25/2000	0	1/28/2000	0	Winter Storm	0	0	0	0	0	0	NEWSPAPER
12/12/2000	1800	12/13/2000	1800	Winter Storm	0	0	0	0	0	0	NEWSPAPER
12/25/2000	0	12/27/2000	2359	Winter Storm	0	0	0	0	0	0	NEWSPAPER
12/31/2000	0	12/31/2000	2359	Winter Storm	0	0	0	0	0	0	NEWSPAPER
1/1/2001	0	1/5/2001	2359	Heavy Snow	0	0	0	0	0	0	NEWSPAPER
11/29/2001	158	11/29/2001	1800	Ice Storm	0	0	0	0	0	0	LAW ENFORCEMENT
2/24/2003	1120	2/27/2003	1800	Winter Storm	0	0	0	0	0	0	LAW ENFORCEMENT
12/22/2004	1	12/22/2004	2359	Winter Weather	0	0	0	0	0	0	NEWSPAPER
4/7/2007	2000	4/8/2007	0	Winter Weather	0	0	0	0	0	0	Newspaper
3/7/2008	400	3/7/2008	700	Winter Weather	0	0	0	0	0	0	Newspaper
2/11/2010	1830	2/12/2010	245	Winter Weather	0	0	0	0	2000	0	Newspaper
2/23/2010	800	2/23/2010	2100	Heavy Snow	0	0	0	0	25000	0	COOP Observer
2/3/2011	2140	2/4/2011	730	Winter Weather	0	0	0	4	30000	0	Newspaper
12/6/2017	900	12/6/2017	1000	Winter Weather	0	0	0	0	0	0	Emergency Manager
2/11/2018	1300	2/11/2018	1400	Winter Weather	0	0	0	0	0	0	Public
10/31/2019	0	10/31/2019	800	Cold/Wind Chill	0	0	0	0	0	0	Official NWS Observations

1/10/2021	915	1/10/2021	1900	Heavy Snow	0	0	0	0	0	0	Trained Spotter
2/11/2021	800	2/11/2021	2030	Ice Storm	0	0	0	0	0	0	Trained Spotter
2/13/2021	600	2/17/2021	2000	Winter Storm	0	0	0	0	0	0	Public
2/15/2021	400	2/16/2021	1000	Extreme Cold/Wind Chill	1	0	0	0	149000	0	AWOS
2/3/2022	0	2/3/2022	1800	Winter Storm	0	0	0	0	0	0	Trained Spotter
2/1/2023	0	2/2/2023	900	Ice Storm	0	0	0	0	0	0	Trained Spotter

(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 9: WILDFIRE EVENTS

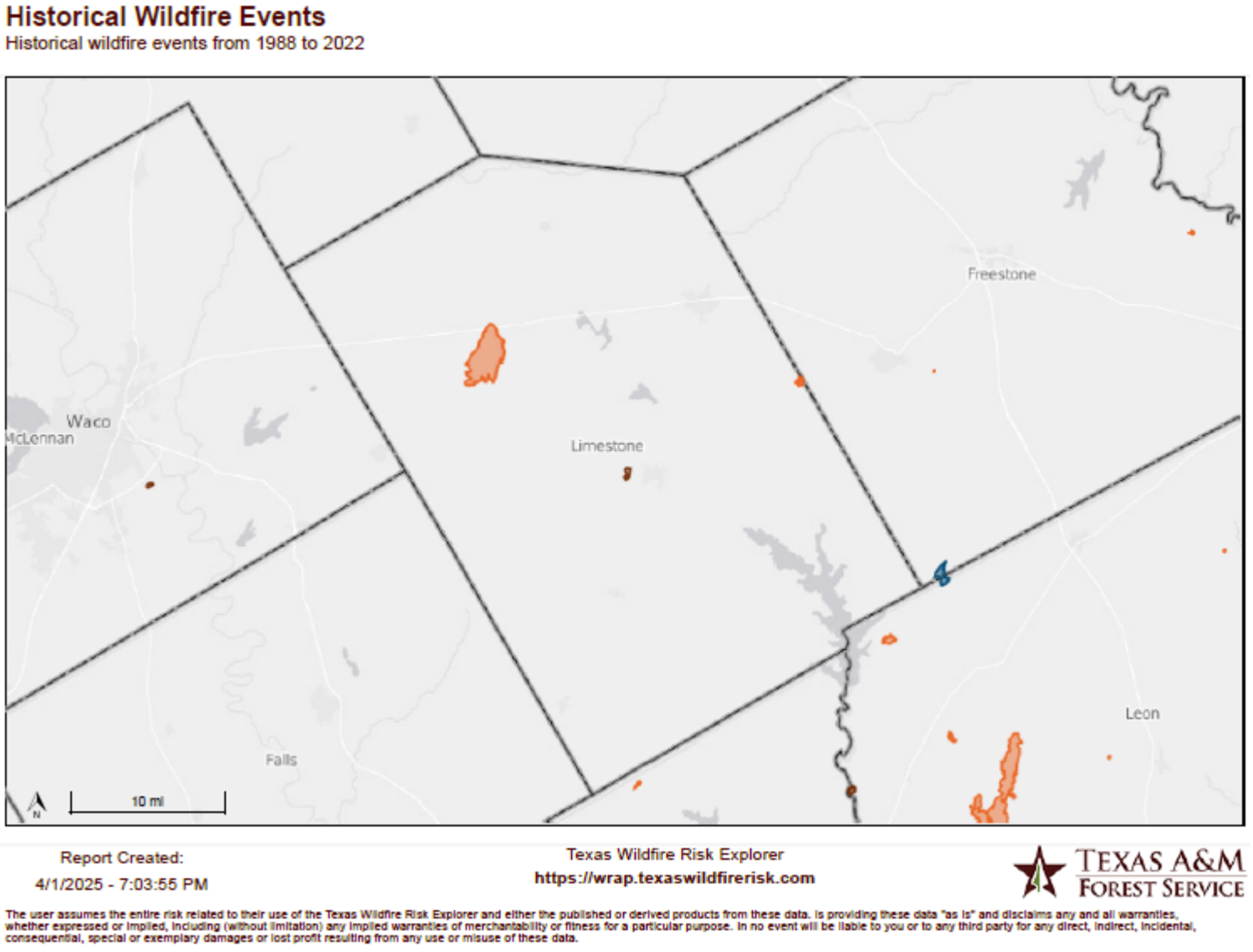
Dth(D): Deaths directly resulting from the hazard; Dth(I): Deaths indirectly resulting from the hazard; Inj(D): Injuries directly resulting from the hazard; Inj(I): Injuries indirectly resulting from the hazard; PrD: Property Damage; CrD: Crop Damage

Table 34: Wildfire Events for Limestone County (1950-2024)

Begin Date	Begin Time	End Date	End Time	Event Type	Dth(D)	Dth(I)	Inj(D)	Inj(I)	PrD	CrD	Source
9/4/2011	930	9/14/2011	1100	Wildfire	0	0	0	0	3000	0	Park/Forest Service
9/4/2011	1100	9/14/2011	1100	Wildfire	0	0	0	0	30000	0	Park/Forest Service
7/16/2022	1200	7/17/2022	1600	Wildfire	0	0	0	0	0	0	Park/Forest Service

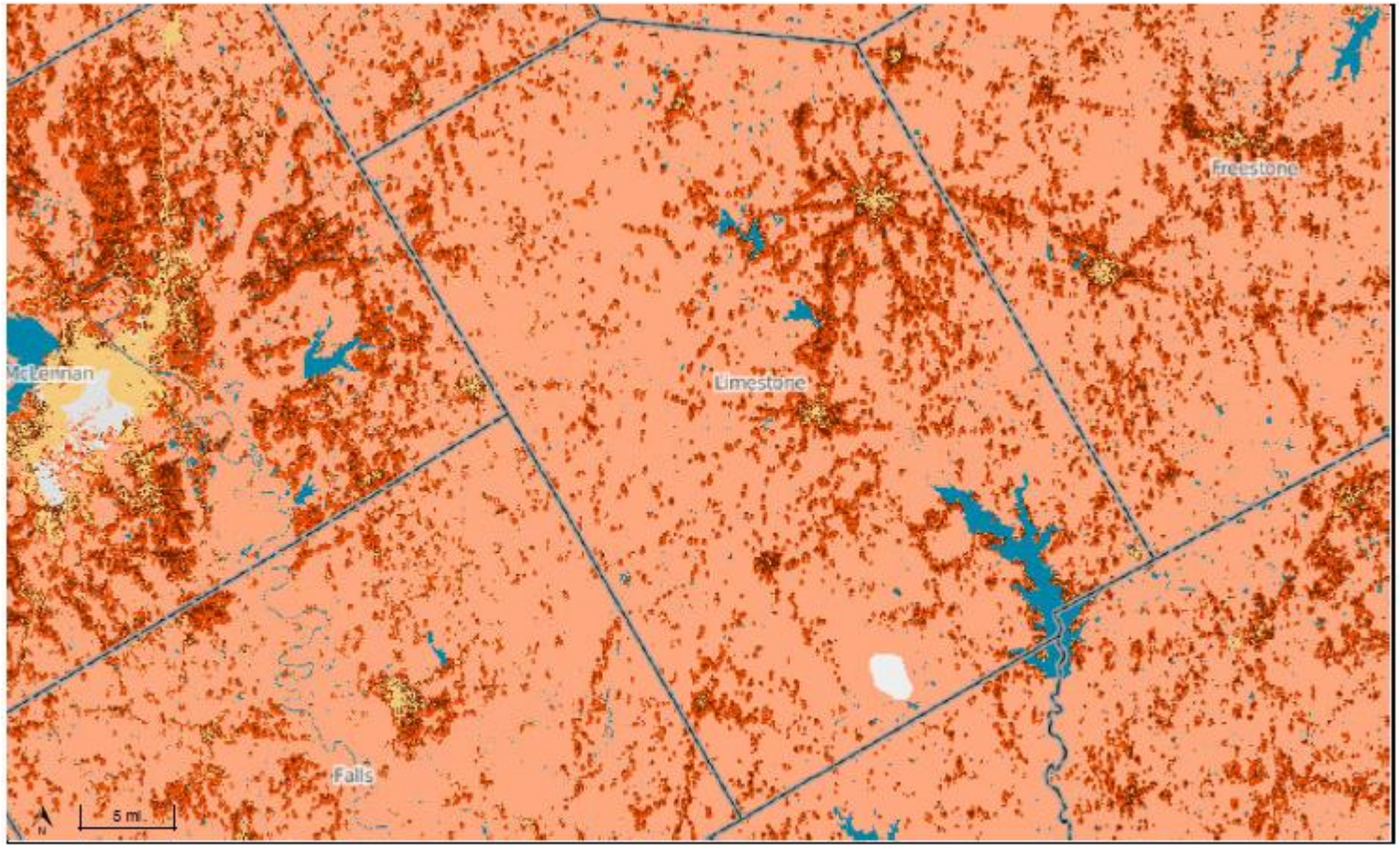
(National Oceanic and Atmospheric Administration, 2025)

APPENDIX 10: HISTORICAL WILDFIRE MAP



(Texas A&M Forest Service, 2025)

APPENDIX 11: WILDLAND URBAN INTERFACE MAP



(Texas A&M Forest Service, 2025)

APPENDIX 12: PUBLIC OPINION SURVEY

The following survey was deployed online to solicit additional public opinion on hazards and mitigation preferences within Limestone County. The survey was deployed online at [WEBSITE] with the direct link advertised on participating jurisdictions' social media profiles and QR codes posted at the County Courthouse or City Hall in each participating jurisdiction. Additionally, social media networks of the MPT were utilized to disseminate the survey and increase its reach. Paper copies of the survey were made available at the County Courthouse or City Hall of each participating jurisdiction. An analysis of the survey results is provided in Appendix 13 and informed all aspects of the MAP.

LIMESTONE COUNTY OFFICE OF EMERGENCY MANAGEMENT

COMMUNITY SURVEY

This survey focuses on public perceptions and opinions about natural hazards in Limestone County. Within the survey, information about the methods and techniques you prefer for reducing the risks and losses associated with these hazards is requested. The information you provide will be used to help improve public/private coordination, mitigation, and risk reduction efforts in Limestone County. The survey should take less than 30 minutes to complete. All responses will remain anonymous.

This is a public opinion survey – the results will inform local natural hazard mitigation planning. Your returned, completed survey indicates your willingness to take part in the study. Participation in this study is voluntary and anonymous. None of the information you provide will be attributed to you directly.

Natural Hazard Information

1. During the past 5 years, have you or someone in your household directly experienced a natural disaster in Limestone County? This could be a severe windstorm, tornado, flood, wildfire, or other type of natural disaster.

   ○ Yes ○ No ○ I prefer not to answer

2. How concerned are you about the following natural disasters affecting Limestone County?

Natural Disaster	Very Concerned	Somewhat Concerned	Neutral	Not Very Concerned	Not Concerned	Prefer not to answer
Drought	○	○	○	○	○	○
Dust Storm	○	○	○	○	○	○
Earthquake	○	○	○	○	○	○
Flood	○	○	○	○	○	○
Landslide	○	○	○	○	○	○
Wildfire	○	○	○	○	○	○
Volcanic Eruption	○	○	○	○	○	○
Windstorm	○	○	○	○	○	○
Severe Winter Storm	○	○	○	○	○	○
Extreme Heat	○	○	○	○	○	○
Other: _____	○	○	○	○	○	○

3. What are your top 3 sources for information about how to make your household and home safer from natural disasters?

○ Local news media	○ Neighbor, friend, or family member
○ National news media	○ Elected official
○ Local government agency	○ American Red Cross
○ State government agency	○ Other non-profit organization
○ Federal government agency	○ social media (e.g., Facebook, X, etc.)
○ Insurance agent or company	○ Not Sure
○ College, university, or research institution	○ Other: _____

4. Prior to participating in this survey, were you aware of your county's hazard mitigation plan?

   ○ Yes ○ No ○ I prefer not to answer

Community Vulnerabilities & Hazard Mitigation Strategies

To assess community risk, we need to understand which community assets may be vulnerable to natural hazards in the region. Vulnerable assets are those community features, characteristics, or resources that may be impacted by natural hazards (e.g., populations with functional needs, economic components, environmental resources, etc.). The next set of questions will focus on vulnerable assets in your community. It will also cover your preferred strategies to mitigate risk to those assets.

5. Community assets are features, characteristics, or resources that either make a community unique or allow the community to function. For the following categories, what do you see as vulnerable in your community? Write a short description of each.

   - Human (loss of life and/or injuries):
   - Economic (business closures and/or job losses):
   - Infrastructure (damage or loss of bridges, utilities, schools, etc.):
   - Cultural/Historic (damage or loss of libraries, museums, fairgrounds, etc.):
   - Environmental (damage or loss of forests, rangeland, waterways, etc.):
   - Governance (ability to maintain order and/or provide public amenities and services):

6. What specific types of community assets are most important to you?

Community Asset	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important	Prefer not to answer
Elder-care facilities	○	○	○	○	○	○
Schools (K-12)	○	○	○	○	○	○
Hospitals	○	○	○	○	○	○
Major bridges	○	○	○	○	○	○
Fire/police stations	○	○	○	○	○	○
Museums/historic buildings	○	○	○	○	○	○
Major employers	○	○	○	○	○	○
Small businesses	○	○	○	○	○	○
College/university	○	○	○	○	○	○
City hall/courthouse	○	○	○	○	○	○
Parks	○	○	○	○	○	○
Other: _____	○	○	○	○	○	○

7. Many activities can reduce your community's risk from natural hazards. These activities can be both regulatory and non-regulatory. Please provide your opinion of each of the following strategies to reduce risk and loss associated with natural disasters.

Community-wide Strategy	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Prefer not to answer
I support implementing government rules to reduce risk	○	○	○	○	○	○
I support a non-governmental approach to reducing risk	○	○	○	○	○	○
I support a mix of both governmental and non-governmental approaches to reducing risk	○	○	○	○	○	○
I support policies to prohibit development in areas subject to natural hazards	○	○	○	○	○	○

I support the use of tax dollars (federal, state, and local) to compensate landowners for not developing in areas subject to hazards	○	○	○	○	○	○
I support the use of local tax dollars to reduce risks and losses from natural hazards	○	○	○	○	○	○
I support protecting historical and cultural structures	○	○	○	○	○	○
I would be willing to make my home more disaster-resistant	○	○	○	○	○	○
I support steps to safeguard the local economy following a disaster event	○	○	○	○	○	○
I support improving the disaster preparedness of local schools	○	○	○	○	○	○
I support a local inventory of at-risk buildings and infrastructure	○	○	○	○	○	○
I support the disclosure of natural hazard risks during real estate transactions	○	○	○	○	○	○

8. Natural hazards can have a significant impact on a community. Planning for these events can help lessen the impact. Please tell us how important each of the following is to you:

Statement	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important	Prefer not to answer
Protecting private property	○	○	○	○	○	○
Protecting critical facilities (e.g., transportation networks, hospitals, fire stations)	○	○	○	○	○	○
Preventing development in hazard-prone areas	○	○	○	○	○	○
Enhancing the function of natural features (e.g., streams, wetlands)	○	○	○	○	○	○
Protecting historic and cultural landmarks	○	○	○	○	○	○
Protecting and reducing damage to utilities	○	○	○	○	○	○
Strengthening emergency services (e.g., police, fire, ambulance)	○	○	○	○	○	○
Disclosing natural hazard risks during real estate transactions	○	○	○	○	○	○
Promoting cooperation among public agencies, citizens, non-profit organizations, and businesses	○	○	○	○	○	○

General Household Information

The following questions will be used only for survey comparison. While each question is voluntary, this information greatly increases the potential for the Mitigation Planning Team to identify trends in data that can improve the viability of future mitigation projects.

9. Zip Code: _____

10. County Precinct in which you live:
    ○ Precinct 1 ○ Precinct 2 ○ Precinct 3 ○ Precinct 4
11. How long have you lived in the state?
    ○ Less than 1 year ○ 1-5 years ○ 6-9 years ○ 10-19 years ○ 20 or more years
12. Do you own or rent your home?
    ○ Own ○ Rent
13. Which of the following most closely resembles your home?
    ○ Single-family home (wood or brick and mortar)
    ○ Duplex
    ○ Apartment (3-4 units in structure)
    ○ Apartment (5 or more units in structure)
    ○ Condominium or townhouse
    ○ Manufactured home (trailer house or camper)
    ○ Other: _____

You may access the draft 2025 update of the Limestone County Hazard Mitigation Action Plan here: {LINK}

APPENDIX 13: PUBLIC OPINION SURVEY ANALYSIS

Content pending

APPENDIX 14: HMT MEETING NOTES

1. Attendees

- Boyce Wilson, MBW Management
- Matt Groveton, Limestone County Office of Emergency Management
- Ray Marsh, Limestone County Office of Emergency Management
- Brooks Valls, City of Kosse
- Paul Miller, City of Thornton
- Tobi Edwards, Limestone County District Clerk's Office

2. Summary:

The kickoff meeting for the Limestone County Hazard Mitigation Plan update for 2025, held on March 28, 2025, at 1:00 PM, focused on collaboration and planning for upcoming hazard mitigation efforts. The meeting highlighted the evolution of the hazard mitigation plan, noting the transition from a regional approach to local-level ownership of mitigation activities, with updates required every five years. Boyce emphasized the assessment of various natural hazards in Limestone County, including flooding, tornadoes, and wildfires, and the necessity of developing an action plan with mitigation strategies from local jurisdictions.

Boyce outlined the need for cost estimates and identification of potential funding sources, particularly through grants. He requested feedback on mitigation actions by April 11, confirming that jurisdictions not responding would have their previous actions included by default. The meeting also addressed the process for public engagement, which includes an online survey and a public meeting to gather community feedback. Boyce underscored the significance of community involvement in the planning process and provided details on how stakeholders can participate and submit their comments.

3. Agenda Items:

a. Kickoff Meeting for Limestone County Hazard Mitigation Plan Update

Boyce Wilson led the kickoff meeting for the Limestone County Hazard Mitigation Plan update for 2025, expressing gratitude to attendees. The meeting featured participants including Ray Marsh, Brooks Valls, Matt Groveton, and Tobi Edwards, and utilized an automated note-taking software to capture discussions. Matt also introduced Paul Miller from the City of Thornton, who joined the meeting.

b. Hazard Mitigation Planning Update

Boyce Wilson outlined the history and process of hazard mitigation planning, noting the transition to local-level management since 2005. He is currently updating the Limestone County plan, which requires a thorough review of existing documentation and community input on hazard mitigation strategies. Wilson emphasized the need to adapt the plan to reflect changes in demographics and hazards.

c. Natural Hazards Assessment in Limestone County

Boyce Wilson provided an overview of the natural hazards facing Limestone County, identifying key threats including flooding, tornadoes, and wildfires. He highlighted the significance of the national storm event database maintained by NOAA in tracking these hazards and their impacts. Wilson also

stressed the necessity of developing an action plan that requires input from local communities to identify mitigation actions for each hazard.

d. Mitigation Plan Updates and Public Feedback Process

Boyce Wilson highlighted the critical nature of the Limestone County mitigation plan for obtaining disaster recovery funding and requested feedback on mitigation actions by April 11. Brooks Valls acknowledged the deadline and mentioned the need to consider future projects. Boyce assured that any missed projects could still be added later, and Matt Groveton shared past experiences with amending plans for new projects.

e. Public Engagement and Plan Submission Process

Boyce Wilson discussed methods for engaging the public in the planning process, including an online survey and a public meeting. He noted that while public participation is encouraged, attendance has been low in the past. Wilson also mentioned the timeline for submitting the plan to the state and encouraged stakeholders to reach out with any questions.

APPENDIX 15: COMMUNITY HAZARD PROFILES

The following legend offers an interpretation of the categories utilized in the community hazard profiles to assess probability of occurrence, potential severity, and risk level.

Table 35: Categorical Interpretation of Hazard Profiles

Metric	Category	Description
Probability of Occurrence	Highly Likely	Event probable in the next year
	Likely	Event probable in the next 3 years
	Occasional	Event possible in the next 5 years
	Unlikely	Event possible in the next 10 years
Potential Severity	Substantial	Multiple deaths, complete shutdown of facilities for 30 days or more, more than 50% of property destroyed or with major damage
	Major	Injuries and/or illnesses result in permanent disability, complete shutdown of critical facilities for at least two weeks, more than 25% of property destroyed or with major damage
	Minor	Injuries and/or illnesses do not result in permanent disability, complete shutdown of critical facilities for more than 1 week, more than 10% of property destroyed or with 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 destroyed or with major damage
Risk Level	Very High	People and facilities located in known risk areas
	High	People and facilities located in areas that have previously experienced impacts from hazard and/or are in areas where impacts from hazards are both possible and probable (e.g. 500-year floodplain, fringe areas along waterways, “tornado alley”, etc.)
	Limited	People and facilities located in areas that have low frequency history of impacts from hazards and/or are in areas where impact is possible but not probable.
	Minimal	People and facilities located in areas with no history of occurrence of hazards and/or in areas where impact is not possible or probable.

1. Limestone County

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

2. City of Coolidge

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

3. City of Groesbeck

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

4. City of Kosse

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

5. City of Mexia

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

6. City of Tehuacana

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

7. City of Thornton

Hazard	Probability of Occurrence	Warning Time	Potential Severity	Risk Level	Priority
Tornado	Likely	Minimal or none	Substantial	High	1
Hail	Likely	3 – 6 hours	Limited	Limited	2
Severe Winds	Likely	6 – 12 hours	Minor	High	3
Floods	Likely	>12 hours	Limited	High	4
Winter Storms	Likely	6 – 12 hours	Limited	Limited	5
Drought	Likely	>12 hours	Minor	High	6
Extreme Heat	Likely	>12 hours	Limited	High	7
Wildfires	Occasional	Minimal or none	Limited	Limited	8

APPENDIX 16: PUBLIC NOTICES

APPENDIX 17: PLAN ADOPTION RESOLUTIONS

PENDING "APPROVED PENDING ADOPTION" STATUS

APPENDIX 18: REFERENCES

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