Hazard Mitigation Action Plan

Wise County, Texas

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Chapter One: Multi-jurisdictional Planning Process

Wise County Hazard Mitigation Action Plan Planning Process The Wise County Hazard Mitigation Action Plan (HazMAP) was created in order comply with current federal and state hazard mitigation plan regulations in compliance with the following rules and regulations:

> Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390)
> Federal Emergency Management Administration's Interim Final Rule, published in the Federal Register on February 26, 2002, at 44 CFR Part 201.

The Wise County HazMAP is comprised of the following participating jurisdictions:

- Unincorporated Wise County
- Alvord
- Bridgeport
- Chico
- Paradise
- Runaway Bay

Each jurisdiction participated by having a Hazard Mitigation Team (HMT). Each HMT participated in the Hazard Mitigation Action Plan. The North Central Texas Council of Governments Emergency Preparedness Department participated in the HazMAP to assist in compiling the jurisdictional information and prepare the plan for submission. Wise County Hazard Mitigation Action Plan Meetings were held on June 22, 2012, December 10, 2012, August 9, 2013, and August 23, 2013.

HazMAP Planning Process Point of Contact The following are the points of contacts during the HazMAP planning process from June 2012 – September 2013:

Unincorporated Wise County
    Fire Marshal/Emergency Management Coordinator
City of Alvord
    Emergency Management Coordinator
Bridgeport
    Emergency Management Coordinator
Chico
    Code Enforcement
Paradise
    Mayor
Runaway Bay
    Mayor
    Emergency Management Coordinator

Participating Jurisdiction Population Profiles

Jurisdiction	2010 Population	2012 Population
Unincorporated	33,678	34,520
Alvord	1,334	1,340
Bridgeport	5,976	5,990
Chico	1,040	1,210
Paradise	485	-
Runaway Bay	1,286	5,990

Source: North Central Texas Council of Governments Research and Information Services 2013 current population estimates, United States Census Bureau

Wise County Hazard Mitigation Action Plan Organization The Wise County Hazard Mitigation Action Plan is organized into five chapters which satisfy the mitigation requirements in 44 CFR Part 201, with an appendix providing the required supporting documentation.

Chapter One: Multi-Jurisdictional Planning Process

Describes the process and organization of the County Hazard Mitigation Action Plan (Wise County Hazard Mitigation Action Plan)

Chapter Two: Planning Process

Describes the individual planning process and organization for each participating jurisdiction satisfying requirements 201.6(c)(1), 201.6(b)(2), 201.6(b)(1), 201.6(b)(3), 201.6(c)(4)(iii), 201.6(c)(4)(i).

Chapter Three: Hazard Analysis

Describes the hazards identified, known national extent scales, location of hazards, previous events, and jurisdictional profiles satisfying requirements 201.6(c)(2)(i), 201.6(c)(2)(ii).

Chapter Four: Mitigation Goals and Actions

Describes the county-wide goals established by the Wise County Hazard Mitigation Action Plan and the Mitigation Action Items for each jurisdiction satisfying requirements 201.6(c)(3), 201.6(c)(3)(i), 201.6(c)(3)(ii), 201.6(c)(3)(iii), 201.6(c)(4)(ii).

Chapter Five: Maintenance Process

Describes the monitoring, evaluating, updating, plan incorporation, and future public updates for each participating jurisdiction satisfying requirements 201.6(c)(4)(i), 201.6(c)(4)(ii), 201.6(c)(4)(iii).

Appendix A: Documentation from Planning and Public Meetings

Appendix B: Capabilities Assessment

Wise County Hazard Mitigation Strategy Maintenance Process The Wise County Hazard Mitigation Action Planning Team will continue to collaborate as a planning group in coordination with the North Central Texas Council of Governments (NCTCOG) Emergency Preparedness Department. Primary Contact will be through emails and conference calls with strategy meetings to occur at least annually. Wise County will lead the plan maintenance and update processes by:

- Assisting jurisdictional Hazard Mitigation Teams in updating their individual contributions to the Wise County HazMAP
- Assisting interested jurisdiction in Wise County who would like to begin their mitigation planning process
- Facilitating Wise County HazMAP meetings and disseminating information
- Collaborating data for the county-wide sections
- Requesting updates and status-reports on planning mechanisms
- Requesting updates and status reports on mitigation action projects
- Assisting jurisdictions in mitigation grants
- Assisting jurisdictions in implementing mitigation goals and action projects
- Providing mitigation training opportunities
- Maintaining documentation of local adoption resolutions for the Wise County Hazard Mitigation Action Plan

Wise County Hazard Mitigation Action Plan Adoption Once the Wise County Hazard Mitigation Action Plan has received FEMA “Approved Pending Local Adoption”, each participating jurisdiction will take the Wise County HazMAP to their Commissioner’s Court or City Councils for final public comment and local adoption. A copy of the resolution will be inserted into the Wise County HazMAP and held on file at the County.

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Chapter Two: Planning Process

(In compliance with 201.6(c)(1))

Plan Development and Adoption Process

In order to apply for federal aid for technical assistance and post-disaster funding, local jurisdictions must comply with Part 201.3 of the Disaster Mitigation Act of 2000 established in the Federal Code of Regulations 44 CRF Part 201.6. While Wise County has historically implemented measures to reduce their vulnerability to hazards, passage of DMA 2000 helped Wise County officials recognize the benefits of a long-term approach to hazard mitigation, which achieves a gradual decrease of impacts achieved through the implementation of a Hazard Mitigation Plan. Wise County's Hazard Mitigation Action Plan represents the collective efforts of all participating jurisdictions, the general public, and stakeholders.

Organizing the Planning Effort

A comprehensive county approach was taken in developing the plan. An open public involvement process was established for the public, neighboring communities, regional agencies, businesses, academia, etc. to provide opportunities for everyone to become involved in the planning process and to make their views known. The meetings were advertised with notices in public places and the local newspaper.

In accordance with Part 201.6(c)(5) of the Disaster Mitigation Act of 2000 (DMA 2000), Wise County developed this Hazard Mitigation Action Plan. This plan identifies hazards, and mechanisms to minimize future damages associated with these hazards, which threaten Wise County and its jurisdictions.

Existing Data and Plans

Existing hazard mitigation information and other plans were reviewed during the development of the Hazard Mitigation Action Plan. Data was gathered through numerous sources, including GIS, statistical and qualitative. The table below outlines the numerous sources of data for the plan:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics in Section 3.5 to 3.7	Population counts, parcel data and land use data
Regional Hazard Assessment Tool	Hazard occurrences in Section 3.2	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences in Section 3.1 to 3.6	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface in Section 3.1 to 3.2, 3.6	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information in Section 3.1 to 3.3, 3.5, 3.6	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps in Section 3.2	GIS mapping of flood zones

The data in this table was incorporated into Wise County and all participating jurisdictions.

Planning Committee

This Hazard Mitigation Action Plan was developed by the Wise County Hazard Mitigation Planning Team, with support of the North Central Texas Council of Governments. The efforts of the Planning Committee were led by the Wise County Emergency Management Coordinator.

The Planning Committee was assembled in 2012 with representatives from all jurisdictions including, mayors, police chiefs, fire chiefs, and general public. Wise County acted as the plan development consultant providing hazard mitigation planning services. The Table below provides a list of the primary entity representative for each jurisdiction on the planning team below.

Hazard Mitigation Team – Primary Representatives

Representing	Position	Role
Wise County	EMC	General Oversight & Plan development
Wise County	Administrative Coordinator	Plan development
Wise County	Judge	Plan development
Alvord	Emergency Manager	Plan development
Bridgeport	Chief of Police	Plan development
Bridgeport	City Administrator	Plan development
Chico	Code Enforcement Officer	Plan development
Paradise	Mayor	Plan development
Paradise	City Secretary	Plan development
Runaway Bay	Patrol Officer	Plan development
Runaway Bay	Mayor	Plan development

See lists below for details of all jurisdictional participation

Wise County served as the coordinator and lead agency for all jurisdictions, including the unincorporated areas of Wise County, by accomplishing the following activities through the planning process:

1. Assigned the County's Emergency Management Coordinator to provide technical assistance and necessary data to the Planning Committee.
2. Scheduled, coordinated, and facilitated community meetings with the assistance of the Planning Committee.
3. Provided any necessary materials, handouts, etc. for public planning meetings.
4. Worked with the Planning Committee to collect and analyze data and develop goals and implementation strategies.
5. Prepared, based on community input and Planning Committee direction, the first draft of the plan and provided technical writing assistance for review, editing and formatting.
6. Coordinated with the stakeholders within the cities and the unincorporated areas of Wise County during plan development.

Each of the individual jurisdictions participated in accomplishing similar activities associated with development of the plan as follows:

1. Coordinated input from representatives of neighborhood stakeholder groups and provided a representative to the County Planning Committee.
2. Attended regular meetings of the planning team as coordinated by Wise County.
3. Assisted Wise County staff with identifying hazards and estimating potential losses from future hazard events.
4. Assisted Wise County in developing and prioritizing mitigation actions to address the identified risks.
5. Assisted Wise County in coordinating public meetings to develop the plan.
6. Identified the community resources available to support the planning effort.
7. Worked for the support of neighborhood stakeholders for the recommendations resulting from the planning process.
8. Submitted the proposed plan to all appropriate departments for review and comment and worked with Wise County to incorporate the resulting comments into the proposed plan.
9. Capabilities, ordinances, policies and current procedures are listed in the NFIP Table and Capability Assessment Table in Chapter 4, and Integration Plan Table in Chapter 5.

External stakeholders involved in reviewing the Wise County Hazard Mitigation Action Plan:

Representing	Position	Role
Texas Agrilife Extension	Ag/Natural Resource Agent	Review of plan
Parker County	Assistant EMC	Review of plan
Wise Regional Health System	Administrative Director	Review of plan
Wise County 4-H & Youth Development	4-H/Youth Development Agent	Review of plan

All stakeholders listed above were contacted through email and Public Meeting Notices as shown in Appendix A. Subsequent to the State of Texas and FEMA approval of the plan, each organization is also committed to accomplishing the following activities:

1. Appoint members to a Coordinating Committee to monitor and work toward plan implementation.
2. Publicize the plan to neighborhood interests and ensure that new community members are aware of the plan and its contents.
3. Monitor progress in achieving the plan's goals through regular maintenance and implementation projects.

Planning Meetings

During the planning process, the Planning Committee met to obtain relevant information from the participating jurisdictions and to discuss the objectives and progress of the plan. The objectives

of these meetings were to gather information and to provide guidance for each jurisdiction throughout the planning stages.

The following planning meetings were held by Wise County and included all jurisdiction's participation:

- Wise County Mitigation Strategy Working Group Meeting - June 8, 2012
- Wise County Mitigation Strategy Working Group Meeting - June 22, 2012
- Wise County Hazard Analysis Working Group Meeting – December 12, 2012

Public Involvement

Support from the community is vital for any successful hazard mitigation plan. The Planning Committee provided opportunities, announced through public communication means, for public participation and input throughout the planning process prior to this draft and before approval of the finalized plan. Advertisement and sign in sheets for these meetings are located in Appendix A.

- The first public meeting was held on December 12, 2012 and advertised in the County News and on the city website inviting the public, neighboring communities, local business, academia, agencies, and nonprofits to comment.
- A second opportunity was provided for public input during the meeting on August 23, 2013. An advertisement was posted in the Wise County News and city website inviting the public, neighboring communities, local business, academia, agencies, and nonprofits to view and comment on the HazMAP prior to plan submission.

There were no comments received from the citizens, non-profits, businesses, academia, or interested parties. An additional opportunity for the public to comment on the plan will be held prior to formal plan adoption.

These opportunities provided all citizens, stakeholders, neighboring communities, agencies, businesses, academia, non-profit organizations, and all interested parties an opportunity to be involved in the planning process and to take part in the decisions making process that affect the future of the communities that they live in.

Chapter Three: Hazard Analysis

(In compliance with 201.6(c)(2)(i), 201.6(c)(2)(ii), 201.6(c)(2)(ii)(A), 201.6(c)(2)(ii)(B), 201.6(c)(2)(ii)(C), & 201.6(c)(2)(iii))

Chapter Three of the Wise County Hazard Mitigation Action Plan (HazMAP) is a risk assessment that provides the factual basis for the action items described in Chapter Four. This information serves to enable the participating jurisdictions to identify and prioritize the appropriate mitigation action items to reduce losses from the identified hazards. Hazards are identified and profiled, to include location and extent of each hazard as well as detailed previous occurrence and probability of future events data.

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3.1 Introduction to Hazard Analysis

The Hazard Mitigation Action Plan for Wise County is a tool to assist in the identification and documentation of all the hazards faced in the region.

The Wise County profile is one of many developed by the North Central Texas Council of Governments (NCTCOG) under the FEMA Hazard Mitigation program. These plans are created by compiling data from the NCTCOG regional natural hazards risk assessments, damage assessments, hazard profiling and identification as well as historical data and geographic information. Of the 15 hazards identified in the State of Texas Hazard Mitigation Action Plan, only 11 will be discussed in this plan. The remaining four (expansive soils, land subsidence, coastal erosions, and hurricane/tropical storm) will not be discussed due to their lack of impact on the Wise County planning area.

Hazards Addressed The Wise County Hazard Mitigation Action Plan has identified the following natural hazards as having the potential to cause damage in the county. Wildland fire, flooding, and dam failure are the only hazards recognized to have predictable vulnerable areas. All other hazards are equally likely to occur throughout the Wise County jurisdictions.

Tornado A tornado is a violently rotating column of air, in contact with the ground, both pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a condensation funnel. Tornados may affect the entire planning area equally.

Unincorporated Wise County Tornados in Wise County have the ability to occur with little warning and no predictable pattern. Throughout the County, there are many developments that are all or nearly all mobile home type structures offering little to inadequate protection from a tornado. Due to the multiple large scale oil and gas production plant operations in the County, a tornado incident could result in extraordinary issues.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the tornado hazard.

City of Alvord Tornados in Alvord have the ability to occur with little warning and no predictable pattern. This hazard equally affects all populations and infrastructure within the jurisdictional boundaries.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the tornado hazard.

City of Bridgeport Tornados in Bridgeport have the ability to occur with little warning and no predictable pattern. This hazard equally affects all populations and infrastructure within the jurisdictional boundaries.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the tornado hazard

City of Chico Downtown Chico contains historical buildings and critical infrastructure. A tornado would likely have great impact on Chico if the area was damaged.

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the tornado hazard.

City of Paradise Tornados in Paradise have the ability to occur with little warning and no predictable pattern. This hazard equally affects all populations and infrastructure within the jurisdictional boundaries.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the tornado hazard.

City of Runaway Bay Tornado affects all of Runaway Bay equally.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports , hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the tornado hazard.

Hail Hail occurs when, at the outgrowth of a severe thunderstorm, balls or irregularly shaped lumps of ice greater than 0.75 inches in diameter fall with rain. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to warm air rising rapidly into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation. Hail may affect the entire planning area equally.

Unincorporated Wise County Unincorporated Wise County: The entire county is susceptible to damaging hail. A majority of the residential developments are comprised of travel trailers and mobile homes. A majority of the mobile homes are older and are constructed of lightweight materials. Because of the rural nature of Wise County, there are limited buildings providing shelter available to the public.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the hail hazard.

City of Alvord Hail damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be more vulnerable than other structures.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the hail hazard.

City of Bridgeport Hail damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be highly vulnerable to hail.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the hail hazard.

City of Chico All of Chico is equally vulnerable to Hail

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the hail hazard.

City of Paradise Hail damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be highly vulnerable to hail.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the hail hazard.

City of Runaway Bay Hail affects all of Runaway Bay equally.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the hail hazard.

High Winds Wind is defined as the motion of air relative to the earth's surface. The horizontal component of the three-dimensional flow and the near-surface wind phenomenon are the most significant aspects of the hazard. Straight-line winds are often responsible for the wind damage associated with a thunderstorm. These winds are often confused with tornados because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado. Downbursts or micro-bursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less. Wind speeds in some of the stronger downbursts can reach 100 to 150 miles per hour, which is similar to that of a strong tornado. The winds produced from a downburst often occur in one direction, and the worst damage is usually on the forward side of the downburst. High winds may affect the entire planning area equally.

Unincorporated Wise County Unincorporated Wise County: High winds can have an impact throughout the county. High winds can occur suddenly and without warning. Due to the high volume of transient workers that follow the gas industry, Wise County has a large number of travel trailers and mobile homes that are very susceptible to high winds.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the high wind hazard.

City of Alvord Wind damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be highly vulnerable to high winds.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the high wind hazard.

City of Bridgeport Wind damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be more highly vulnerable to high winds.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the high wind hazard.

City of Chico City Hall and the schools in the Chico Independent School District are especially vulnerable to High Winds.

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the high wind hazard.

City of Paradise Wind damage can occur equally throughout the jurisdiction. All populations are equally vulnerable. Windows and poorly-built structures would be highly vulnerable to high winds.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the high wind hazard.

City of Runaway Bay Structures in the eastern portion of Runaway Bay are more vulnerable to High Winds.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the high wind hazard.

Winter Storms Winter storms originate as mid-latitude depressions or cyclonic weather systems, sometimes following the path of the jet stream. A winter storm or blizzard combines heavy snowfall, high winds, extreme cold and ice storms. Many winter depressions give rise to exceptionally heavy rain and widespread flooding and conditions worsen if the precipitation falls in the form of snow. The winter storm season varies widely, depending on latitude, altitude and proximity to moderating influences. Winter storms affect the entire planning area equally. Cold snaps in which temperatures fall below the freezing point of 32° Fahrenheit do happen on an annual basis in the planning area and can lead to issues with infrastructure, especially frozen roads and bridges.

Unincorporated Wise County Winter storms affect the entire county. With the potential for freezing precipitation, icing of roadways are of an utmost concern. Major roadways such as U.S. Hwy 287 and 380 along with State Hwy 114 would be given priority for surface cleaning. Rural roadways not given the same priority could potentially strand a large percentage of the population as well as limit first responder access during an emergency. There are numerous gas production facilities and rock quarries in Wise County. Limited capabilities due to winter storms would have a large economic impact on the County.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the winter storm hazard.

City of Alvord Winter storm damage can occur equally throughout the jurisdiction. Low-income populations are most vulnerable. Structures are not generally vulnerable to winter storms, though poorly-built structures can increase winter storm impacts on elderly and low-income populations.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the winter storm hazard.

City of Bridgeport Winter storm damage can occur equally throughout the jurisdiction. Low-income populations are most vulnerable. Structures are not generally vulnerable to winter storms, though poorly-built structures can increase storm impacts on elderly and low-income populations.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the winter storm hazard.

City of Chico All buildings and populations are equally vulnerable to Winter Storms

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the winter storm hazard.

City of Paradise Winter storm damage can occur equally throughout the jurisdiction. Low-income populations are most vulnerable. Structures are generally not vulnerable to winter storms, though poorly-built structures can increase storm impacts on elderly and low-income populations.

Based on GIS analysis there is one fire station, four schools, and zero public airports , police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the winter storm hazard.

City of Runaway Bay U.S. Highway 380, a major transportation route in the DFW Metroplex, runs through Runaway Bay. Travel to and from Runaway Bay would be severely impacted if the road was impassible.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the winter storm hazard.

Extreme Heat Extreme heat is characterized by a combination of a very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave. Extreme heat can also be a factor that drastically impacts drought conditions as high temperatures lead to an increased rate of evaporation. Extreme heat can also lead to heat stroke and even death in vulnerable populations such as the elderly and the very young if exposed to the high temperatures for an extended period of time. Extreme heat may affect the entire planning area equally.

Unincorporated Wise County Extreme heat can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to extreme heat. Structures are generally not vulnerable to extreme heat, though poorly-built structures can increase the heat impacts on elderly and low-income populations.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the extreme heat hazard.

City of Alvord Extreme heat can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to extreme heat. Structures are generally not vulnerable to extreme heat, though poorly-built structures can increase heat impacts on elderly and low-income populations.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the extreme heat hazard.

City of Bridgeport Extreme heat can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to extreme heat. Structures are generally not vulnerable to extreme heat, though poorly-built structures can increase heat impacts on elderly and low-income populations.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the extreme heat hazard.

City of Chico Low-income neighborhoods in Chico, such as Brock Island and Reeds, are more vulnerable to Extreme Heat.

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the extreme heat hazard.

City of Paradise Extreme heat can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to extreme heat. Structures are generally not vulnerable to extreme heat, though poorly-built structures can increase heat impact on elderly and low-income populations.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the extreme heat hazard.

City of Runaway Bay Extreme Heat affects all of Runaway Bay equally.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports , hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the extreme heat hazard.

Drought Drought can be defined as a water shortage caused by the natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It can be aggravated by other factors such as high temperatures, high winds, and low relative humidity. Texas experiences a cycle of extended wet and drought conditions that can extend over a period of months even years. Extended periods of drought can have an enormous impact on an area by affecting the

abundance of water supply, the agriculture economy, and foundations of structures. Drought may affect the entire planning area equally.

Unincorporated Wise County Drought in a rural county provides for many difficult issues. The farm and ranch industry is pressed due to a lack of crops and feed. As a drought continues, many residents who are on private wells as well as those served by small water utilities begin to experience water shortages. The lack of water can also impact emergency responder capabilities in the form of firefighting efforts.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the drought hazard.

City of Alvord Drought can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to drought. Structures are generally not vulnerable to drought.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, or wastewater treatment facilities in the city of Alvord that are at risk from the drought hazard.

City of Bridgeport Drought can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to drought. Structures are generally not vulnerable to drought.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the drought hazard.

City of Chico Low-income neighborhoods in Chico, like Brock Island and Reeds, are more vulnerable to drought.

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the drought hazard.

City of Paradise Drought can occur equally throughout the jurisdiction. Elderly and low-income populations are most at risk to drought. Structures are generally not vulnerable to drought.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the drought hazard.

City of Runaway Bay Drought affects all of Runaway Bay equally.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the drought hazard.

Earthquake An earthquake is a sudden motion or trembling caused by an abrupt release of accumulated strain on the tectonic plates that comprise the Earth's crust. The theory of plate tectonics holds that the Earth's crust is broken into several major plates. These rigid, 50- to 60- mile thick plates move slowly and continuously over the interior of the earth, meeting in some areas and separating in others. As the

tectonic plates move together they bump, slide, catch, and hold. Eventually, faults along or near plate boundaries slip abruptly when the stress exceeds the elastic limit of the rock, and an earthquake occurs. The ensuring seismic activity and ground motion provoke secondary hazards: surface faulting, ground failure, and tsunamis. The vibration or shaking of the ground during an earthquake is referred to as ground motion. In general, the severity of ground motion increases with the amount of energy released and decreases with distance from the causative fault or epicenter. When a fault ruptures, seismic waves are propagated in all directions, causing the ground to vibrate at frequencies ranging from 0.1 to 30 Hz. Seismic waves are referred to as P waves, S waves, and surface waves. Due to the risk being associated to a distant quake, earthquakes may affect the entire planning area equally. There is no history of earthquakes occurring within Wise County (as of December 31, 2012), however, there have been earthquakes measuring up to 3.5 on the Richter scale in nearby Johnson County.

The most likely risk to a significant earthquake event is associated to either a distant larger quake which might occur in Missouri, Tennessee, or Oklahoma, though these earthquakes are probable to occur only once every 500 years. The second likely occurrence for earthquakes is large amount of hydrocarbon production occurring in the northwestern area of the North Central Texas region including Wise County. Natural Gas Extractions has been responsible for creating small earthquakes within the formations which it is produced, in the case of the North Texas natural gas play, the primary formation is the Barnett gas play. Due to the risk being associated to a distant quake, earthquakes affect the planning area equally.

Unincorporated Wise County Earthquakes can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage.

Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the earthquake hazard.

City of Alvord Earthquakes can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage.

Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the earthquake hazard.

City of Bridgeport Earthquakes can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage.

Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the earthquake hazard.

City of Chico All of Chico is vunerable to earthquake.

Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the earthquake hazard.

City of Paradise Earthquakes can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage.

Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the earthquake hazard.

City of Runaway Bay Earthquake affects all of Runaway Bay equally.

Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the earthquake hazard.

Lightning Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas within thunderstorms. A "bolt" or brilliant flash of light is created when the buildup becomes strong enough. These bolts of lightning can be seen in cloud-to-cloud or cloud-to-ground strikes.

Bolts of lightning can reach temperatures approaching 50,000° Fahrenheit. While lightning is mostly affiliated with thunderstorms, lighting often strikes outside of these storms, as far as 10 miles away from any rainfall. Federal Emergency Management Agency states that an average of 300 people are injured and 80 people are killed in the United States each year by lighting. Direct strikes have the power to cause significant damage to buildings, critical facilities, infrastructure, and ignition of wildfires which can result in widespread damages to property.

Unincorporated Wise County According to Wise County, lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage. We have numerous communication towers that have the potential to be damaged by lightning. We also have numerous petroleum storage tanks that have the potential to be damaged by lighting. Based on GIS analysis there are five fire stations, three schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in unincorporated Wise County that are at risk from the lightning hazard.

City of Alvord According to the city of Alvord, lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage. Based on GIS analysis there are three schools, one water treatment facility, and zero fire stations, police stations, hospitals, emergency operation centers, public airports, and wastewater treatment facilities in the city of Alvord that are at risk from the lightning hazard.

City of Bridgeport According to the city of Bridgeport, Lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage Based on GIS analysis there is one fire station, one police station, five schools, one hospital, two wastewater treatment facilities, one water treatment facility, one public airport, and zero emergency operation centers in the city of Bridgeport that are at risk from the lightning hazard.

City of Chico According to the city of Chico, lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage. Based on GIS analysis there is one fire station, three schools, one police station, and zero public airports, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Chico that are at risk from the lightning hazard.

City of Paradise According to the city of Paradise, lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage. Based on GIS analysis there is one fire station, four schools, and zero public airports, police stations, hospitals, emergency operation centers, wastewater treatment facilities, and water treatment facilities in the city of Paradise that are at risk from the lightning hazard.

City of Runaway Bay According to the city of Runaway Bay, lightning can occur equally throughout the jurisdiction. All structures and infrastructure are equally vulnerable to damage. Based on GIS analysis there is one fire station, one police station, one wastewater treatment facility, and zero schools, public airports, hospitals, emergency operation centers, and water treatment facilities in the city of Runaway Bay that are at risk from the lightning hazard

Wildland Fire Wildland fire is any fire occurring on grassland, forest, or prairie, regardless of ignition source, damages or benefits. Wildland fires are fueled almost exclusively by natural vegetation. They typically occur in national forests and parks, where federal agencies are responsible for fire management and suppression. Interface or intermix fires are urban/wildland fires in which vegetation and the built-environment provide fuel. Firestorms are events of such extreme intensity that effective suppression is virtually impossible. Firestorms occur during extreme weather and generally burn until conditions change or the available fuel is exhausted. Wildland fires affect the entire planning area equally. For the purposes of this hazard analysis, wildland fires are assessed under what is known as the Wildland Urban Interface (WUI). The WUI is an area of development that is susceptible to wildland fires due to the amount of structures located in an area with vegetation that can act a fuel for a wildland fire.

Unincorporated Wise County Wildfire is a very high risk throughout the county. It is estimated by the Texas Forest Service (TFS) that 52,110 people or 88% of the total project area population (59,445) live within the wildland-urban interface. Fires are common, though they can usually be contained before spreading out of control. Most of the land is dry and open, which creates an abudance of fuel for wildfires. The county relies on local fire departments to attack these fires when they are reported; most have experience with wildland fire response.

Based on GIS analysis there are four fire stations, two schools, and zero wastewater treatment facilities, hospitals, police stations, emergency operation centers, and public airports in unincorporated Wise County that are located in the wildland-urban interface.

City of Alvord According to the Texas Forest Service, roughly 80-90% of the population of Alvord lives within the wildland-urban interface. As the risk for wildfires in the area is high, the Alvord fire department is well trained in fighting these types of fires. Vulnerabilities in this area include both residential and commercial properties.

Based on GIS analysis there is one fire station, two schools, and zero wastewater treatment facilities, stations, hospitals, police stations, emergency operation centers, and public airports in the city of Alvord that are located in the wildland-urban interface.

City of Bridgeport According to the Texas Forest Service, 85% of Bridgeport is located within wildland-urban interface. With 85% of the city at high-risk for wildfires, the fire department is well-trained at fighting these types of fires. Vulnerabilities include both residential and commercial properties.

Based on GIS analysis there is one fire station, five schools, two wastewater treatment facilities, one hospital, one police stations, and zero emergency operation centers and public airports in the city of Bridgeport that are located in the wildland-urban interface.

City of Chico According to the Texas Forest Service, 95% of Chico's population is located within the wildland-urban interface. Chico's fire department is well trained to fight these types of fires. Vulnerabilities include commercial and residential properties.

Based on GIS analysis there are three schools, and zero fire stations, wastewater treatment facilities, stations, hospitals, police stations, emergency operation centers, and public airports in the city of Chico that are located in the wildland-urban interface.

City of Paradise According to the Texas Forest Service, 98% of Paradise's population is located in the wildland-urban interface. Vulnerabilities include residential, commercial, and agriculture properties.

Based on GIS analysis there is one fire station, two schools, and zero wastewater treatment facilities, stations, hospitals, police stations, emergency operation centers, and public airports in the city of Paradise that are located in the wildland-urban interface.

City of Runaway Bay According to the Texas Forest Service Wildfire Risk Assessment 44% of the population of Runaway Bay is located in the wildland-urban interface. The western portion of the city is where the majority of fires take place.

Based on GIS analysis there is one fire station, one wastewater treatment facility, and zero schools, hospitals, police stations, emergency operation centers, and public airports in the city of Runaway Bay that are located in the wildland-urban interface.

Flooding Flooding is defined as the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. The statistical meaning of terms like "25-year storm" and "100-year flood" can be confusing. Simply stated, a floodplain can be located anywhere; it just depends on how large and how often a flood event occurs. Floodplains are those areas that are subject to inundation from flooding. Floods and the floodplains associated with them are often described in terms of the percent chance of a flood event happening in any given year. As a community management or planning term, "floodplain" most often refers to an area that is subject to inundation by a flood that has a one percent chance of occurring in any given year (commonly and incorrectly referred to as the 100-year floodplain). Common flooding hazards within the planning area include flood hazards from flash flooding and from new development.

A flash flood is a rapid flood that inundates low-lying areas in less than six hours. This is caused by intense rainfall from a thunderstorm or several thunderstorms. Flash floods can also occur from the collapse of a man-made structure or ice dam. Construction and development can change the natural drainage and create brand new flood risks as new buildings, parking lots, and roads create less land that can absorb excess precipitation from heavy rains, hurricanes, and tropical storms. Flash floods are a high risk hazard since they can roll boulders, tear out trees, and destroy buildings and bridges.

Unincorporated Wise County There are numerous areas in unincorporated Wise County that are subject to flooding, both flash and regular. Areas affected by flooding differ with each storm,

as there are several different river and tributaries that are subject to overflow, depending on which receives rain. The following roads are subject to flooding. Refer to the DFIRM map E.1, in section 3.2 for a more visual description.

Wise County Pct. #1
CR 2320 0.5 mi east of FM51, CR 2625 0.5 mi west of FM51, CR 2625 0.1 mi east of CR 2735, CR 2845 at Harts Creek, CR 4010 0.5 mi west of CR 4511, CR 4191 at Center Creek, CR 4227 at branch of Deep Creek, CR 4411 at Sweetwater Creek, CR 4511 between CR 4010 & CR 4522, CR 4717 at Harriett Creek, CR 4730 at Harriet Creek, Cemetery Rd. east of 730 at bridge, Greenwood Rd. .25 mi south of CR 2440, Greenwood Rd. 1.5 mi north of CR 2130, Greenwood Rd. at Pecan Creek, Heritage Creek Dr. at Long Branch Creek, Old Reunion Rd. at Martin Branch, Starshell Rd. 0.2 mi east of FM51, CR 2320 0.5 mi east of FM51.

Wise County Pct. # 2
CR 1308 from Tributary to Dry Creek, CR 1370 at Briar Branch, CR 1590 at Big Sandy Creek, CR 1591 at Big Sandy Creek, CR 1660 from tributary to Pringle Creek, CR 1790 at Big Sandy Creek, CR 1895 at upper Vinchonor Creek, CR 2788 at Big Sandy Creek, CR 2896 at Brushy Creek, CR 2898 at Brushy Creek.

Wise County Pct. #3
CR 3591 from tributary to Salt Creek, CR 3690 from tributary to Salt Creek, CR 3696 at low-water crossing, CR 4227 at Blue Creek, CR 4460 at Deep Creek, CR 4461 at Deep Creek, CR 4668 at Trinity River, CR 4676 at tributary of Trinity River, CR 4680 at Walker Creek, CR 4692 at tributary of Lola Creek, CR 4694 at Lola Creek, CR 4756 at tributary of Trinity River, CR 4757 from headwater to Eagle Mountain Lake, CR 4790 at tributary of Hog Branch, CR 4796 at low-water crossing, CR 4797 at low-water crossing, CR 4798 at low-water crossing, CR 4898 at low-water crossing, CR 3591 from tributary to Salt Creek.

Wise County Pct. # 4
CR 1700 at Jasper Creek, CR 3250 at low water crossing, CR 3381 at Garrett Creek, CR 3451 at Rush Creek, CR 3521 at low water crossing, CR 3657 at horn in road, CR 3701 at Castleberry Creek, CR 3840 at Boones Creek, Mesquite at tributary of Big Sandy Creek.

Based on previous occurrence data from the National Climatic Data Center, Wise County has experienced flood and flash flood events that have covered roadways, impeding traffic. Any future events can be expected to be of similar magnitude.

City of Alvord The City of Alvord is a small community. About 80% of the town's flooding issues occur within the middle of the town. The town has no storm drains for distribution of rainwater, therefore almost every intersection within the town is susceptible to flooding. Elm Creek runs through the city and the creek is known to rise when it rains. Other points of concern are the Pecan and Wise intersection, Donell Street, and Lynch Road. Refer to the DFIRMS map in section 3.2, map E.2, for a more visual description.

Based on previous occurrence data from the National Climatic Data Center, the city of Alvord has experienced flood and flash flood events that have covered roadways, impeding traffic. Any future events can be expected to be of similar magnitude.

City of Bridgeport The City of Bridgeport's Fire Hall is located within the flood plain. Other points of flooding include: the Turkey Creek Street Crossing to 114, 2nd and the Halsell Street manufactured home complex, Halsell Street 100-800 block, localized flooding on 1900-2000 block of Carpenter Street, subdivision development, 3214 County Road water Cuba Street at Kate Street, and areas of the Turkey Creek Floodway identified in the 2011 flood study. Turkey Creek can back up due to the Trinity River, flooding Dry Creek on eastside and Turkey Creek on the Westside. Refer to the DFIRM map E.3, in section 3.2 for a more visual description.

Based on previous occurrence data from the National Climatic Data Center, the city of Bridgeport has experienced flood events that have been up to two feet. Any future events can be expected to be of similar magnitude.

City of Chico A major portion of the city is located in flood zone A, see FEMA DFIRM map E.4, in section 3.2. Weatherford Street in front of fire station, the Granada Street and Oakwood intersection, Highway 101 and 1810 intersection are all susceptible to flooding. The North Hovey Street 3 ft. dip in the road, Marshal's Trailer Park, and Kentucky Street between Buffalo Street and Alvord Street, are also susceptible to flooding.

Based on previous occurrence data from the National Climatic Data Center, the city of Chico has experienced flood events that have covered roadways, impeding traffic. Any future events can be expected to be of similar magnitude.

City of Paradise The 100 year flood plain stretches out over the north east corner of the city limits encompassing a privately owned pecan farm. On HWY 114 on the way the way to Bridgeport and Boyd, there is flooding that blocks access. Farm to Market 3259 on the way to Decatur, flooding occurs more often blocking access to Decatur; this happens when flood gates are opened at Lake Bridgeport. These flooded locations don't directly affect residents or property but do prevent access on routes to leave town. Refer to the DFIRM map E.5, in section 3.2 for a more visual description.

Based on previous occurrence data from the National Climatic Data Center, the city of Paradise has experienced flood events that have covered roadways, impeding traffic. Any future events can be expected to be of similar magnitude.

City of Runaway Bay Properties near the lake are susceptible to flooding. The Champion and Jim Walters Street are susceptible to wash outs. There are effects to the sewer infrastructure as a result of flooding. Johnson Lane, Runaway Bay Drive at Hastings are additional locations susceptible to flooding. Viking Court, Harbor Drive, Ratliff Drive, Bayside, Driftwood, Bay Roc, Shady Oaks Bridge (Water line/Sewer line) are also susceptible to flooding. Refer to the DFIRM map E.6, in section 3.2 for a more visual description.

Based on previous occurrence data from the National Climatic Data Center, the city of Runaway Bay has experienced flood events that have covered roadways, impeding traffic. Any future events can be expected to be of similar magnitude.

Dam Failure A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam failure is an accidental or unintentional collapse, breach, or other failure of an impoundment structure that results in downstream flooding. Because dams are man-made structures, dam failures are usually considered technological hazards. However, since most dam failures result from prolonged periods of rainfall, they are often cited as secondary or cascading effects of natural flooding disasters and are not named as the primary hazard that causes disaster declarations.

Based on a quantitative analysis of the dams currently in place in Wise County and a qualitative analysis of the potential impacts that dam failures would have on the social, economic, and environmental components of the region, the risk of a dam failure hazard is significant.

There have not been any inundation studies for the dams in Wise County and the County does not have information from the owners or emergency operations plans for the dams. Therefore, the County has chosen to cite a data deficiency and include an action item to research better inundation data before the next plan update. In addition, as opportunities arise the NCTCOG will apply for mitigation grant funding to complete dam inundation studies for a majority of the high hazard dams in the region. The data below is from the National Inventory of Dams (NID):

Unincorporated Wise County
There are 23 dams classified as high hazard in Wise County.
Denton Creek Dams: 30, 19, 19A, 18G, 18J, 20, 21D, 23A, 23B, 23D, 24, 29, 31
Salt Creek Dams: 10, 5, 15
Big Sandy Dams: 35, 39, 43, 44, 24B, 26, 32

City of Alvord No data on dam failure was found for Alvord

City of Bridgeport The dam at Lake Bridgeport, owned by the Tarrant County Regional Water District, is the most threatening dam to the City of Bridgeport. If this dam failed it could potentially wipe out at least one-third of the city.

City of Chico Chico is not vulnerable to dam failure.

City of Paradise A Lake Bridgeport Dam failure would affect access on FM 3259 which heads east to Decatur. This would affect travel into and from Paradise, but not damage any property.

City of Runaway Bay Due to its location at the top of the watershed, Runaway Bay is not vulnerable to dam failure.

3.2 Location of Hazards

The following maps illustrate the location of the hazards in Wise County. Maps concerning tornado and hail incidents are in reverence to previous events as they have the potential to occur equally throughout the county. Winter storms, summer heat, and drought have the potential to occur equally throughout the county and their previous events data is not represented by a map. Likewise, it is assumed that those hazard listed as having the potential to occur equally throughout the HazMAP planning area will affect the area as described in each city's critical infrastructure and structure maps G.1-G.6, in section 3.6.

Map Series A **Tornado Incidents**

Map A.1 Wise County Tornado Incidents
Map A.2 City of Alvord Tornado Incidents
Map A.3 City of Bridgeport Tornado Incidents
Map A.4 City of Chico Tornado Incidents
Map A.5 City of Paradise Tornado Incidents
Map A.6 City of Runaway Bay Tornado Incidents

Map Series B **Hail Incidents**

Map B.1 Wise County Hail Incidents
Map B.2 City of Alvord Hail Incidents
Map B.3 City of Bridgeport Hail Incidents
Map B.4 City of Chico Hail Incidents
Map B.5 City of Paradise Hail Incidents
Map B.6 City of Runaway Bay Hail Incidents

Map Series C **Wildland Urban Interface**

Map C.1 Wise County Wildland Urban Interface
Map C.2 City of Alvord Wildland Urban Interface
Map C.3 City of Bridgeport Wildland Urban Interface
Map C.4 City of Chico Wildland Urban Interface
Map C.5 City of Paradise Wildland Urban Interface
Map C.6 City of Runaway Bay Wildland Urban Interface

Map Series D **Wildfire Risk Assessment**

Map D.1 Wise County Wildfire Risk Assessment
Map D.2 City of Alvord Wildfire Risk Assessment
Map D.3 City of Bridgeport Wildfire Risk Assessment
Map D.4 City of Chico Wildfire Risk Assessment
Map D.5 City of Paradise Wildfire Risk Assessment
Map D.6 City of Runaway Bay Wildfire Risk Assessment

Map Series E **Flood Zones**

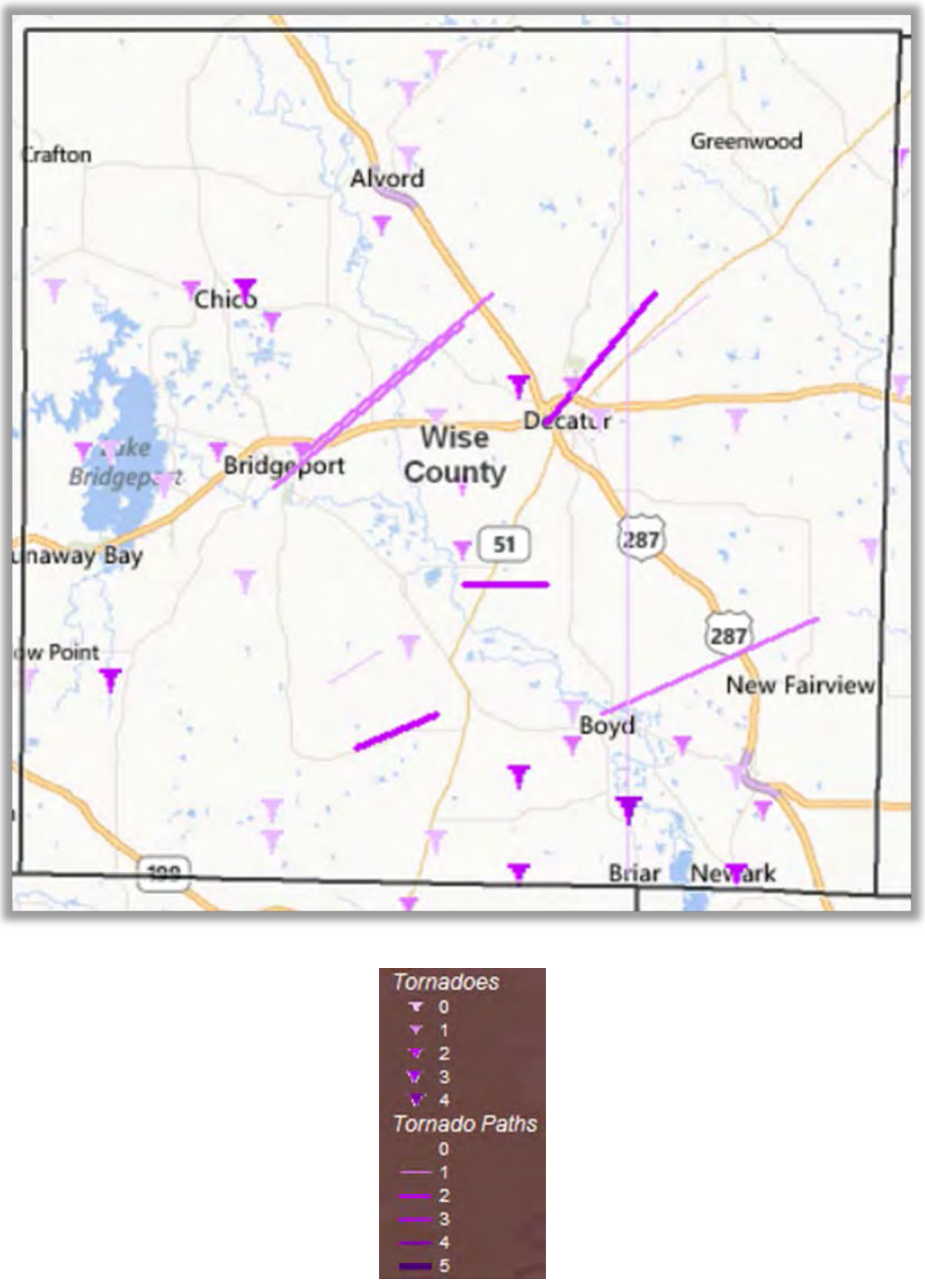
Map E.1 Wise County Flood Zones
Map E.2 City of Alvord Flood Zones
Map E.3 City of Bridgeport Flood Zones
Map E.4 City of Chico Flood Zones
Map E.5 City of Paradise Flood Zones
Map E.6 City of Runaway Bay Flood Zones

Map Series F Dams

Map F.1 Wise County Dams
Map F.2 City of Alvord Dams
Map F.3 City of Bridgeport Dams
Map F.4 City of Chico Dams
Map F.5 City of Paradise Dams
Map F.6 City of Runaway Bay Dams

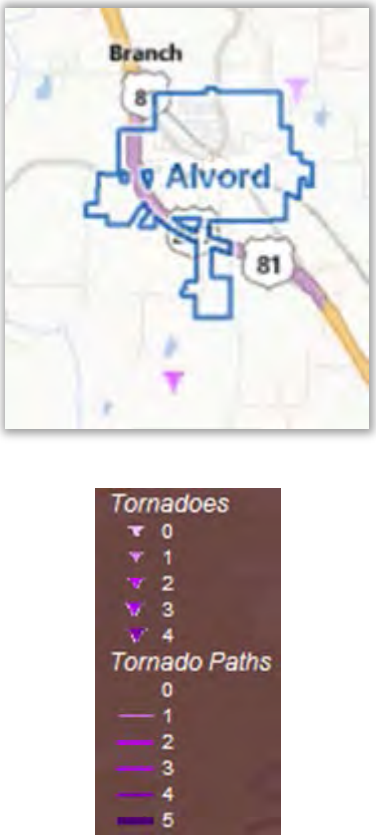
Map Series A - Tornado Incidents

Map A.1 - Wise County Tornado Incidents



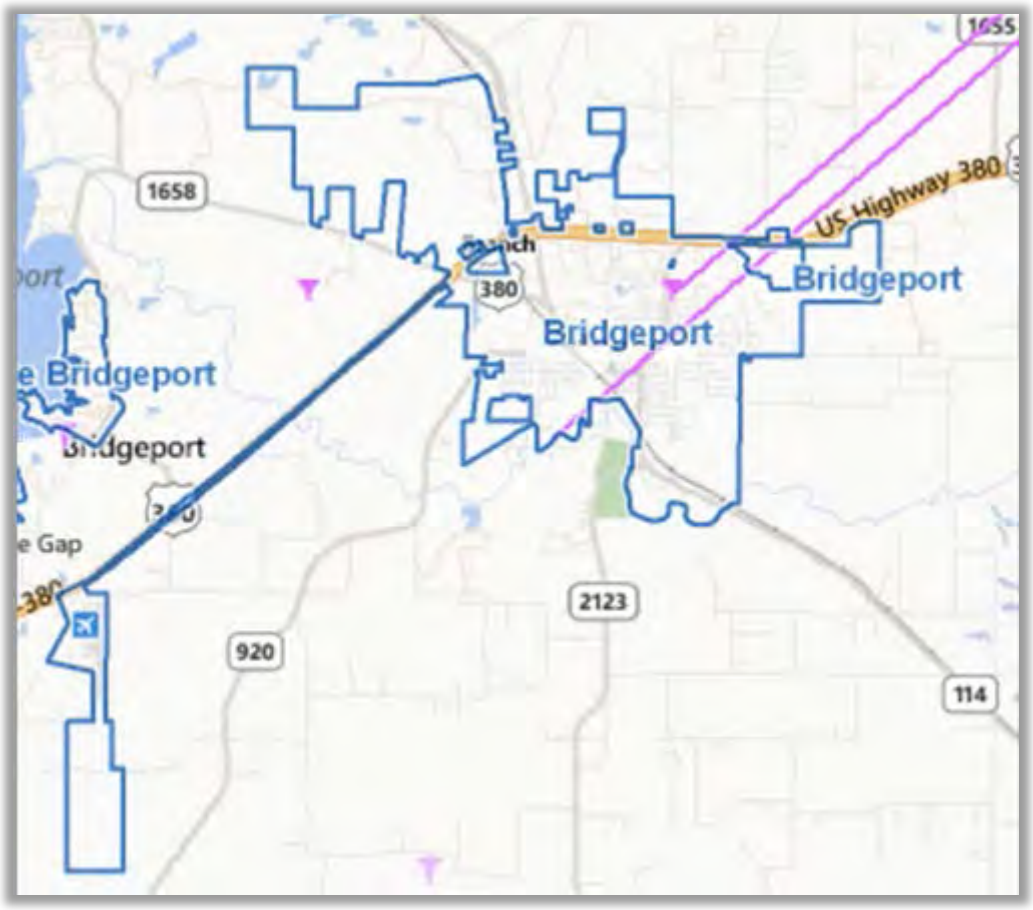
Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map A.2 - Alvord Tornado Events



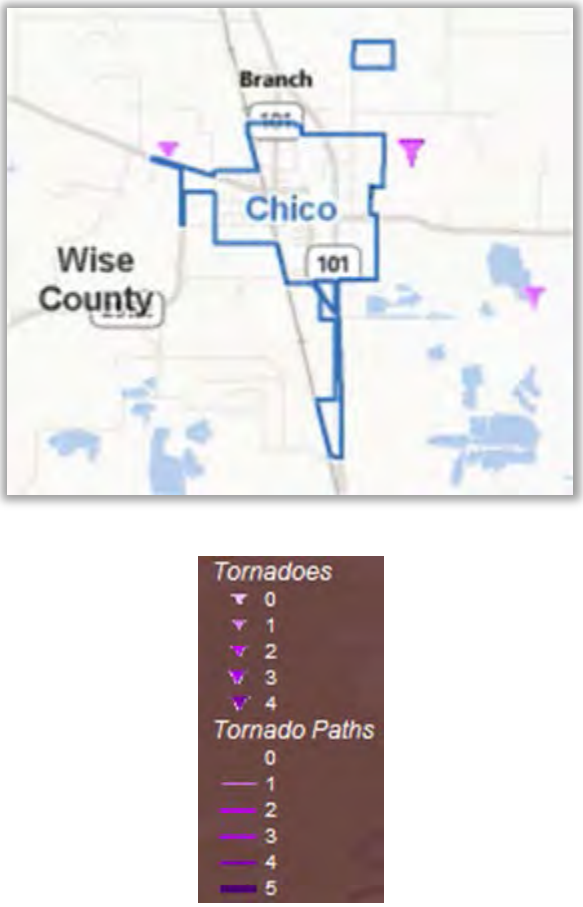
Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map A.3 - Bridgeport Tornado Events



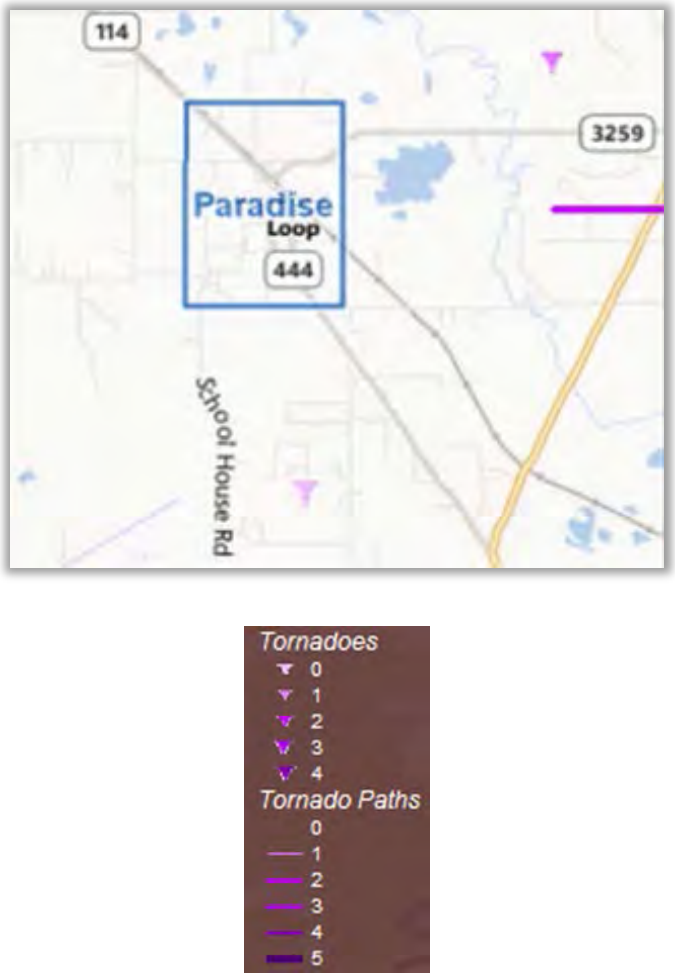
Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map A.4 - Chico Tornado Events



Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map A.5 - Paradise Tornado Events



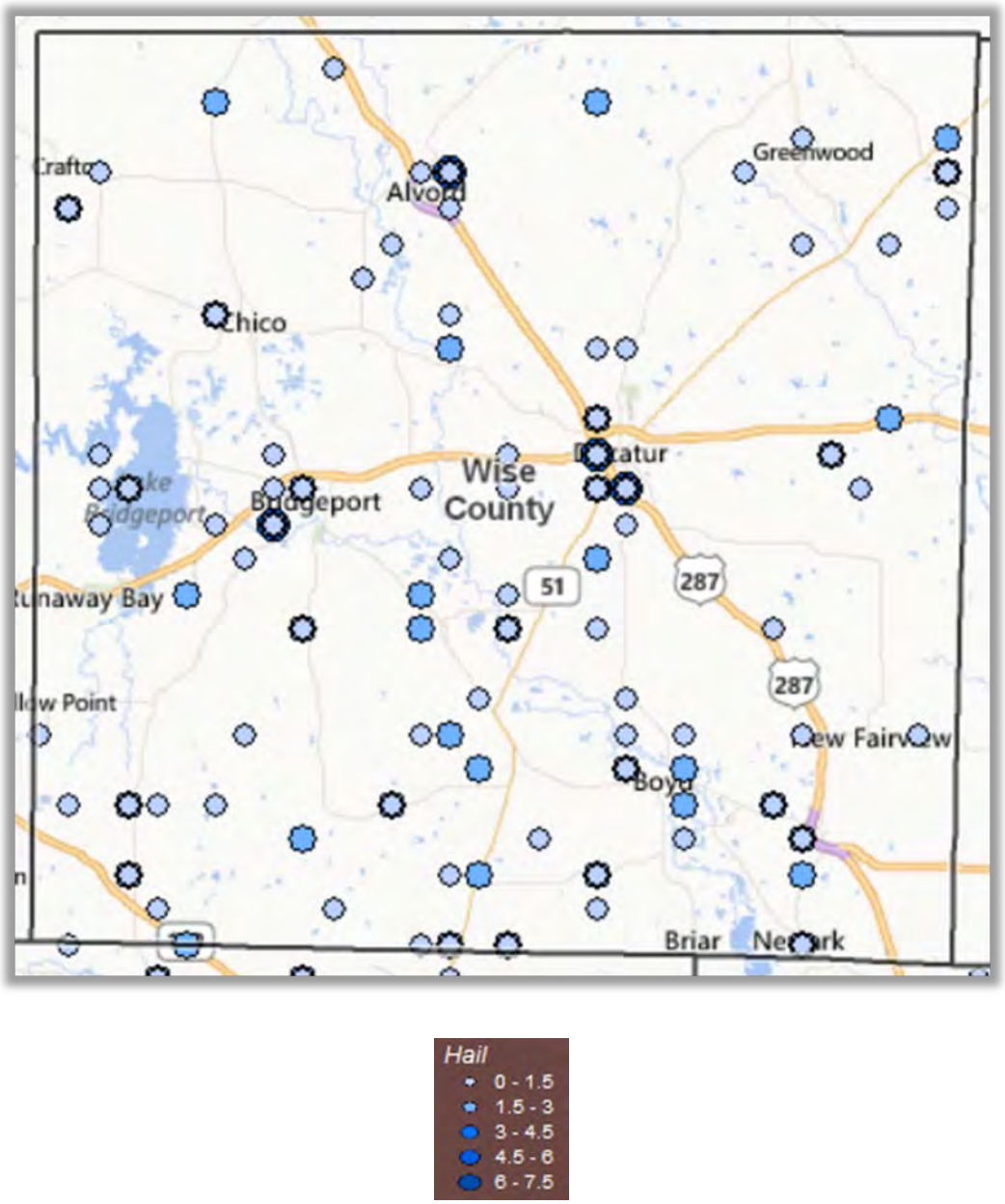
Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map A.6 - Runaway Bay Tornado Events

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

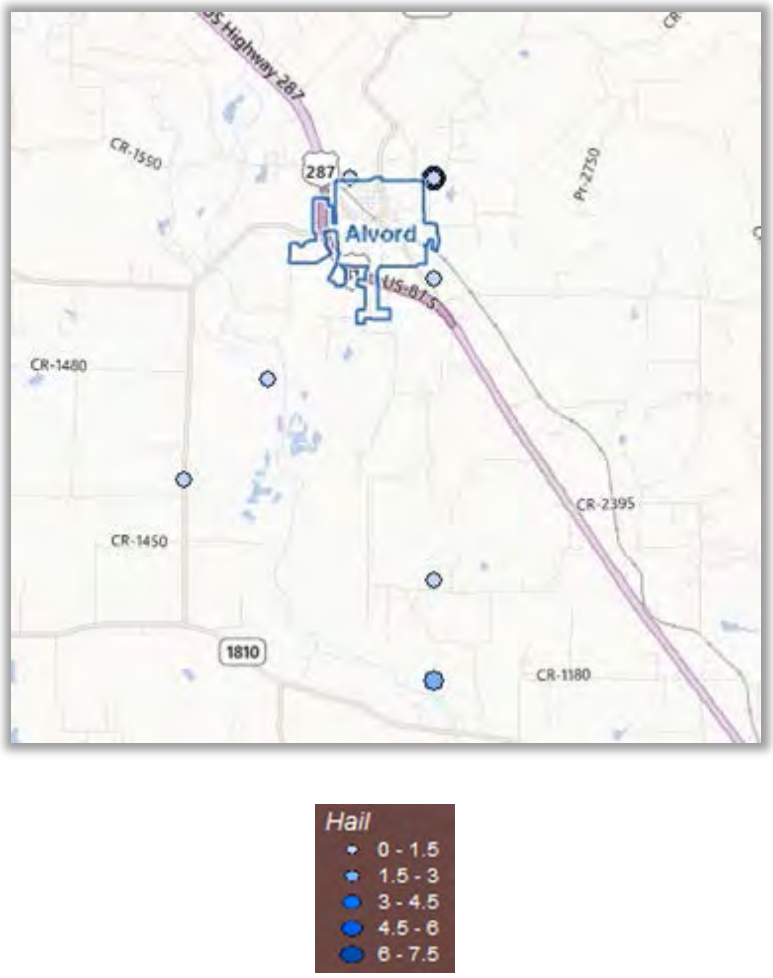
Map Series B - Hail Incidents

Map B.1 - Wise County Hail Incidents



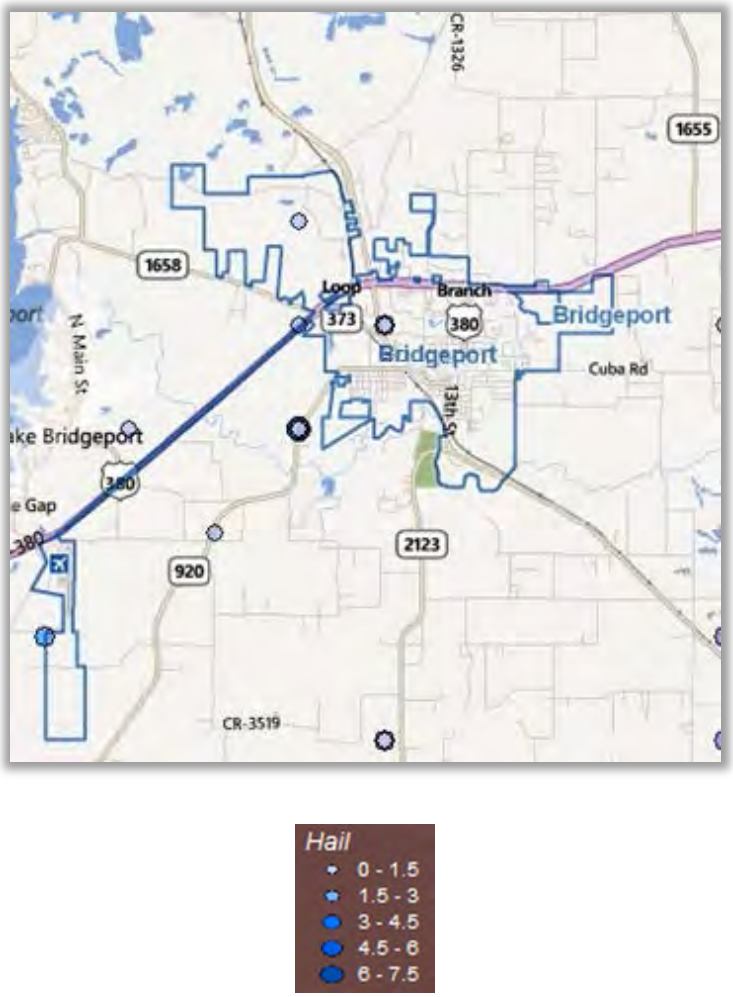
Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map B. 2 - Alvord Hail Incidents



Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map B.3 - Bridgeport Hail Incidents

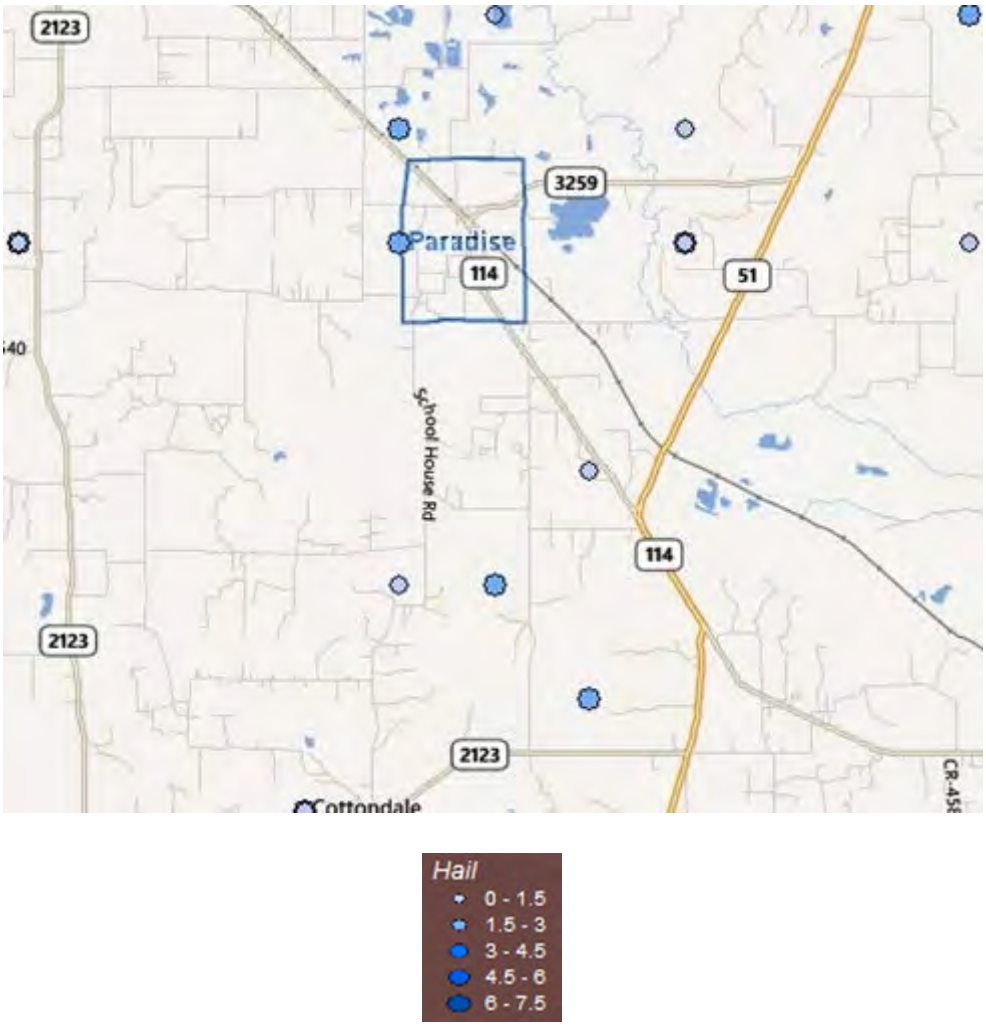


Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map B.4 - Chico Hail Incidents

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

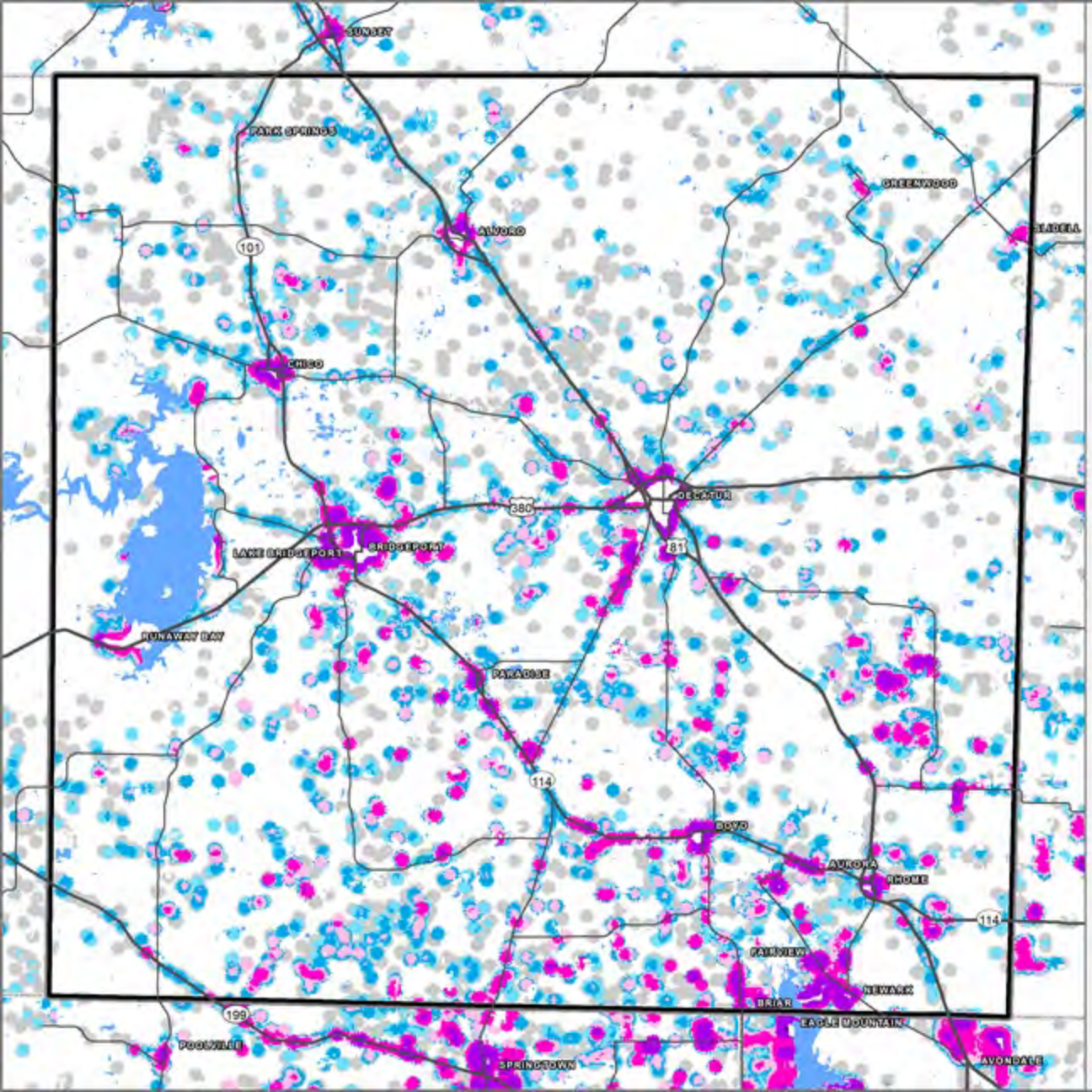
Map B.5 - Paradise Hail Incidents



Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map B.6 - Runaway Bay Hail Incidents

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)



Wise County
Map C.1

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 1.5 3 4.5 6 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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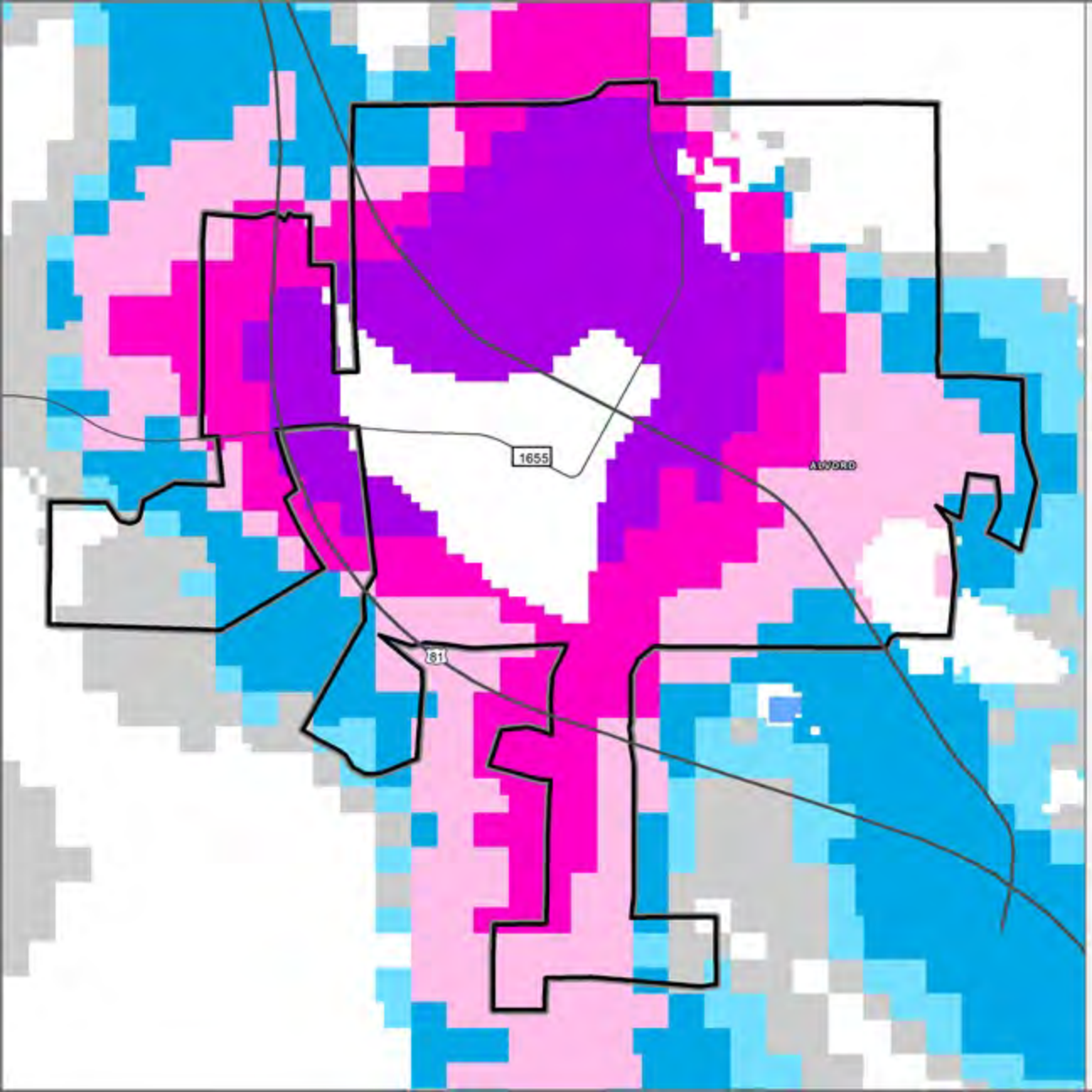

Alvord
Map C.2

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 0.085 0.17 0.255 0.34 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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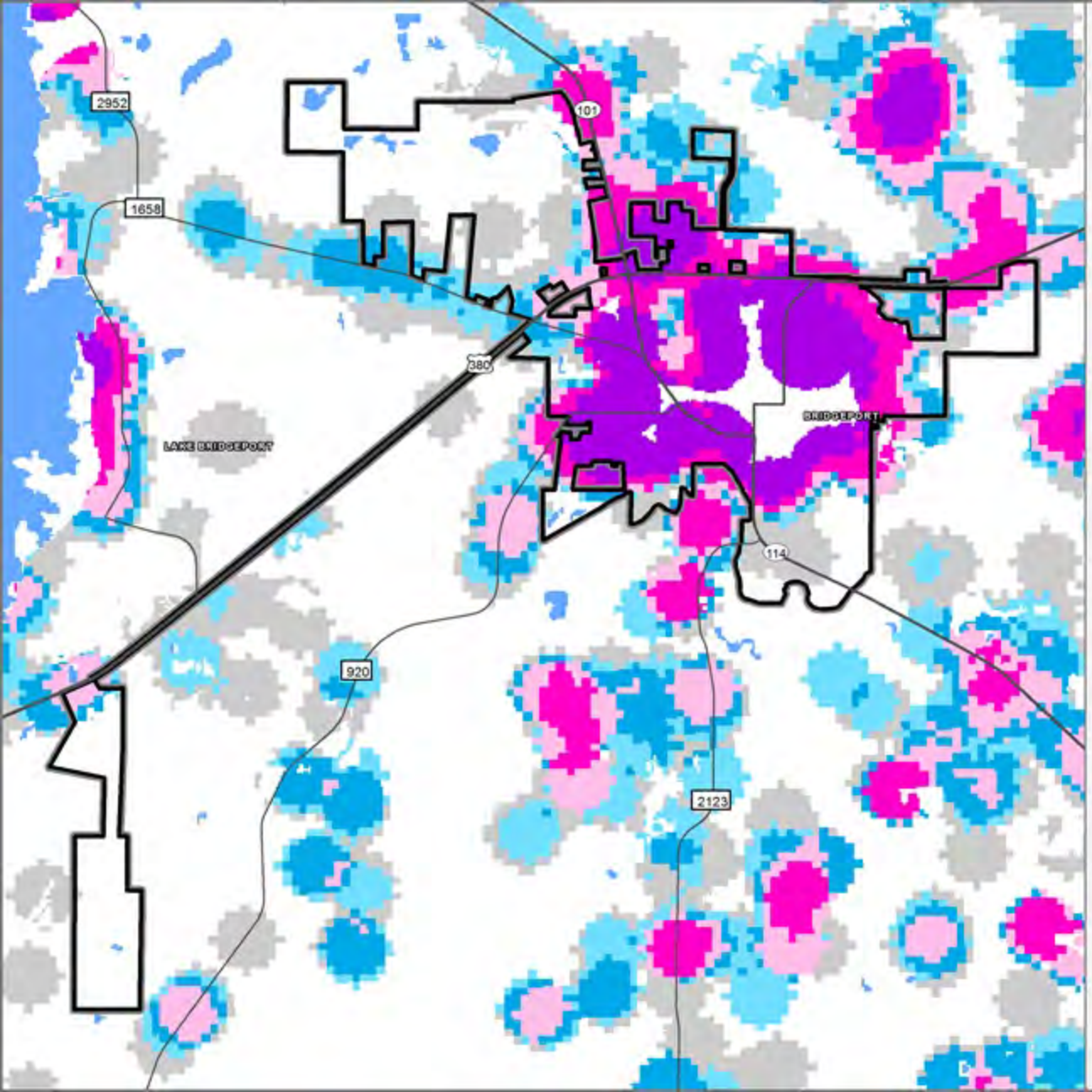

Bridgeport
Map C.3

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 0.3 0.6 0.9 1.2 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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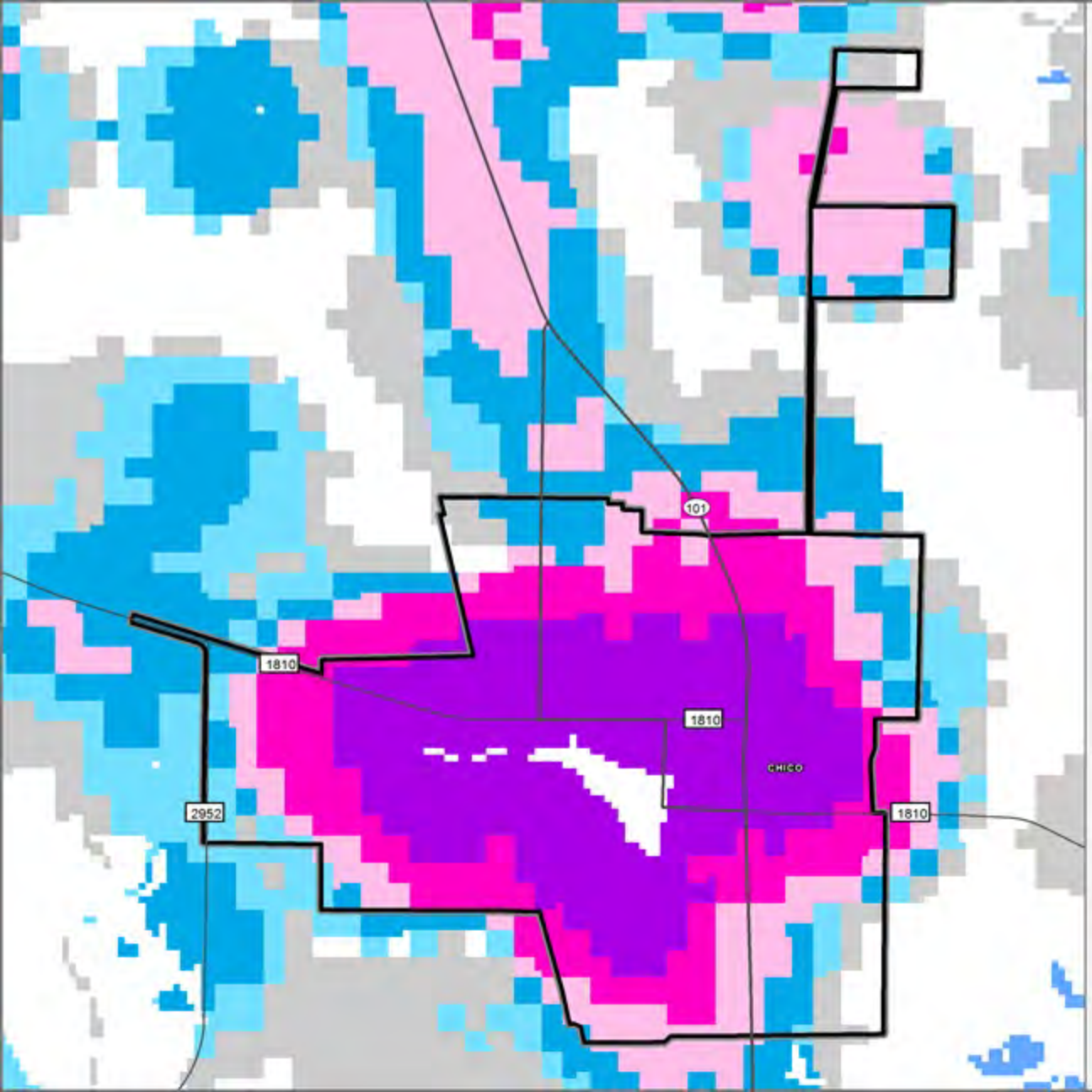

Chico
Map C.4

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 0.1 0.2 0.3 0.4 Miles

Date: 12/3/2014

N

TEXAS A&M FOREST SERVICE

Texas Wildfire Risk Assessment
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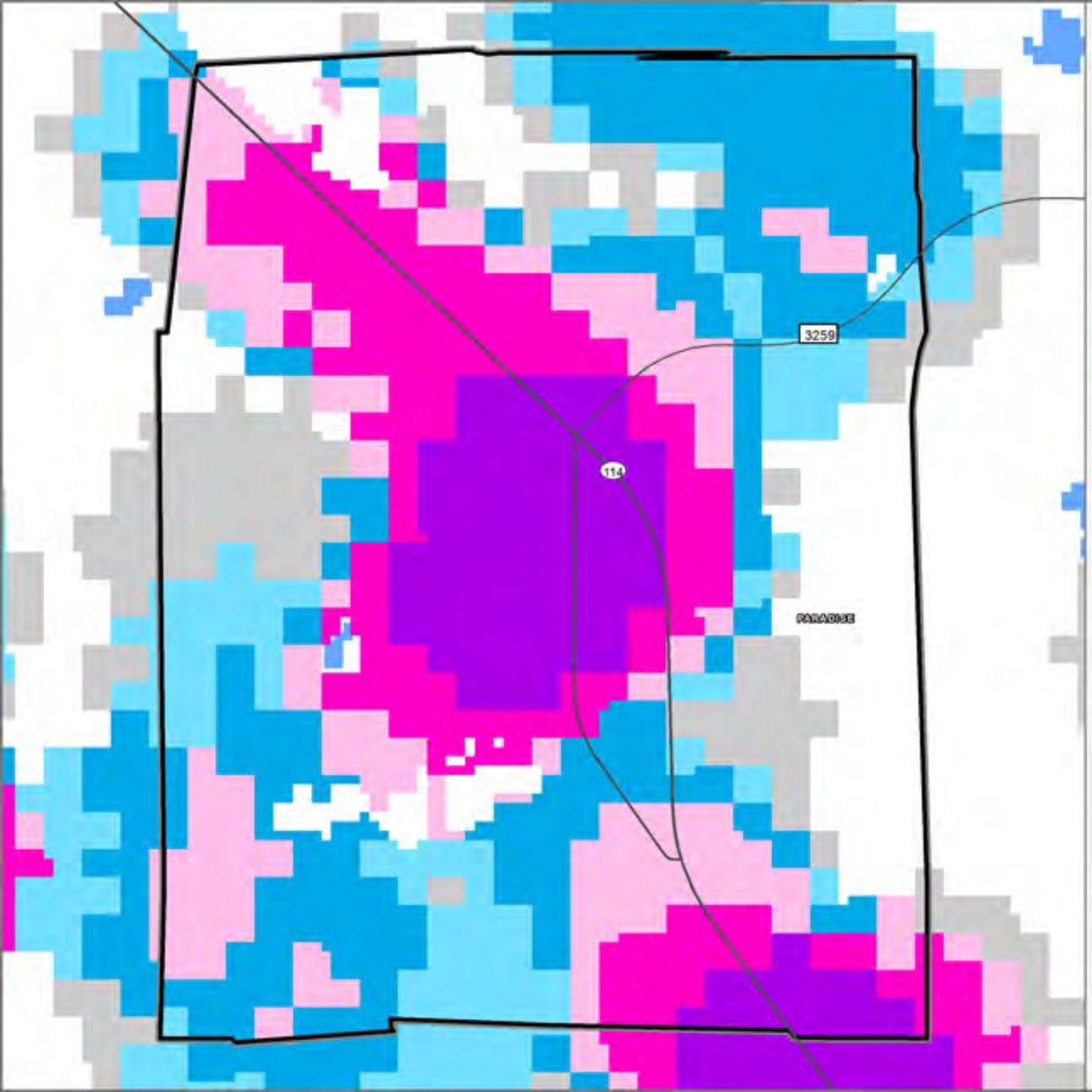

Paradise
Map C.5

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 0.075 0.15 0.225 0.3 Miles

N

Date: 12/3/2014

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Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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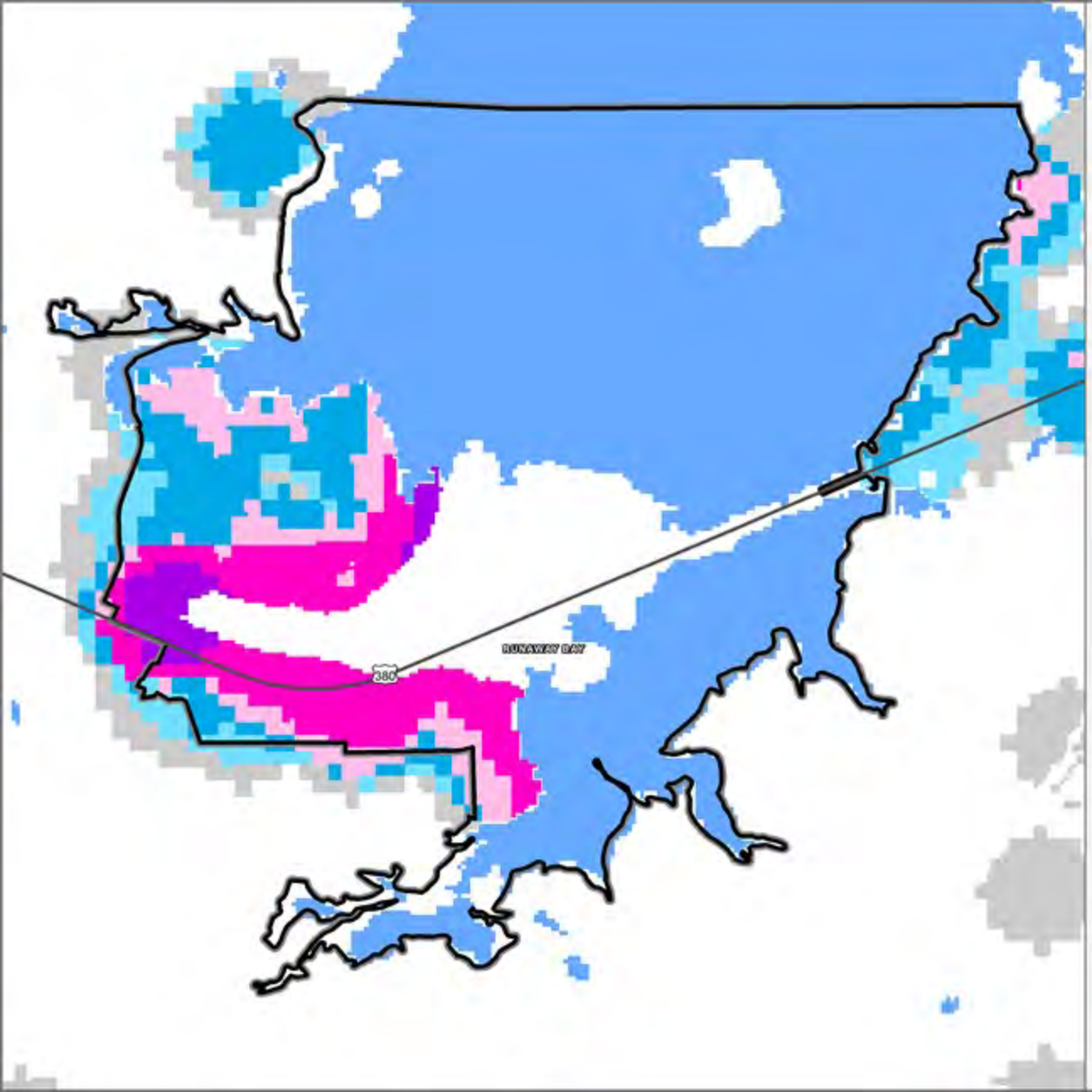

Runaway Bay
Map C.6

Wildland Urban Interface

- 1 - LT 1 hs/40 ac
- 2 - 1 hs/40 to 1 hs/20 ac
- 3 - 1 hs/20 to 1 hs/10 ac
- 4 - 1 hs/10 to 1 hs/5 ac
- 5 - 1 hs/5 to 1 hs/2 ac
- 6 - 1 hs/2 to 3 hs/ac
- 7 - GT 3 hs/ac

0 0.15 0.3 0.45 0.6 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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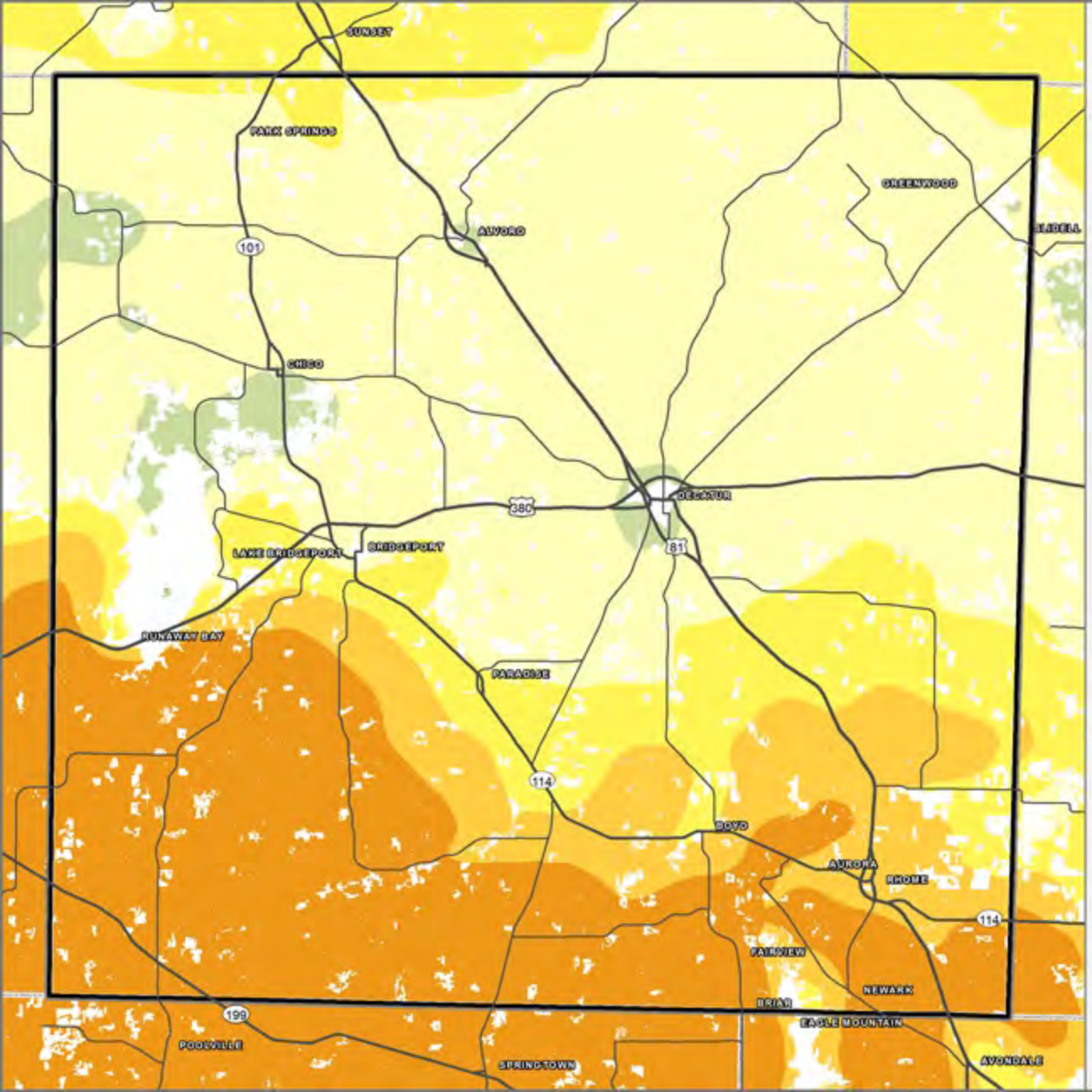

Wise County
Map D.1

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 1.5 3 4.5 6 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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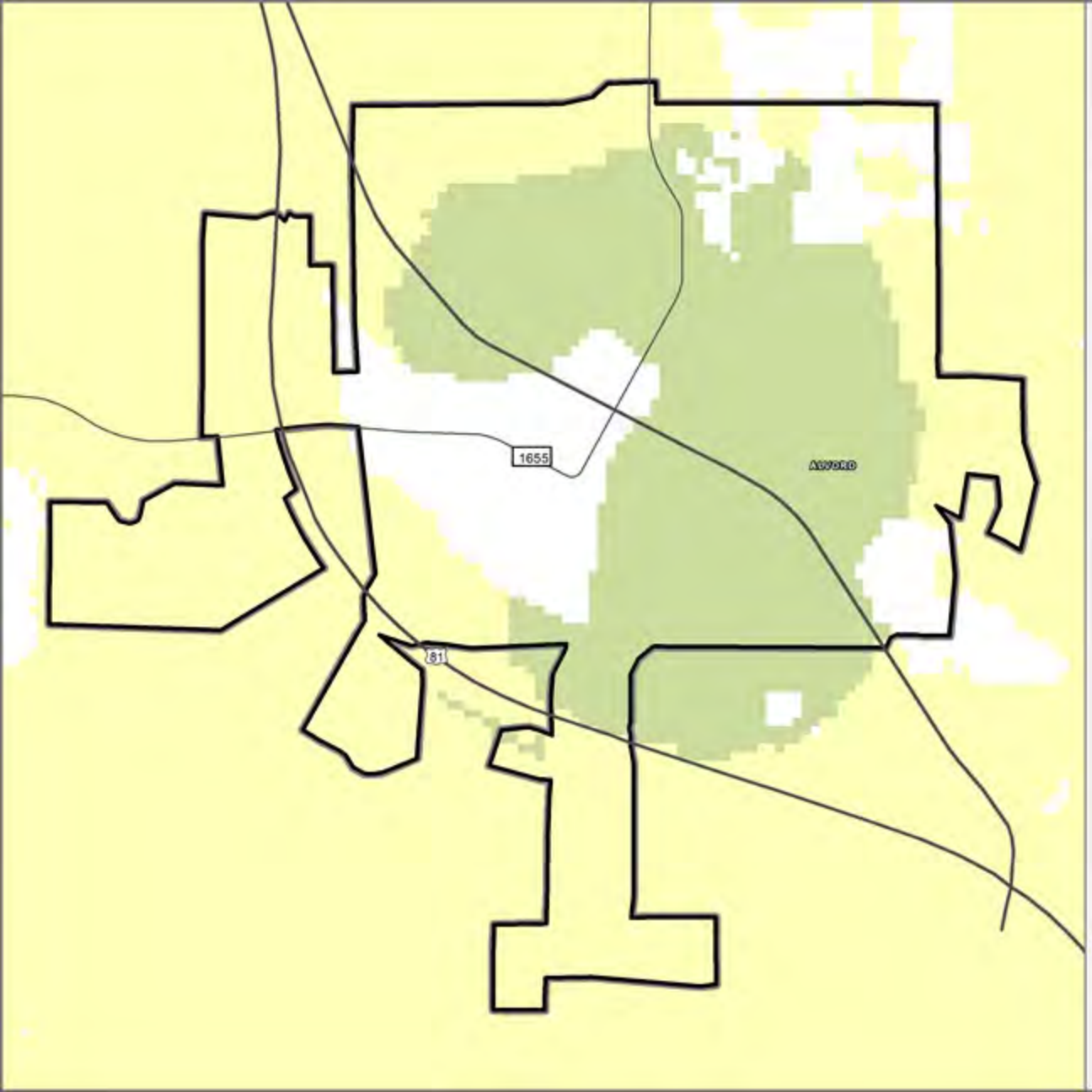

Alvord
Map D.2

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 0.085 0.17 0.255 0.34 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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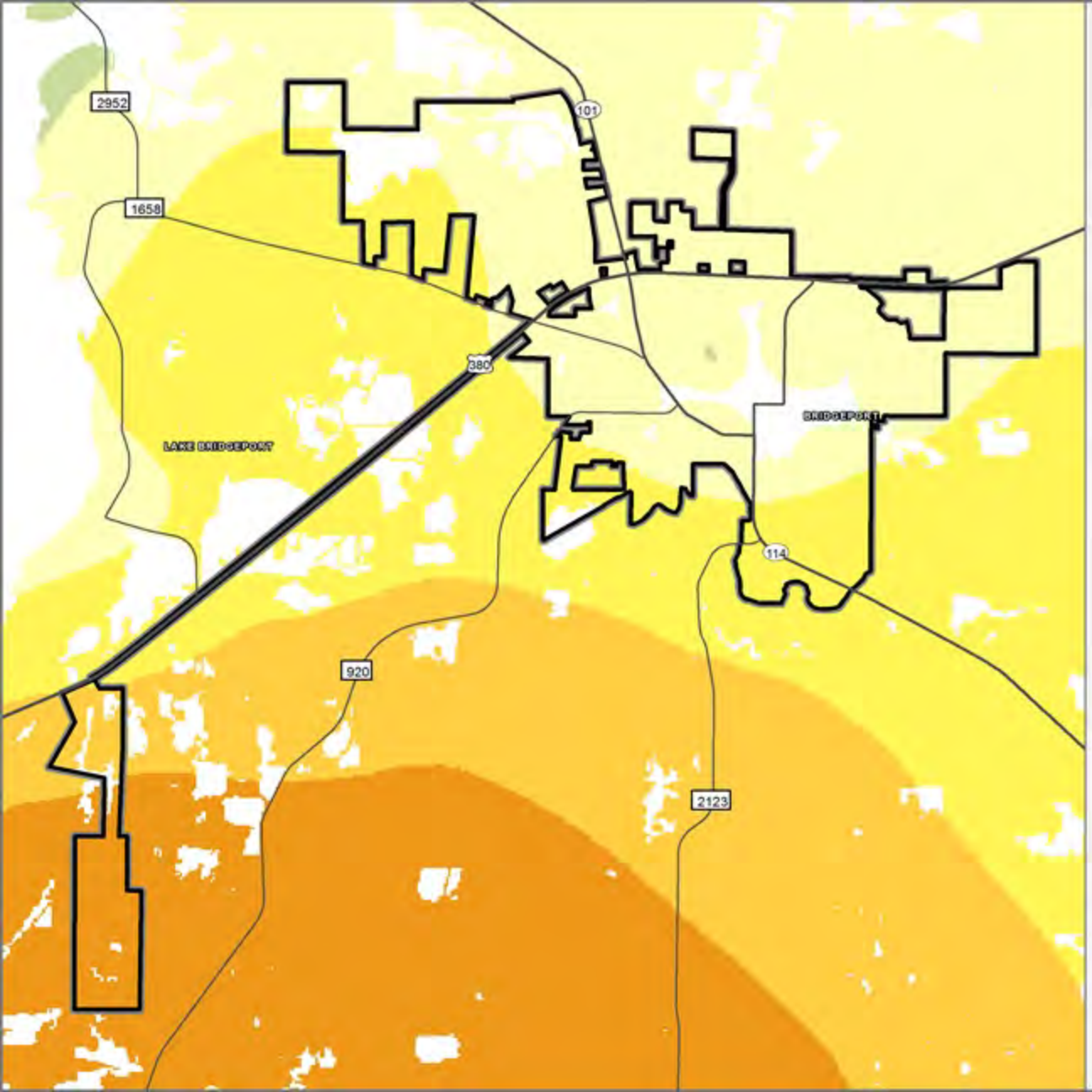

Bridgeport
Map D.3

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 0.3 0.6 0.9 1.2 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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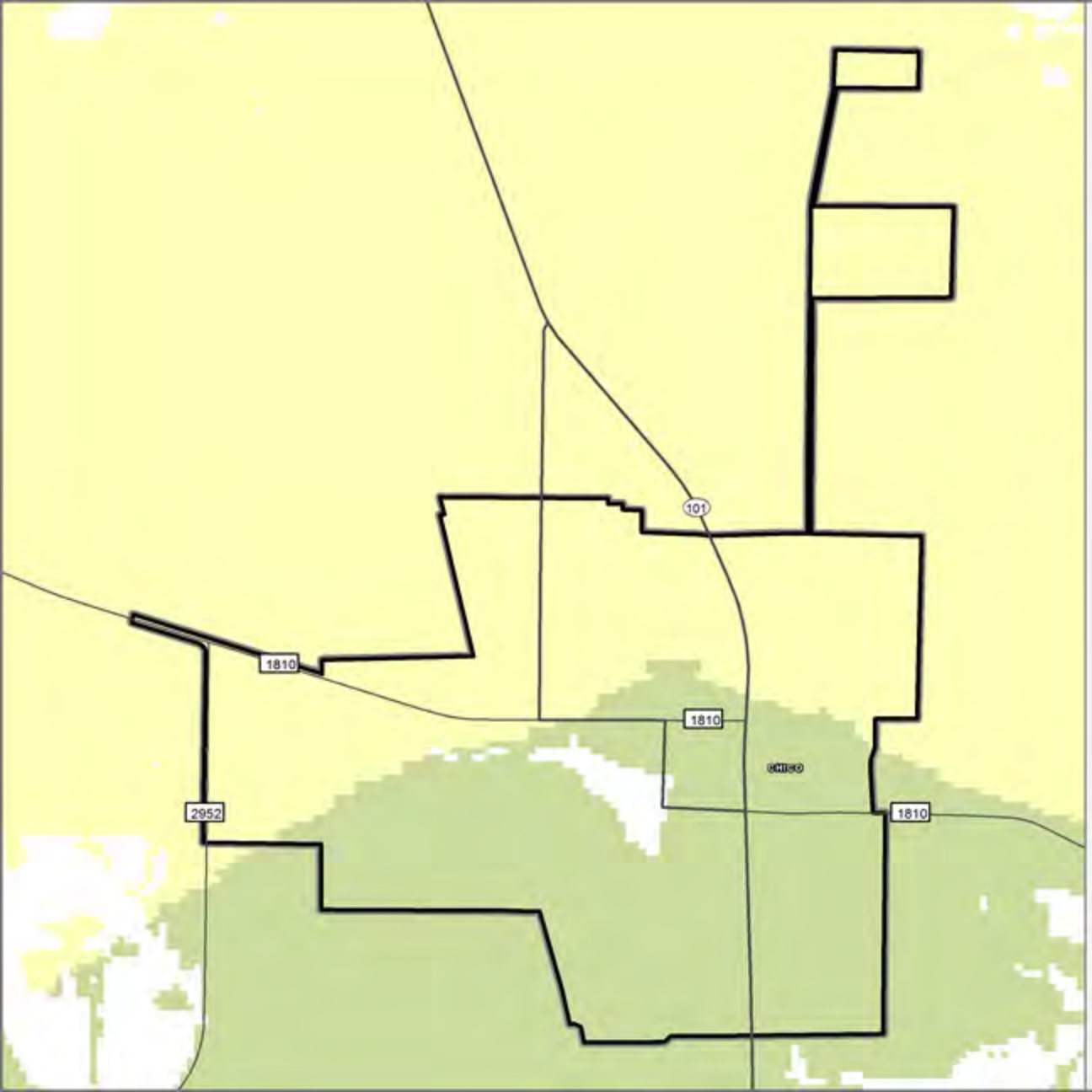

Chico
Map D.4

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 0.1 0.2 0.3 0.4 Miles

N

Date: 12/3/2014

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Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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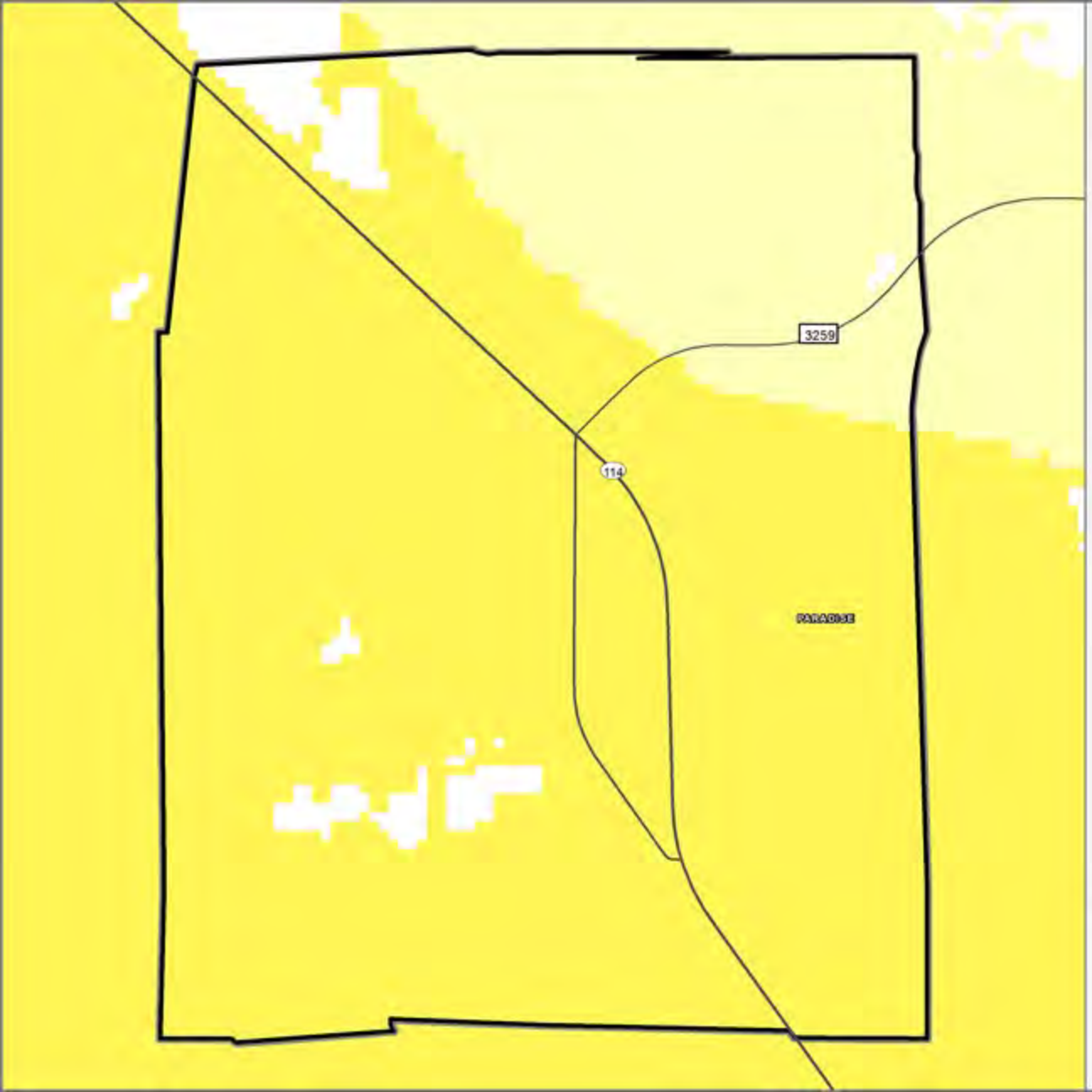

Paradise
Map D.5

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 0.075 0.15 0.225 0.3 Miles

N

Date: 12/3/2014

Texas A&M Forest Service

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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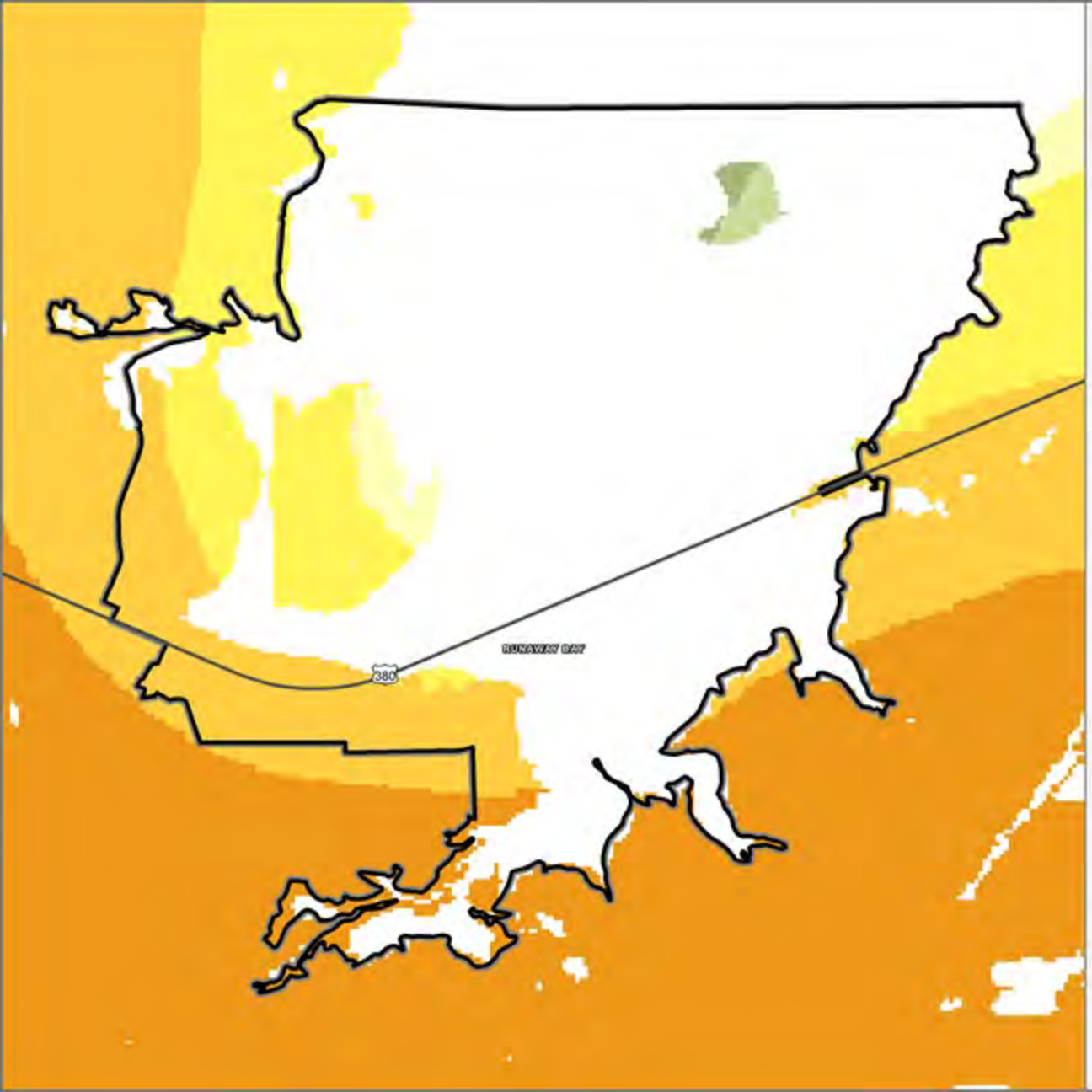

Runaway Bay
Map D.6

Wildfire Threat

- Non-Burnable
- 1 (Low)
- 2
- 3 (Moderate)
- 4
- 5 (High)
- 6
- 7 (Very High)

0 0.15 0.3 0.45 0.6 Miles

N

Date: 12/3/2014

TEXAS A&M FOREST SERVICE

Texas Wildfire Risk Assessment
http://www.texaswildfirerisk.com

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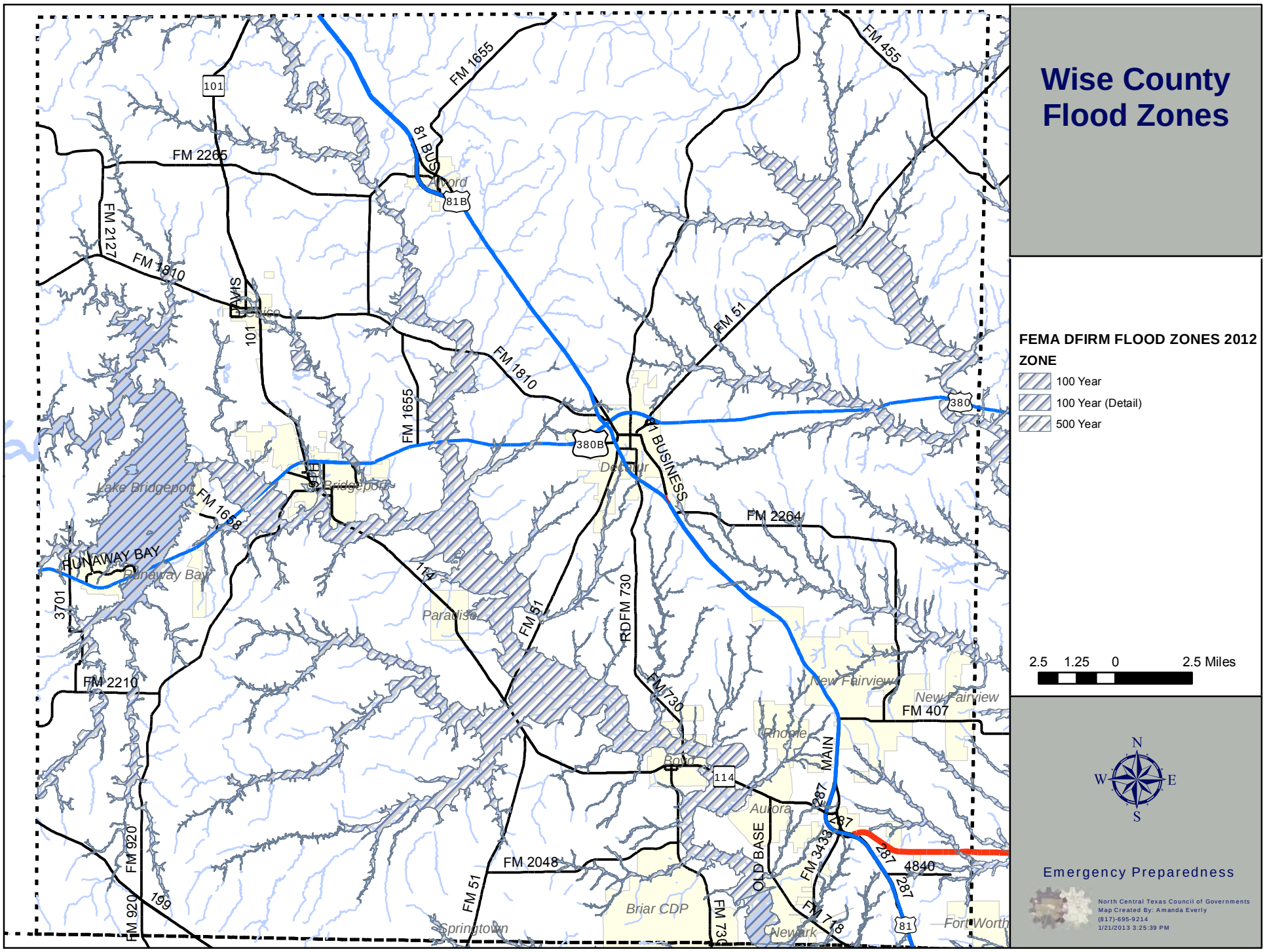
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Flood Zones
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
2.5 1.25 0 2.5 Miles
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Emergency Preparedness
North Central Texas Council of Governments
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FM 1655
FM 455
81 BUSINESS
Alvord
81B
FM 2265
FM 2127
FM 1810
SHHS
Paradise
101
FM 51
380
380B
Decatur
Lake Bridgeport
Bridgeport
FM 1658
FM 2264
RUNAWAY BAY
Runaway Bay
3701
114
Paradise
RDFM 730
FM 2210
New Fairview
FM 407
Rhome
Boyd
MAIN
Aurora
287
OLD BASE
FM 3433
4840
FM 920
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FM 730
FM 718
Newark
81
Fort Worth
Springtown

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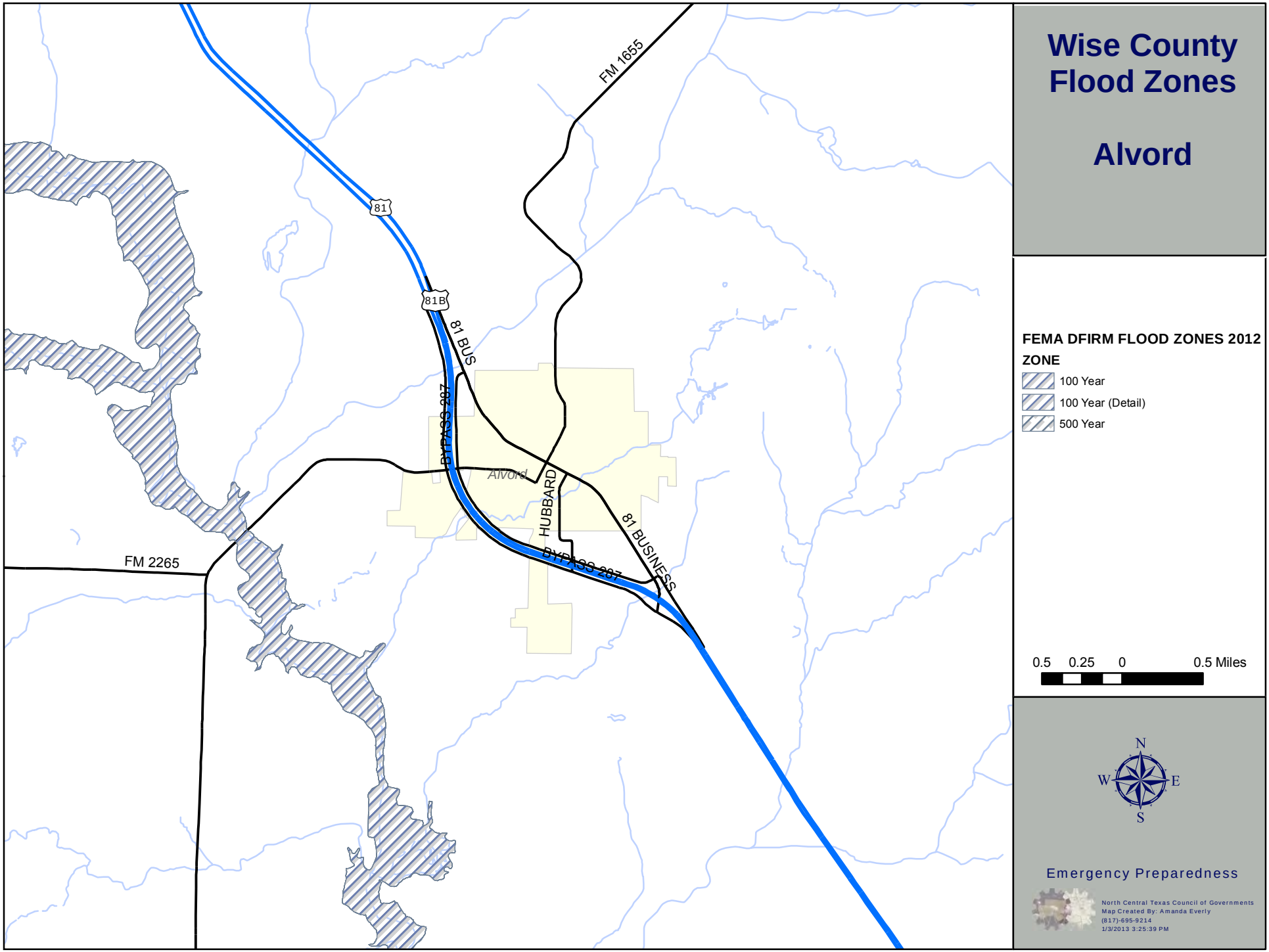
Wise County
Flood Zones
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100 Year
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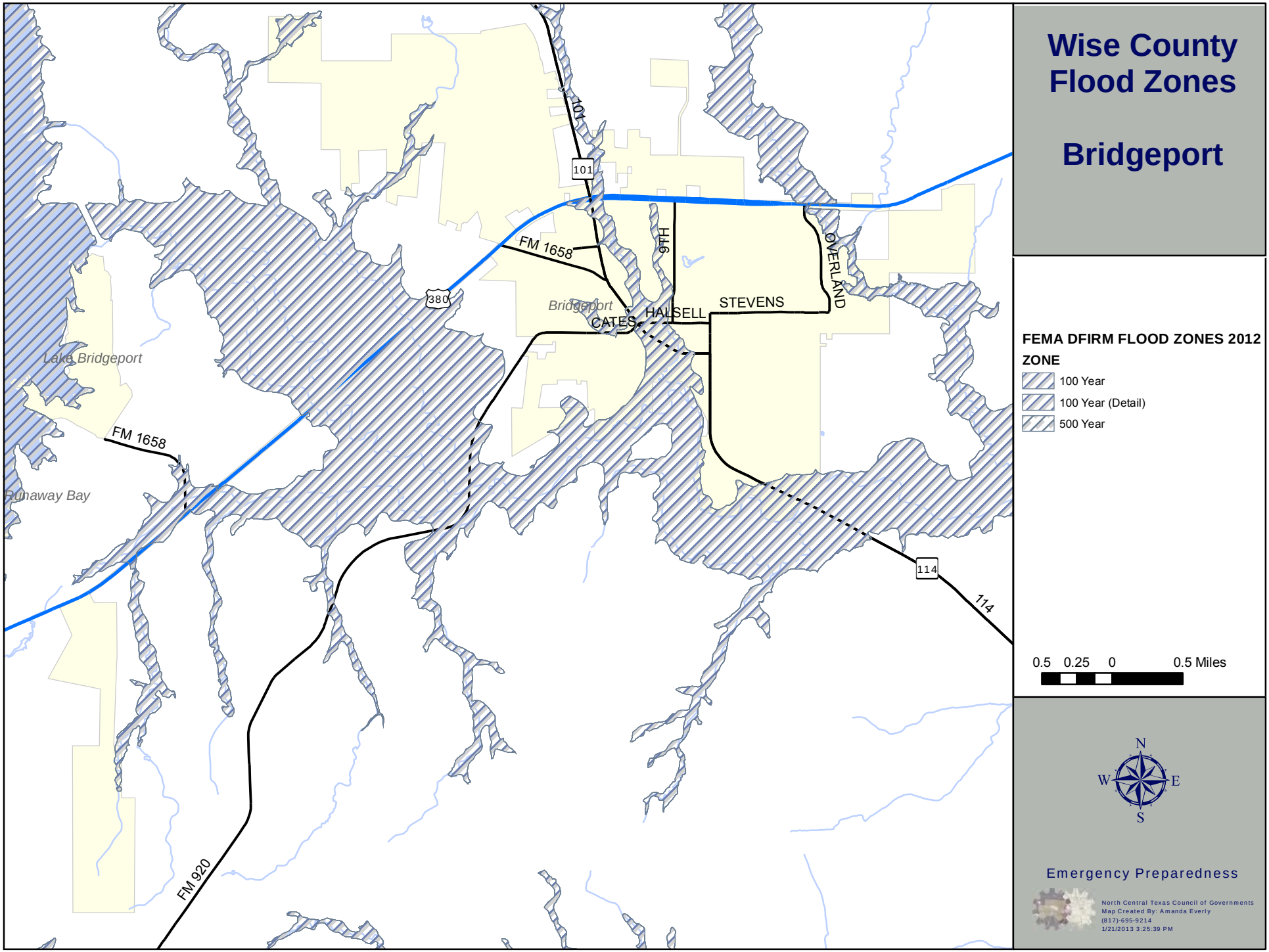
Wise County
Flood Zones
Bridgeport
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
0.5 0.25 0 0.5 Miles
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Emergency Preparedness
North Central Texas Council of Governments
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101
FM 1658
380
Bridgeport
CATES
HALSELL
STEVENS
HWY
OVERLAND
Lake Bridgeport
Runaway Bay
FM 920
114

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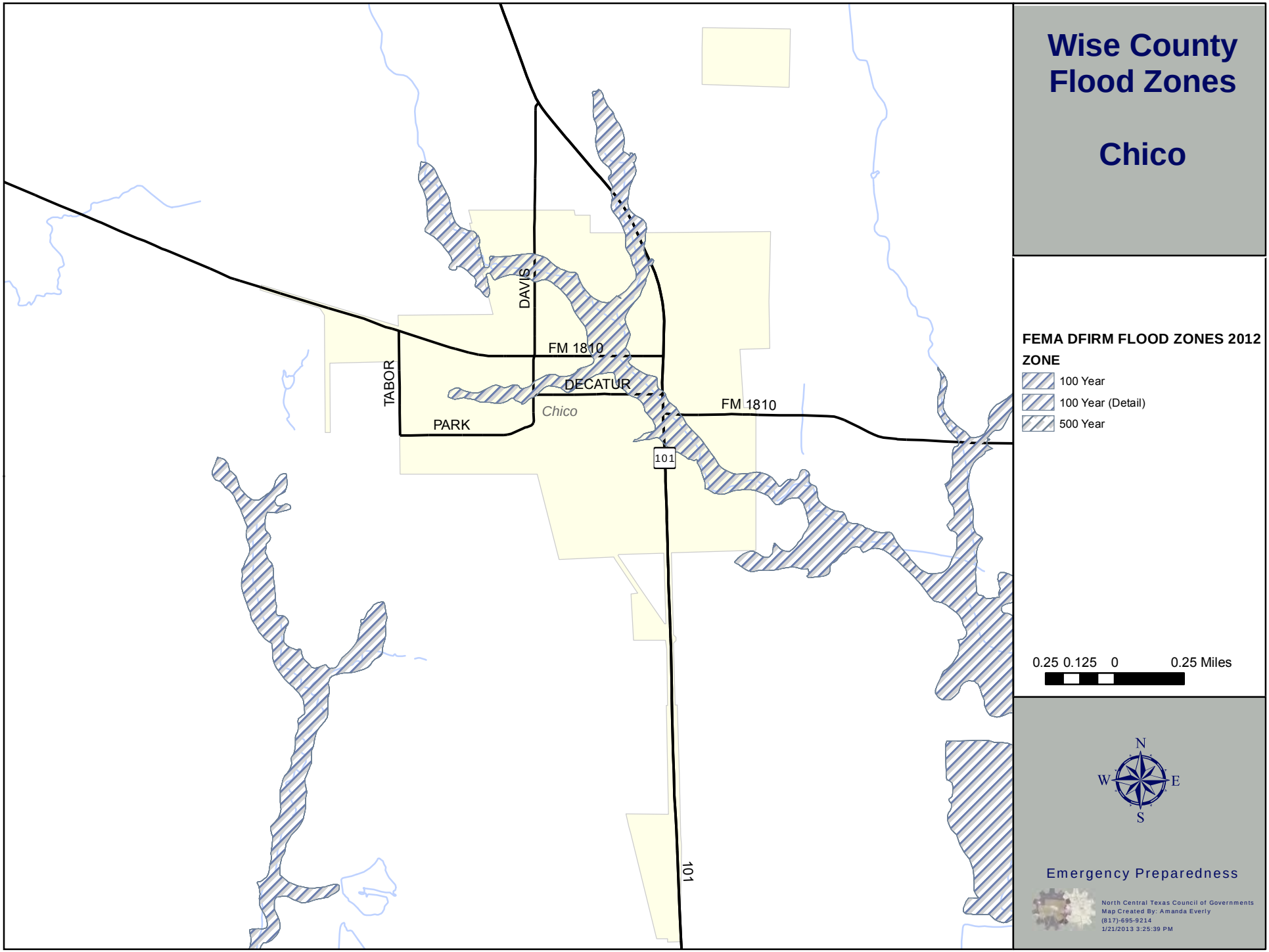
Wise County
Flood Zones
Chico
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
0.25 0.125 0 0.25 Miles
DAVIS
FM 1810
TABOR
DECATUR
Chico
FM 1810
PARK
101
101
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Emergency Preparedness
North Central Texas Council of Governments
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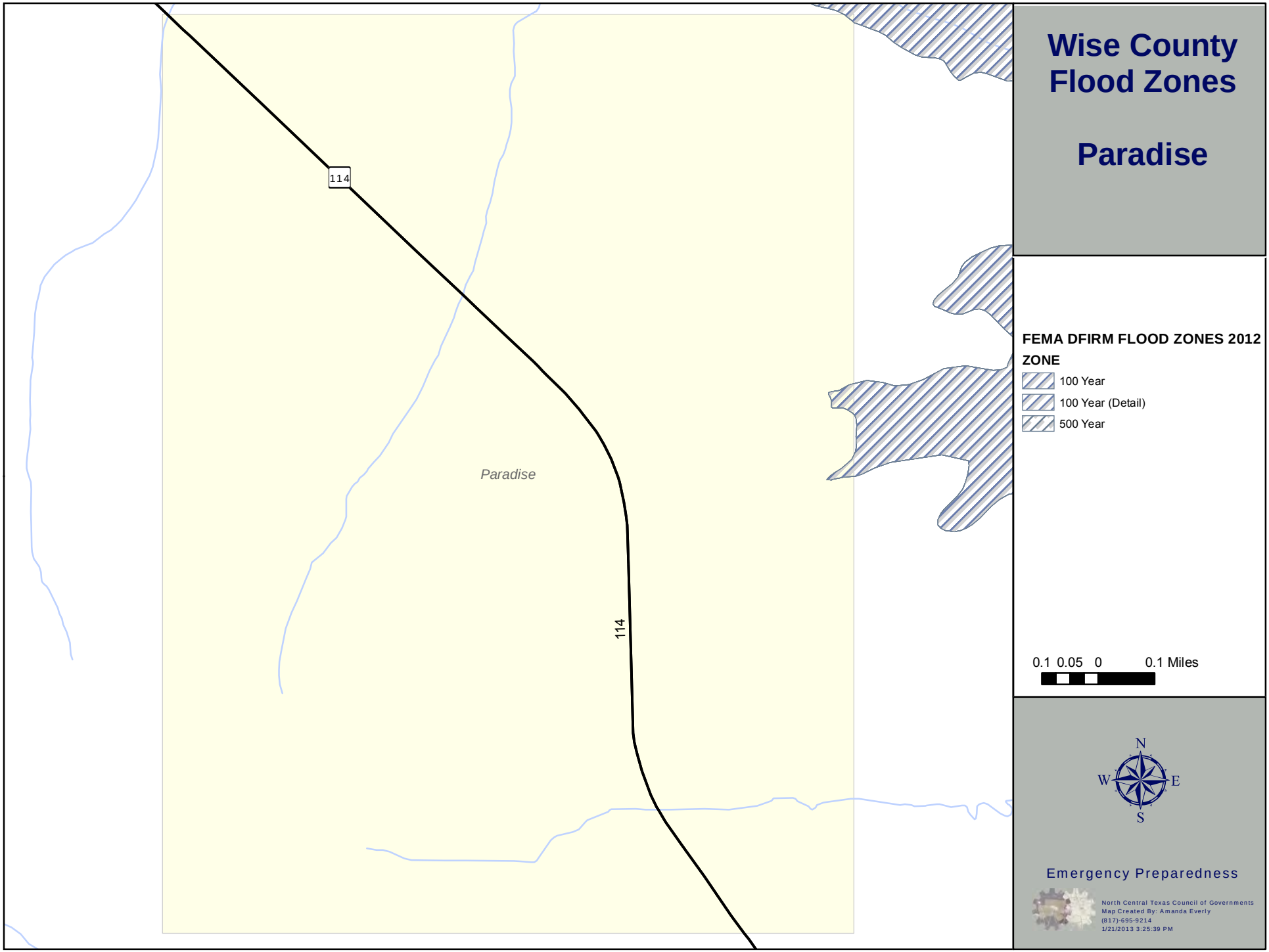
Wise County
Flood Zones
Paradise
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
0.1 0.05 0 0.1 Miles
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Emergency Preparedness
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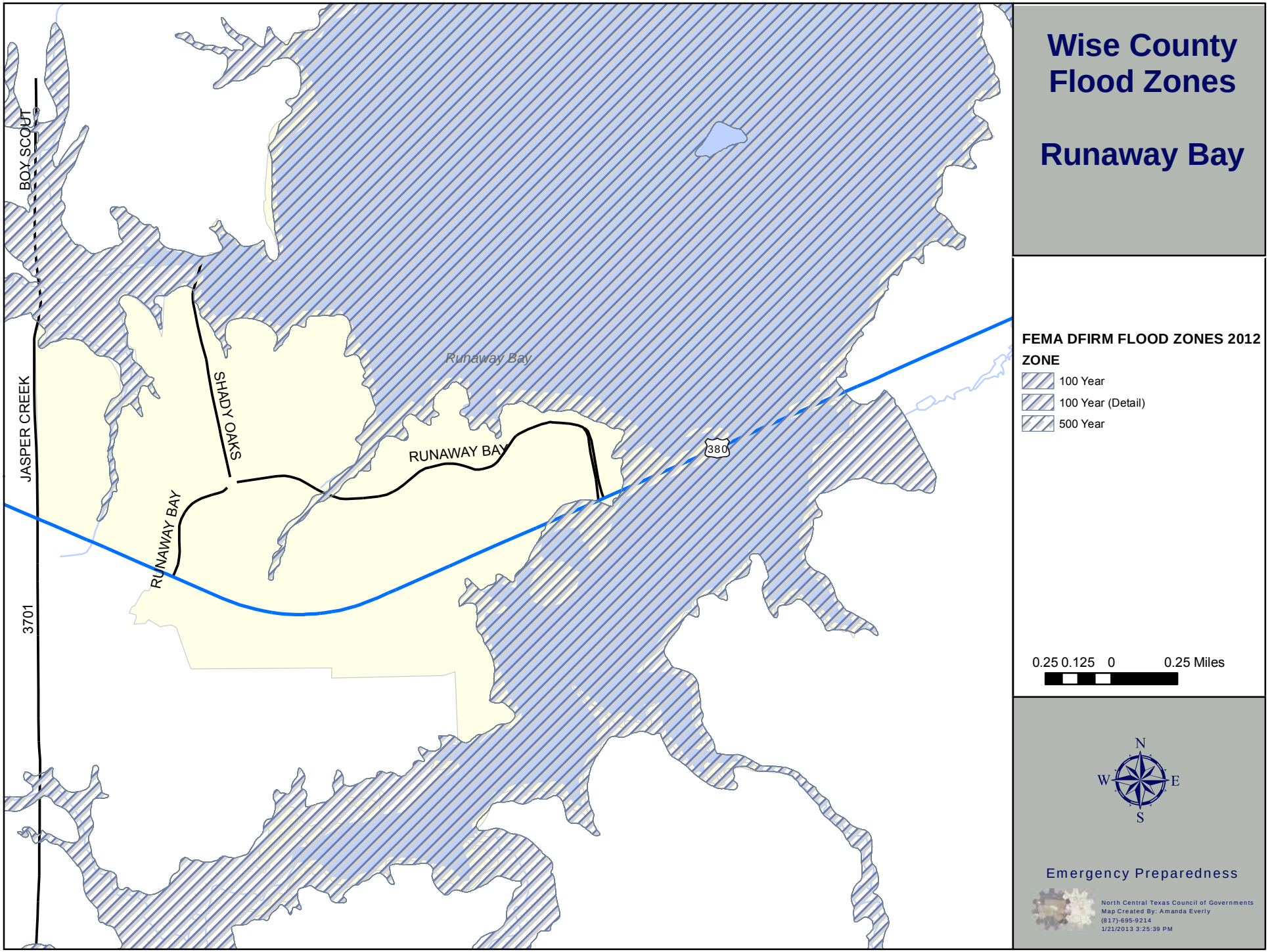

Wise County Flood Zones

Runaway Bay

FEMA DFIRM FLOOD ZONES 2012

ZONE

- 100 Year
- 100 Year (Detail)
- 500 Year

0.25 0.125 0 0.25 Miles

N
W E
S

Emergency Preparedness

North Central Texas Council of Governments
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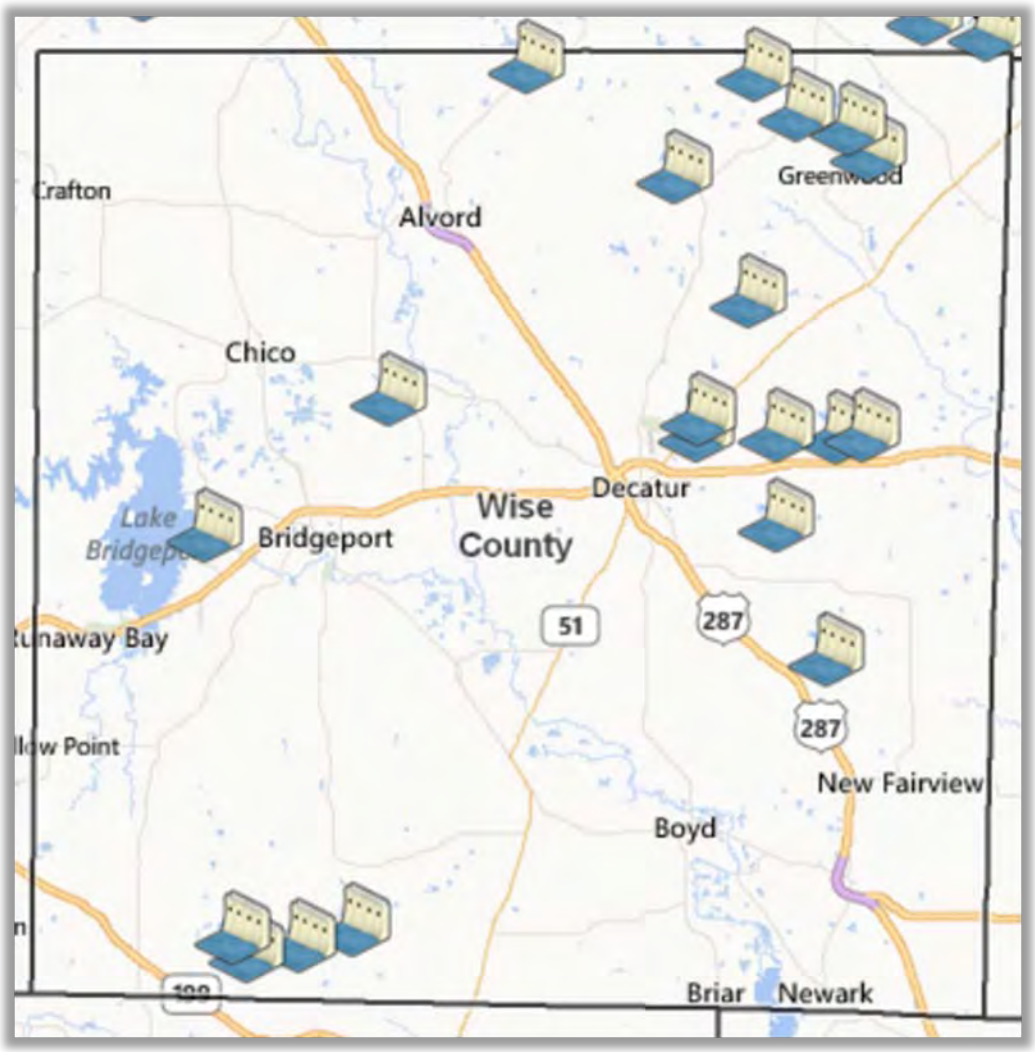
Map Series F - Dam Maps

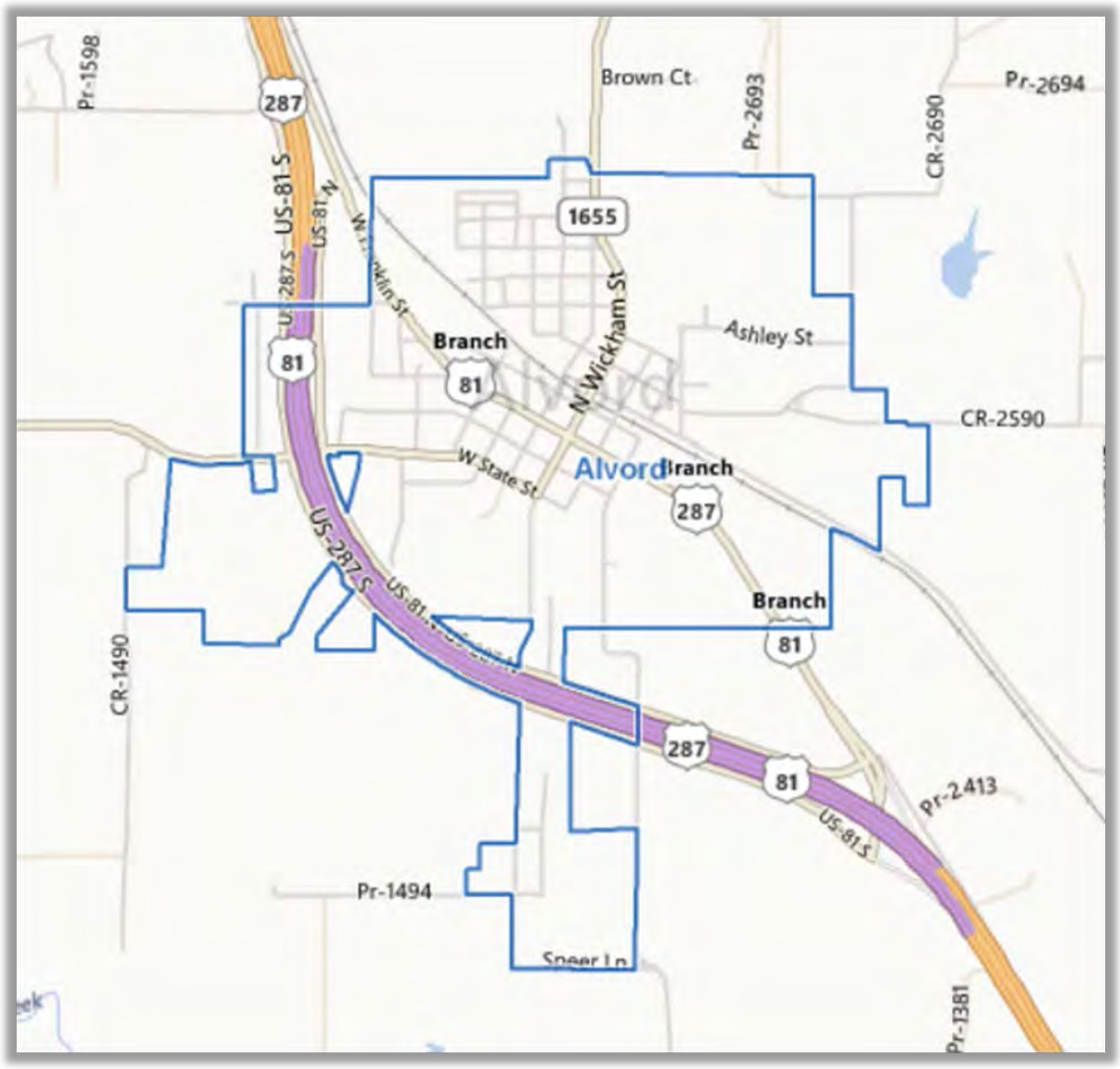
Map F.1 - Wise County Dams



- Indicates Presence of Dam

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map F.2 - Alvord Dams

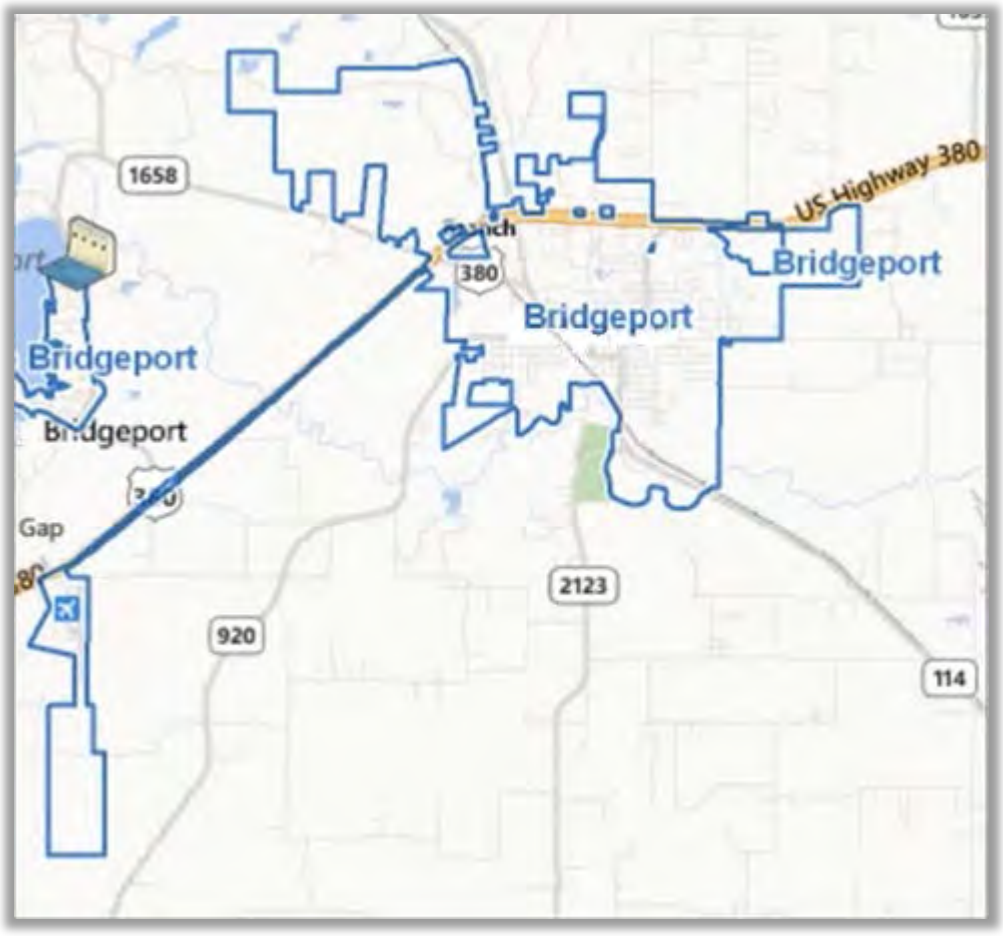


- Indicates Presence of Dam*

*No dams present in jurisdiction.

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map F.3 - Bridgeport Dams



- **Indicates Presence of Dam**

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

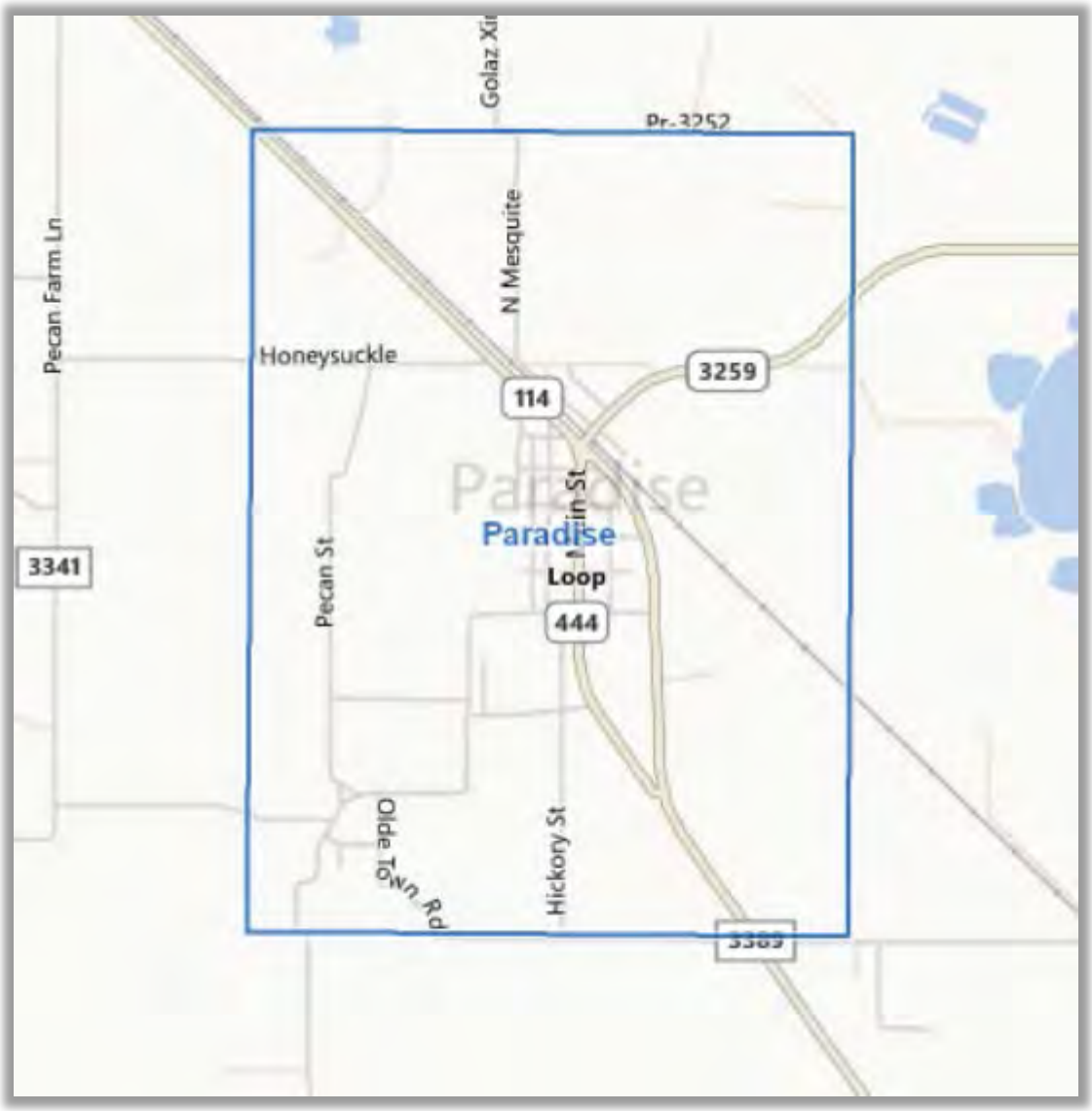
Map F.4 - Chico Dams

- Indicates Presence of Dam*

*No dams present in jurisdiction.

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map F.5 - Paradise Dams



Indicates Presence of Dam*

*No dams present in jurisdiction.

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

Map F.6 - Runaway Bay Dams

- Indicates Presence of Dam*

*No dams present in jurisdiction.

Source: North Central Texas Council of Government's Regional Hazard Assessment Tool (RHAT)

3.3 Extent

Natural Hazards are judged on specific extent scales. The following are the known extent scales for the natural hazards addressed in the Wise County HazMAP.

Tornado

Fujita Scale

F-Scale Number	Intensity Phrase	Wind Speed	Type of Damage
F0	Gale tornado	40-72 mph	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
F1	Moderate tornado	73-112 mph	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; manufactured homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	Significant tornado	113-157 mph	Considerable damage. Roofs torn off frame houses; manufactured homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe tornado	158-206 mph	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted
F4	Devastating tornado	207-260 mph	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	Incredible tornado	261-318 mph	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel reinforced concrete structures badly damaged.
F6	Inconceivable tornado	319-379 mph	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies

Source: http://tornadoproject.com/fscale/fscale.htm

On February 1, 2007, the Fujita scale was decommissioned in favor of the more accurate Enhanced Fujita Scale, which replaced it. None of the tornados recorded on or before January 31, 2007 will be re-categorized. Therefore maintaining the Fujita scale will be necessary when referring to previous events.

Enhanced Fujita Scale

Enhanced Fujita Category	Wind Speed (mph)	Potential Damage
EF0	65-85	Light damage. Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
EF1	86-110	Moderate damage. Roofs severely stripped; manufactured homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135	Considerable damage. Roofs torn off well-constructed houses; foundations of frame homes shifted; manufactured homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136-165	Severe damage. Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166-200	Devastating damage. Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF5	>200	Incredible damage. Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 m (109 yd); high-rise buildings have significant structural deformation;

Source: http://www.spc.noaa.gov/efscale/

The Enhanced Fujita Scale is representative of the damage from tornados this community has faced in the past and will no doubt face in the future. The Enhanced Fujita Scale allows planners to prepare and mitigate future potential damage by assessing the historical nature of tornados in the planning community. For example, according to the National Climatic Data Center, in 2007 an EF0 tornado occurred in Decatur. The tornado caused $50,000 worth of property damage.

Wise County and participating jurisdictions experienced six tornado events ranging from F0 & EF0 to F1, during the time period analyzed for this plan (01/01/2002-12/31/2012). It can be expected that any future tornado events will be similar in magnitude.

Combined NOAA/TORRO Hailstorm Intensity Scales

Size Code	Intensity Category	Typical Hail Diameter (inches)	Approximate Size	Typical Damage Impacts
H0	Hard Hail	up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33-0.60	Marble or Mothball	Slight damage to plants, crops
H2	Potentially Damaging	0.60-0.80	Dime or grape	Significant damage to fruit, crops, vegetation
H3	Severe	0.80-1.20	Nickel to Quarter	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	1.2-1.6	Half Dollar to Ping Pong Ball	Widespread glass damage, vehicle bodywork damage
H5	Destructive	1.6-2.0	Silver dollar to Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	2.0-2.4	Lime or Egg	Aircraft bodywork dented, brick walls pitted
H7	Very destructive	2.4-3.0	Tennis ball	Severe roof damage, risk of serious injuries
H8	Very destructive	3.0-3.5	Baseball to Orange	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.5-4.0	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	4+	Softball and up	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: http://www.torro.org.uk/site/hscale.php

The Hailstorm Intensity Scale is representative of the damage from hail storms this community has experienced in the past and will likely experience in the future. The Hailstorm Intensity Scale allows planners to gauge past damage and mitigate for future expected damage. For example, according to the National Climatic Data Center, there have been two storms in the planning area since 2002, at the H10 ranking. In 2002 and 2008, the City of Decatur experienced 4.25 inch (softball size) hail. Each incident resulted in $40,000 of property damage.

Wise County and participating jurisdictions experienced 89 hail events ranging from magnitude H2 (.75 inch diameters) to magnitude H10 (4.5 inch diameters), during the time period analyzed for this plan (01/01/2002-12/31/2012). It can be expected that any future hail events will be similar in magnitude.

Beaufort Wind Scale

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Sea heaps up, waves 13-20 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41-47	Strong Gale	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

Source: http://www.spc.noaa.gov/faq/tornado/beaufort.html

The Beaufort Wind Scale is representative of the damage from high winds this community may endure. The Beaufort Wind Scale allows planners in the community to assess historical data and mitigate for future high wind storms. For example, according to the National Climatic Data Center, in 2011 Wise County experienced Force 10 (52 knot) winds that blew down trees and fences and caused $300,000 worth of damage.

Wise County and participating jurisdictions experienced 88 high wind events ranging from 39 knots to 75 knots (44.9 to 86.3 mph), during the time period analyzed for this plan (01/01/2002-12/31/2012). It can be expected that any future high wind events will be similar in magnitude.

Wind Chill

Wind Chill temperature is simply a measure of how cold the wind makes real air temperature feel to the human body. Since wind can dramatically accelerate heat loss from the body, a blustery 30° day would feel just as cold as a calm day with 0° temperatures. The index was created in 1870, and on November 1, 2001, the National Weather Service released a more scientifically accurate equation, which we use today. Below is a chart for calculating wind chill. (Please note that it is not applicable in calm winds or when the temperature is over 50°.)

Wind Chill Chart

Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	29	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

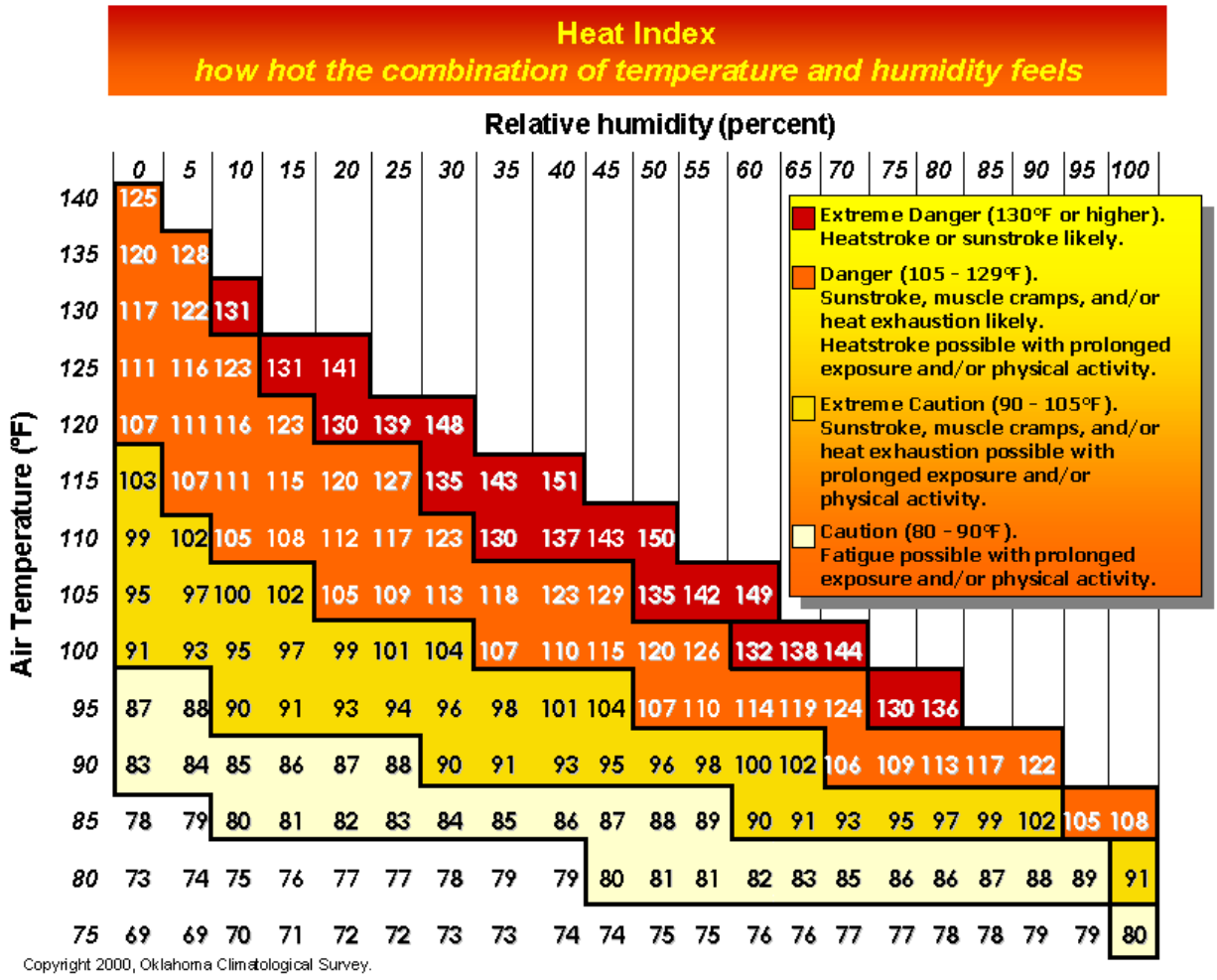
Where, T= Air Temperature (°F) V= Wind Speed (mph) *Effective 11/01/01*

Source: National Weather Service and NOAA

The Wind Chill Chart displays the Frostbite Times in regards to Temperature and Wind. This chart allows the communities to prepare for Severe Winter Storm or an Ice event. These events are infrequent but can cause damage. The primary areas of concern are on bridges and roadways. For example, according to the National Climatic Data Center, in 2010 heavy snowfall was recorded county-wide in Wise County. The heavy snow caused $2,000,000 in property damage.

Wise County and participating jurisdictions experienced 18 winter storm events ranging from heavy snow to ice, during the time period analyzed for this plan (01/01/2002-12/31/2012). The winter storm events ranged from 3-5 inches of snow fall, 1-3 inches of sleet, and up to an inch of ice accumulation. It can be expected that any future events will be similar in magnitude.

Extreme Heat / Heat Index



Source: http://www.ima.army.mil/southwest/sites/divisions/Safety/Heat%20Index.gif

The Heat Index chart displays the relative danger in regards to air temperature and relative humidity. Extreme heat is a hazard this community faces on an annual basis during the summer season. A combination of high temperatures and high humidity prompt heat advisories. This chart allows communities to assess the citizen's danger in regards to heat index. For example, according to the National Climatic Data Center, a heat event was recorded in Wise County in 2011. The event resulted in two fatalities.

Wise and participating jurisdictions experienced one heat event during a prolonged period of heat at the beginning of August in 2011.The whole North Texas Region experienced over a month of 100-degree plus temperatures around this time. This heat event resulted in two deaths. It can be expected that any future heat or excessive heat incidents will be similar in magnitude.

Drought

Drought Severity Classification

		Ranges					
Category	Description	Possible Impacts	Palmer Drought Index	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Short and Long-term Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	21-30	21-30	-0.5 to -0.7	21-30
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested	-2.0 to -2.9	11-20	11-20	-0.8 to -1.2	11-20
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9	6-10	6-10	-1.3 to -1.5	6-10
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9	3-5	3-5	-1.6 to -1.9	3-5
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0-2	0-2	-2.0 or less	0-2

Short-term drought indicator blends focus on 1-3 month precipitation. Long-term blends focus on 6-60 months. Additional indices used, mainly during the growing season, include the USDA/NASS Topsoil Moisture, Keetch-Byram Drought Index (KBDI), and NOAA/NESDIS satellite Vegetation Health Indices. Indices used primarily during the snow season and in the West include snow water content, river basin precipitation, and the Surface Water Supply Index (SWSI). Other indicators include groundwater levels, reservoir storage, and pasture/range conditions.

Source: http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx

PDSI Classifications for Dry and Wet Periods	
4.00 or more	Extremely wet
3.00 to 3.99	Very wet
2.00 to 2.99	Moderately wet
1.00 to 1.99	Slightly wet
0.50 to 0.99	Incipient wet spell
0.49 to -0.49	Near normal
-0.50 to -0.99	Incipient dry spell
-1.00 to -1.99	Mild drought
-2.00 to -2.99	Moderate drought
-3.00 to -3.99	Severe drought
-4.00 or less	Extreme drought
-5.00 or less	Exceptional Drought

Source: http://drought.unl.edu/whatis/indices.htm

Drought conditions occur in this community. The PDSI Classification allows community planners to anticipate the effects of Drought and plan preparedness and mitigation activities for future events as they will likely occur. The last event of widespread drought was in 2012.

Wise County and participating jurisdictions have experienced 32 drought events, ranging from Abnormally Dry/Mild Drought (D0/PDSI -1.0 to -1.9) to Exceptional Drought (D4/PDSI -5.0 or less), during the time period analyzed for this plan (01/01/2002-12/31/2012). It can be expected that future drought events will be of similar magnitude.

Earthquake: Mercalli & Richter Scales Comparison

Mercalli Scale	Richter Scale	
I.	0 – 1.9	Not felt. Marginal and long period effects of large earthquakes.
II.	2.0 -2.9	Felt by persons at rest, on upper floors, or favorably placed.
III.	3.0 – 3.9	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV.	4.0 - 4.3	Hanging objects swing. Vibration like passing of heavy trucks. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink the upper range of IV, wooden walls and frame creak.
V.	4.4 - 4.8	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Pendulum clocks stop, start.
VI.	4.9 - 5.4	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Books, etc., off shelves. Pictures off walls. Furniture moved. Weak plaster and masonry D cracked. Small bells ring. Trees, bushes shaken.
VII.	5.5 - 6.1	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices. Some cracks in masonry C. Waves on ponds. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII.	6.2 - 6.5	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX.	6.6 - 6.9	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters.
X.	7.0 - 7.3	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
XI.	.7.4 - 8.1	Rails bent greatly. Underground pipelines completely out of service.
XII.	> 8.1	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces. Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces. Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces. Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

Source: http://www.abag.ca.gov/bayarea/eqmaps/doc/mmigif/m10.html

The Mercalli and Richter Scales allow planners to assess the impact Earthquakes have. There is no history of earthquake activity in Wise County.

Wise County and participating jurisdictions did not experienced any earthquakes during the time period analyzed for this plan (01/01/2002-12/31/2012). There is potential for future earthquakes events.

Lightning Activity Level Grid

The Lightning Activity Level (LAL) is a common parameter that is part of fire weather forecasts nationwide. LAL is a measure of the amount of lightning activity using values 1 to 6 where:

Lightning Activity Level (LAL) A scale which describes lightning activity. Values are labeled 1-6:	
LAL 1	No thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a five minute period.
LAL 3	Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud to ground strikes in a 5 minute period.
LAL 4	Scattered thunderstorms. Moderate rain is commonly produced Lightning is frequent, 11 to 15 cloud to ground strikes in a 5 minute period.
LAL 5	Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater then 15 cloud to ground strikes in a 5 minute period.
LAL 6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag Warning.

Source: http://www.nws.noaa.gov/forecasts/wfo/definitions/defineLAL.html

The Lightning Activity Level grid provides a way to gauge the average number of strikes that may accompany a given type of storm. The average number of strikes is given since the density of lightning strikes varies from storm to storm. According to the National Climatic Data Center, there have been a total of nine lightning events reported in Wise County since 2002. In 2011, one of the lightning events caused $100,000 in property damage in the City of Bridgeport.

As a whole, Wise County experienced $547,000 in property damage. The damage ranged in magnitude from minor damage to homes and apt complexes to tank battery fires and fires at injection well sites.

Keetch-Byram Drought Index

KBDI	Fire Potential
0-200	Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. Typical of spring dormant season following winter precipitation.
200-400	Typical of late spring, early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity
400-600	Typical of late summer, early fall. Lower litter and duff layers contribute to fire intensity and will burn actively.
600-800	Often associated with more severe drought with increased wildfire occurrence. Intense, deep-burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

Source: http://www.tamu.edu/ticc/KBDI%20Fact%20Sheet.pdf

The index scale ranges from 0 to 800 and represents moisture deficiency in hundredths of an inch. By looking at indicators of moisture deficiency in the soil in this chart, communities are able to assess when they are at a heightened danger for a wildfire. According to the National Climatic Data Center there have been 10 wildfire events in Wise County since 2002. In 2011 a wildland fire caused $800,000 in property damage and $6,000 in crop damage.

Wise County and participating jurisdictions experienced 10 wildfires during the time period analyzed for this plan (01/01/2002-12/31/2012). There is potential for future wildfire events. These events ranged from 5,000 acres to 30 acres.

Fire Danger

Rating	Basic Description	Detailed Description
CLASS 1: Low Danger (L) COLOR CODE: Green	fires not easily started	Fuels do not ignite readily from small firebrands. Fires in open or cured grassland may burn freely a few hours after rain, but wood fires spread slowly by creeping or smoldering and burn in irregular fingers. There is little danger of spotting.
CLASS 2: Moderate Danger (M) COLOR CODE: Blue	fires start easily and spread at a moderate rate	Fires can start from most accidental causes. Fires in open cured grassland will burn briskly and spread rapidly on windy days. Woods fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel – especially draped fuel -- may burn hot. Short-distance spotting may occur, but is not persistent. Fires are not likely to become serious and control is relatively easy.
CLASS 3: High Danger (H) COLOR CODE: Yellow	fires start easily and spread at a rapid rate	All fine dead fuels ignite readily and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High intensity burning may develop on slopes or in concentrations of fine fuel. Fires may become serious and their control difficult, unless they are hit hard and fast while small.
CLASS 4: Very High Danger (VH) COLOR CODE: Orange	fires start very easily and spread at a very fast rate	Fires start easily from all causes and immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high-intensity characteristics - such as long-distance spotting - and fire whirlwinds, when they burn into heavier fuels. Direct attack at the head of such fires is rarely possible after they have been burning more than a few minutes.
CLASS 5: Extreme (E) COLOR CODE: Red	fire situation is explosive and can result in extensive property damage	Fires under extreme conditions start quickly, spread furiously and burn intensely. All fires are potentially serious. Development into high-intensity burning will usually be faster and occur from smaller fires than in the Very High Danger class (4). Direct attack is rarely possible and may be dangerous, except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions, the only effective and safe control action is on the flanks, until the weather changes or the fuel supply lessens.

Source: http://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32/class-rating-fire-potential-danger-51?task=view

Flood Zones

Zone A	The 100-year or Base Floodplain. There are six types of A zones:	
	A	The base floodplains mapped by approximate methods, i.e., BFEs are not determined. This is often called an unnumbered A zone or an approximate A zone.
	A1-30	These are known as numbered A zones (e.g., A7 or A14). This is the base floodplain where the firm shows a BFE (old format).
	AE	The base floodplain where base flood elevations are provided. AE zones are now used on new format FIRMs instead of A1-30 zones.
	AO	The base floodplain with sheet flow, ponding, or shallow flooding. Base flood depths (feet above ground) are provided.
	AH	Shallow flooding base floodplain. BFE's are provided.
	A99	Area to be protected from base flood by levees or Federal flood protection systems under construction. BFEs are not determined.
	AR	The base floodplain that results from the de-certification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection
Zone V and VE	**V**	The coastal area subject to velocity hazard (wave action) where BFEs are not determined on the FIRM.
	VE	The coastal area subject to velocity hazard (wave action) where BFEs are provided on the FIRM.
Zone B and Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and the 500-year floods. B zones are also used to designate base floodplains or lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.	
Zone C and Zone X (unshaded)	Area of minimal flood hazard, usually depiction FIRMs as exceeding the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood.	
Zone D	Area of undetermined but possible flood hazards.	

Source: http://www.fema.gov/floodplain-management/flood-zones

Flood hazard areas are identified as a Special Flood Hazard Area (SFHA). SFHAs are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone V, and Zone VE. Moderate flood hazard areas, labeled Zone B or Zone X, are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are defined as Zone C or Zone X. These flood zone identifications allow planners to determine appropriate land use in designated zones.

The planning communities are participants in the National Flood Insurance Program and actively take measures to plan land use. The communities are subject to flash flooding hazards such as the event in 2007 that occurred in the City of Decatur. According to the National Climatic Data Center the flash flood event resulted in $5,000 worth of property damage.

Wise County and participating jurisdictions experienced 22 flood and flash flood events during the time period analyzed for this plan (01/01/2002-12/31/2012). Most of the flood and flash flood events were a result of excessive rainfall over a short amount of time, in one instance 6 inches in 24 hours. These events resulted mainly in over-the-road flooding and minor to moderate property damage. It can be expected that any future flood or flash flood events will be similar in magnitude.

Local Extent Having identified the extent scales by which hazards are ranked, the participating jurisdictions have utilized the following definitions to determine the expected extent/severity for their planning area.

	High	Medium	Low
Tornado	• EF3-EF5 • There will be a range of severe damage from well-constructed houses being destroyed to houses being swept away	• EF1-EF2 • There will be a range of moderate to considerate damage. Roofs will be severely stripped, manufactured homes overturned, and cars lifted off of the ground	• EF0 • There will be light damage. Roofs will be peeled off, gutters damaged, and branches broken
Hail	• H7-H10, 2.4"->4" • There will be severe damage. Including roof and structural damage and risk of serious injuries to fatalities.	• H5-H6, 1.6"-2.4" • There will be a range of severe damage from well-constructed houses being destroyed to houses being swept away.	• H0-H4, 0"-1.6" • There will be a variance of destruction to vegetation and slight damage to glass.
High Winds	• Force: 8-12 • Knots: 28-64+ • Whole trees moving to considerable structure damage.	• Force: 4-6 • Knots: 11-27 • Dust, leaves, and loose paper lifted. Small to Large branches moving.	• Force: 0-3 • Knots: <1-10 • Calm, leaves rustle, light flags extended
Winter Storms	• Temperatures 15F- -45F • Wind Chill 7F- -98F • At wind chill of -19 frostbite will occur in 30 minutes increasing in severity to occurrence in 5 minutes.	• Temperatures 30F- 20F • Wind Chill 25F--4F • Bridges and roadways are at risk to ice	• Temperatures 40F- 35F • Wind Chill 36F-17F • Vulnerable populations and agriculture at risk to lower temperatures and wind chill.
Extreme Heat	• Heat Index >130F • Heatstroke or sunstroke likely	• Heat Index 105F-129F • Sunstroke, muscle cramps, and/pr heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.	• Heat Index 80F-105F • Fatigue possible with prolonged exposure and/or physical activity, Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Drought	• PDSI -3.00- -4.00 or less • Severe to extreme drought conditions	• PDSI -1.00- -2.99 • Mild to moderate drought conditions	• PDSI 4.00 or more - -0.99 • Extremely wet to incipient dry spells

	High	Medium	Low
Earthquake	• Mercalli Scale: VIII-XII • Richter Scale: 6.2->8.1 Driving will be difficult, increase in damage to infrastructures and objects can be thrown	• Mercalli Scale: VI-VII • Richter Scale: 4.9-6.1 All will feel the event, walking will be difficult, glassware will break, irrigation ditches damaged	• Mercalli Scale: I-V • Richter Scale: 0-4.8 Range of feeling the event is cannot be felt to being felt outdoors. Doors may swing close and liquids may be disturbed.
Lightning	• LAL 5--Towering cumulus and thunderstorms are numerous, covering more than three-tenths of the sky. Rain is moderate/ heavy, lightning is frequent and intense. • LAL 6--Dry thunderstorms, conditions similar to LAL 3	•LAL 3-- Towering cumulus covering ≤2/10 of the sky. Two to three thunderstorms must occur. Light/ moderate rain, infrequent lightning • LAL 4--Towering cumulus covers 2/10 – 3/10 of the sky. More than three thunderstorms must occur. Moderate rain, lightning is frequent.	•LAL 1-- No thunderstorms. • LAL 2-- Cumulus clouds, only a few towering cumulus. A single thunderstorm must be confirmed. The clouds produce virga and occasional light rain. Infrequent lightning.
Wildland Fire	• KBDI 600-800 • Associated with severe drought. Intense, deep-burning fires with significant downwind spotting.	• KBDI 200-400 • Ranges from lower litter and duff layers are drying, start to contribute to fire intensity to them causing the fire to burn actively.	• KBDI 0-200 • Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity.
Flooding	• 100yr Flood Zone, Zone A • The extent of severity in the 100yr Flood Zone will be dependent on the structures and livestock located in the identified area.	• 500yr Flood Zone, Zone B • The extent of severity in the 500yr Flood Zone will be dependent on the structures and livestock located in the identified area.	• Outside of100yr and 500yr Flood Zones, Zone C, F, X • Potential for flooding due to local drainage problems
Dam Failure	• Greater than 50% of city structures are in the inundation zone. • Greater than 50% of the city's critical infrastructure in the identified inundation zone	• 20%-50% of city structures are in the inundation zone. • 20%-50% of the city's critical infrastructure in the inundation zone	• Less than 20% of city structures are in the inundation zone. • Less than 20% of the city's critical infrastructure in the inundation zone

The following are the High, Medium, Low rankings for each of the related extent scales.

	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Dam Failure	Low	Low	High	Low	Low	Low
Drought	Medium	Medium	High	Medium	Medium/High	Medium
Earthquake	Medium	Medium	Medium	Medium	Medium	Medium
Extreme Heat	Medium	Medium	Medium	Medium	Medium	Medium
Flooding	High	High	High	High	Low	Medium
Hail	Medium	Medium	High	Medium	Low/Medium	Medium
High Winds	Medium	Medium	High	Medium	Medium	Medium
Lightning	Medium	Medium	Medium	Medium	Medium	Medium
Tornado	Medium	Medium	Medium	Medium	Medium	Medium
Wildland Fire	High	Medium	High	Medium	High	Medium
Winter Storms	Medium	Low	Medium	Medium	Medium	Medium

3.4 Occurrence

The following tables list the previous events data according to the National Climatic Data Center reported in Wise County, Texas. For those hazards which have the potential to affect the county equally, all data provided by the National Climatic Data Center has been included. The belief is that hazards do not stay within jurisdictional boundaries and thus it is important to be aware of occurrences that have impacted neighboring jurisdictions to further assess the Wise County HazMAP participating jurisdictions' risks.

All previous events data was gathered from the National Climatic Data Center at http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms

Dam Failure There is no recorded information or known history of previous occurrence/history of dam failure within Wise County.

6 Tornado events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 to 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
BRYAN	5/24/2011	18:38	TORNADO	EF0	0	0	2K	0
COTTONDALE	4/9/2008	18:43	TORNADO	EF0	0	0	0	0
DECATUR	6/25/2007	23:15	TORNADO	EF0	0	5	50K	0
AURORA	4/28/2006	20:45	TORNADO	F1	0	0	20K	0
BOYD	4/28/2006	20:38	TORNADO	F0	0	0	0	0
BOYD	3/4/2004	14:25	TORNADO	F0	0	0	5K	0
				TOTALS:	0	5	77K	0

89 Hail events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
BRIAR	7/26/2012	17:51	HAIL	0.75 in.	0	0	0	0
LAKE BRIDGEPORT	6/6/2012	12:30	HAIL	1.00 in.	0	0	0	0
SLIDELL	5/29/2012	20:20	HAIL	0.75 in.	0	0	0	0
DECATUR	3/19/2012	14:57	HAIL	0.75 in.	0	0	0	0
BRIDGEPORT	3/19/2012	14:34	HAIL	0.88 in.	0	0	0	0
BOONSVILLE	3/19/2012	14:23	HAIL	1.75 in.	0	0	2K	0
SLIDELL	2/3/2012	18:37	HAIL	1.25 in.	0	0	1K	0
SLIDELL	2/3/2012	18:34	HAIL	1.00 in.	0	0	0	0
ALVORD	2/3/2012	18:02	HAIL	1.75 in.	0	0	6K	0
ALVORD	2/3/2012	17:05	HAIL	1.00 in.	0	0	0	0
HERMAN	12/14/2011	16:45	HAIL	1.00 in.	0	0	0.1K	0
BRIDGEPORT MUNI ARPT	10/17/2011	20:44	HAIL	0.75 in.	0	0	0	0
WISE COUNTY	6/20/2011	19:40	HAIL	1.25 in.	0	0	7K	0
WISE COUNTY	6/20/2011	19:35	HAIL	1.75 in.	0	0	10K	0
WISE COUNTY	6/20/2011	19:35	HAIL	1.75 in.	0	0	15K	0
WISE COUNTY	6/18/2011	18:13	HAIL	1.00 in.	0	0	0	0
WISE COUNTY	6/18/2011	18:05	HAIL	1.75 in.	0	0	2K	0
BOONSVILLE	5/24/2011	18:19	HAIL	1.75 in.	0	0	7K	0
ALVORD	5/1/2011	3:43	HAIL	1.25 in.	0	0	0	0
RHOME	4/25/2011	2:27	HAIL	1.00 in.	0	0	0	0
PARADISE	4/25/2011	2:05	HAIL	1.75 in.	0	0	8K	0
COTTONDALE	4/25/2011	2:03	HAIL	0.88 in.	0	0	0	0
PARADISE	4/25/2011	1:57	HAIL	1.00 in.	0	0	0	0
BOONSVILLE	4/25/2011	1:52	HAIL	2.75 in.	0	0	30K	0
DECATUR	4/24/2011	17:44	HAIL	1.00 in.	0	0	0	0
DECATUR	4/24/2011	17:44	HAIL	1.00 in.	0	0	0	0
BOONSVILLE	4/21/2011	22:00	HAIL	1.00 in.	0	0	0	0
BOONSVILLE	4/21/2011	21:50	HAIL	0.75 in.	0	0	0	0
ALVORD	4/20/2011	21:00	HAIL	0.75 in.	0	0	0	0
FORD	4/14/2011	20:38	HAIL	0.75 in.	0	0	0	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
BRIDGEPORT	7/26/2010	17:34	HAIL	1.00 in.	0	0	0	0
DECATUR	3/24/2010	15:10	HAIL	0.88 in.	0	0	0	0
BRIDGEPORT	3/24/2010	14:52	HAIL	0.88 in.	0	0	0	0
GREENWOOD	5/26/2009	19:40	HAIL	1.50 in.	0	0	0	0
DECATUR	5/26/2009	18:57	HAIL	1.00 in.	0	0	0	0
DECATUR	5/26/2009	18:48	HAIL	2.00 in.	0	0	10K	0
KEETER	5/26/2009	18:24	HAIL	1.75 in.	0	0	2K	0
BOYD	5/26/2009	18:23	HAIL	1.75 in.	0	0	4K	0
KEETER	5/26/2009	18:00	HAIL	1.00 in.	0	0	0	0
BRIAR	5/5/2009	21:55	HAIL	1.25 in.	0	0	0	0
COTTONDALE	5/5/2009	21:40	HAIL	0.88 in.	0	0	0	0
DECATUR	4/12/2009	16:32	HAIL	1.00 in.	0	0	0	0
BRIAR	3/30/2009	20:46	HAIL	2.25 in.	0	0	7K	0
KEETER	3/30/2009	20:45	HAIL	1.00 in.	0	0	1K	0
BRIAR	3/30/2009	20:43	HAIL	1.00 in.	0	0	0	0
BOONSVILLE	3/30/2009	20:40	HAIL	1.75 in.	0	0	3K	0
BOONSVILLE	3/30/2009	20:30	HAIL	1.75 in.	0	0	2K	0
BRIDGEPORT	2/10/2009	19:22	HAIL	1.75 in.	0	0	1K	0
BOONSVILLE	12/27/2008	7:00	HAIL	0.88 in.	0	0	0	0
COTTONDALE	12/27/2008	6:44	HAIL	1.00 in.	0	0	0	0
ALVORD	4/17/2008	17:34	HAIL	1.25 in.	0	0	0	0
LAKE BRIDGEPORT	4/17/2008	17:16	HAIL	0.88 in.	0	0	0	0
ALVORD	4/10/2008	2:05	HAIL	1.00 in.	0	0	0	0
DECATUR	4/9/2008	18:52	HAIL	2.50 in.	0	0	20K	0
BRIDGEPORT	4/9/2008	18:38	HAIL	2.75 in.	0	0	25K	0
DECATUR	4/9/2008	18:36	HAIL	1.00 in.	0	0	0	0
BRIDGEPORT	4/9/2008	18:20	HAIL	2.75 in.	0	0	25K	0
BLUETT	4/4/2008	0:10	HAIL	1.75 in.	0	0	5K	0
DECATUR	4/4/2008	0:00	HAIL	4.25 in.	0	0	40K	0
DECATUR	5/24/2007	13:30	HAIL	0.88 in.	0	0	0	0
BRIDGEPORT	5/7/2007	9:06	HAIL	0.75 in.	0	0	0	0
DECATUR	4/13/2007	16:27	HAIL	2.00 in.	0	0	10K	0
PARADISE	3/29/2007	19:01	HAIL	1.75 in.	0	0	5K	0
ALVORD	6/17/2006	18:30	HAIL	1.50 in.	0	0	0	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
ALVORD	6/17/2006	18:15	HAIL	1.75 in.	0	0	5K	0
BOYD	5/4/2006	23:41	HAIL	1.75 in.	0	0	5K	0
CHICO	5/2/2006	9:32	HAIL	0.88 in.	0	0	0	0
LAKE BRIDGEPORT	5/8/2005	16:48	HAIL	0.88 in.	0	0	0	0
DECATUR	4/10/2005	17:08	HAIL	0.75 in.	0	0	0	0
DECATUR	6/19/2004	11:40	HAIL	0.88 in.	0	0	0	0
BRIDGEPORT	6/1/2004	17:52	HAIL	1.75 in.	0	0	0	0
RHOME	6/1/2004	17:25	HAIL	1.75 in.	0	0	0	0
NEWARK	3/20/2004	20:56	HAIL	0.75 in.	0	0	0	0
BOYD	3/20/2004	20:56	HAIL	0.75 in.	0	0	0	0
ALVORD	8/11/2003	17:50	HAIL	0.75 in.	0	0	0	0
DECATUR	5/6/2003	19:27	HAIL	0.88 in.	0	0	0	0
BRIDGEPORT	5/6/2003	19:16	HAIL	2.75 in.	0	0	50K	0
BRIDGEPORT	5/6/2003	19:12	HAIL	0.88 in.	0	0	0	0
SLIDELL	5/6/2003	18:42	HAIL	0.88 in.	0	0	0	0
SLIDELL	5/6/2003	18:28	HAIL	0.88 in.	0	0	0	0
NEWARK	4/5/2003	21:03	HAIL	1.50 in.	0	0	0	0
ALVORD	12/30/2002	12:18	HAIL	0.75 in.	0	0	0	0
DECATUR	4/29/2002	18:53	HAIL	4.50 in.	0	0	0	0
PARADISE	4/29/2002	18:38	HAIL	2.75 in.	0	0	0	0
BRIDGEPORT	4/29/2002	18:34	HAIL	3.00 in.	0	0	0	0
BOONSVILLE	4/29/2002	18:25	HAIL	1.75 in.	0	0	0	0
CHICO	4/16/2002	16:25	HAIL	1.75 in.	0	0	0	0
NEWARK	4/16/2002	16:12	HAIL	0.88 in.	0	0	0	0
BRIDGEPORT	3/29/2002	23:27	HAIL	1.50 in.	0	0	0	0
				TOTALS:	0	0	308.1K	0

83 High/T-Storm Wind events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
BRIDGEPORT MUNI ARPT	8/12/2012	16:15	T-STORM WIND	52 kts. EG	0	0	30K	0
BRIDGEPORT	8/12/2012	16:30	T-STORM WIND	52 kts. EG	0	0	5K	0
DECATUR MUNI ARPT	8/12/2012	17:01	T-STORM WIND	57 kts. EG	0	0	5K	0
DECATUR	6/11/2012	21:43	T-STORM WIND	56 kts. MG	0	0	2K	0
DECATUR	6/11/2012	21:45	T-STORM WIND	56 kts. EG	0	0	2K	0
ALVORD	5/28/2012	19:55	T-STORM WIND	52 kts. EG	0	0	10K	0
WISE COUNTY	6/21/2011	0:37	T-STORM WIND	70 kts. EG	0	1	300K	0
WISE COUNTY	6/21/2011	0:40	T-STORM WIND	64 kts. MG	0	0	12K	0
WISE COUNTY	6/21/2011	0:41	T-STORM WIND	51 kts. MG	0	0	15K	0
WISE COUNTY	6/21/2011	0:45	T-STORM WIND	65 kts. EG	0	1	20K	0
WISE COUNTY	6/21/2011	1:12	T-STORM WIND	53 kts. EG	0	0	7K	0
WISE COUNTY	6/21/2011	1:21	T-STORM WIND	52 kts. EG	0	0	3K	0
WISE COUNTY	6/21/2011	20:41	T-STORM WIND	56 kts. EG	0	0	10K	0
WISE COUNTY	6/21/2011	20:42	T-STORM WIND	52 kts. EG	0	0	50K	0
WISE COUNTY	6/14/2011	23:01	T-STORM WIND	50 kts. EG	0	0	0	0
WISE COUNTY	6/14/2011	23:05	T-STORM WIND	65 kts. EG	0	1	12K	0
WISE COUNTY	6/14/2011	23:05	T-STORM WIND	61 kts. EG	0	0	7K	0
WISE COUNTY	6/14/2011	23:10	T-STORM WIND	65 kts. EG	0	0	10K	0
WISE COUNTY	6/14/2011	23:25	T-STORM WIND	65 kts. EG	0	0	40K	0
BOONSVILLE	5/24/2011	18:19	T-STORM WIND	52 kts. MG	0	0	1.5K	0
CRAFTON	5/22/2011	17:30	T-STORM WIND	56 kts. EG	0	0	10K	0
DECATUR	5/22/2011	18:50	T-STORM WIND	52 kts. EG	0	0	3K	0
NEWARK	5/22/2011	19:05	T-STORM WIND	61 kts. EG	0	0	30K	0
CHICO	5/11/2011	12:35	T-STORM WIND	75 kts. EG	0	0	80K	0
BRIDGEPORT	5/11/2011	12:42	T-STORM WIND	52 kts. EG	0	0	4K	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
DECATUR	5/11/2011	12:42	T-STORM WIND	61 kts. EG	0	0	35K	0
ALVORD	5/11/2011	12:45	T-STORM WIND	61 kts. EG	0	0	5K	0
DECATUR	5/11/2011	12:45	T-STORM WIND	58 kts. EG	0	0	15K	0
AURORA	5/11/2011	12:54	T-STORM WIND	56 kts. EG	0	0	25K	0
RHOME	5/11/2011	12:55	T-STORM WIND	61 kts. EG	0	0	20K	0
PARK SPGS	5/1/2011	3:43	T-STORM WIND	56 kts. EG	0	0	0	0
ALVORD	5/1/2011	3:50	T-STORM WIND	52 kts. EG	0	0	5K	0
BRIDGEPORT	4/24/2011	17:32	T-STORM WIND	52 kts. EG	0	0	0	0
DECATUR MUNI ARPT	6/24/2010	16:05	T-STORM WIND	52 kts. MG	0	0	0	0
DECATUR MUNI ARPT	6/24/2010	16:05	T-STORM WIND	52 kts. EG	0	0	150K	0
DECATUR	6/15/2010	0:00	T-STORM WIND	50 kts. EG	0	0	100K	0
BRIAR	6/15/2010	0:05	T-STORM WIND	50 kts. EG	0	0	1K	0
BOONSVILLE	6/10/2009	16:30	T-STORM WIND	64 kts. EG	0	0	5K	0
BOONSVILLE	6/10/2009	17:05	T-STORM WIND	70 kts. MG	0	0	5K	0
FORD	6/10/2009	17:38	T-STORM WIND	56 kts. EG	0	0	2K	0
COTTONDALE	5/26/2009	23:50	T-STORM WIND	61 kts. MG	0	0	4K	0
BRIDGEPORT	2/10/2009	19:22	T-STORM WIND	63 kts. EG	0	0	0	0
ALVORD	7/30/2008	15:25	T-STORM WIND	50 kts. EG	0	1	12K	0
BRIAR	7/30/2008	17:08	T-STORM WIND	52 kts. MG	0	0	0	0
BRIDGEPORT	6/19/2008	5:32	T-STORM WIND	61 kts. EG	0	0	2K	0
BRIDGEPORT	6/19/2008	5:32	T-STORM WIND	62 kts. MG	0	0	0	0
COTTONDALE	6/19/2008	5:43	T-STORM WIND	50 kts. EG	0	0	2K	0
BALSORA	6/19/2008	5:44	T-STORM WIND	61 kts. MG	0	0	0	0
RHOME	6/19/2008	6:08	T-STORM WIND	50 kts. EG	0	0	2K	0
ALVORD	5/27/2008	9:00	T-STORM WIND	50 kts. EG	0	0	15K	0
PARK SPGS	4/3/2008	18:15	T-STORM WIND	50 kts. EG	0	0	5K	0
BOYD	7/23/2007	15:28	T-STORM WIND	54 kts. MG	0	0	0	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
RHOME	6/25/2007	15:50	T-STORM WIND	50 kts. EG	0	0	30K	0
DECATUR	6/3/2007	6:25	T-STORM WIND	50 kts. EG	0	0	0	0
BRIDGEPORT	5/7/2007	8:56	T-STORM WIND	52 kts. EG	0	0	0	0
DECATUR	5/7/2007	18:45	T-STORM WIND	50 kts. EG	0	0	15K	0
DECATUR	4/13/2007	16:33	T-STORM WIND	57 kts. MG	0	0	0	0
BRIDGEPORT	3/30/2007	16:19	T-STORM WIND	56 kts. EG	0	0	0	0
WISE COUNTY	2/24/2007	12:00	HIGH WIND	50 kts. EG	0	0	100K	0
CHICO	8/14/2006	16:16	T-STORM WIND	50 kts. ES	0	0	30K	0
BOYD	8/11/2006	15:45	T-STORM WIND	50 kts. ES	0	0	15K	0
BRIDGEPORT	4/28/2006	20:35	T-STORM WIND	52 kts. ES	0	0	15K	0
BOYD	9/15/2005	13:37	T-STORM WIND	50 kts. ES	0	0	5K	0
COTTONDALE	6/3/2005	12:28	T-STORM WIND	56 kts. MS	0	0	0	0
DECATUR	6/2/2004	20:35	T-STORM WIND	61 kts. ES	0	0	0	0
CHICO	6/2/2004	20:54	T-STORM WIND	70 kts. ES	0	0	0	0
BOYD	6/1/2004	18:51	T-STORM WIND	57 kts. ES	0	0	0	0
BRIDGEPORT	3/4/2004	14:10	T-STORM WIND	60 kts. ES	0	0	5K	0
DECATUR	3/4/2004	14:25	T-STORM WIND	52 kts. ES	0	0	5K	0
CHICO	6/11/2003	20:49	T-STORM WIND	52 kts. ES	0	0	5K	0
DECATUR	6/11/2003	21:11	T-STORM WIND	61 kts. ES	0	0	5K	0
LAKE BRIDGEPORT	4/29/2003	22:05	T-STORM WIND	61 kts. ES	0	0	0	0
CRAFTON	10/6/2002	15:00	T-STORM WIND	60 kts. E	0	0	0	0
CHICO	8/27/2002	4:48	T-STORM WIND	52 kts. E	0	0	0	0
COUNTYWIDE	6/15/2002	23:15	T-STORM WIND	52 kts. E	0	0	0	0
DECATUR	6/13/2002	12:50	T-STORM WIND	52 kts. E	0	0	0	0
DECATUR	5/16/2002	18:30	T-STORM WIND	52 kts. E	0	0	0	0
DECATUR	5/16/2002	18:35	T-STORM WIND	69 kts. M	0	0	10K	0
DECATUR	4/13/2002	10:30	T-STORM WIND	52 kts. E	0	0	0	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
BALSORA	4/7/2002	17:30	T-STORM WIND	52 kts. E	0	0	0	0
DECATUR	4/7/2002	17:45	T-STORM WIND	52 kts. E	0	0	2K	0
DECATUR	4/7/2002	18:10	T-STORM WIND	52 kts. E	0	0	7K	0
DECATUR	4/7/2002	18:15	T-STORM WIND	52 kts. E	0	0	5K	0
				TOTALS:	0	4	1.33M	0

16 Winter Storm events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
WISE COUNTY	12/25/2012	11:45	WINTER WEATHER	N/A	0	0	150K	0
WISE COUNTY	2/1/2011	1:00	HEAVY SNOW	N/A	0	0	150K	0
WISE COUNTY	2/11/2010	2:45	HEAVY SNOW	N/A	0	0	2M	0
WISE COUNTY	1/7/2010	2:29	WINTER WEATHER	N/A	0	0	40K	0
WISE COUNTY	12/24/2009	10:00	WINTER STORM	N/A	0	0	100K	0
WISE COUNTY	1/27/2009	4:00	ICE STORM	N/A	0	0	15K	0
WISE COUNTY	12/23/2008	6:00	WINTER WEATHER	N/A	0	0	0	0
WISE COUNTY	3/6/2008	12:00	WINTER STORM	N/A	0	0	0	0
WISE COUNTY	2/2/2007	0:00	WINTER WEATHER	N/A	0	0	10K	0
WISE COUNTY	1/17/2007	4:00	WINTER WEATHER	N/A	0	0	0	0
WISE COUNTY	1/13/2007	11:00	ICE STORM	N/A	0	0	15K	0
WISE COUNTY	12/7/2005	9:00	WINTER STORM	N/A	0	0	0	0
WISE COUNTY	2/14/2004	1:00	HEAVY SNOW	N/A	0	0	0	0
WISE COUNTY	2/24/2003	11:20	WINTER STORM	N/A	0	0	0	0
WISE COUNTY	3/2/2002	5:00	WINTER STORM	N/A	0	0	0	0
WISE COUNTY	2/5/2002	9:00	WINTER STORM	N/A	0	0	0	0
				TOTALS:	0	0	2.48M	0

1 Extreme Temperature event reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
WISE COUNTY	7/1/2011	0:00	HEAT	N/A	2	0	0	0
				TOTALS:	2	0	0	0

32 Drought events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
WISE COUNTY	12/1/2012	0:00	DROUGHT	N/A	0	0	0	2K
WISE COUNTY	11/27/2012	0:00	DROUGHT	N/A	0	0	0	1K
WISE COUNTY	8/1/2012	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	7/17/2012	0:00	DROUGHT	N/A	0	0	0	1K
WISE COUNTY	10/1/2011	0:00	DROUGHT	N/A	0	0	0	2K
WISE COUNTY	9/1/2011	0:00	DROUGHT	N/A	0	0	0	25K
WISE COUNTY	8/1/2011	0:00	DROUGHT	N/A	0	0	0	20K
WISE COUNTY	7/12/2011	0:00	DROUGHT	N/A	0	0	5K	0
WISE COUNTY	6/7/2011	0:00	DROUGHT	N/A	0	0	2K	0
WISE COUNTY	5/1/2011	0:00	DROUGHT	N/A	0	0	0	8K
WISE COUNTY	4/1/2011	0:00	DROUGHT	N/A	0	0	0	12K
WISE COUNTY	3/25/2011	0:00	DROUGHT	N/A	0	0	0	5K
WISE COUNTY	4/1/2009	0:00	DROUGHT	N/A	0	0	0	20K
WISE COUNTY	3/1/2009	0:00	DROUGHT	N/A	0	0	0	8K
WISE COUNTY	2/1/2009	0:00	DROUGHT	N/A	0	0	0	10K
WISE COUNTY	9/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	8/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	7/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	6/6/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	5/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	4/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	3/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	2/1/2006	0:00	DROUGHT	N/A	0	0	0	0

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
WISE COUNTY	1/1/2006	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	12/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	11/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	10/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	9/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	8/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	7/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	6/1/2005	0:00	DROUGHT	N/A	0	0	0	0
WISE COUNTY	5/1/2005	0:00	DROUGHT	N/A	0	0	0	0
				TOTALS:	0	0	7K	114K

9 Lightning events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
NEWARK	8/6/2012	17:00	LIGHTNING	N/A	0	0	200K	0
BOONSVILLE	5/30/2012	4:30	LIGHTNING	N/A	0	0	50K	0
BOYD	11/8/2011	8:30	LIGHTNING	N/A	0	0	10K	0
BRIDGEPORT	5/1/2011	5:30	LIGHTNING	N/A	0	0	100K	0
NEWARK	9/1/2010	16:00	LIGHTNING	N/A	0	0	20K	0
SLIDELL	6/19/2008	6:00	LIGHTNING	N/A	0	0	150K	0
DECATUR	6/19/2008	6:15	LIGHTNING	N/A	0	0	2K	0
DECATUR	3/18/2006	11:00	LIGHTNING	N/A	0	0	5K	0
DECATUR	4/7/2002	18:30	LIGHTNING	N/A	0	0	10K	0
				TOTALS:	0	0	547K	0

10 Wildfire events were reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
WISE COUNTY	8/12/2012	15:30	Wildfire	N/A	0	0	0	0
WISE COUNTY	9/1/2011	0:00	Wildfire	N/A	0	0	0	0
WISE COUNTY	8/31/2011	12:15	Wildfire	N/A	0	0	800K	6K
WISE COUNTY	4/15/2011	15:00	Wildfire	N/A	0	0	300K	0
WISE COUNTY	3/11/2011	12:00	Wildfire	N/A	0	0	60K	0
WISE COUNTY	3/11/2011	12:00	Wildfire	N/A	0	0	120K	5K
WISE COUNTY	4/9/2009	13:00	Wildfire	N/A	0	0	150K	0
WISE COUNTY	1/22/2009	14:30	Wildfire	N/A	0	0	85K	0
WISE COUNTY	1/29/2008	11:00	Wildfire	N/A	0	0	1M	0
WISE COUNTY	1/3/2006	16:00	Wildfire	N/A	0	0	80K	0
				TOTALS:	0	0	2.595M	11K

22 Flood events reported in Wise County, Texas and participating jurisdictions between 01/01/2002 and 12/31/2012

Location	Date	Time	Event	Magnitude	Fatalities	Injuries	Property Damage	Crop Damage
SLIDELL	9/8/2010	6:24	Flash Flood	N/A	0	0	100K	0
BOYD	5/14/2010	12:05	Flash Flood	N/A	0	0	0	0
CHICO	5/14/2010	12:05	Flash Flood	N/A	0	0	0	0
BOONSVILLE	10/22/2009	1:00	Flood	N/A	0	0	0	0
BRIDGEPORT	9/10/2007	5:23	Flash Flood	N/A	0	0	0	0
DECATUR	8/1/2007	17:00	Flash Flood	N/A	0	0	5K	0
DECATUR	6/26/2007	0:00	Flash Flood	N/A	0	0	0	0
BOYD	6/26/2007	14:00	Flash Flood	N/A	0	0	10K	0
BOYD	6/25/2007	16:25	Flash Flood	N/A	0	0	30K	0
BOYD	5/26/2007	19:23	Flash Flood	N/A	0	0	0	0
DECATUR	5/7/2007	19:00	Flash Flood	N/A	0	0	0	0
DECATUR	4/24/2007	16:59	Flash Flood	N/A	0	0	0	0
BOYD	3/30/2007	17:00	Flash Flood	N/A	0	0	0	0
DECATUR	3/19/2006	17:00	Flash Flood	N/A	0	0	0	0
WISE COUNTY	8/16/2005	10:23	Flood	N/A	0	0	0	0
SLIDELL	4/10/2005	17:30	Flash Flood	N/A	0	0	0	0
BOYD	6/9/2004	3:54	Flash Flood	N/A	0	0	100K	0
BRIDGEPORT	6/9/2004	6:45	Flash Flood	N/A	0	0	0	0
BOYD	6/9/2004	17:00	Flash Flood	N/A	0	0	0	0
RHOME	6/6/2004	20:23	Flash Flood	N/A	0	0	0	0
DECATUR	6/6/2004	22:55	Flash Flood	N/A	0	0	0	0
DECATUR	4/23/2004	22:00	Flash Flood	N/A	0	0	0	0
				TOTALS:	0	0	245K	0

Occurrence Based on previous events data, participating jurisdictions have analyzed the expected occurrence of the assessed data to be the following.

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

	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Dam Failure	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Drought	Likely	Highly Likely	Highly Likely	Likely	Highly Likely	Likely
Earthquake	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Extreme Heat	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Flooding	Occasional	Occasional	Likely	Occasional	Unlikely	Occasional
Hail	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
High Winds	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Lightning	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Tornado	Likely	Likely	Occasional	Likely	Likely	Likely
Wildland Fire	Likely	Likely	Occasional	Likely	Likely	Likely
Winter Storms	Occasional	Occasional	Likely	Occasional	Likely	Likely

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3.5 Impact

Impact has been assessed utilizing the previous events data, maps, assessments, and the following definitions:

Substantial (4):	Multiple Fatalities Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major (3):	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 (2):	Injuries or illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than a week. More than 10% of property destroyed or with major damage.
Limited (1/0):	Injuries and illnesses are treatable with first aid. Minor quality of life lost. Shut down of critical facilities and services for 24 hours or less. Less than 10% of property destroyed or with major damage.

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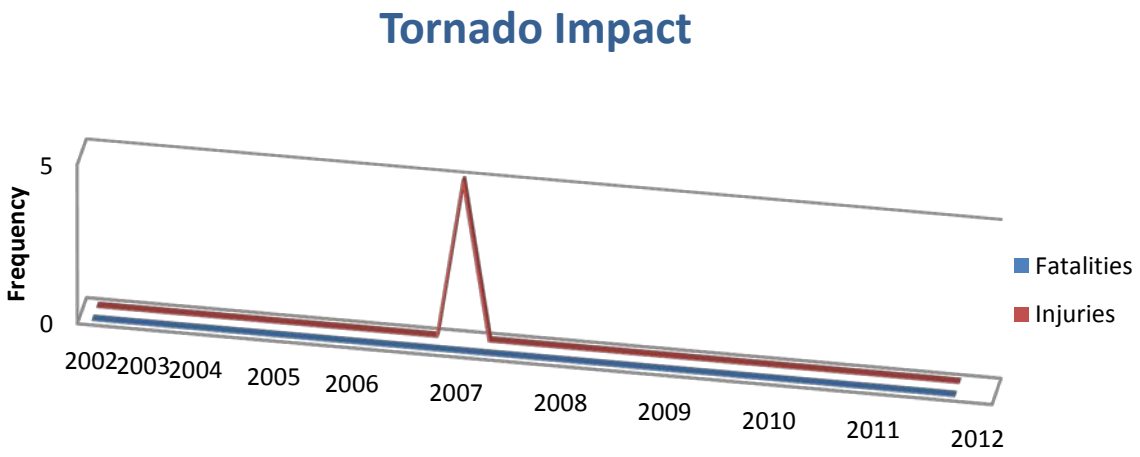
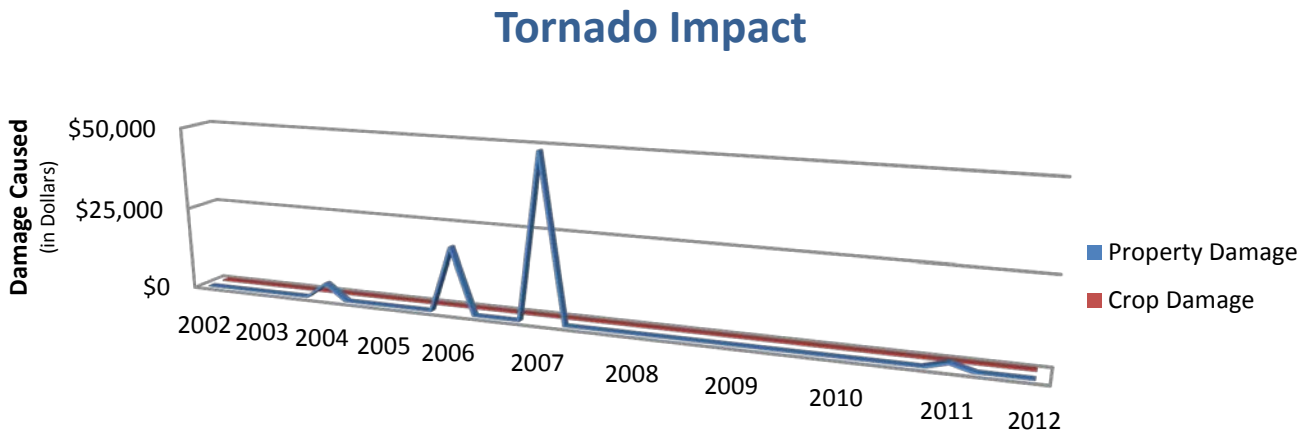
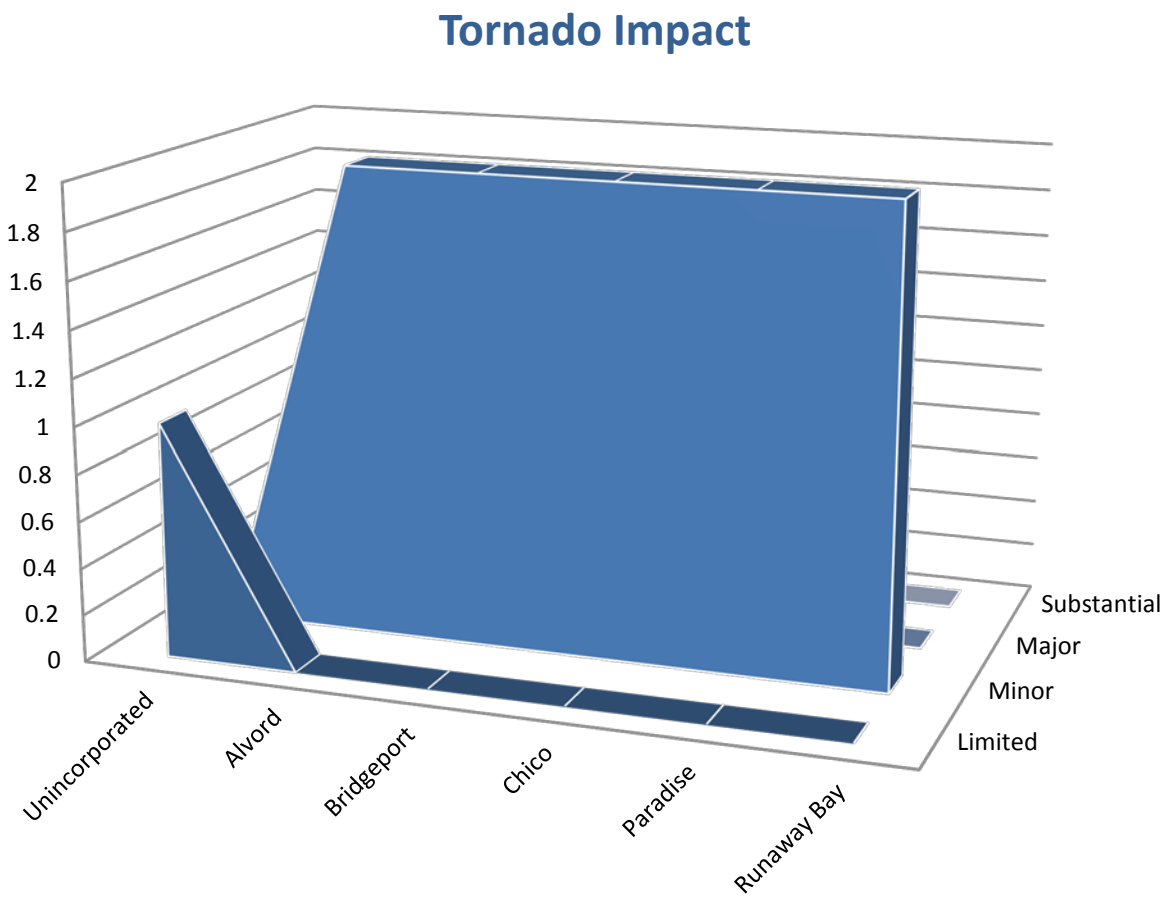
Tornado According to the historical data recorded by the National Climatic Data Center there have been 6 tornado events during 01/01/2002 - 12/31/2012 in Wise County. These events have caused a recorded total of 5 injuries, and $77,000 in property damage. Using these historical values over the time span of 11 years the average per year is .54 events, .45 injuries, and $7,000 in property damage.



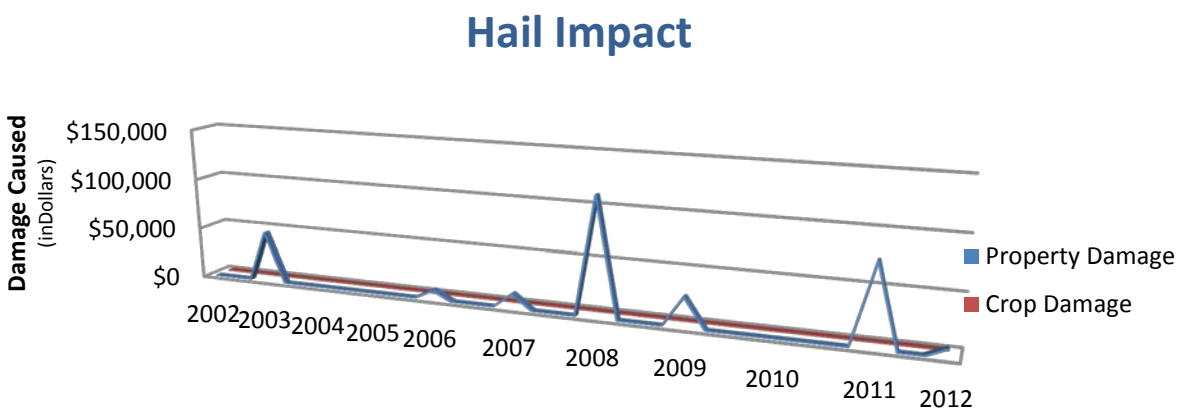


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of tornado events to be as follows:

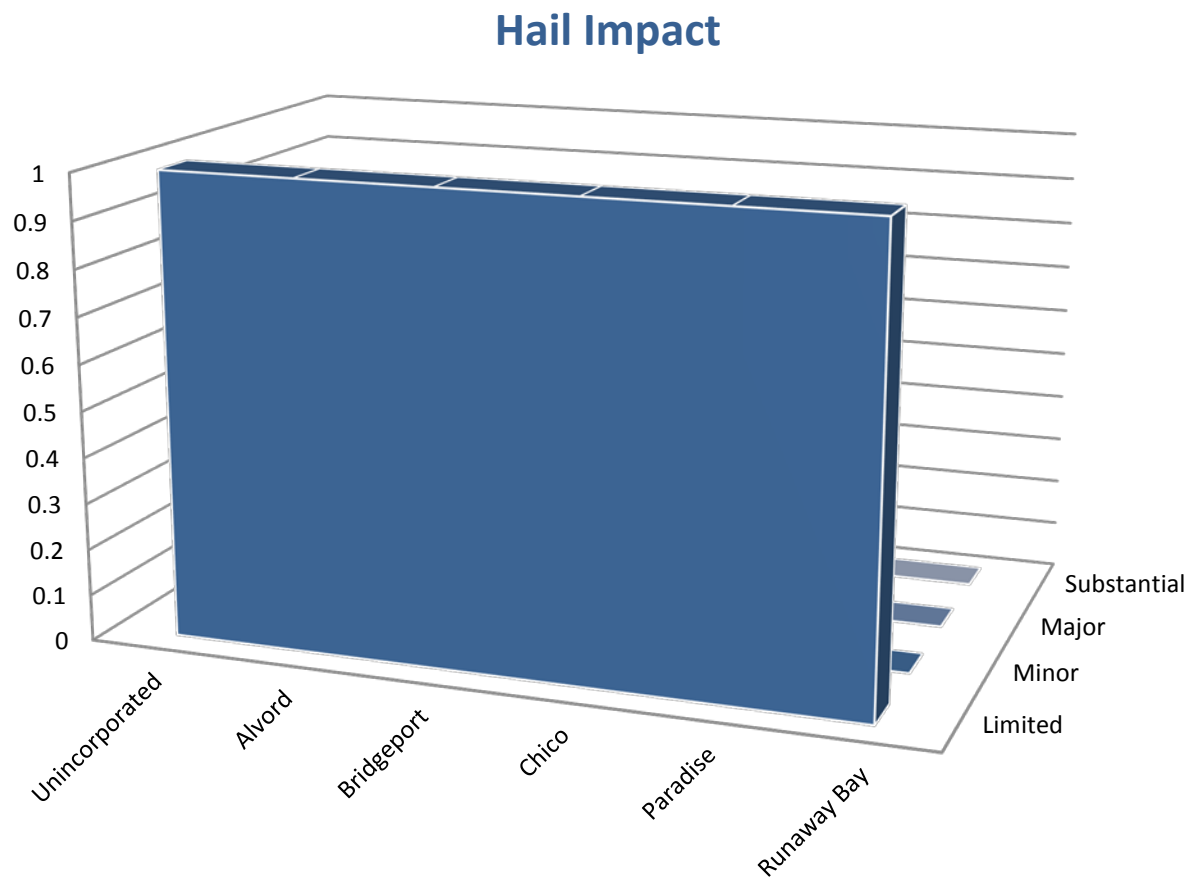


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited	1					
Minor		2	2	2	2	2
Major						
Substantial						

Hail According to the historical data recorded by the National Climatic Data Center there have been 89 hail events during 01/01/2002 - 12/31/2012 in Wise County. These events have caused a recorded total of $308,100 in property damage. Using these historical values over the time span of 11 years the average per year is 8.1 events and $28,009 in property damage. (According to the National Climatic Data Center there have been no recorded injuries or fatalities due to hail events.)

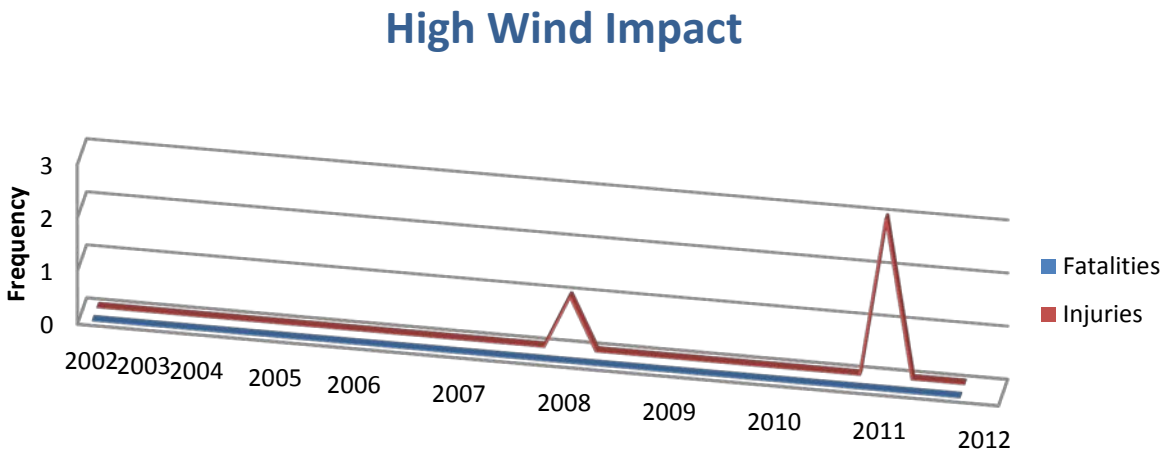


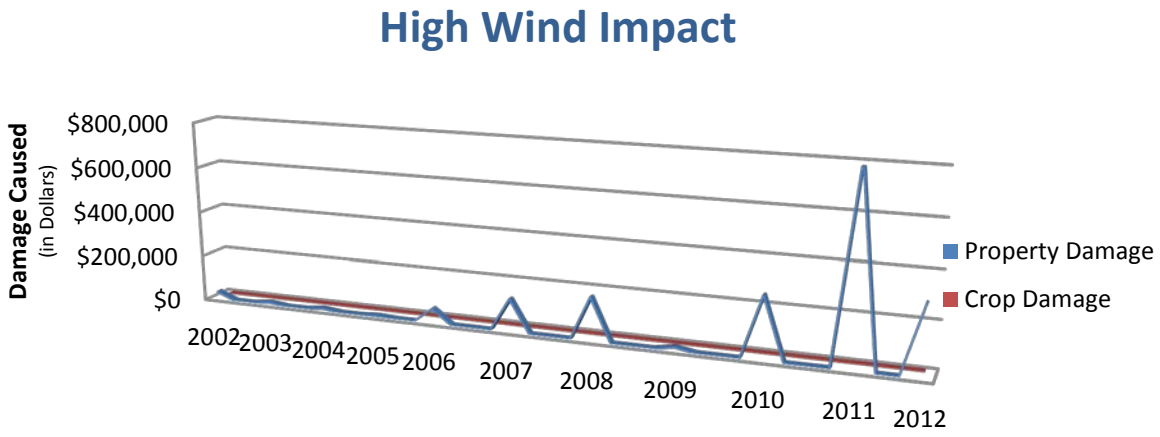
Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of a hail event to be as follows:



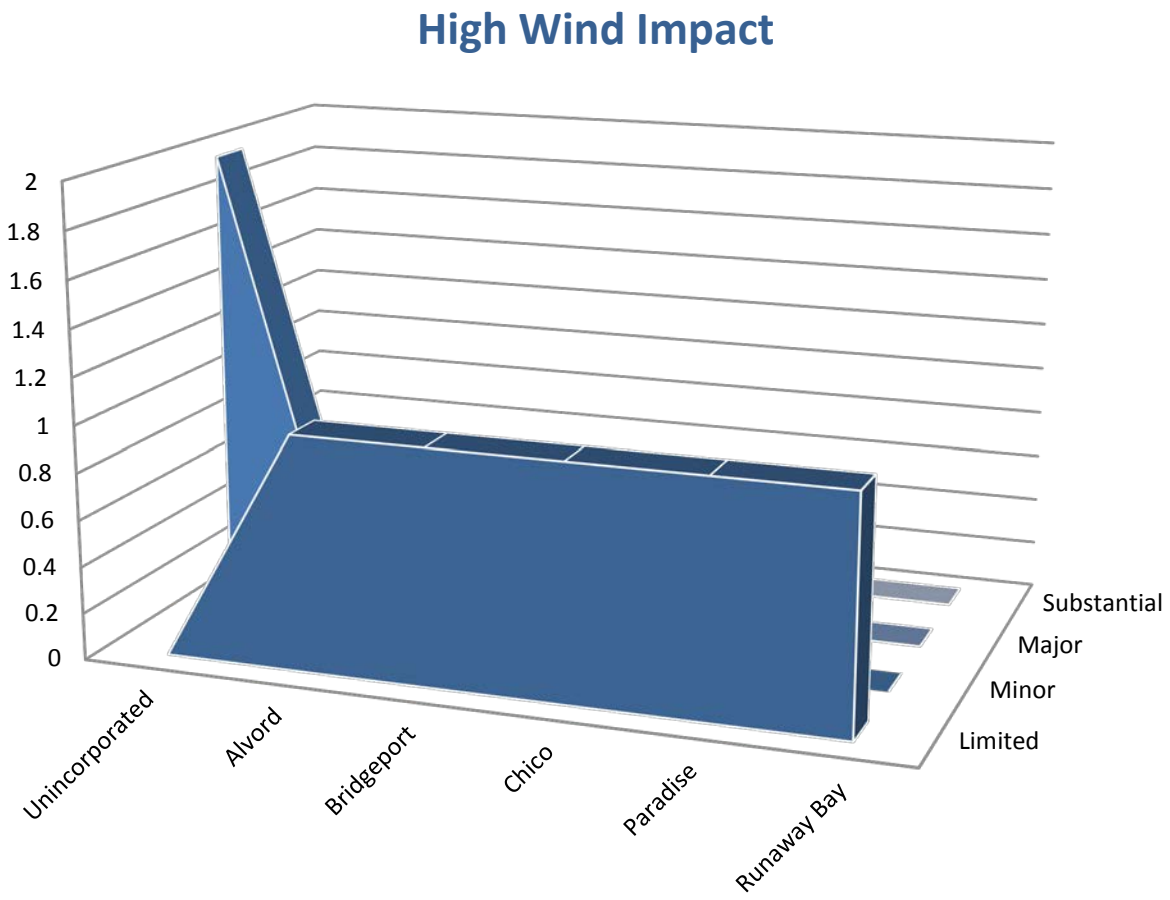
	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited	1	1	1	1	1	1
Minor						
Major						
Substantial						

High Wind According to the historical data recorded by the National Climatic Data Center there have been 83 high/t-storm Wind during 01/01/2002 - 12/31/2012 in Wise County. These events have caused a recorded total of 4 injuries and $1,332,500 in property damage. Using the historical values over the time span of 11 years the average per year is 7.55 events, 0.36 injuries, and $121,136 in property damage.



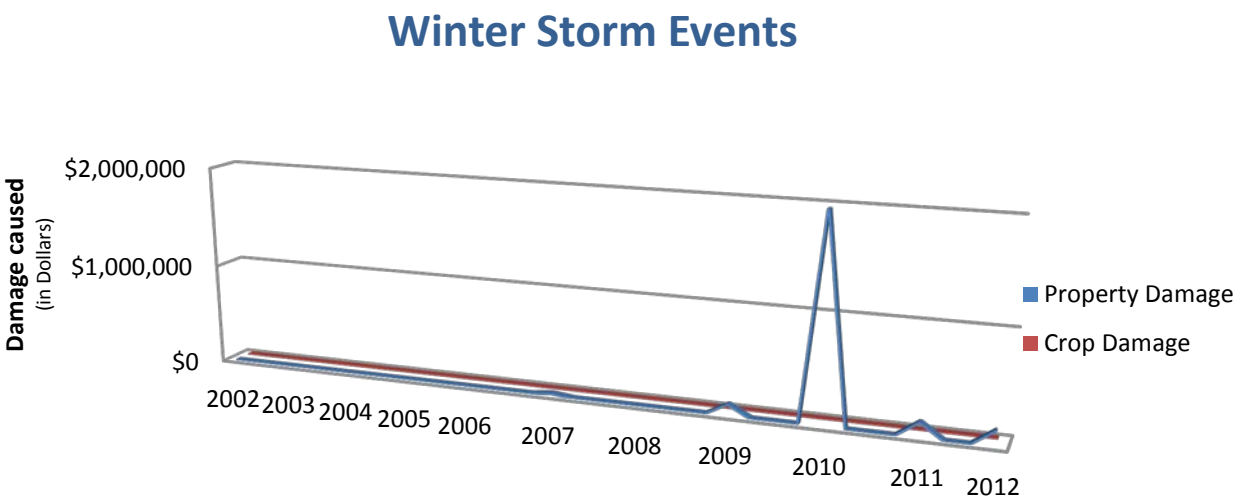


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of high wind events to be as follows:

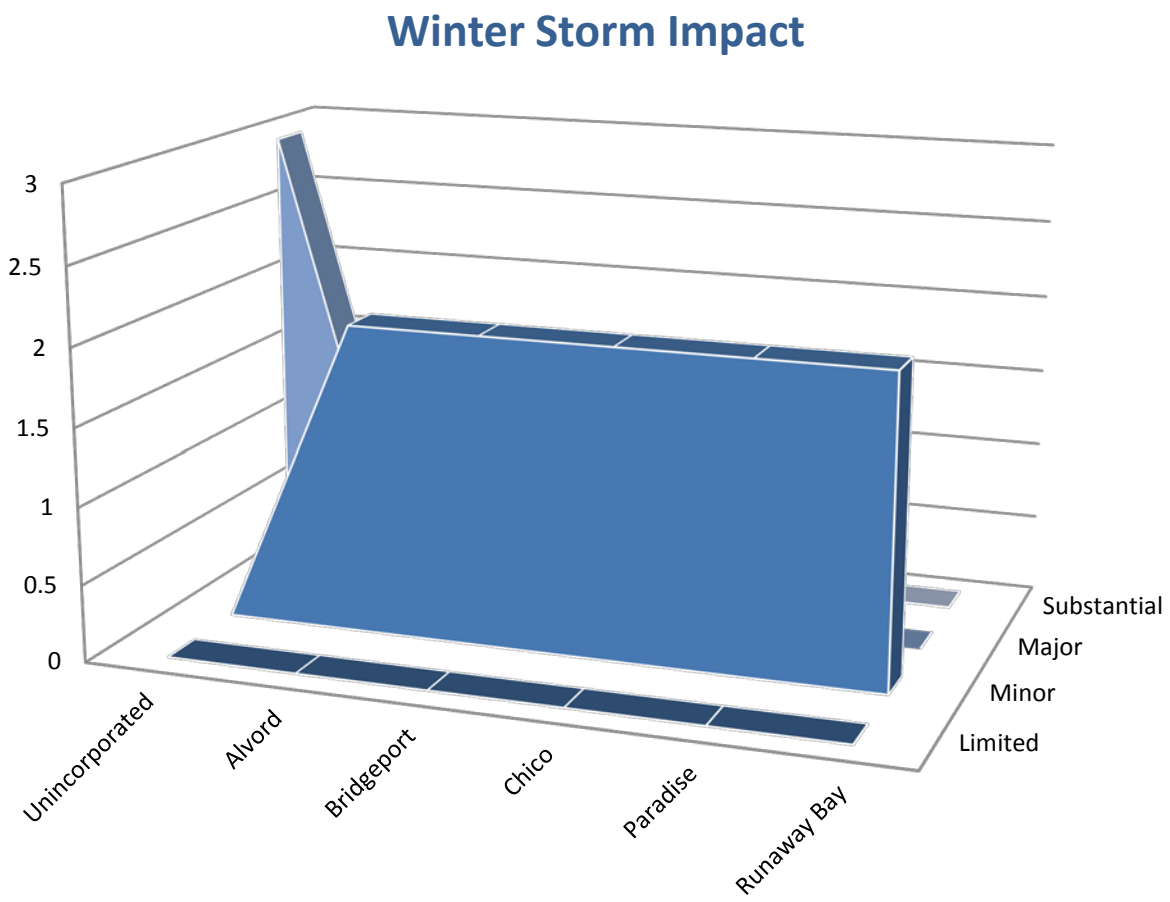


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited		1	1	1	1	1
Minor	2					
Major						
Substantial						

Winter Storm According to the historical data recorded by the National Climatic Data Center there have been 16 winter storm events during 01/01/2002-12/31/2012 in Wise County. These events have caused a recorded total of $2,480,000 in property damage. Using these historical values over the time span of 11 years the average per year is 1.45 events and $225,454 in property damage. (According to the National Climatic Data Center there have been no recorded injuries or fatalities due to winter storm events.)

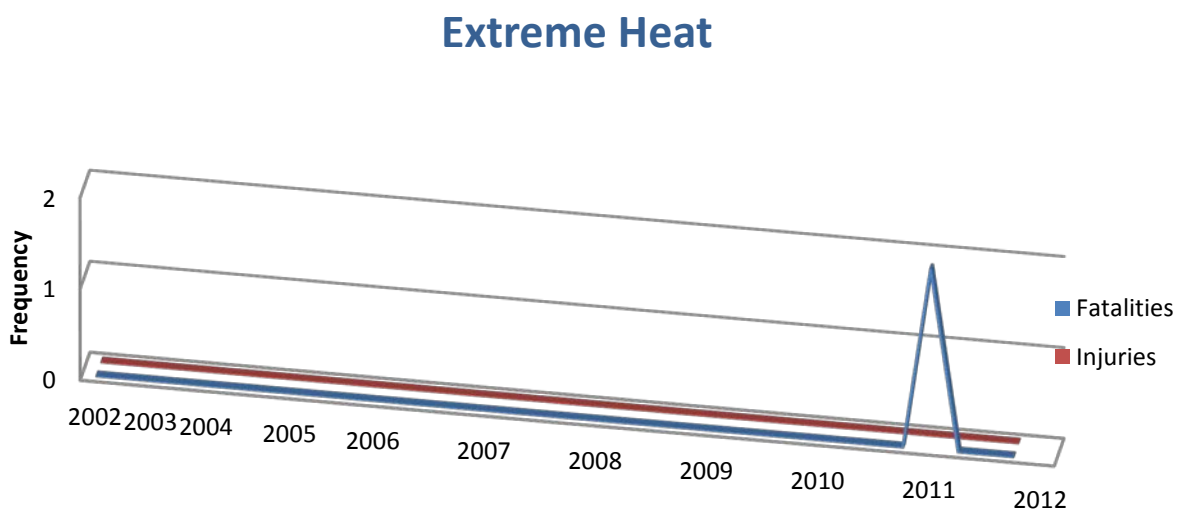


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of winter storm events to be as follows:

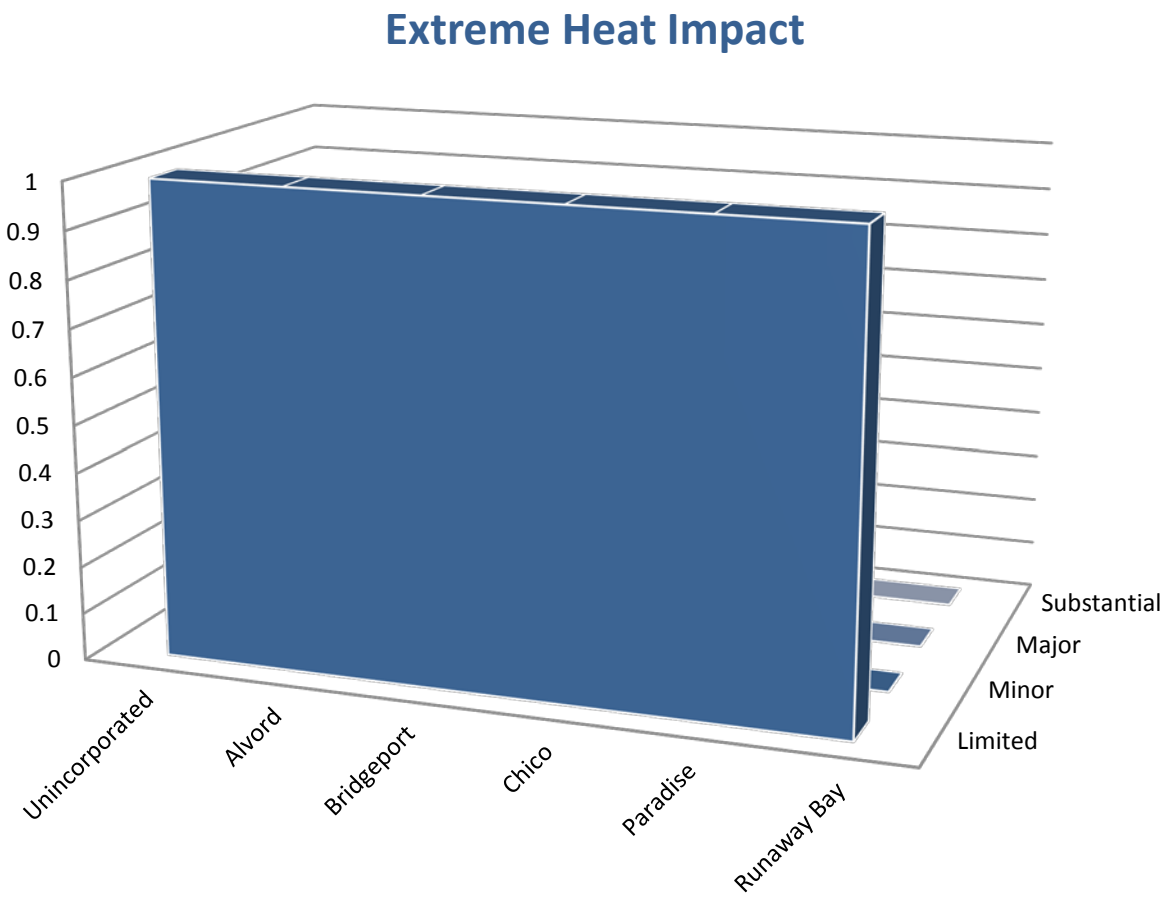


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited						
Minor		2	2	2	2	2
Major	3					
Substantial						

Extreme Heat According to the historical data recorded by the National Climatic Data Center there has been one heat event during 01/01/2002-12/31/2012 in Wise County. This events caused a recorded total of two fatalities. Using these historical values over the time span of 11 years the average per year .09 events and .18 fatalities. (According to the National Climatic Data Center there have been no recorded property damage or crop damage due to extreme heat events.)

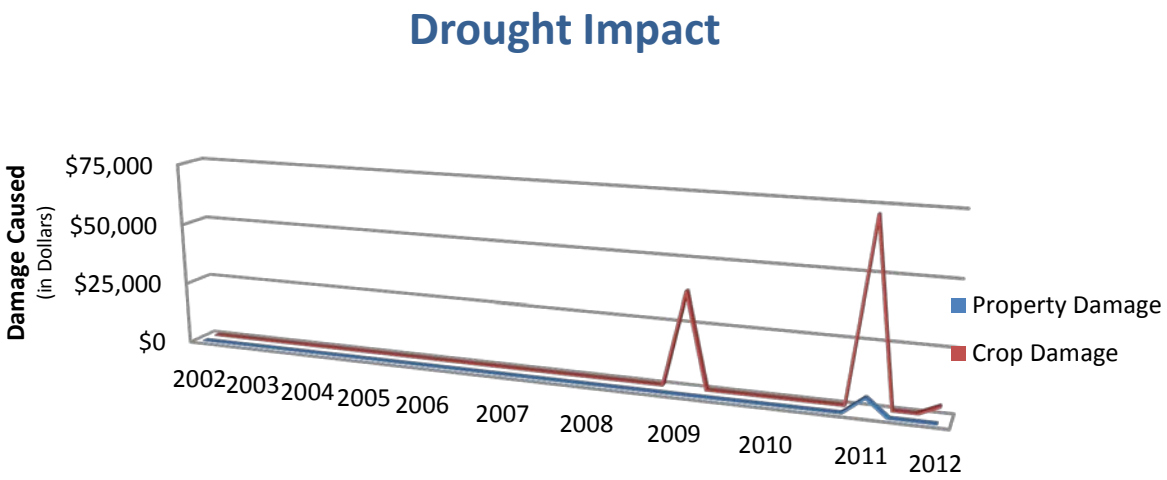


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of extreme heat events to be as follows:

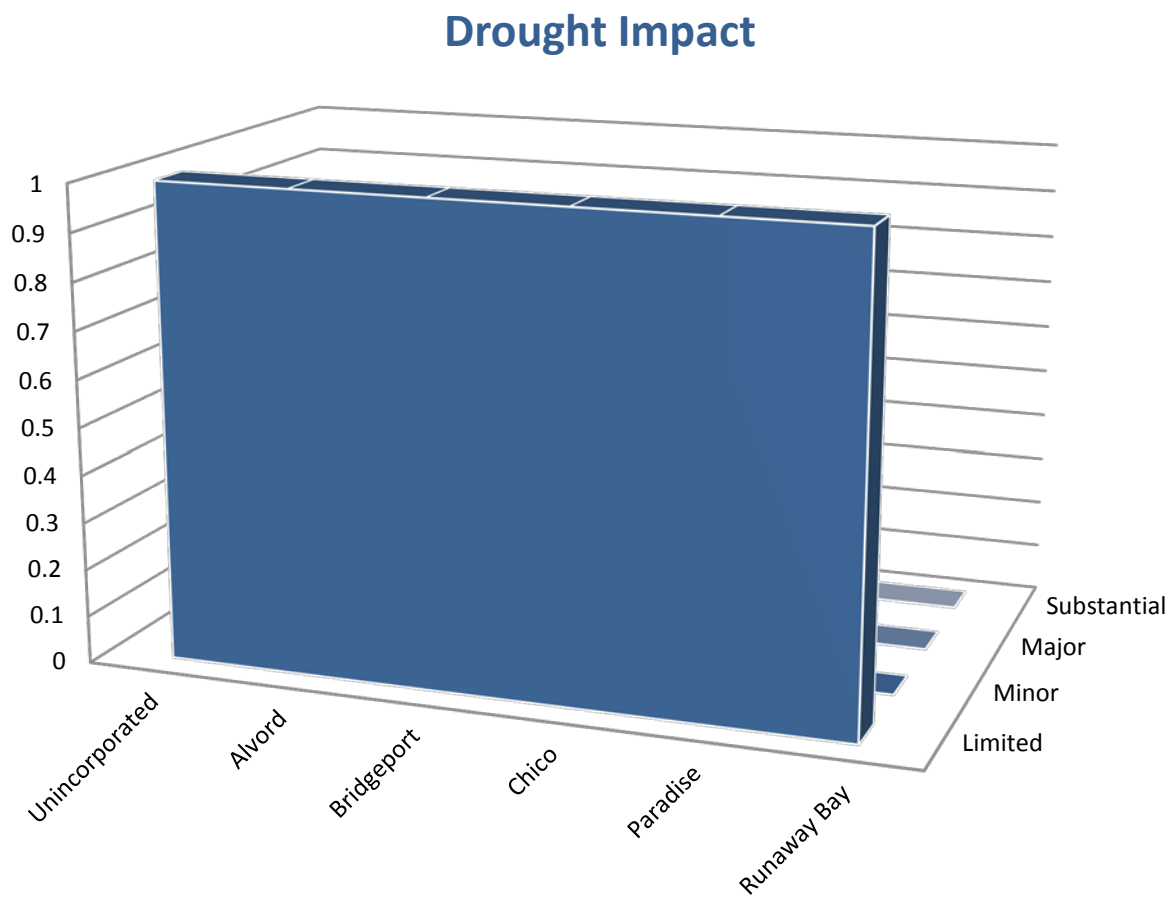


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited	1	1	1	1	1	1
Minor						
Major						
Substantial						

Drought According to the historical data recorded by the National Climatic Data Center there has been 32 drought events during 01/01/2002-12/31/2012 in Wise County. These events have caused a recorded total of $7,000 in property damage and $114,000 in crop damage. Using these historical values over the time span of 11 years the average per year is 2.91 events, $636 in property damage and $10,363 in crop damage. (According to the National Climatic Data Center there have been no recorded injuries or fatalities due to drought events.)

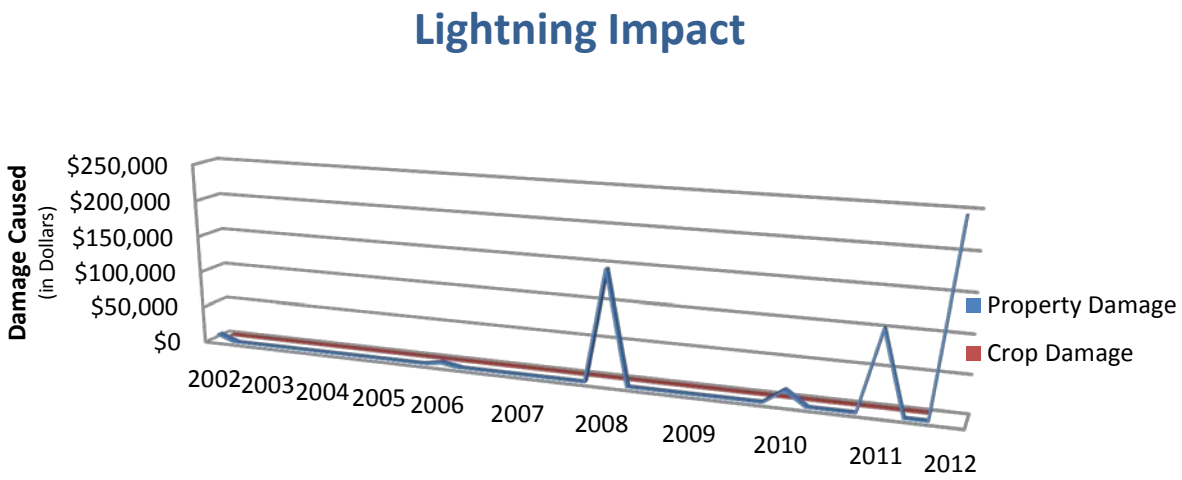


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of drought events to be as follows:

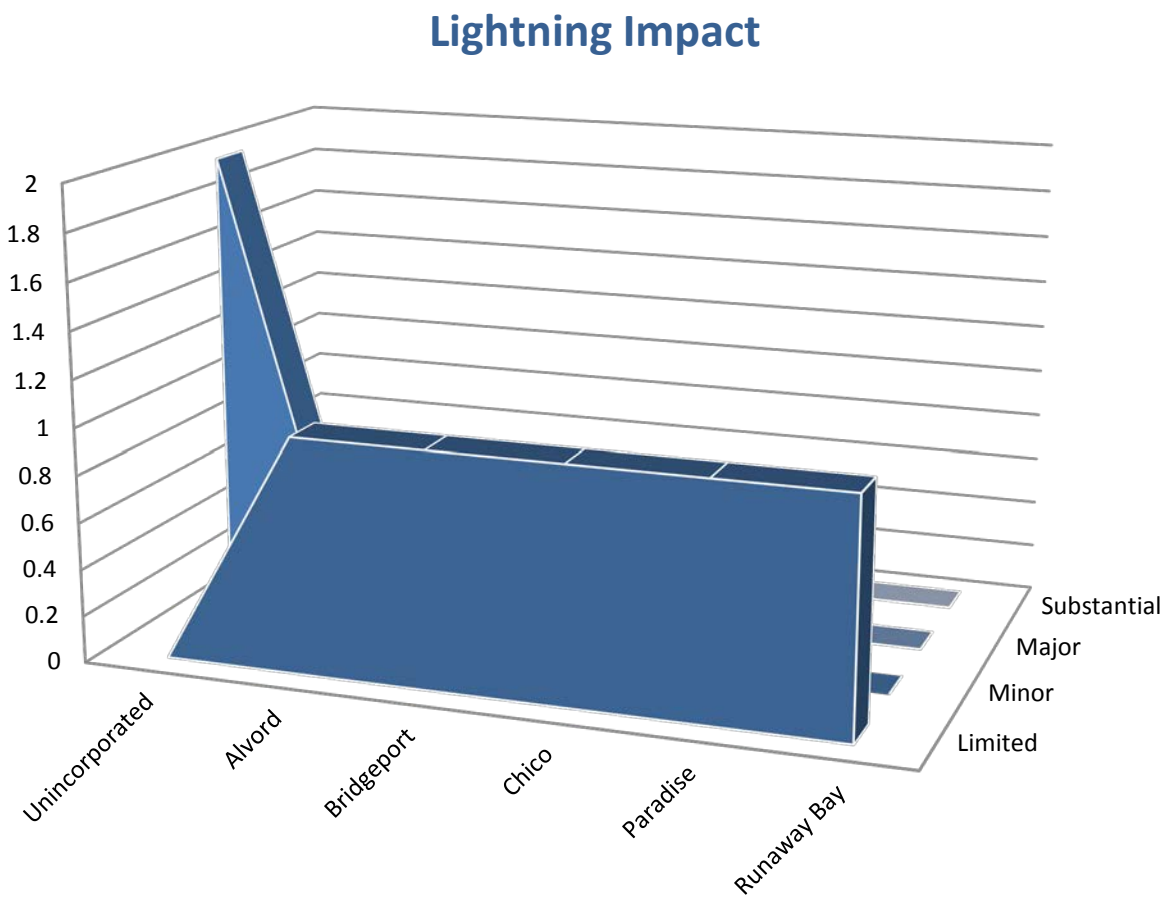


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited	1	1	1	1	1	1
Minor						
Major						
Substantial						

Lightning According to the historical data recorded by the National Climatic Data Center there has been 9 lightning events during 01/01/2002-12/31/2012 in Wise County. These events have caused a recorded total of $547,000 in property damage and $0 in crop damage. Using these historical values over the time span of 11 years the average per year is 0.82 events, $49,727 in property damage and $0 in crop damage. (According to the National Climatic Data Center there have been no recorded injuries or fatalities due to lightning events.)

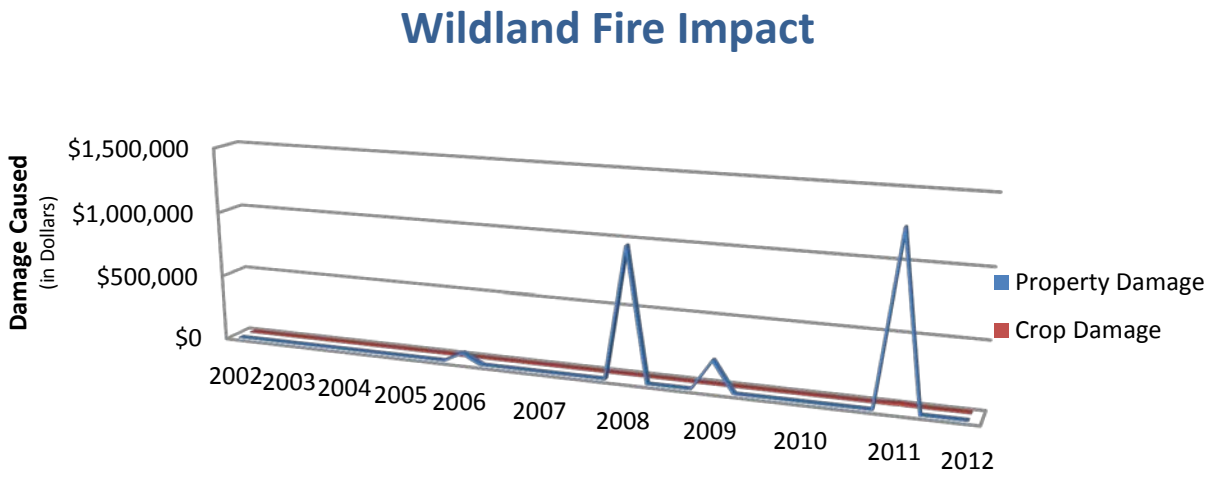


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of lightning events to be as follows:

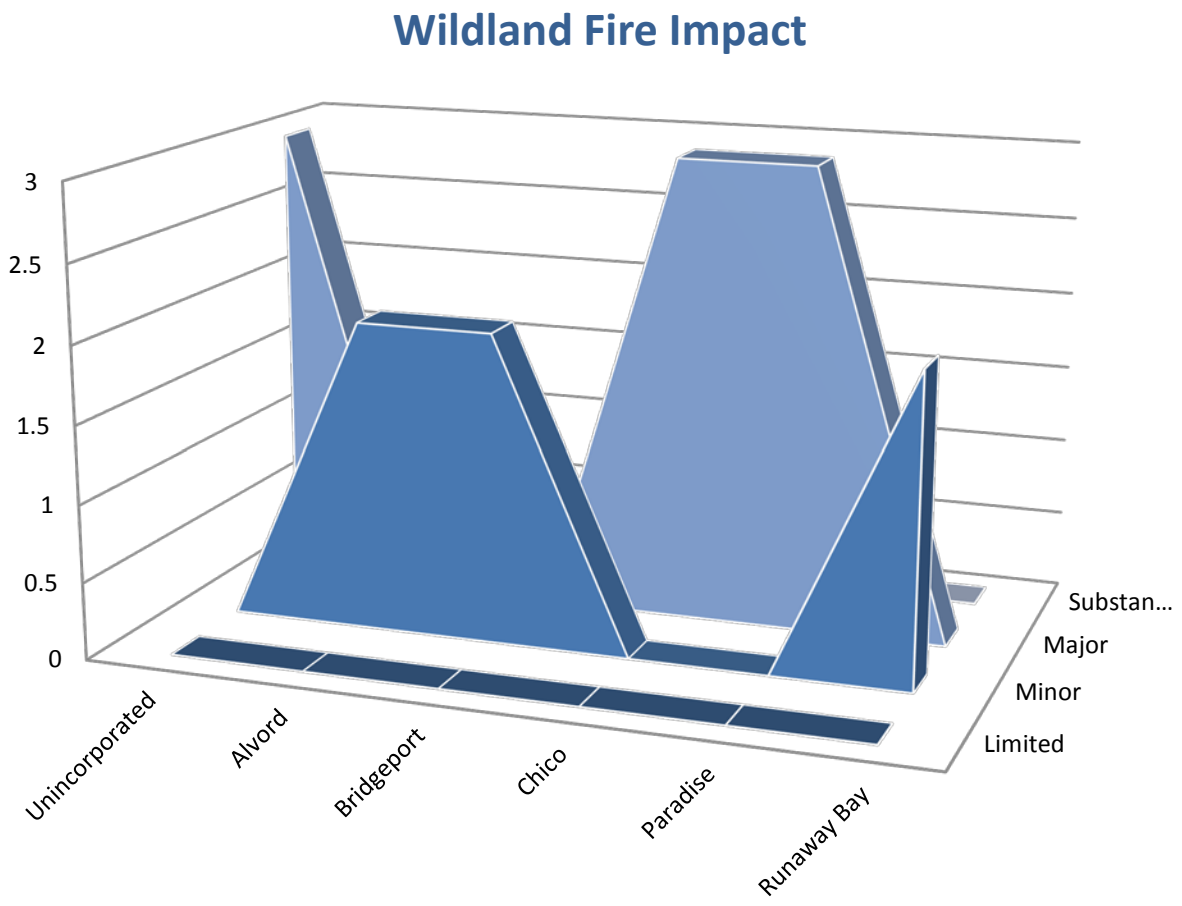


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited		1	1	1	1	1
Minor	2					
Major						
Substantial						

Wildland Fire According to the historical data recorded by the National Climatic Data Center there have been 10 wildland fire events during 01/01/2002-12/31/2012 in Wise County. These events have caused a recorded total of $2,595,000 in property damage and $11,000 in crop damage. Using these historical values over the time span of 11 years the average per year is 0.90 events, $235,909 in property damage,$1,000 in crop damage. (According to the National Climatic Data Center, there have been no recorded injuries or fatalities as a result of wildland fire events.)

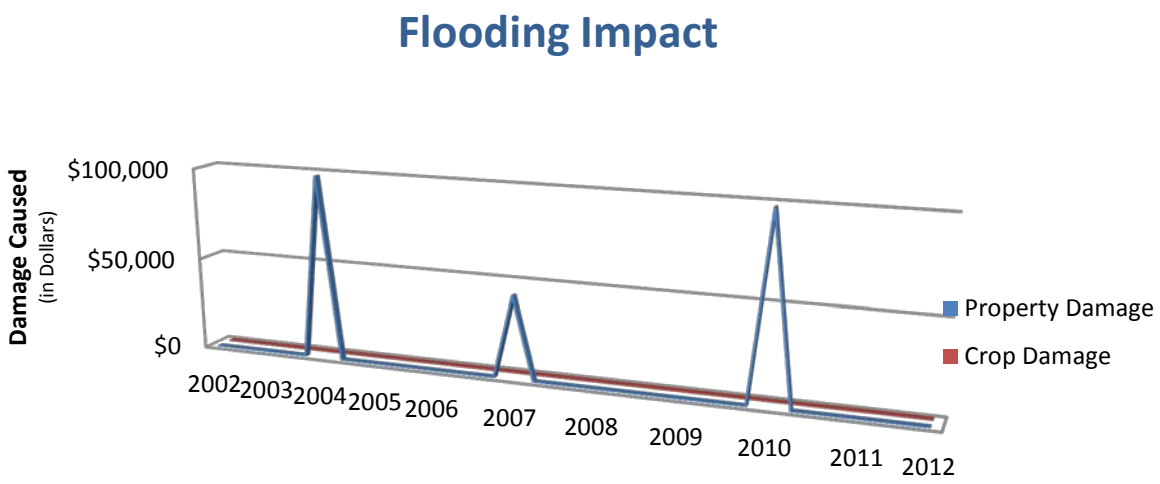


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of wildland fire events to be as follows:

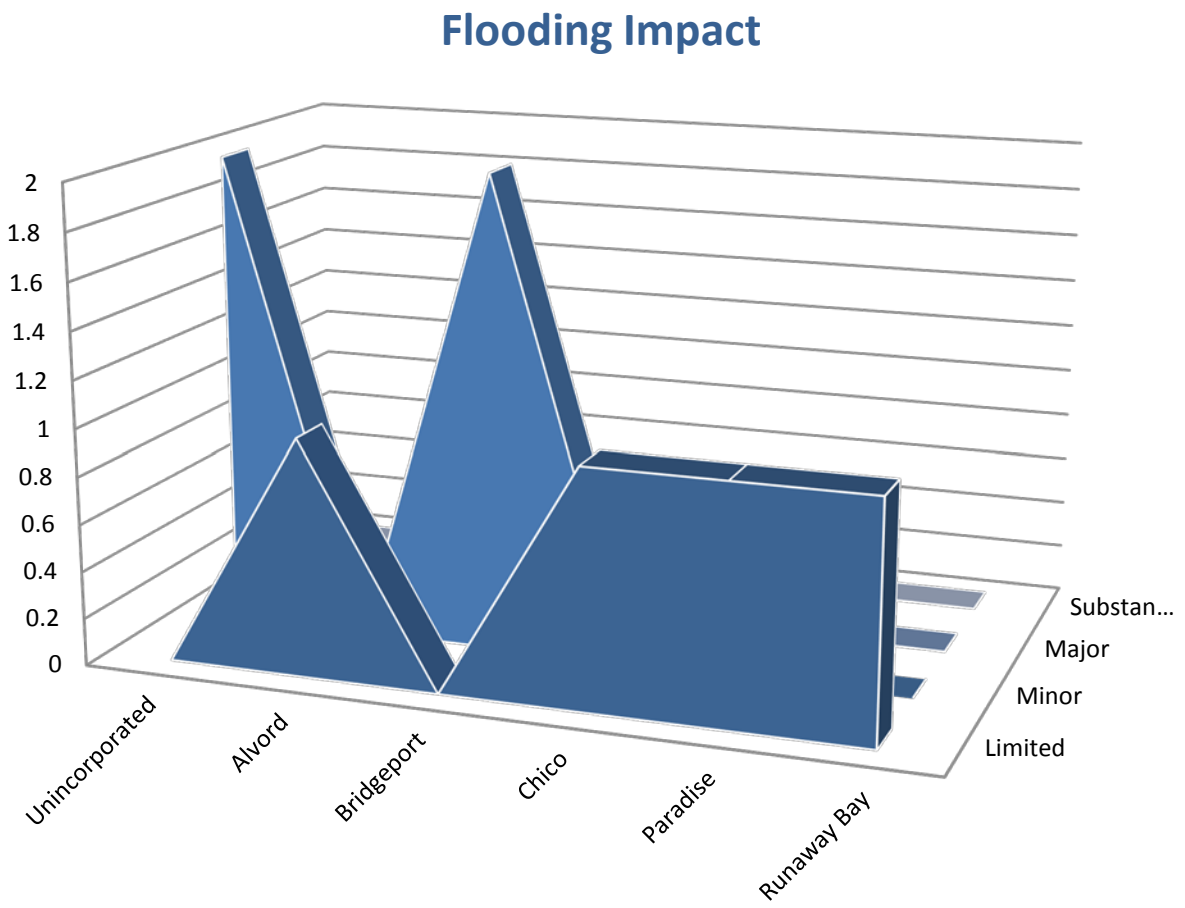


	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited						
Minor		2	2			2
Major	3			3	3	
Substantial						

Flooding According to the historical data recorded by the National Climatic Data Center there have been 22 flash flooding and flooding events during 01/01/2002-12/31/2012 in Wise County. These events have cause a recorded total of $245,000 in property damage. Using these historical values over the time span of 11 years the average per year is 2 events and $22,272 in property damage. (According to the National Climatic Data Center there have been no recorded injuries or fatalities due to flooding events)

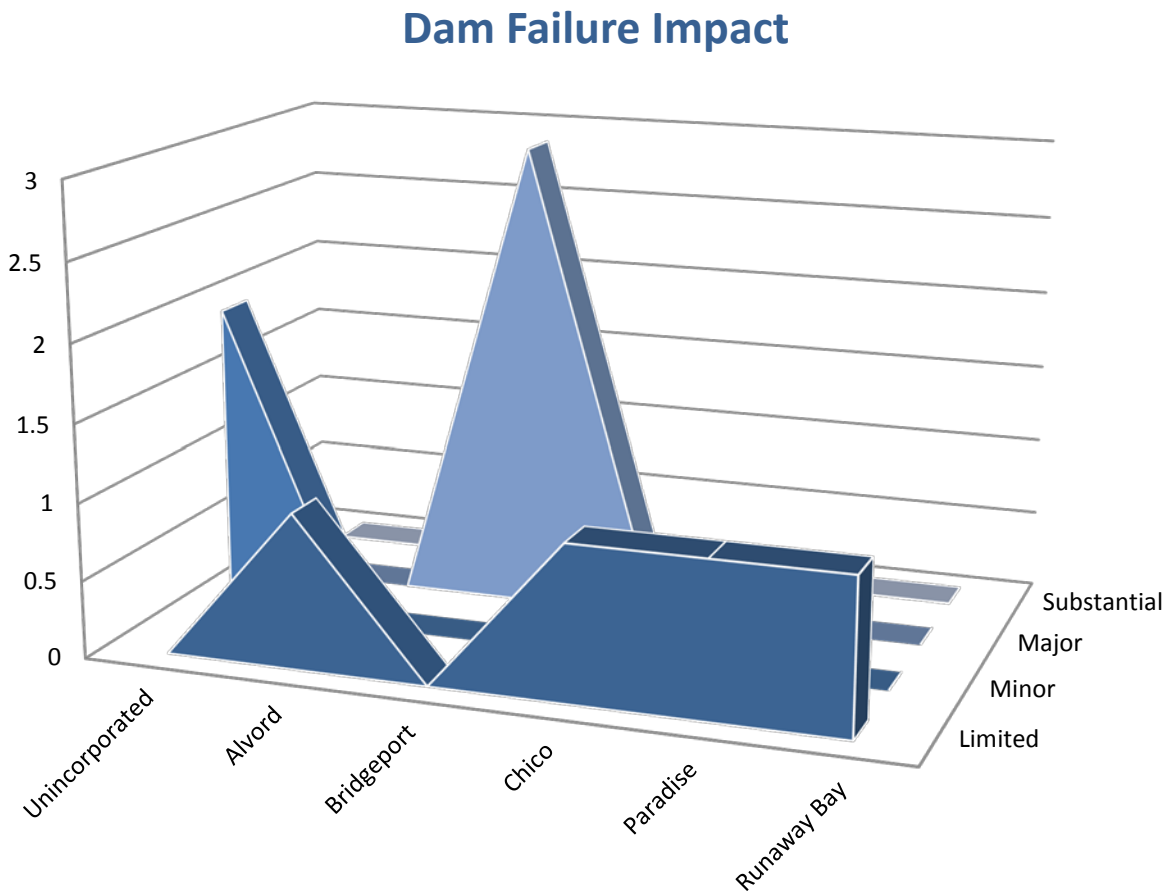


Utilizing the provided definitions, as well as land use maps, the participating jurisdictions have assessed the impact of flooding events to be as follows:



	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited		1		1	1	1
Minor	2		2			
Major						
Substantial						

Dam Failure There is no historical data in Wise County of a dam failure or in the State of Texas. There are 23 identified high hazard dams in the participating jurisdictions or at the responsibility of the participating jurisdictions. Dams are located within residential areas and unincorporated areas. It is expected that a significant dam failure would cause a cascading effect of flooding through inundation zones, water supply disruption, and critical infrastructures. At this time there are no inundation studies or dam failure impact studies which have been conducted, though all do have emergency operation plans. Mitigation projects have been identified in Chapter 4 to examine a cost-effective means for developing studies and relationships to determine the high hazard impact areas and their value.



	Unincorporated	Alvord	Bridgeport	Chico	Paradise	Runaway Bay
Limited		1		1	1	1
Minor	2					
Major			3			
Substantial						

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3.6 Structures, Losses, and Trends

In order to better understand and mitigate vulnerabilities to natural hazards an overview assessment of the types of structures in the planning areas has been conducted. This overview shows those structures which are either in a greater vulnerability area (i.e. 100 year flood zone) or those which are traditionally known to not withstand natural hazards, which incorporate severe weather elements such as strong wind, hail, severe rains, and lightning. This section details vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the planning area, and estimates the potential dollar losses to those vulnerable structures.

Planning Methodology for Structure Vulnerability Assessment To determine structure vulnerability, in terms of types and numbers, parcel data was used from the Wise County Appraisal District to determine the total land and structure values. This was then broken out into the categories and sub-categories of residential, commercial and utilities, and infrastructure to differentiate between the types of structures and the different vulnerabilities each type presented. The parcel data was mapped using GIS layers and overlays consisting of FEMA DFIRM flood zones, critical infrastructure, and land use maps to provide information regarding targeted hazard vulnerabilities.

For planning purposes, the parcel data used represents the average number of specific types of structures within those parcels. The value for each of the types of structures represented within the specific parcel is aggregated structure value for the specific structure type based on Appraisal District Data. Parcels which intersect the floodplain are considered to have a vulnerability assessment of impacted, regardless of whether the entire parcel was encompassed by the floodplain.

The chart below shows the total number of parcels and their values for each jurisdiction, as well as the overall totals.

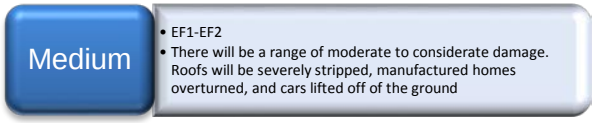
	Total Parcels	Est. Value
County	14,924	$1,814,793,600
Alvord	595	$57,586,640
Bridgeport	1,987	$310,278,420
Chico	466	$40,804,160
Paradise	238	$37,246,950
Runaway Bay	690	$106,874,040
Total	**18,900**	**$2,367,583,810**

Hazard Specific Structure Vulnerability The hazards identified within the Wise County Hazard Mitigation Action Plan affect structures to different extents based on previous occurrence and event data, as well as extent and impact forecasted for future events. Hazards that affect the entire planning area and those structures throughout the planning area are detailed below.

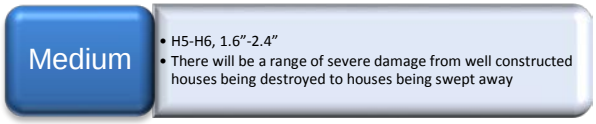
As in section 3.1 hazards will continue to be divided by those which have the potential to affect the entire planning area equally and those which occur in geographical specific locations.

The following hazards affect the entire planning area equally thus will rely on the structure value charts from page 3-127. Full descriptions of the scales can be seen on pages 3-85 to 3-86.

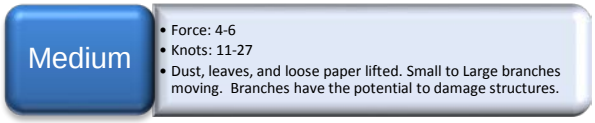
Tornado Based on the historical data for the 6 tornado events in Wise Country that caused a total of $77,000 in structure damage, previous event occurrence forecasts ranging from likely to occasional, and the extent of a tornado hazard in the planning area being assessed as overall medium, the estimated structure damage within the planning area is an average per year of $7,000, affecting all structure types. Residential structures, especially manufactured and single family homes, are particularly vulnerable to the effects of tornados.



Hail Based on the previous 89 recorded hail events in Wise County that caused a total of $308,100 in structure damage, previous event occurrence forecasts of highly likely, and the extent of hail in the planning area being assessed overall as medium, the estimated structure damage within the planning area is an average per year of $28,009, affecting all structure types, especially manufactured and single family homes.

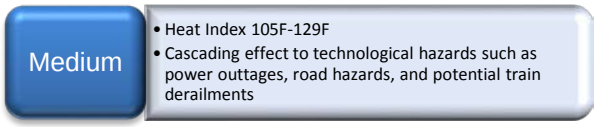


High Winds Based on the historical data for the 83 wind and nine lightning events in Wise County that caused a total of $1,332,500 in structure damage, previous event occurrence forecasts of highly likely, and that the extent of high winds in the planning area being assessed as overall medium, the estimated structure damage within the planning area is an average per year of $121,136, affecting all structure types. Residential structures, especially manufactured and single family homes, are particularly vulnerable to the effects of high wind.



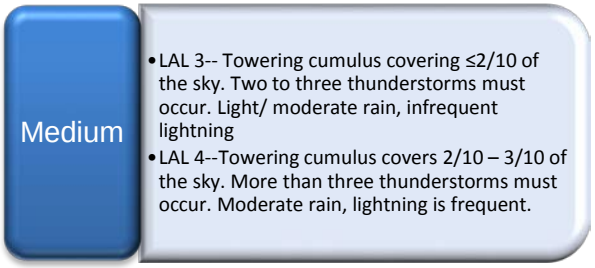
Winter Storm Based on the historical data for the 16 winter storm events in Wise County that caused a total $2,480,000 in structure damage, previous event occurrence forecasts ranging from occasional to likely, the extent of winter storms hazard in the planning area has been assessed as low, the estimated property damage per year being $225,454, affecting all structure types. Residential structures, especially manufactured and single-family homes, are particularly vulnerable to winter storms. Due to the rarity of winter storm events, roughly one per year, many homeowners do not have sufficient tree limb maintenance plans in place.

Extreme Heat Extreme heat would have the same effect as drought. However, if both were occur in conjunction, the effect would be magnified and would cause greater damage.

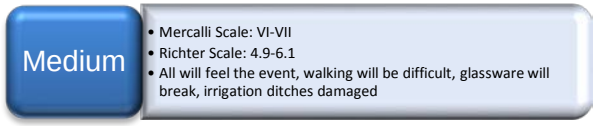


Drought Based on the historical data of the 32 drought events in Wise County that caused a total of $114,000 in crop damage and previous event occurrences ranging from likely to highly likely, the average extent of drought has been overall medium. The structure types most vulnerable to drought are infrastructure and all types of buildings (commercial, residential, and utilities). Based on the assessment, the next drought event is projected to occur in the next 1-3 years.

Lightning Based on the historical data of the 9 lightning events in Wise County that caused a total of $547,000 in property damage, the previous event occurrences ranked at highly likely, the average extent of lightning has been overall medium. The structure types most vulnerable to lightning are infrastructure and all types of buildings (commercial, residential, and utilities). Based on the assessment, the next lightning event is projected to occur in the next year.

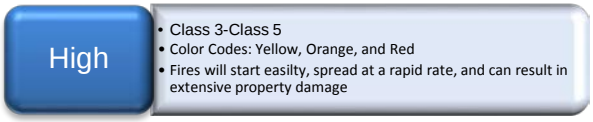


Earthquake Based on having no previous earthquake occurrences within the boundaries in Wise County, previous events occurrence unlikely to likely, and that the extent of an earthquake in the planning area has been assessed as medium, the estimated damage to structures in the area is low.

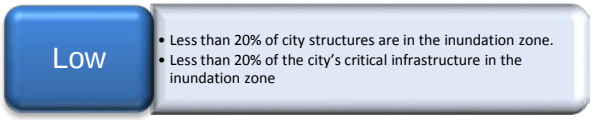


The following hazards are considered to be geographically defined. These hazards only affect certain areas within the planning area and those structures in that geographically defined area are detailed below. There are three hazards which are evaluated as geographically specific. Wildland fire, dam failure, and flooding. For wildland fire and dam failure the following charts may be used to estimate structure values which could be vulnerable. Further discussion is provided in the following hazard descriptions.

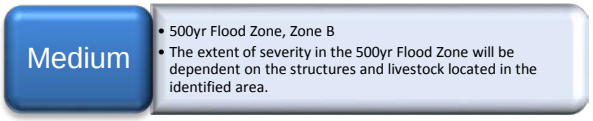
Wildland Fire Based on the historical data for the 10 wildland fire events in Wise County that have caused a total of $2,595,000 in structure damage, previous event occurrence forecasts ranging from likely to highly likely, and the extent of a wildland fire event in the planning area being assessed overall as high, the estimated damage to structures within the planning area is minimal. Based on the Fire Danger chart description of High, or Code Red/Class 3, potential fires are likely to become serious and control is difficult. This is especially true if the fire is started in a wildland or open space area. Wildland fire danger becomes a higher vulnerability when combined with the high wind hazard and would be much more likely to move into areas where it would affect residential structures, especially manufactured and single family homes if not prevented or stopped in time. The estimated structure damage within the planning area is an average per year of $235,909, affecting all structure types.



Dam Failure Based on the fact that there is no historical data in Wise County of a dam failure or in the State of Texas the future occurrence prediction is unlikely. However, there are 23 identified high hazard dams in participating jurisdictions or at the responsibility of the participating jurisdictions. Dams are located within residential areas and unincorporated areas. It is expected that a significant dam failure would cause a cascading effect of flooding through inundation zones, water supply disruption, and critical infrastructures. The overall anticipated average for extent is low meaning that less than 20% of the structures are in the inundation zone. Thus the structures have been identified in values of 5%, 10%, and 15% for planning purposes.



Flooding Based on the historical data for the 22 flood events in Wise County that caused a total of $245,000 in structure damage, previous event occurrence forecasts ranging from occasional to likely, and the extent of flooding in the planning area has been assessed as overall medium; the estimated structure damage within the planning area is an average per year of $22,272, affecting all structure types.



The following charts are estimates based on 2012 Wise County Appraisal District parcel data depicting types of structures and their costs within the 100 year and 500 year flood zones.

Single Family Homes This section details vulnerability in terms of types and numbers located in the planning area, and estimates the potential dollar losses to those vulnerable structures within each jurisdiction of the Wise County HazMAP

Wise County Flood Vulnerability: Single Family Homes

	Single Family Homes	Est. Value
County	1,905	$297,262,230
Alvord	0	$0
Bridgeport	83	$10,049,260
Chico	43	$2,957,060
Paradise	2	$355,160
Runaway Bay	123	$27,681,170
Total	2,156	$338,304,880

Manufactured Homes this section details vulnerability in terms of the types and numbers located in the planning area, and estimates the potential dollar losses to those vulnerable structures within each jurisdiction of the Wise County HazMAP.

Wise County Flood Vulnerability: Manufactured Homes

	Manufactured Homes	Est. Value
County	257	$17,799,090
Alvord	0	$0
Bridgeport	16	$384,080
Chico	6	$131,110
Paradise	0	$0
Runaway Bay	1	$30,100
Total	280	$18,344,380

Multi-Family Homes Multi-Family homes this section details vulnerability in terms of the types and numbers located in the planning area, and estimates the potential dollar losses to those vulnerable structures within each jurisdiction of the Wise County HazMAP.

Wise County Flood Vulnerability: Multi-Family Homes

	Multi-Family Homes	Est. Value
County	3	$153,800
Alvord	0	$0
Bridgeport	7	$1,102,170
Chico	0	$0
Paradise	0	$0
Runaway Bay	4	$498,160
Total	14	$1,754,130

Commercial and Utilities Facilities This section details vulnerability in terms of the types and numbers located in the planning area, and estimates the potential dollar losses to those vulnerable structures within each jurisdiction of the Wise County HazMAP

Wise County Flood Vulnerability: Commercial & Utilities Facilities

	Commercial & Utilities Facilities	Est. Value
County	173	$46,728,970
Alvord	0	$0
Bridgeport	120	$44,186,750
Chico	20	$2,791,870
Paradise	0	$0
Runaway Bay	23	$9,036,890
Total	336	$102,744,480

Development Trends Map Series G provides a detailed overview of the locations of critical infrastructure, residential, commercial, and undeveloped land as well as fire stations, police stations, emergency operations centers, and hospitals. Wise County Hazard Mitigation Action Plan has city zoning ordinances which establish a land development trend of building outside of the flood plains. Mitigation measures and the Wise County Hazard Mitigation Action Plan will continue to be used and assessed in future city plan development.

Map Series G	Development Trends
	Map G.1 Wise County
	Map G.2 City of Alvord
	Map G.3 City of Bridgeport
	Map G.4 City of Chico
	Map G.5 City of Paradise
	Map G.6 City of Runaway Bay

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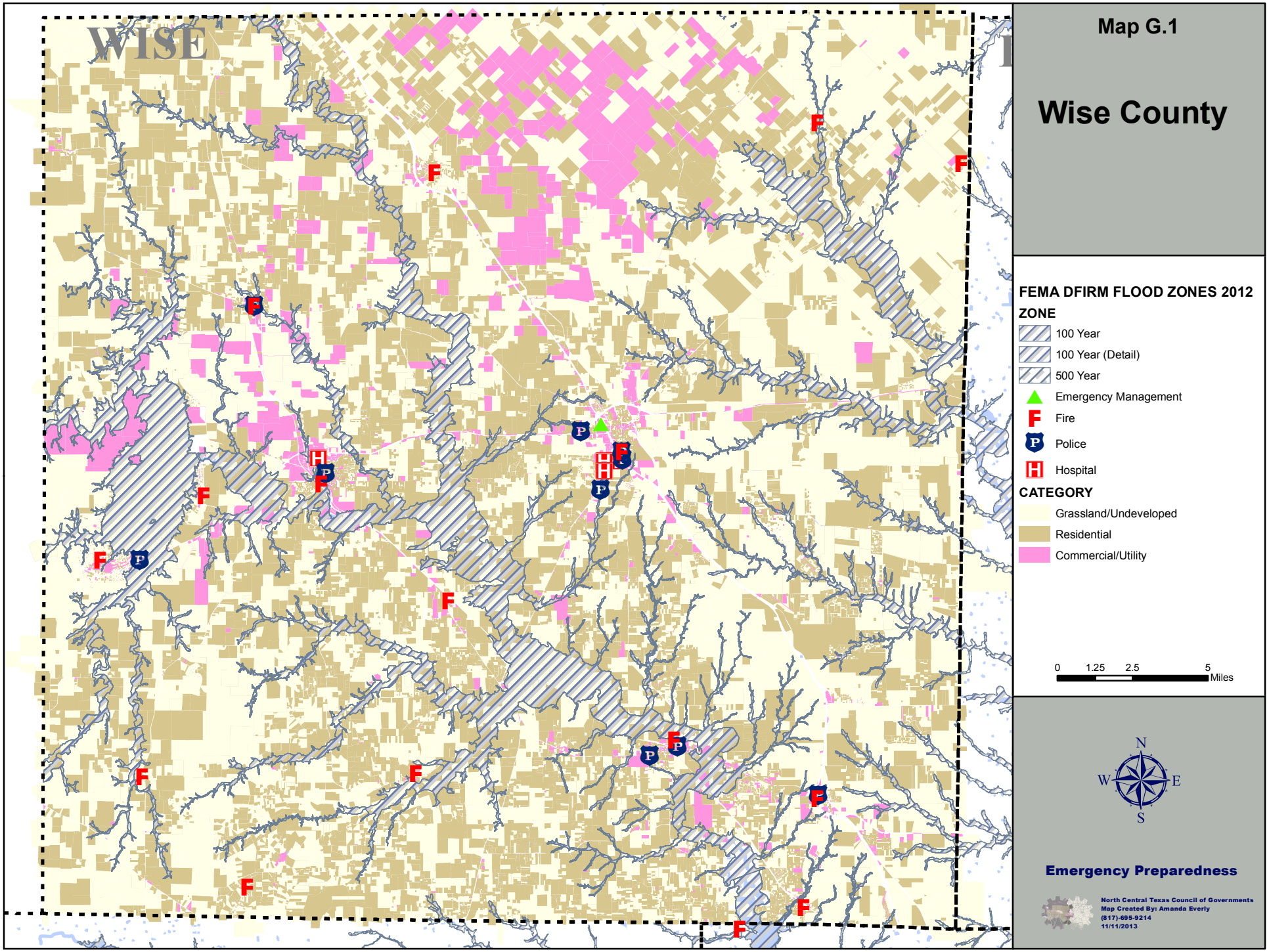
WISE
Map G.1
Wise County
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
Emergency Management
Fire
Police
Hospital
CATEGORY
Grassland/Undeveloped
Residential
Commercial/Utility
0 1.25 2.5 5
Miles
N
W
E
S
Emergency Preparedness
North Central Texas Council of Governments
Map Created By: Amanda Everly
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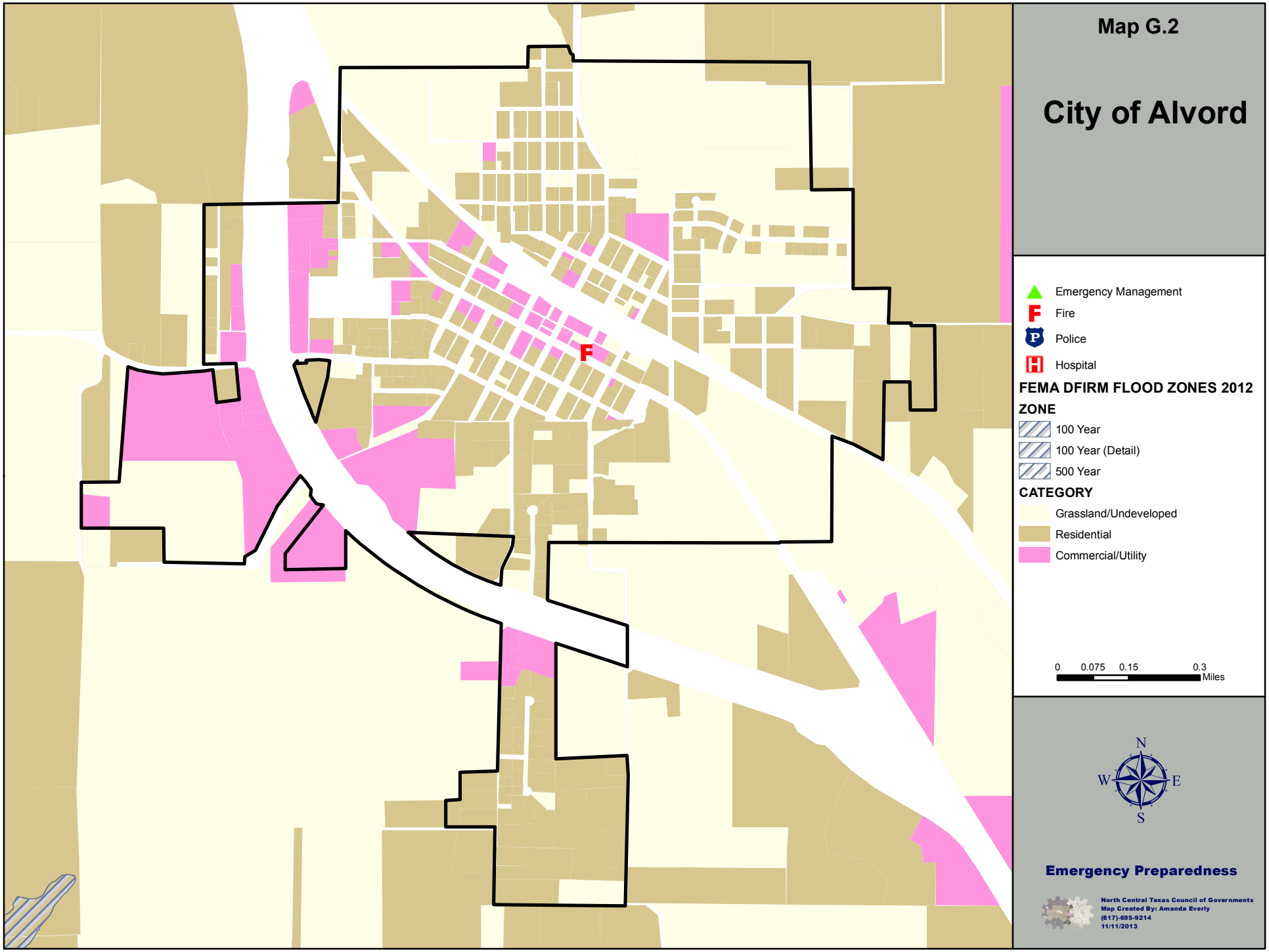
Map G.2
City of Alvord
Emergency Management
Fire
Police
Hospital
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
CATEGORY
Grassland/Undeveloped
Residential
Commercial/Utility
0 0.075 0.15 0.3
Miles
N
W
E
S
Emergency Preparedness
North Central Texas Council of Governments
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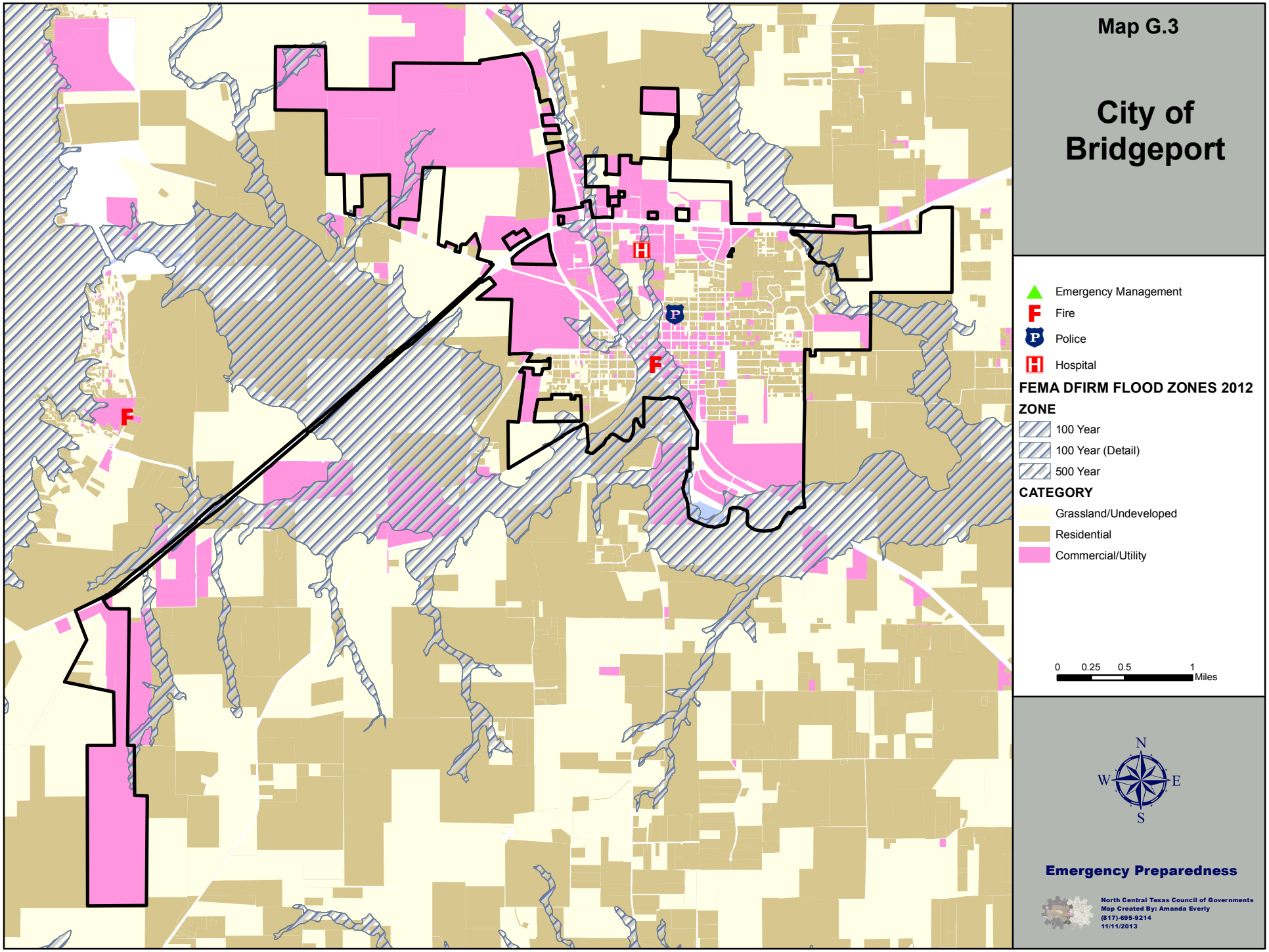
Map G.3
City of Bridgeport
Emergency Management
Fire
Police
Hospital
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
CATEGORY
Grassland/Undeveloped
Residential
Commercial/Utility
0 0.25 0.5 1 Miles
N
W
E
S
Emergency Preparedness
North Central Texas Council of Governments
Map Created By: Amanda Everly
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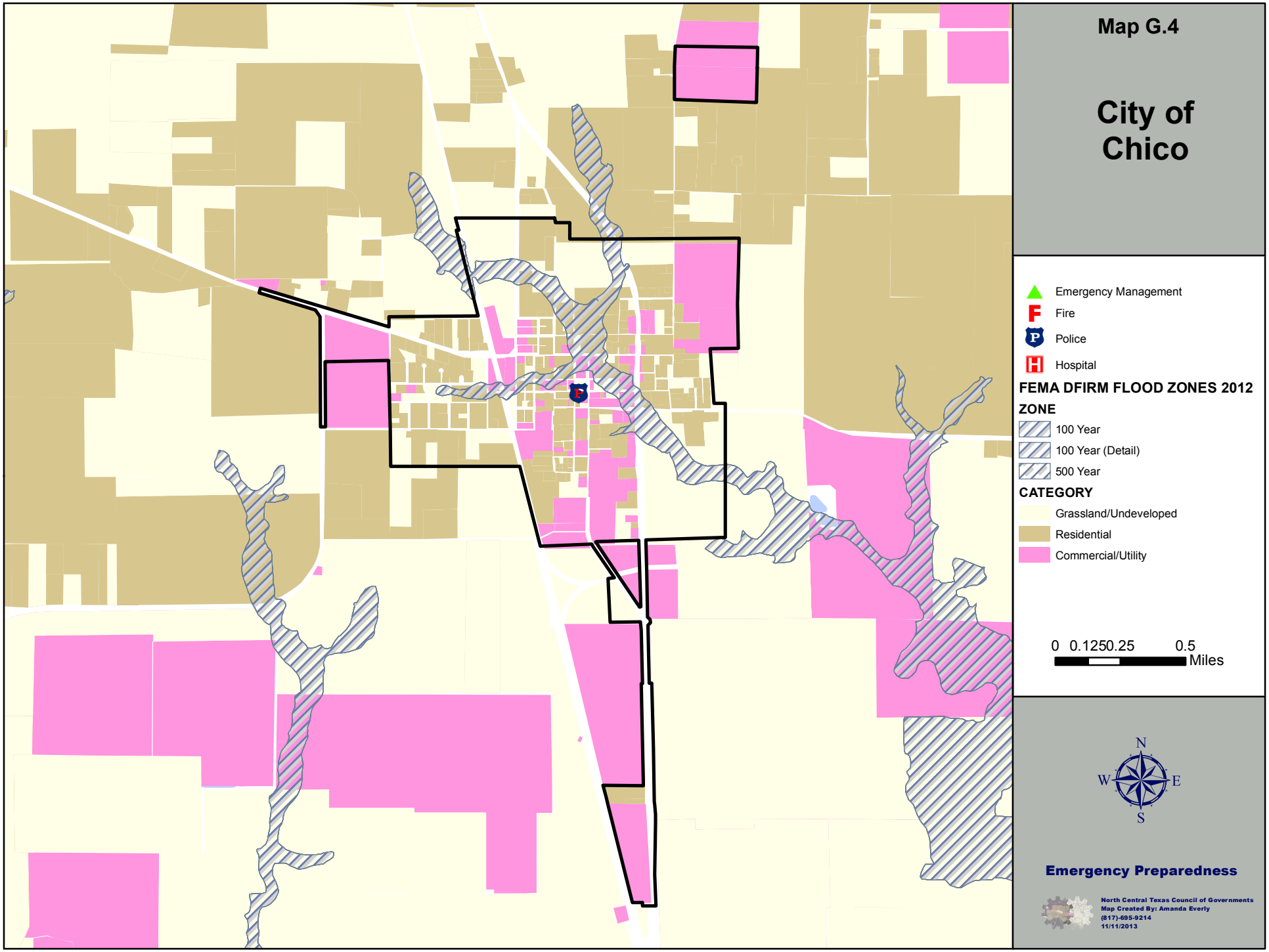
Map G.4
City of Chico
Emergency Management
Fire
Police
Hospital
FEMA DFIRM FLOOD ZONES 2012
ZONE
100 Year
100 Year (Detail)
500 Year
CATEGORY
Grassland/Undeveloped
Residential
Commercial/Utility
0 0.1250.25 0.5
Miles
N
W
E
S
Emergency Preparedness
North Central Texas Council of Governments
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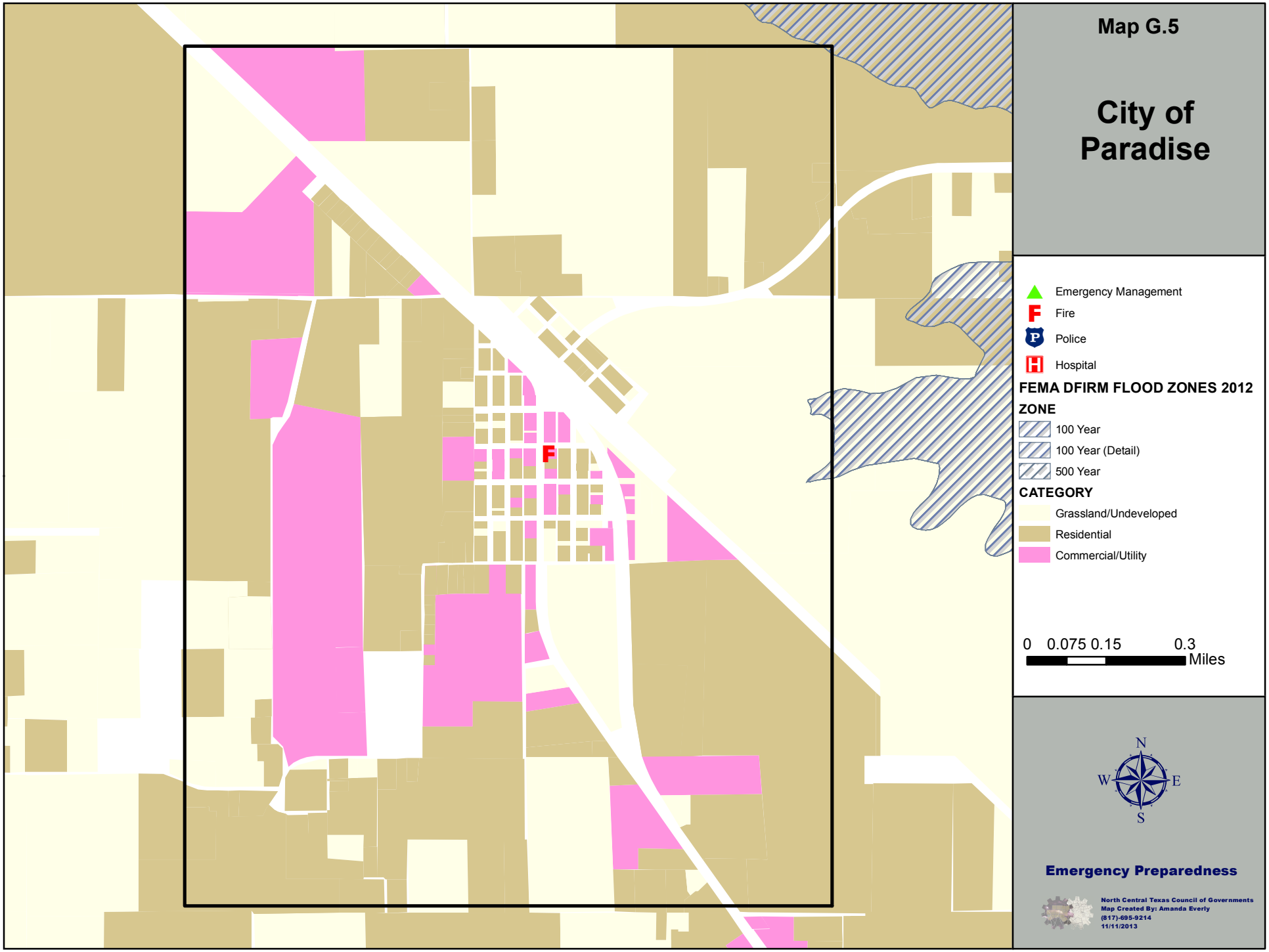

Map G.5

City of Paradise

Emergency Management
Fire
Police
Hospital

FEMA DFIRM FLOOD ZONES 2012

ZONE

100 Year
100 Year (Detail)
500 Year

CATEGORY

Grassland/Undeveloped
Residential
Commercial/Utility

0 0.075 0.15 0.3 Miles

N
W E
S

Emergency Preparedness

North Central Texas Council of Governments
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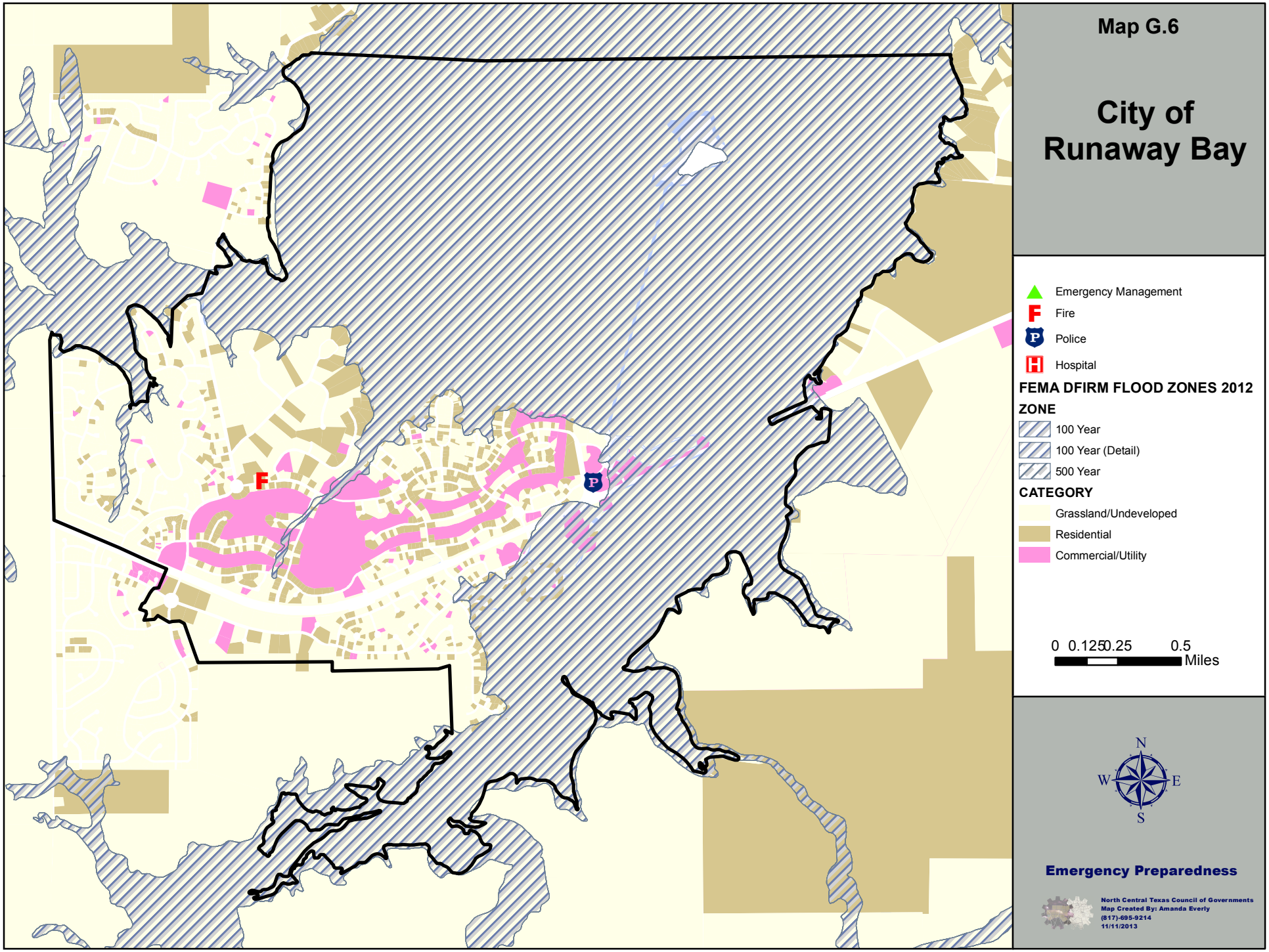

Map G.6

City of Runaway Bay

Emergency Management
Fire
Police
Hospital

FEMA DFIRM FLOOD ZONES 2012

ZONE

100 Year
100 Year (Detail)
500 Year

CATEGORY

Grassland/Undeveloped
Residential
Commercial/Utility

0 0.125 0.25 0.5 Miles

N
W E
S

Emergency Preparedness

North Central Texas Council of Governments
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3.7 Repetitive Loss Properties

Vulnerability of Repetitive Loss Properties The National Flood Insurance Reform Act of 2004 recognized repetitive loss as a significant problem and defined severe repetitive loss as:

- Four or more paid flood losses of more than $1,000 each; or
- Two paid flood losses within a 10-year period that, in the aggregate, equal or exceed the current value of the insured property; or
- Three or more paid losses that, in the aggregate, equal or exceed the current value of the insured property.

The loss history includes all flood claims paid on an insured property, regardless of any change of ownership, since the building's construction or back to 1978 if the building was constructed prior to 1978. The following chart lists all losses for the Wise County planning area and was utilized in identifying Repetitive Loss property based on the FEMA screening criteria.

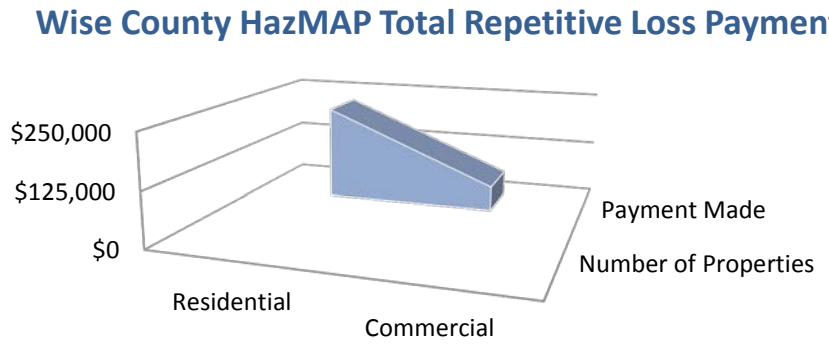
Texas Loss Statistics from January 1, 1978 through report September 8, 2013

Community Name	Total Payments	Closed Losses	Open Losses	CWOP Losses	Total Losses
Wise County	$143,551	9	0	0	9
City of Alvord	$0	0	0	0	0
City of Bridgeport	$135,000	4	0	0	4
City of Chico	$0	0	0	0	0
City of Paradise	$0	0	0	0	0
City of Runaway Bay	$0	0	0	0	0

Source: http://bsa.nfipstat.com/reports/1040.htm

Types and Numbers of Repetitive Loss Properties The National Flood Insurance Program structures that have been repetitively damaged in floods have been assessed within Wise County HazMAP and, provide a basis for addressing overall participating jurisdiction vulnerability in the terms of types and numbers of repetitive loss properties located within the identified hazard areas.

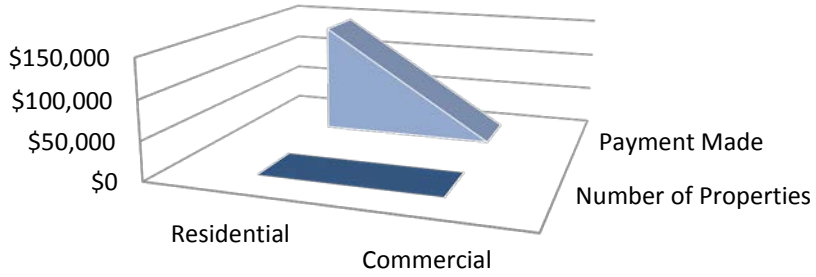
The following chart provides an overview for the entire planning area and subsequent charts provide specific information for types and numbers of repetitive loss properties.



	Residential	Commercial
Number of Properties	5	1
Payment Made	$221,057.00	$57,494.00

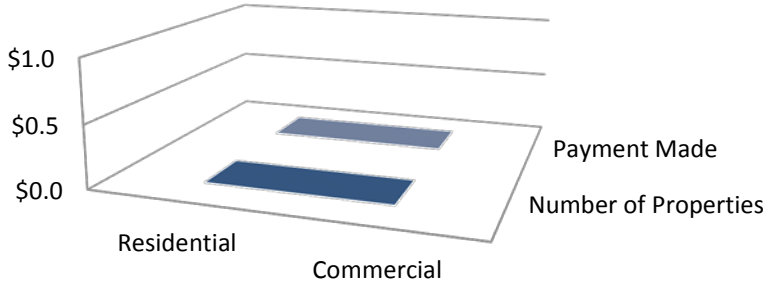
Jurisdiction Repetitive Loss Properties The following tables demonstrate the number and type of structures for each jurisdiction which are known to be repetitive loss properties as defined by FEMA in the Wise County Hazard Mitigation Action Plan.

Unincorporated County Repetitive Loss Payments



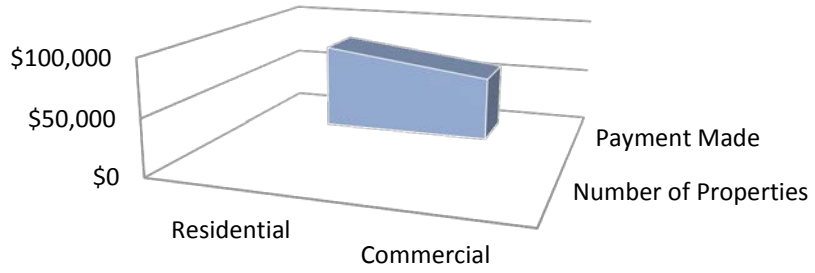
	Residential	Commercial
Number of Properties	4	0
Payment Made	$143,551.00	$0.00

City of Alvord Repetitive Loss Payments



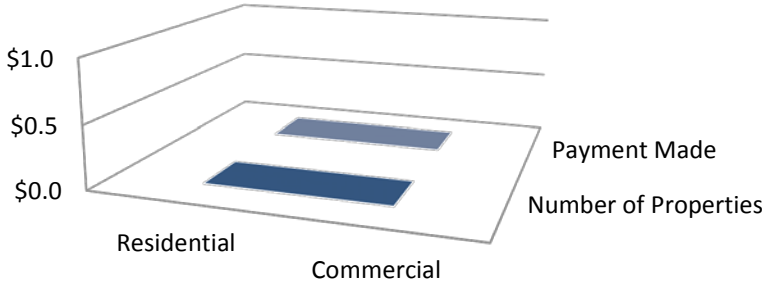
	Residential	Commercial
Number of Properties	0	0
Payment Made	$0.00	$0.00

City of Bridgeport Repetitive Loss Payments



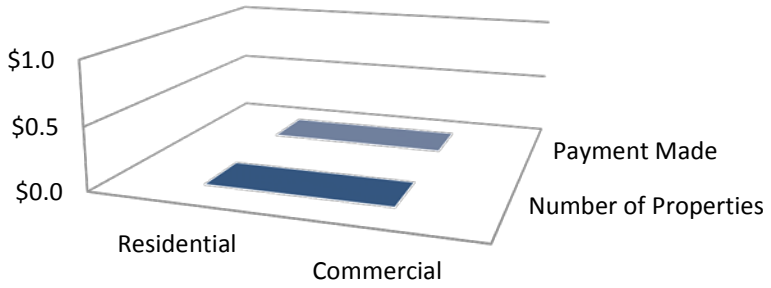
	Residential	Commercial
Number of Properties	1	1
Payment Made	$77,506.00	$57,494.00

City of Chico Repetitive Loss Payments



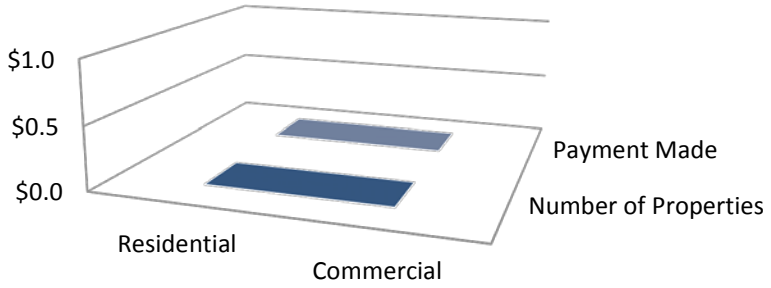
	Residential	Commercial
Number of Properties	0	0
Payment Made	$0.00	$0.00

City of Paradise Repetitive Loss Payments



	Residential	Commercial
Number of Properties	0	0
Payment Made	$0.00	$0.00

City of Runaway Bay Repetitive Loss Payments



	Residential	Commercial
Number of Properties	0	0
Payment Made	$0.00	$0.00

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Chapter Four: Mitigation Goals and Action Items

(In compliance with 201.6(c)(3), 201.6(c)(3)(i), 201.6(c)(3)(ii), 201.6(c)(3)(iii), & 201.6(c)(4)(ii))

Chapter Four of the Wise County Hazard Mitigation Action Plan (HazMAP) describes each participating jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand and improve on these existing tools. By participating in the HazMAP, each jurisdiction currently has the necessary authorities, policies, programs, and resources necessary to fulfil the requirements of the plan. By participating in the plan, each jurisdiction has both the ability and willingness to expand and improve on the existing policies and programs.

Hazard mitigation goals are outlined for the HazMAP, and objectives are quantified through individual jurisdiction action items through which each participating jurisdiction plans to accomplish those objectives and reach goal completion. By participating in the plan, each jurisdiction will integrate the requirements of the plan into other planning mechanisms, including but not limited to comprehensive or capital improvement plans, whenever appropriate, as dictated by local policies and procedures.

The chapter identifies specific and identifiable action items for each participating jurisdiction, laying out each action item and how it will be implemented and administered, to include the responsible department, existing and potential funding sources, and the timeframe in which each item will be completed. The action items also present a cost benefit review statement and demonstrate the priority of emphasis on each action item by that particular jurisdiction.

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4.1 Goals

The Wise County Hazard Mitigation Action Plan cooperatively assessed the mitigation goals of the participating jurisdictions. The following goals and objectives were identified:

Goal 1 Reduce or eliminate loss of life and property damage resulting from severe weather events.

Objective 1-A Provide adequate warning and communication before, during, and after a hazard event
Objective 1-B Expand and coordinate Early Warning Systems currently in use
Objective 1-C Reduce or eliminate loss of life and property damage from tornados through the construction and use of safe rooms or shelter areas

Goal 2 Protect existing and new properties from the effects of all natural hazards.

Objective 2-A Conduct studies to determine hazard and vulnerability threat assessment for all natural hazards
Objective 2-B Rehabilitate or retrofit identified high hazard critical infrastructure.
Objective 2-C Enact and enforce regulatory measures that enforce hazard mitigation measures
Objective 2-D Construct enhancements or additions to current and new facilities which mitigate the effects of natural hazards
Objective 2-E Maintain NFIP compliance, storm water management, and implement drainage projects

Goal 3 Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

Objective 3-A Conduct a hazard/vulnerability assessment of personal properties and structures located in flood zones within Wise County
Objective 3-B Develop and implement a buyout program for those personal properties and structures located in high hazard flood zones starting with those that are most vulnerable to life and property loss
Objective 3-C Develop and execute new programs which identify and reduce threats from natural hazards.

Goal 4 Develop Public Education Campaigns to educate the public on what actions they can take to mitigate the effects of loss of life or property damage resulting from all natural hazards

Objective 4-A Educate the public on risks, threats, and vulnerability from all natural hazards
Objective 4-B Educate the public on actions they can take to prevent or reduce the loss of life or property from all natural hazards
Objective 4-C Develop and implement a community education campaign to heighten public awareness about chronic flooding and options for insurance coverage to protect their personal properties as well as long term benefits from a buyout program

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4.2 Action Items

Each participating jurisdiction's Hazard Mitigation Team (HMT) in the Wise County Hazard Mitigation Action Plan collaboratively created action items based upon the direction of the city as identified in capital improvement plans and special projects within each city department, as well as identified new mitigation action items within the Hazard Mitigation Action Plan. The HazMAP addresses how the actions will be implemented and administered, including the responsible department, existing and potential resources, and the timeframe to complete each action. The format for the Action Items follows this guideline and addresses the following areas:

1. Action Item Title
2. Hazard(s) Addressed
3. Goal
4. Priority
5. Estimated Cost
6. Potential Funding Sources
7. Lead Agency/Department Responsible
8. Implementation Schedule
9. Effect on New Buildings
10. Effect on Existing Buildings
11. Cost Effectiveness
12. Discussion

Hazard Mitigation Team representatives collaborated as a Hazard Mitigation Action Plan through the North Central Texas Council of Governments (NCTCOG) to further analyze the mitigation needs as a county.

Cost Benefit Review, Priorities As specified by C.F.R. §201.6(c)(3)(iii), the prioritization also includes a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed project and their associated costs for each jurisdiction. The comprehensive range of specific mitigation actions and projects being considered in the Wise County HazMAP have been determined by each of the Hazard Mitigation Teams. As a part of the prioritization process, there was an emphasis on the use of a cost-benefit review to maximize benefits. The cost-benefit review as a part of determining the priority was based on the evaluation criteria used in current planning mechanisms, public approval, feasibility, and political implications. The priorities were further determined by the Hazard Mitigation Teams by examining available jurisdictional funding, local priorities, economic impact, and comparison to special projects, capital improvement plans, plans and studies, and the benefit of the mitigation action in comparison to another or to no action at all. Each mitigation action item for the participating jurisdictions was ranked as high, medium, or low priority based on these criteria.

High Priority	First level of project consideration based on evaluation criteria detailed above
Medium Priority	Second level of project consideration based on evaluation criteria detailed above
Low Priority	Third level of project consideration based on evaluation criteria detailed above

Action Item Aggregate Overview The Wise County Hazard Mitigation Action Plan action items are aggregated by hazard in order to present an overview of the hazards individually targeted for mitigation action items by each participating jurisdiction. The action items are listed below by each hazard the action item addresses. For each hazard presented, the participating jurisdiction's action items are listed alphabetically by jurisdiction.

Action Item Complete Listing The complete listing of each participating jurisdiction's action items is detailed below. Each action item addresses how the actions will be implemented and administered, including the responsible department, existing and potential resources, and the timeframe to complete

each action. The action item discussion also includes the jurisdiction's assessed priority according to the prioritization methodology utilized, as well as the results of the cost-benefit review.

See the following Table listings for the detailed action item descriptions.

Section 4.2.A – Unincorporated Wise County Action Items

Wise County Action Item	Develop and implement a comprehensive public education program for Wise County residents
Hazard(s) Addressed	Dam/Levee failure, Drought, Extreme Heat, Floods, Hailstorms, Tornadoes, Wildfire, Severe Winter Storms, High Winds, Earthquake, Lightning
Goal/Objective	4-A
Priority	Low
Estimated Cost	$4,000
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management
Implementation Schedule	1-2 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The costs associated with implementing a public education program are minimal and much less labor intensive than other mitigation actions that were considered.
Discussion	Project would develop a public education program based on the hazards listed in the Wise County HazMAP. This program would use civic group presentations, distributed literature, and social media to inform residents of the hazards that threaten Wise County, and the best ways to privately mitigate against them.

Wise County Action Item	Purchase and install CASA WX Radar.
Hazard(s) Addressed	Tornados, High Winds, Hail, Winter Storm, Wildfire, Flooding, Dam Failure, Drought
Goal/Objective	1-A, 1-B, 2-E
Priority	Medium
Estimated Cost	$2.5 million
Potential Funding Sources	HMGP, PDM, County budget
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	Emergency Management
Implementation Schedule	1-2 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits.
Discussion	The CASA radars provide jurisdictions more accurate weather data and geographically specific weather data culled from the most active levels of the atmosphere. This data could save lives by providing the public more time to react and prepare appropriately as severe weather affects their location.

Wise County Action Item	Retrofit an existing county structure to serve as a hardened county emergency operations center.
Hazard(s) Addressed	Dam failure, Extreme Heat, Floods, Hailstorms, Tornadoes, Wildfire, Severe Winter Storms, High Winds, Drought, Earthquake, Lightning
Goal/Objective	2-B, 2-D
Priority	High
Estimated Cost	$1-$3 Million
Potential Funding Sources	HMGP, PDM, County budget, other federal/state grants
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	Emergency Management, county commissioners
Implementation Schedule	2-3 years
Effect on New Buildings	None
Effect on Existing Buildings	Reduce impacts of natural hazards to structure and people inside
Cost Effectiveness	Retrofitting a building currently in place, as opposed to constructing a new building, would save time and money.
Discussion	Structure would be retrofitted to mitigate impacts of tornadoes, flooding, hail, wildfire, severe winter storms, earthquake, dam failure, drought, extreme heat, and high winds. Hardening to include: roof brackets, impact/force resistant windows/doors, lightning protection, high rated insulation, water conservation plumbing, foundation modifications, fire/hail resistant roofing.

Wise County Action Item	Increase the ability of residents and businesses to receive early warning and hazard information from the National Weather Service. This would be accomplished by purchasing and distributing NOAA All Hazard Radios to each household and business in the county.
Hazard(s) Addressed	Dam/Levee failure, Drought, Extreme Heat, Floods, Hailstorms, Tornadoes, Wildfire, Severe Winter Storms, High Winds, Earthquake, Lightning
Goal/Objective	1-B
Priority	High
Estimated Cost	$700,000
Potential Funding Sources	County Budget, Grant Funds, HMPG, PDM, Partial payment by receiving party
Potential Matching Sources	Local funds, in-kind, donations, citizen cost-share
Lead Department	Emergency Management
Implementation Schedule	1-2 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Advanced warning saves lives, which outweighs the cost of the radios.
Discussion	NOAA weather radios primarily distribute advanced warning about incoming severe weather and hazardous events. However, NOAA radios also deliver information about other hazards, including extreme heat, earthquakes, and drought.

Wise County Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program.
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C
Priority	Medium
Estimated Cost	Up to $3,000 per shelter, number of shelters TBD
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management
Implementation Schedule	Within 2 years of funding
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reduction in personal injuries or deaths.
Discussion	This program would be used to provide rebates to resident who install severe weather safe rooms in their homes or on their property. Severe weather shelters are able to withstand tornados, and high winds, protecting lives and personal property.

Wise County Action Item	Harden county-owned structures that are identified as vulnerable to natural hazards
Hazard(s) Addressed	Dam/Levee failure, Drought, Floods, Hailstorms, Tornadoes, Severe Winter Storms, High Winds, Earthquake
Goal/Objective	2-B
Priority	Low
Estimated Cost	To be determined
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management
Implementation Schedule	2-4 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Hardening structures against natural hazards will reduce losses to life and property in the future.
Discussion	Prior to this action, a survey would be conducted on all county-owned facilities to determine vulnerability to all hazards listed in the Wise County HazMAP. Structures would then be mitigated against all deficiencies identified in the survey. Examples include installing low-flow plumbing to mitigate against drought, or installing stormproof windows and doors to mitigate against severe weather hazards.

Wise County Action Item	Develop and implement a tree-trimming program to minimize amount of debris generated during severe weather events.
Hazard(s) Addressed	Tornado, High Winds, Winter Storms, Wildfire
Goal/Objective	2-D
Priority	High
Estimated Cost	Unknown
Potential Funding Sources	County Budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	County Public Works
Implementation Schedule	18-24 months after funding
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	Tree branches can impact power-lines during high wind, winter storm, or tornado events. Large collections of debris can add fuel to a potential wildfire event. This annual project would identify trees that are too close to power-lines and, based on individual variables of each location, either remove the tree, remove the tree, trim the branches that are tangled with the power lines, or tag the tree to monitor its growth.

Wise County Action Item	Develop an extreme temperature program that identifies both public and private safe locations for residents to go to during periods of extreme temperatures.
Hazard(s) Addressed	Extreme Heat, Winter Storms
Goal/Objective	2-A
Priority	Low
Estimated Cost	Staff time and resources
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management, CERT
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	Using funds, the county would open the identified buildings as shelters during times of extreme temperature events. Heating and Cooling shelters would allow threatened populations to reduce their vulnerability to extreme temperature events, protecting lives.

Wise County Action Item	Partner with non-profit organizations for distribution of fans/air conditioner units/space heaters, checking on vulnerable residents, and notification of shelter locations.
Hazard(s) Addressed	Extreme Heat, Winter Storms
Goal/Objective	2-A
Priority	Low
Estimated Cost	$50 per fan/heater
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management, CERT
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	Wise County would partner with local NGOs and VOADs to distribute fans and space heaters to local special populations identified by individual organizations. The county would purchase then fans/heaters and the organizations would distribute the fans/heaters, along with distributing public education information about extreme heat and winter storms. Residents would also be told of their nearest temperature shelter.

Wise County Action Item	Implement a targeted fuel load reduction campaign to reduce the potential for wildland-urban interface fires.
Hazard(s) Addressed	Wildfire
Goal/Objective	2-A
Priority	Medium
Estimated Cost	$300,000
Potential Funding Sources	HMGP, PDM, Texas Forest Service grants, County budget
Potential Matching Sources	Local funds, in-kind
Lead Department	Fire Marshal's Office
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	A targeted fuel campaign lowers the WUI index and lowers the risk of wildfire.

Wise County Action Item	Develop a Community Wildfire Protection Plan.
Hazard(s) Addressed	Wildfire
Goal/Objective	2-A
Priority	High
Estimated Cost	50,000
Potential Funding Sources	County budget, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	Fire Marshal
Implementation Schedule	1-2 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	A community wildfire protection plan would be the first of its kind in North Central Texas. This would allow Wise County to remain at the forefront of wildfire mitigation.

Wise County Action Item	Limit loss of property and life from wildfire by educating citizens in the WUI in regards to defensible space and buffer zones.
Hazard(s) Addressed	Wildfire
Goal/Objective	4-A
Priority	High
Estimated Cost	$30,000
Potential Funding Sources	County Budget, HMGP, PDM
Potential Matching Sources	County budget, donations, in-kind
Lead Department	Fire Marshal, Emergency Management
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Promoting citizen awareness saves money in response and recovery, along with first responder time, and effort.
Discussion	Wildfire has proven to be a formidable threat in Texas. Research shows that precautions such as fuels mitigation and the creation of buffer zones are proven to save lives and property.

Wise County Action Item	Create a Storm water Management Plan.
Hazard(s) Addressed	Flooding
Goal/Objective	3-A
Priority	High
Estimated Cost	Staff time
Potential Funding Sources	County budget, HMGP, other grants
Potential Matching Sources	Local funds, in-kind
Lead Department	County Public Works
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	Developing a storm water management plan would update policies and procedures currently in place to better manage storm water, preventing flooding. Additional projects would be created based on the storm water plan.

Wise County Action Item	Develop a buyout program for repetitive flood loss areas within the county.
Hazard(s) Addressed	Flooding
Goal/Objective	3-B
Priority	High
Estimated Cost	TBD
Potential Funding Sources	County Budget, HMGP
Potential Matching Sources	Local funds, in-kind
Lead Department	Emergency Management, Floodplain Manager, Commissioners
Implementation Schedule	2-3 years
Effect on New Buildings	None
Effect on Existing Buildings	Homes in the floodplain would be eligible to be bought out.
Cost Effectiveness	Buying out properties and removing structures is more cost effective than paying for loss and repairs and reduces the risk to first responders.
Discussion	This program would target repetitive loss and severe repetitive loss properties within the county. Wise County would purchase those properties at fair market value and demolish any structures in the floodplain. The property would remain under the control of Wise County until a suitable use is found.

Wise County Action Item	Retrofit drainage issues on identified low-water crossings.
Hazards Addressed	Flooding
Goal/Objective	3-C
Priority	High
Estimated Cost	TBD
Potential Funding Sources	HMGP, PDM, county budget
Potential Matching Sources	Local funds, in-kind
Lead Department	County Engineer
Implementation Schedule	18-24 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The cost of the project will be low compared to the amount of money and lives saved by improving drainage in the county.
Discussion	Through a study, additional low-water crossings would be identified. This action would be to solve the flooding issues identified in these areas.

Wise County Action Item	Hire a consultant to complete a dam inundation study, safety study, and inventory of mitigation activities to implement for the county dams.
Hazard(s) Addressed	Dam Failure
Goal/Objective	3-A
Priority	Medium
Estimated Cost	$150,000
Potential Funding Sources	County budget, HMGP
Potential Matching Sources	Local funds, in-kind
Lead Department	Floodplain Manager, Emergency Management
Implementation Schedule	Within two years of funding
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Identifying weaknesses now would save lives and money.
Discussion	Based on the data deficiency identified in Chapter 3. Conducting a thorough study would give better understanding of structural integrity and inundation to identify further areas of potential mitigation efforts. This information would in turn lead to future mitigation projects based on the findings.

Wise County Action Item	Educate downstream property owners in the benefits of participating in the National Flood Insurance Program.
Hazard(s) Addressed	Dam Failure
Goal/Objective	4-C
Priority	Medium
Estimated Cost	Minimal
Potential Funding Sources	County budget, HMGP
Potential Matching Sources	Local funds, in-kind
Lead Department	Floodplain Manager
Implementation Schedule	3 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	This project would distribute NFIP literature to residents vulnerable to dam failure to educate them on the benefits of NFIP.

Section 4.2.B – Alvord Action Items

City of Alvord Action Item	Implement telephone-based early warning and information-distribution system for city residents
Hazard(s) Addressed	Tornado, High Winds, Hail, Winter Storm, Wildfire, Flooding, Dam Failure, Extreme Heat, Drought, Earthquake, Lightning
Goal/Objective	1-A
Priority	High
Estimated Cost	$5,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Emergency Management
Implementation Schedule	12 months
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The costs estimated for this project are insignificant in comparison to the opportunity to warn our citizens more effectively of impending dangers associated with weather and natural disasters.
Discussion	An automated telephone-based warning system would notify residents about any imminent hazards that could threaten life and/or property. System could also be used for distribution of information about natural hazards.

City of Alvord Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program.
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C
Priority	Medium
Estimated Cost	50% of (up to) $2,500 per shelter. Number of shelters to be determined.
Potential Funding Sources	HMGP, PDM, City budget, Homeowner
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	Within two years of funding
Effect on Old Buildings	This action will improve the safety of existing homes with either in- ground or in-house shelters.
Effect on New Buildings	This action will improve the safety of new homes with either in-ground or in-house shelters.
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reduction in personal injuries or death.
Discussion	This program would give rebates to individuals who install storm shelters and safe rooms on their property or in their homes. Residential safe room sheltering can decrease potential personal injuries or deaths in the event of a tornado or high wind event.

City of Alvord Action Item	Adopt more stringent building codes requiring mitigation measures on all new construction.
Hazard(s) Addressed	Tornado, High Winds, Winter Storms, Wildfire, Hail, Extreme Heat, Winter Storms, Flood, Drought, Earthquake, Lightning
Goal/Objective	2-C
Priority	Low
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Potential Matching Sources	NA
Lead Department	Code Enforcement
Implementation Schedule	12-18 months
Effect on Old Buildings	If retrofitted, prolong effective life of existing structures, protect occupants.
Effect on New Buildings	Prolong effective life of new structures, protect occupants
Cost Effectiveness	This project will prove cost effective through keeping structures inhabitable as well as improving property values.
Discussion	Alvord will adopt and enforce codes for structures at the time of construction. These additions will protect life and property. These measures include hail-resistant roofing and windows; wind and impact resistant doors, windows, and roofing ; wildfire breaks and fire resistant building materials; stricter foundation standards for earthquake and expansive soils; increased elevation (BFE) standards for flooding; higher grade insulation to mitigate extreme heat and winter weather; and resource-efficient (low-flow) plumbing for drought. Also, additional codes for dry-proofing and lightning protection (rods, grounding) for public buildings to mitigate flood and lightning.

City of Alvord Action Item	Partner with local electric delivery provider to identify and minimize threats to electric infrastructure.
Hazard(s) Addressed	Tornado, High Winds, Winter Storms, Wildfire
Goal/Objective	2-D
Priority	Medium
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Potential Matching Sources	None
Lead Department	Emergency Management
Implementation Schedule	1 year
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The minimal cost of staff time would be returned tenfold through our efforts to mitigate potential threats to our utility system.
Discussion	Tree branches can impact power-lines during high wind, winter storm, or tornado events. This can lead to a potential wildfire event. This project would identify trees that are too close to power-lines and, based on individual variables of each location, either remove the tree, remove the tree, trim the branches that are tangled with the power lines, or tag the tree to monitor its growth.

City of Alvord Action Item	Minimize effect of winter storms on essential city services by creating redundancies within the utility system, such as second sources of power and sufficient bypasses and looping in fresh water systems.
Hazard(s) Addressed	Winter Storms
Goal/Objective	2-D
Priority	Medium
Estimated Cost	$150,000
Potential Funding Sources	State and Federal grants, City budget
Potential Matching Sources	City budget, in-kind, donations
Lead Department	Public Works
Implementation Schedule	2 years
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The return on the investment from this project would be evident for years to come. It could be seen in limiting loss of revenue through utility billing, ability to maintain fire protection during freezing temperatures and power outages, as well as maintaining the public health through sanitation.
Discussion	Purchase a generator to serve as emergency backup power source. This project has been identified as a need by city administration in years past. Given the cost of this project it has been unattainable thus far. It remains an important goal for our city.

City of Alvord Action Item	Establish a plan and protocol to ensure for health and safety of the vulnerable population during extended periods of extreme cold temperatures. Including implementation of a public warming center as well as a mass notification when it is activated.
Hazard(s) Addressed	Winter Storms
Goal/Objective	1-A
Priority	Medium
Estimated Cost	$45,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Emergency Management
Implementation Schedule	1 year upon funding
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The estimated cost of this project is minimal when compared to the lives of our citizens. The project would continue to serve us for ten to twenty years with only minimal maintenance costs.
Discussion	Alvord is a community with a definite need for an established warming station. Based on the number of meals on wheels participants within the city, there is evidence of a population that can't care for themselves in the event of a power failure or simply extreme temperatures that might overwhelm a citizen's normal means of staying warm.

City of Alvord Action Item	Provide a distribution and gathering point for community service organizations that provide fans and ac units for those in need.
Hazard(s) Addressed	Extreme Heat
Goal/Objective	2-D
Priority	Medium
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Potential Matching Sources	N/A
Lead Department	City Council
Implementation Schedule	6 months
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The small cost of this project could make a significant positive impact on the lives of our citizens with limited financial resources and means of combatting high temperatures.
Discussion	This project will benefit the vulnerable population of Alvord by providing both a gathering point as well as distribution center for those in need.

City of Alvord Action Item	Develop a contingency plan for catastrophic well failure, aquifer depletion, or other water delivery emergency to maintain a safe and dependable water supply for the city.
Hazard(s) Addressed	Drought, Dam Failure
Goal/Objective	2-C
Priority	Medium
Estimated Cost	$20,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Public Works
Implementation Schedule	Two years upon funding
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The cost of study would be minimal in comparison to the revenue loss and health concerns associated with a failed water supply.
Discussion	The City of Alvord is completely dependent upon groundwater from city owned wells. This emphasizes the need for such a plan. Earthquake planning would be included as an event could have an impact on residential water delivery.

City of Alvord Action Item	Create a Storm Water Management Program
Hazard(s) Addressed	Flooding
Goal/Objective	3-A
Priority	High
Estimated Cost	Staff time
Potential Funding Sources	General Fund, HMGP, other grants
Potential Matching Sources	Local funds, in-kind
Lead Department	Public Works
Implementation Schedule	12-18 months
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	Cost to implement this program is low compared to the benefits of program.
Discussion	Program would create a better understanding of flooding patters and allow for identification of future mitigation projects.

City of Alvord Action Item	Install drainage and waterways on city properties and right-of-ways to minimize flash flooding during heavy precipitation.
Hazard(s) Addressed	Flooding
Goal/Objective	2-B
Priority	Medium
Estimated Cost	$20,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Public Works
Implementation Schedule	1 year upon funding.
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The cost associated with this project would be justified if even one structure avoids damage through these actions.
Discussion	The city of Alvord has had street level flash flooding issues for years. This project would be an opportunity to mitigate those problem areas.

City of Alvord Action Item	Develop and implement a public education campaign to inform citizens about measures they can take to mitigate against the impacts of drought and dam failure
Hazard(s) Addressed	Drought, Dam Failure
Goal/Objective	4-A, 4-B, 4-C
Priority	Medium
Estimated Cost	$10,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Emergency Management
Implementation Schedule	One year upon funding
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The estimated cost would quickly be recovered through preservation of city wells and avoidance of cost associated with secondary water sources; money cannot replace loss of life from dam failure
Discussion	The City of Alvord is completely dependent upon ground water from city owned wells, making water conservation a serious concern. Mitigation measures for dam failure could save lives and/or prevent serious injuries.

City of Alvord Action Item	Purchase and install CASA WX Radar.
Hazard(s) Addressed	Tornado, High winds, hail, winter storm, wildfire, flooding, dam failure
Goal/Objective	1-A
Priority	Medium
Estimated Cost	$2.5 million
Potential Funding Sources	HMGP, PDM, County budget
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	City Council
Implementation Schedule	1-2 years
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits.
Discussion	The CASA WX radars provide jurisdictions more accurate weather data and geographically specific weather data culled from the most active levels of the atmosphere. This data could save lives by providing the public more time to react and prepare appropriately as severe weather affects their location.

City of Alvord Action Item	Limit loss of property and life from wildfire by educating citizens in the WUI in regards to defensible space and buffer zones.
Hazard(s) Addressed	Wildfire
Goal/Objective	4-A
Priority	Medium
Estimated Cost	$2,000 in postage and media, plus staff time
Potential Funding Sources	State and Federal grants
Potential Matching Sources	City Budget
Lead Department	Emergency Management, FD
Implementation Schedule	2 years upon funding
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	Costs of this project would be offset if it was to succeed in saving even one structure from wildfire.
Discussion	Wildfire has proven to be a formidable threat in Texas. Research shows that precautions such as fuels mitigation and the creation of buffer zones are proven to save lives and property.

City of Alvord Action Item	Improve communication with citizens regarding high fire danger days as well as notification of existing wildfire threats through existing mass notification system and social media.
Hazard(s) Addressed	Wildfire
Goal/Objective	1-A, 1-B
Priority	Medium
Estimated Cost	$10,000
Potential Funding Sources	State and Federal Grants
Potential Matching Sources	City Budget
Lead Department	Emergency Management, FD
Implementation Schedule	1 year upon funding
Effect on Old Buildings	none
Effect on New Buildings	none
Cost Effectiveness	The cost of this project would cover improvement of the existing mass notification database as well as website development. These costs would be easily justified through the lives and property saved through education and early warning.
Discussion	Notification of high fire danger and red flag days can have a significant effect on citizen decision making that will prevent wildfire. Early notification of confirmed wildfires can be the difference in life or death. When evacuation occurs early, firefighters are compelled to take less risks to protect their citizens.

Section 4.2.C – Bridgeport Action Items

City of Bridgeport Action Item	Improve early warning and public information capabilities by purchasing and implementing a telephone-based mass notification system.
Hazard(s) Addressed	Tornado, High Winds, Hail, Winter Storm, Flooding, Dam Failure, Drought, Extreme Heat, Wildfire, Earthquake, Lightning
Goal/Objective	1-A
Priority	Low
Estimated Cost	$15,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	Police Department
Implementation Schedule	Less than three months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The Blackboard Connects system is inexpensive but valuable in contacting numerous citizens in a short amount of time.
Discussion	The Blackboard system is a low-cost effective tool to reach many citizens to warn them about imminent events or provide information about natural hazards.

City of Bridgeport Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program.
Hazard(s) Addressed	Tornado, High Winds, Hail
Goal/Objective	1-C
Priority	Medium
Estimated Cost	50% of (up to $3,000 per shelter). Number of shelters to be determined
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	Emergency Management/City Building Inspections
Implementation Schedule	Within two years of funding.
Effect on Old Buildings	This action will improve the safety of new homes with either in-ground or in-house shelters.
Effect on New Buildings	This action will improve the safety of new homes with either in-ground or in-house shelters.
Cost Effectiveness	The cost is low compared to the potential loss of life or serious injury.
Discussion	This program would offer rebates to city residents that purchase and install storm shelters on their property. Residential safe room sheltering can decrease potential personal injuries or deaths in the event of a tornado, high wind, or hail event.

City of Bridgeport Action Item	Purchase and install additional outdoor early warning sirens in areas of new development.
Hazard(s) Addressed	Tornado, High Winds, Hail, Winter Storm, Flooding, Dam Failure, Wildfire
Goal/Objective	1-B
Priority	Medium
Estimated Cost	$40,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	City Electric Department/Emergency Management
Implementation Schedule	Within six months of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost effectiveness is found in the ability to save lives by warning people early to take the appropriate action during hazard events.
Discussion	Bridgeport is expanding at a rapid pace. By purchasing new sirens and installing them at locations currently under development, new residents will have their long-term vulnerability lowered immediately. This project will protect lives by alerting people early to imminent hazard events.

City of Bridgeport Action Item	Develop and implement a tree-trimming program to minimize amount of debris generated during severe weather events.
Hazard(s) Addressed	Tornado, High Winds, Winter Storms, Wildfire, Lightning
Goal/Objective	2-D
Priority	High
Estimated Cost	$150,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	City Electric Department
Implementation Schedule	Three months after funding is allocated.
Effect on Old Buildings	Provide for reduced electric supply to residences and commercial buildings, thus saving downtime for businesses and the loss of revenue.
Effect on New Buildings	Provide for reduced electric supply to residences and commercial buildings, thus saving downtime for businesses and the loss of revenue.
Cost Effectiveness	Derived from delivering dependable electric service to consumers, such as hospitals, clinics, nursing homes, traffic signals and commercial businesses and mitigating the potential for personal injury or death because of the lapse of electric service.
Discussion	Tree branches can impact power-lines during high wind, winter storm, or tornado events. This can lead to a potential wildfire event. This annual project would identify trees that are too close to power-lines and, based on individual variables of each location, either remove the tree, remove the tree, trim the branches that are tangled with the power lines, or tag the tree to monitor its growth.

City of Bridgeport Action Item	Adopt and enforce the most recent version of International Residential Building Code requirements for all new property developments to raise current code standards.
Hazard(s) Addressed	Tornado, High Winds, Hail, Winter Storm, Flooding, Dam Failure, Drought, Extreme Heat, Wildfire, Earthquake
Goal/Objective	2-C
Priority	Low
Estimated Cost	TBD
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	Building and Code Inspections
Implementation Schedule	12-18 months
Effect on Old Buildings	Old buildings may be adapted or remodeled to meet certain standards
Effect on New Buildings	Ensures proper construction.
Cost Effectiveness	Upfront costs negligible compared to life safety and reduced property damage benefits
Discussion	Building standards are important tools in mitigating hazard events. If buildings are built to comply with the latest building standards, property damage and injuries from hazards will be mitigated. These measures include hail-resistant roofing and windows; wind and impact resistant doors, windows, and roofing ; wildfire breaks and fire resistant building materials; stricter foundation standards for earthquake and expansive soils; increased elevation (BFE) standards for flooding; higher grade insulation to mitigate extreme heat and winter weather; and resource-efficient (low-flow) plumbing for drought. Also, additional codes for dry-proofing and lightning protection (rods, grounding) for public buildings to mitigate flood, dam failure and lightning.

City of Bridgeport Action Item	Construct Bridge at Low-Water Crossing on Turkey Creek Trail.
Hazard(s) Addressed	Flooding
Goal/Objective	2-D
Priority	High
Estimated Cost	$250,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind, donations
Lead Department	Public Works/City Engineer
Implementation Schedule	Within six months of receiving funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost effectiveness derived by preventing motorist from driving into a flooded low water crossing that has the potential for causing drowning or injury.
Discussion	This low water crossing is on a major east-west connector street that carries motorist from central Bridgeport to State Highway 114. By construction a bridge over Turkey Creek to replace the old low water crossing has the potential to save lives and reduce the possibility of drowning during flooding.

City of Bridgeport Action Item	Rebuild Turkey Creek Trail from 9th Street to State Highway 114.
Hazard(s) Addressed	Flooding
Goal/Objective	2-D
Priority	High
Estimated Cost	$1,250,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	City Engineer/Public Works
Implementation Schedule	Within six months after receiving funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost effectiveness derived by preventing motorist from driving into a flooded low water crossing that has the potential for causing drowning or injury.
Discussion	Turkey Creek Trail is on a major east-west connector street that carries motorist from central Bridgeport to State Highway 114. This roadway is an inadequately constructed roadway that lies in the floodplain. By rebuilding this roadway, improving elevation and drainage will reduce the potential of drowning during flooding.

City of Bridgeport Action Item	West Bridgeport Creek Channelization and Drainage Project.
Hazard(s) Addressed	Flooding
Goal/Objective	2-D
Priority	High
Estimated Cost	$150,000
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	City Engineer/ Public Works
Implementation Schedule	With six months after funding has been allocated.
Effect on Old Buildings	Would prevent potential flooding of some residences.
Effect on New Buildings	None
Cost Effectiveness	Cost effectiveness derived from preventing injuries or death due to flooding and eliminating the possibility of people from driving into flooded low water crossings.
Discussion	This area of west Bridgeport floods several times annually, many times leaving residents stranded. By improving the creek channel, low water crossings and improving street drainage will reduce the risk of accidents, injuries or deaths caused by flooding.

City of Bridgeport Action Item	Adopt and enforce water conservation codes for drought events
Hazard(s) Addressed	Drought
Goal/Objective	2-C
Priority	Low
Estimated Cost	TBD
Potential Funding Sources	General Fund
Potential Matching Sources	Local funds
Lead Department	Building and Code Inspections
Implementation Schedule	6-12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Local policies are inexpensive to develop and implement and save money exponentially.
Discussion	This action would create water conservation ordinances to prevent overuse of water during times of drought.

City of Bridgeport Action Item	Purchase and install a CASA WX Weather Radar System
Hazard(s) Addressed	Tornado, High Winds, Hail, Winter Storm, Flooding, Dam Failure
Goal/Objective	1-A, 1-B, 4-E
Priority	Medium
Estimated Cost	$2.5 Million
Potential Funding Sources	General Fund, HMGP, PDM
Potential Matching Sources	Donations, local funds, in-kind
Lead Department	Emergency Management
Implementation Schedule	1-2 years
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost effectiveness is derived from the ability to accurately track tornados and warn people early to prevent the loss of life or personal injury.
Discussion	The accurate tracking of severe storms or tornados aids in the early warning system to prevent injury or death to citizens.

Section 4.2.D – Chico Action Items

City of Chico Action Item	Develop and implement a comprehensive public education programs for presentation to residents and civic groups.
Hazard(s) Addressed	Drought, Extreme Heat, Flooding, Hail, High Winds, Tornado, Wildland Fire, Winter Storm, Dam Failure, Earthquake, Lightning
Goal/Objective	4-A, 4-B
Priority	Medium
Estimated Cost	$2,000
Potential Funding Sources	City budget, Public and Private grants, donations
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	12-18 months
Effect on Old Buildings	Programs will identify potential mechanisms to retrofit existing structures from severe weather hazards.
Effect on New Buildings	Programs will identify potential mechanisms to mitigate severe weather hazards in new construction.
Cost Effectiveness	Costs for public education programs are minimal compared to benefits.
Discussion	This project would develop a public education program based on the hazards identified in this HazMAP.

City of Chico Action Item	Purchase and install early warning sirens in areas of new development.
Hazard(s) Addressed	Flooding, Hail, High Winds, Tornado, Wildland Fire, Winter Storm
Goal/Objective	1-B
Priority	Medium
Estimated Cost	$10,000
Potential Funding Sources	HGMP, PDM, DHS, NWS funds, City budget
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The ability to save lives by warning people to take appropriate action during a hazard event is very cost effective.
Discussion	In order to protect the expanding population of Chico, this project would be to purchase and install early warning sirens in areas of new development within the city borders. By purchasing the sirens before development is completed, new residents will have their vulnerabilities reduced immediately upon move-in.

City of Chico Action Item	Create cooling centers and warming centers to allow citizens, especially vulnerable populations, to seek refuge from extreme hot and cold temperatures.
Hazard(s) Addressed	Extreme Heat, Winter Storm
Goal/Objective	2-D
Priority	Medium
Estimated Cost	To be determined by market
Potential Funding Sources	HGMP, PDM, City budget
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	12-18 months
Effect on Old Buildings	City to identify current city owned facilities that could be utilized.
Effect on New Buildings	None
Cost Effectiveness	Cost will be minimal by using existing city owned facilities.
Discussion	Cooling and warming centers need to be created to help protect the vulnerable population in the community.

City of Chico Action Item	Distribute information to downstream property owners educating homeowners about the National Flood Insurance Program.
Hazard(s) Addressed	Flooding
Goal/Objective	2-C, 4-C
Priority	High
Estimated Cost	Minimal cost for public education materials
Potential Funding Sources	City budget, grant funds, donations
Potential Matching Sources	General Fund
Lead Department	Code Enforcement
Implementation Schedule	3 months
Effect on Old Buildings	Purchase of NFIP policy assists property owners with recovery efforts following flooding disasters.
Effect on New Buildings	Purchase of NFIP policy assists property owners with recovery efforts following flooding disasters.
Cost Effectiveness	Cost is low compared to benefits from NFIP participation.
Discussion	The City of Chico participates in the NFIP and would work to encourage downstream property owners to do so by explaining the benefits of the program.

City of Chico Action Item	Install a community safe room at Chico City Hall that will be open to the staff and public.
Hazard(s) Addressed	Extreme Heat, Flooding, High Winds, Tornado, Wildland Fire, Winter Storm, Earthquake
Goal/Objective	1-C, 2-D
Priority	Medium
Estimated Cost	$50,000
Potential Funding Sources	HMGP, PDM, DHS, NWS funds, City budget, Private donations
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	One year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is offset by lives saved and injuries avoided.
Discussion	Installation of a community safe room at Chico City Hall will reduce the vulnerability of city residents by ensuring a reinforced location in the building for all in the event of a hazard incident.

City of Chico Action Item	Purchase four generators to ensure continued operation of critical infrastructure during and after severe weather events and other disasters.
Hazard(s) Addressed	Tornado, High Winds, Winter Storm, Earthquake, Extreme Heat, Flooding, Lightning
Goal/Objective	2-B
Priority	Medium
Estimated Cost	$250,000
Potential Funding Sources	HMGP, PDM, City budget
Potential Matching Sources	General Fund
Lead Department	Public Works
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	Upgrade critical infrastructure at existing city buildings.
Effect on New Buildings	None
Cost Effectiveness	Cost is low compared to loss of basic services and endangerment of life and property.
Discussion	The City of Chico wants to ensure that critical infrastructure continues to work during and after severe weather events and other disasters with little or no interruption of services.

City of Chico Action Item	Increase ability of Chico residents to receive early warning and special information about natural hazards by purchasing and distributing NOAA All Hazard Radios to each household and business in Chico.
Hazard(s) Addressed	Tornado, Hail, High Winds, Wildland Fire, Winter Storm, Extreme Heat, Flooding, Lightning, Drought, Earthquake, Dam Failure
Goal/Objective	1-A, 1-B
Priority	Medium
Estimated Cost	$25,000 with yearly costs
Potential Funding Sources	HMGP, PDM, DHS, NWS funds, Donations
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	Within two years of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The ability to save lives by warning people to take appropriate action during a severe weather or wildland fire event is very cost effective.
Discussion	The NOAA System is in place and working every day, households and businesses need to be able to get the information.

City of Chico Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program.
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C
Priority	Medium
Estimated Cost	50% of (up to) $2,500 per shelter. Number of shelters to be determined.
Potential Funding Sources	HMGP, PDM, City budget, Homeowner
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	Within two years of funding
Effect on Old Buildings	This action will improve the safety of existing homes with either in- ground or in-house shelters.
Effect on New Buildings	This action will improve the safety of new homes with either in-ground or in-house shelters.
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reduction in personal injuries or death.
Discussion	Residential safe room sheltering can decrease potential personal injuries or deaths in the event of a tornado, or high winds event.

City of Chico Action Item	Harden and retrofit the current fire station to serve as the city EOC.
Hazard(s) Addressed	Drought, Earthquake, Extreme Heat, Flooding, Hail, High Winds, Tornado, Wildland Fire, Winter Storm, Dam Failure
Goal/Objective	2-B
Priority	Medium
Estimated Cost	$60,000
Potential Funding Sources	HMGP, PDM, City budget
Potential Matching Sources	General Fund
Lead Department	Fire Department/Emergency Management
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	Existing fire station will be hardened and retrofitted to protect and mitigate against natural hazards.
Effect on New Buildings	None
Cost Effectiveness	Cost is minimal compared to protection of First Responders, equipment and data.
Discussion	Structure would be retrofitted to withstand Tornado, Earthquakes, flooding, hail, wildfire, severe winter storms, and high winds. Building would be serve as a community shelter for severe weather, wildfire, and extreme heat. Building will have sustainable features to conserve water (to mitigate drought) and to insulate (to mitigate extreme heat and winter storms).

City of Chico Action Item	Protect citizens from heat by building covered patios in public parks.
Hazard(s) Addressed	Extreme Heat
Goal/Objective	1-C
Priority	Medium
Estimated Cost	$7,500 per covered patio
Potential Funding Sources	HMGP, PDM, Grants, City budget
Potential Matching Sources	General Fund
Lead Department	Parks/Public Works
Implementation Schedule	Within two years of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is low compared to loss of life from heat illnesses and funding spent for Emergency Services responses.
Discussion	Covered patios are an effective means of providing temporary relief to Extreme Heat.

City of Chico Action Item	Enact and enforce water restriction ordinances.
Hazard(s) Addressed	Drought
Goal/Objective	2-C
Priority	Medium
Estimated Cost	Personnel time
Potential Funding Sources	City budget
Potential Matching Sources	General Fund
Lead Department	Code Enforcement
Implementation Schedule	6-12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Usage codes are a very low cost approach to water conservation.
Discussion	Water restrictions would help lessen or prevent the effects of drought.

City of Chico Action Item	Structure improvements - North Weatherford Street in front of fire station and Oakwood Street between Granada and El Camino.
Hazard(s) Addressed	Flooding, Dam Failure
Goal/Objective	2-D
Priority	High
Estimated Cost	$200,000
Potential Funding Sources	HMGP, PDM, City budget
Potential Matching Sources	General Fund
Lead Department	Public Works
Implementation Schedule	Within two years of funding.
Effect on Old Buildings	This action will assist in preventing flood damage to existing buildings.
Effect on New Buildings	This action will assist in preventing flood damage to new buildings.
Cost Effectiveness	Cost is low compared to the potential benefits of reducing the effects of a 100-year flood.
Discussion	This project is to improve the drainage system to handle 100-year storm frequency to protect property and human life.

City of Chico Action Item	City will acquire property and structures in the flood zone along Dry Creek and its tributaries and remove structures to prevent loss of life and property during flooding events.
Hazard(s) Addressed	Flooding, Dam Failure
Goal/Objective	3-B
Priority	High
Estimated Cost	$350,000
Potential Funding Sources	HMGP, PDM, Local funds, Private donations
Potential Matching Sources	General Fund
Lead Department	Public Works/Parks
Implementation Schedule	Within two years of funding.
Effect on Old Buildings	Existing buildings in this area will be removed.
Effect on New Buildings	No new building construction will be allowed in this area.
Cost Effectiveness	Very effective due to the elimination of future replacement costs associated with flooding.
Discussion	Buyout programs are a good value for everyone involved along with the decreased possibility of loss of human life.

Section 4.2.E – Paradise Action Items

City of Paradise Action Item	Design and implement a comprehensive community awareness and education campaign to include hazard mitigation measures and actions.
Hazard(s) Addressed	Dam Failure, Drought, Extreme Heat, Floods, Hail, Tornados, Wildfire, Winter Storms, High Winds, Earthquake, Lightning
Goal/Objective	4-A, 4-B
Priority	High
Estimated Cost	$5,000
Potential Funding Sources	General funds, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	City Administration
Implementation Schedule	Within 12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Public education campaigns have high benefits from low costs.
Discussion	The City of Paradise will design and implement a comprehensive, concerted campaign of community and education to inform city residents of the hazards present in their communities and actions they can take to mitigate hazard impacts.

City of Paradise Action Item	Adopt, implement and enforce the most recent International Building Code to ensure more stringent building codes in the City of Paradise.
Hazard(s) Addressed	Dam Failure, Drought, Extreme Heat, Floods, Hail, Tornados, Wildfire, Winter Storms, High Winds, Earthquake
Goal/Objective	2-C
Priority	High
Estimated Cost	Staff time
Potential Funding Sources	General funds, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	City Administration
Implementation Schedule	12 months following funding
Effect on Old Buildings	None
Effect on New Buildings	Structures approved after implementation would be subject to increased building requirements.
Cost Effectiveness	Cost is low, but provides exponential level of benefits for residents.
Discussion	Paradise City Council will adopt the higher standards of the International Residential Building Code. City administration will be tasked with enforcing the more stringent standards on all new construction. These measures include hail-resistant roofing and windows; wind and impact resistant doors, windows, and roofing ; wildfire breaks and fire resistant building materials; stricter foundation standards for earthquake and expansive soils; increased elevation (BFE) standards for flooding; higher grade insulation to mitigate extreme heat and winter weather; and resource-efficient (low-flow) plumbing for drought. Also, additional codes for dry-proofing and lightning protection (rods, grounding) for public buildings to mitigate flood, dam failure and lightning.

City of Paradise Action Item	Develop and implement a tree-trimming program to minimize amount of debris generated during severe weather events.
Hazard(s) Addressed	High Winds, Winter Storms, Wildland Fire, Tornado, Lightning
Goal/Objective	2-B
Priority	High
Estimated Cost	$10,000
Potential Funding Sources	HMGP, PDM, General Fund
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	Public works
Implementation Schedule	6-12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is outweighed by benefits.
Discussion	Tree branches can impact power-lines during high wind, winter storm, or tornado events. This could potentially cause a wildfire event. This annual project would identify trees that are too close to power-lines and, based on individual variables of each location, either remove the tree, remove the tree, trim the branches that are tangled with the power lines, or tag the tree to monitor its growth.

City of Paradise Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program.
Hazards Addressed	Tornado, High Winds
Goal/Objective	1-C
Priority	Medium
Estimated Cost	Up to $3,000 per shelter, number of shelters TBD
Potential Funding Sources	General fund, HMGP, PDM
Potential Matching Sources	Local funds, in-kind
Lead Department	City Administration
Implementation Schedule	Within 2 years of funding.
Effect on New Buildings	None
Effect on Existing Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reduction in personal injuries or deaths.
Discussion	By participating in this program, as opposed to partnering with another jurisdiction, residents of Paradise would have better odds of getting their shelters funded.

City of Paradise Action Item	Purchase and install a storm siren system.
Hazard(s) Addressed	Dam Failure, Floods, Hail, Tornados, Wildfire, High Winds, Lightning
Goal/Objective	1-A, 1-B
Priority	High
Estimated Cost	$50,000
Potential Funding Sources	General fund, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	Public Works
Implementation Schedule	Within 12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Benefits of early warning systems outweigh the costs.
Discussion	Paradise lacks a system for early warning. Purchasing and installing a storm siren would protect life and property in Paradise by warning residents of imminent hazardous events, including, but not limited to, severe weather.

City of Paradise Action Item	Develop and implement an enforcement plan and capabilities for mandatory water rationing.
Hazard(s) Addressed	Drought
Goal/Objective	2-C
Priority	Medium
Estimated Cost	$25,000
Potential Funding Sources	General fund, HMGP, PDM, other state/federal grants
Potential Matching Sources	Local funds, user fees, donations, in-kind
Lead Department	Public Works
Implementation Schedule	12-18 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Benefits outweigh costs.
Discussion	With Texas currently in its third consecutive year of drought conditions, it is important to consider the benefits of stricter controls on public water use. This project would entail the creation of a ration enforcement plan and ensuring that the municipal water delivery system is capable of this kind of program.

City of Paradise Action Item	Purchase and distribute NOAA “All-Hazard” radios
Hazard(s) Addressed	Dam Failure, Drought, Earthquakes, Extreme Heat, Floods, Hail, Tornados, Wildfire, Winter Storms, High Winds, Lightning
Goal/Objective	1-A, 1-B
Priority	Medium
Estimated Cost	$50/radio X number of households at the time of implementation.
Potential Funding Sources	General funds, HMGP, PDM
Potential Matching Sources	Local funds, donations, in-kind, resident cost-share
Lead Department	City Administration
Implementation Schedule	Within 12 months of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Weather radios are cheap and allow citizens to stay informed of any announcements by city officials in terms of hazardous events.
Discussion	Distribute NOAA “All-Hazards” radios to citizens to allow them to be better prepared for any and all natural hazard events.

City of Paradise Action Item	Purchase and install a CASA WX weather radar.
Hazard(s) Addressed	Dam Failure, Floods, Hail, Tornados, Wildfire, Winter Storms, High Winds
Goal/Objective	1-A, 4-E
Priority	Medium
Estimated Cost	$2.5 Million
Potential Funding Sources	HMGP, PDM, General Fund, donations
Potential Matching Sources	Local funds, donations, in-kind, user fees
Lead Department	City administration
Implementation Schedule	1-2 years
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits.
Discussion	The CASA radars provide jurisdictions more accurate weather data and geographically specific weather data culled from the most active levels of the atmosphere. This data could save lives by providing the public more time to react and prepare appropriately as severe weather affects their location.

City of Paradise Action Item	Initiate Water Conservation Awareness Program.
Hazard(s) Addressed	Drought
Goal/Objective	4-B
Priority	High
Estimated Cost	$5,000
Potential Funding Sources	General fund, HMGP, PDM, other state/federal grants
Potential Matching Sources	Local funds, donations, in-kind, user fees
Lead Department	Public Works
Implementation Schedule	Within 12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Benefits outweigh costs.
Discussion	Educating citizens on the benefits of moving to increased water restriction is the most beneficial way to promote compliance.

City of Paradise Action Item	Implement the “Firewise” program from the Texas Forest Service.
Hazard(s) Addressed	Wildland Fire
Goal/Objective	4-B
Priority	Low
Estimated Cost	$30,000
Potential Funding Sources	General Fund, HMGP, PDM, other state/federal grants
Potential Matching Sources	Local funds, donations, in-kind
Lead Department	Fire Department, City Administration
Implementation Schedule	Within 12 months of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Program benefits outweigh the costs.
Discussion	

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Section 4.2.F – Runaway Bay Action Items

City of Runaway Bay Action Item	Educate the public via newsletter articles on risks, threats, and vulnerability from all natural hazards and include actions that can be taken to mitigate impacts.
Hazard(s) Addressed	Dam Failure, Drought, Earthquakes, Extreme Heat, Floods, Hail, Tornadoes, Wildfire, Winter Storms, High Winds, Lightning
Goal/Objective	4-A, 4-B
Priority	Medium
Estimated Cost	No additional costs
Potential Funding Sources	City Budget
Potential Matching Sources	General Fund
Lead Department	Administration
Implementation Schedule	12-18 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost of this project is low compared to the potential benefits.
Discussion	Educating our citizens on hazards and providing mitigation actions that can be taken forms a basis to reduce the impacts of hazards affecting Runaway Bay

City of Runaway Bay Action Item	Develop and implement the Texas Individual Safe Room Rebate Program.
Hazard(s) Addressed	Tornado, High Winds, Hail
Goal/Objective	1-C
Priority	Medium
Estimated Cost	$3,000/safe room, plus staff time.
Potential Funding Sources	HMGP, PDM, City Budget
Potential Matching Sources	General Fund
Lead Department	Administration
Implementation Schedule	Within 1 year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reduction in personal injuries or deaths.
Discussion	This program gives rebates to homeowners who purchase and install storm safe rooms in their homes or on their property. This project will reduce the loss of lives and personal injuries during severe weather events.

City of Runaway Bay Action Item	Adopt and enforce the most recent version of the International Residential Code requirements for new construction to ensure higher building standards.
Hazard(s) Addressed	Tornado, High Winds, Earthquake, Hail, Drought, Flood, Extreme Heat, Lightning, Wildland Fire, Winter Storm
Goal/Objective	2-C
Priority	Medium
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Potential Matching Sources	General Fund
Lead Department	Public Works/Building Inspections
Implementation Schedule	Within one year
Effect on Old Buildings	None
Effect on New Buildings	This action will assist in lessening the effects of damage to new buildings.
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reducing the effects of natural hazards.
Discussion	Adoption, implementation and enforcement of International Residential Building Codes is a good way to reduce or eliminate the loss of life and impacts to property through more stringent building codes. These measures include hail-resistant roofing and windows; wind and impact resistant doors, windows, and roofing ; wildfire breaks and fire resistant building materials; stricter foundation standards for earthquake and expansive soils; increased elevation (BFE) standards for flooding; higher grade insulation to mitigate extreme heat and winter weather; and resource-efficient (low-flow) plumbing for drought. Also, additional codes for dry-proofing and lightning protection (rods, grounding) for public buildings to mitigate flood and lightning.

City of Runaway Bay Action Item	Protect citizens from heat by building covered rest areas in public parks.
Hazard(s) Addressed	Extreme Heat
Goal/Objective	3-A
Priority	Low
Estimated Cost	$7,500 per covered rest area
Potential Funding Sources	City Budget
Potential Matching Sources	General Fund
Lead Department	Public Works
Implementation Schedule	12 months
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Covered rest areas will provide a shelter from extreme heat for the citizens thus allowing them to avoid heat exhaustion.
Discussion	Covered rest areas are an effective means of providing temporary relief to Extreme Heat.

City of Runaway Bay Action Item	Develop and implement a tree-trimming program to minimize amount of debris generated during severe weather events.
Hazard(s) Addressed	Winter Storm, High Winds, Tornado, Wildfire, Lightning
Goal/Objective	3-C
Priority	Medium
Estimated Cost	Staff Time, Equipment Operational Costs
Potential Funding Sources	City Budget
Potential Matching Sources	General Fund
Lead Department	Code Enforcement/Public Works
Implementation Schedule	6-18 months
Effect on Old Buildings	This action will reduce the effects of severe winter/ice storms on existing buildings by helping to ensure the impact of broken tree limbs is lessened.
Effect on New Buildings	This action will reduce the effects of severe winter/ice storms on new buildings by helping to ensure the impact of broken tree limbs is lessened.
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reducing the effects of severe winter/ice storms.
Discussion	Tree branches can impact power-lines during high wind, winter storm, or tornado events. Large collections of debris can add fuel to a potential wildfire event. This annual project would identify trees that are too close to power-lines and, based on individual variables of each location, either remove the tree, trim the branches that are tangled with the power lines, or tag the tree to monitor its growth.

City of Runaway Bay Action Item	Structure improvements - Champion and Jim Walters.
Hazard(s) Addressed	Flooding
Goal/Objective	2-D
Priority	High
Estimated Cost	TBD
Potential Funding Sources	City Budget, CIP Funds, HMPG, PDM
Potential Matching Sources	General Fund
Lead Department	Public Works
Implementation Schedule	Within 1 year of funding.
Effect on Old Buildings	This action will assist in preventing flood damage to existing buildings.
Effect on New Buildings	This action will assist in preventing flood damage to new buildings.
Cost Effectiveness	The cost of this project is low compared to the potential benefits of reducing the effects of 100-year flood damage.
Discussion	This project involves adding one 4' diameter corrugated metal pipe culvert to enhance drainage and eliminate road erosion. This will increase the existing conditions to 100-year flood level of protection in order to protect the traffic flow on streets, as well as keep roadways open to allow for emergency vehicles and to protect public safety.

City of Runaway Bay Action Item	Adopt, implement and enforce water conservation measures
Hazard(s) Addressed	Drought
Goal/Objective	2-C
Priority	Medium
Estimated Cost	To be determined by personnel costs.
Potential Funding Sources	Grant funding, if available; General budgetary funds
Potential Matching Sources	General Fund
Lead Department	Public Works
Implementation Schedule	12-18 months
Effect on Old Buildings	Existing buildings may be retrofitted to meet existing water conservation standards when building improvements are initiated.
Effect on New Buildings	By ensuring existing water conservation measures are in place and enforced during new construction, the city helps to reduce the overall water demand.
Cost Effectiveness	Enforcement of water conservation standards is always important, and especially challenging during extreme temperature and limited rainfall duration.
Discussion	Runaway Bay will adopt, implement and enforce restrictions on water usage in Runaway Bay, notably through assigned residential and business watering days. Mitigation initiatives will include fiscal penalties for non-compliance and/or excessive water consumption.

City of Runaway Bay Action Item	Participate in the Community Rating System program (CRS)
Hazard(s) Addressed	Flooding, Dam Failure
Goal/Objective	2-E
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	Flood Mitigation Assistance Program
Potential Matching Sources	General Fund
Lead Department	Emergency Management
Implementation Schedule	Within One Year of Funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of this problem is low compared to the potential benefits of reducing or eliminating loss of life and property.
Discussion	The objective of the Community Rating System (CRS) is to reward communities that are doing more than meeting the minimum NFIP requirements to help their citizens prevent or reduce flood losses. The CRS also provides an incentive for communities to initiate new flood protection activities.

4.3 National Flood Insurance Program (NFIP) Compliance

The National Flood Insurance Program (NFIP) The National Flood Insurance Program is a federally run program which enables property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

Community Participation A community applies for participation in the National Flood Insurance Program (NFIP) either as a result of interest in eligibility for flood insurance or as a result of receiving notification from FEMA that it contains one or more Special Flood Hazard Areas (SFHA). In order for a community to apply for and receive participation in the NFIP, that community must adopt resolutions or ordinances to minimally regulate new construction in identified SFHAs. FEMA works closely with State and local officials to identify flood hazard areas and flood risks. The floodplain management requirements within the SFHA are designed to prevent new development from increasing the flood threat and to protect new and existing buildings from anticipated flood events.

When a community chooses to join the NFIP, it must require permits for all development in the SFHA and ensure that construction materials and methods used will minimize future flood damage. Permit files must contain documentation to substantiate how buildings were actually constructed. In return, the Federal Government makes flood insurance available for almost every building and its contents within the community.

Communities must ensure that their adopted floodplain management ordinance and enforcement procedures meet program requirements. Local regulations must be updated when additional data are provided by FEMA or when Federal or State standards are revised

Wise County Jurisdiction Participation Wise County jurisdictions are participating in the National Flood Insurance Program and have identified their respective areas as vulnerable to flooding. This is incorporated into all current and future planning for dealing with repetitive loss vulnerabilities.

CID	Community Name	County	Initial FHBM Identified	Initial FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal
-	ALVORD, CITY OF	WISE COUNTY	-	-	-	-	No
480677#	BRIDGEPORT, CITY OF	WISE COUNTY	6/14/1974	3/19/1990	12/16/11(M)	8/1/1987	No
481053#	CHICO, CITY OF	WISE COUNTY	8/13/1976	3/19/1990	12/16/11(M)	9/1/1987	No
480503#	PARADISE, CITY OF	WISE COUNTY	-	12/16/2011	12/16/11(M)	08/05/10(E)	No
481618#	RUNAWAY BAY, CITY OF	WISE COUNTY	-	3/19/1990	12/16/11(M)	5/10/1990	No

** indicates unincorporated county*
- Information unavailable
(M): No Elevation Determined - All Zone A, C and X
(E): Indicates Entry In Emergency Program
Source: http://www.fema.gov/cis/TX.html

Jurisdiction Compliance Once the community applies for the NFIP, FEMA arranges for a study of the community to determine base flood elevations and flood risk zones. Consultation with the community occurs at the start of and during the study, and those communities with minimal flood risk are converted to the Regular Program without a study.

FEMA provides the studied community with a Flood Insurance Rate Map delineating base flood elevations and flood risk zones. The community is then given 6 months to adopt base flood elevations in its local zoning and building code ordinances. Once the community adopts more stringent ordinances, FEMA converts the community to the NFIP's Regular Program. FEMA then authorizes the sale of additional flood insurance in the community up to the Regular Program limits. The Community must implement and enforce the adopted floodplain management measures. FEMA provides periodic community assistance visits with local officials to provide technical assistance regarding complying with NFIP floodplain management requirements.

The purchase of flood insurance is mandatory as a condition of receipt of federal or federally-related financial assistance for acquisition and/or construction of buildings in SFHAs of any participating community. Those communities notified as flood-prone which do not apply for participation in the NFIP within 1 year of notification are ineligible for federal or federally-related financial assistance for acquisition, construction, or reconstruction of insurable buildings in the SFHA.

Jurisdiction Activities

In order to maintain eligibility with NFIP, jurisdictions are required to maintain their list of properties that hold a policy with NFIP, along with up-to-date maps of the floodplains in the jurisdictions. Each jurisdiction participating in the Wise County Hazard Mitigation Action Plan completes this basic requirement and has the information on file with the jurisdiction's designated floodplain manager.

Jurisdiction	Floodplain Manager	NFIP Activity	Activity Description	Enforcement
Wise County	County Engineer	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the County Engineer's Office. Wise County requires 2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and non-residential structures that will be built on properties created or platted after the effective date of the Flood Damage Prevention Order	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the Wise County flood damage prevention order shall result in fines up to $500 per violation plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Future Mitigation Projects	The county will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	

Jurisdiction	Floodplain Manager	NFIP Activity	Activity Description	Enforcement
City of Alvord	City Secretary	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the City Hall. Alvord requires 2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and non-residential structures that will be built on properties created or platted after the effective date of the Flood Damage Prevention Order	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the Alvord flood damage prevention order shall result in fines up to $2000 per violation plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Future Mitigation Projects	Alvord will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	
City of Bridgeport	City Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the City Hall. Bridgeport requires 2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and non-residential structures that will be built on properties created or platted after the effective date of the Flood Damage Prevention Order	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the Bridgeport flood damage prevention order shall result in fines up to $2000 per violation plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Future Mitigation Projects	Bridgeport will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	

Jurisdiction	Floodplain Manager	NFIP Activity	Activity Description	Enforcement
City of Chico	Code Enforcement Officer	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the City Hall. Chico requires 2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and non-residential structures that will be built on properties created or platted after the effective date of the Flood Damage Prevention Order	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the Chico flood damage prevention order shall result in fines up to $500 per violation plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Future Mitigation Projects	Chico will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	
City of Paradise	City Councilman	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the City Hall. Paradise requires 2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and non-residential structures that will be built on properties created or platted after the effective date of the Flood Damage Prevention Order	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the Paradise flood damage prevention order shall result in fines up to $500 per violation plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Future Mitigation Projects	Paradise will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	
City of Runaway Bay	Chief of Police	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the administration department. Runaway Bay does not issue permits at or below the	NFIP compliance is implemented and enforced through a process of floodplain

Jurisdiction	Floodplain Manager	NFIP Activity	Activity Description	Enforcement
			established flood elevation of 844.5 msl.	identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with City's flood damage prevention order shall result in fines up to $1,000 per violation, plus court costs.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Participate with FEMA in identifying Special Flood Hazard Areas for future FIRM maps	Runaway Bay participates in meetings held by FEMA and/or their contractors to better identify areas that are flood prone that are not shown on current Flood Insurance Rate Maps.	
		Take action to minimize the effects of flooding on people, property, and building contents through measures including flood warning, emergency response, and evacuation planning	The City uses Blackboard Connect to inform citizens of conditions that adversely affects our citizens.	
		Future Mitigation Projects	Runaway Bay will continue to monitor for new areas of flooding that have not been previously identified for mitigation.	

The Community Rating System (CRS) The Community Rating System (CRS) is a voluntary program for NFIP-participating communities. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. All CRS communities must maintain completed FEMA elevation and flood proofing certificates for all new and substantially improved construction in the Special Flood Hazard Area after the date of application for CRS classification.

The Wise County Hazard Mitigation Action Plan jurisdictions will apply for and participate in the CRS program to provide discounted insurance premium incentives for communities to go beyond the minimum floodplain management requirements and to analyze and manage future development.

According to the current CRS document located on the following link http://www.fema.gov/library/viewRecord.do?id=3629, there are no communities in Wise County that are currently participating.

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4.4 Capability Assessment

(In compliance with 201.6 (C1))

County government structure is spelled out in the Texas Constitution, which makes counties functional agents of the state. Thus, counties, unlike cities, are limited in their actions to areas of responsibility specifically spelled out in laws passed by the legislature.

At the heart of each county is the Commissioners Court. Each Texas county has four precinct commissioners and a county judge who serve on this court. Although this body conducts the general business of the county and oversees financial matters, the Texas Constitution established a strong system of checks and balances by creating other elective offices in each county. The major elective offices found in most counties include county judges, county attorneys, county and district clerks, county treasurers, sheriffs, tax assessor-collectors, justices of the peace, and constables. As a part of the checks and balances system, counties have an auditor appointed by the district courts.

While many county functions are administered by elected officials, others are administered by individuals employed by the County. They include such programs as public health and human services, personnel and budget, and in some counties, public transportation, and emergency medical services.

Jurisdiction	Chief Administrative Officer	Ability to Implement Capabilities
Wise County	County Judge	The County Commissioner's Court, including the County Judge and County Commissioners, address the budget; pass laws, regulations, and codes; hire staff; approve plans; and determine the direction of the city overall. Ability to implement and approve mitigation actions and integrate mitigation into existing policies and programs is a function of this group. As the governing body, the Commissioner's Court has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing their budget, and changing policies and programs. A summary of Wise County legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.
City of Alvord	Mayor	The City of Alvord is served by the offices of mayor, mayor pro-tem, councilpersons, and the city secretary. The city council, consisting of the mayor, mayor pro-tem and councilpersons, reviews and amends the city budget annually, has the power to pass new laws and create codes and ordinances, and generally determines the ability of the city to implement hazard mitigation actions and integrate mitigation actions into other policies and programs. As the governing body, the City Council has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing the City budget, adopting new ordinances and regulations, and changing policies and programs. A summary of Alvord's legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.

Jurisdiction	Chief Administrative Officer	Ability to Implement Capabilities
City of Bridgeport	City Manager	The City of Bridgeport is served by the offices of mayor, mayor pro-tem, councilpersons, the city manager, and the city secretary. The city council, consisting of the mayor, mayor pro-tem and councilpersons, reviews and amends the city budget annually, has the power to pass new laws and create codes and ordinances, and generally determines the ability of the city to implement hazard mitigation actions and integrate mitigation actions into other policies and programs. As the governing body, the City Council has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing the City budget, adopting new ordinances and regulations, and changing policies and programs. A summary of Bridgeport's legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.
City of Chico	Mayor	The City of Chico is served by the offices of mayor, mayor pro-tem, councilpersons, and the city secretary. The city council, consisting of the mayor, mayor pro-tem and councilpersons, reviews and amends the city budget annually, has the power to pass new laws and create codes and ordinances, and generally determines the ability of the city to implement hazard mitigation actions and integrate mitigation actions into other policies and programs. As the governing body, the City Council has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing the City budget, adopting new ordinances and regulations, and changing policies and programs. A summary of Chico's legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.
City of Paradise	Mayor	The City of Paradise is served by the offices of mayor, mayor pro-tem, councilpersons, and the city secretary. The city council, consisting of the mayor, mayor pro-tem and councilpersons, reviews and amends the city budget annually, has the power to pass new laws and create codes and ordinances, and generally determines the ability of the city to implement hazard mitigation actions and integrate mitigation actions into other policies and programs. As the governing body, the City Council has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing the City budget, adopting new ordinances and regulations, and changing policies and programs. A summary of Paradise's legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.

Jurisdiction	Chief Administrative Officer	Ability to Implement Capabilities
City of Runaway Bay	City Administrator	The City of Runaway Bay is served by the offices of mayor, mayor pro-tem, councilpersons, the city administrator, and the city secretary. The city council, consisting of the mayor, mayor pro-tem and councilpersons, reviews and amends the city budget annually, has the power to pass new laws and create codes and ordinances, and generally determines the ability of the city to implement hazard mitigation actions and integrate mitigation actions into other policies and programs. As the governing body, the City Council has the authority to expand and/or improve mitigation capabilities though hiring additional staff, implementing new taxes, increasing the City budget, adopting new ordinances and regulations, and changing policies and programs. A summary of Runaway Bay's legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities can be found in Appendix B, Tables 4.1, 4.2, and 4.3.

The capability assessment examines the ability of Wise County and participating jurisdictions to implement and manage a comprehensive mitigation strategy. The strengths, weaknesses, and resources of these jurisdictions are identified in this assessment as a means to develop an effective Hazard Mitigation Action Plan. The capabilities identified in this assessment are evaluated collectively to develop feasible recommendations, which support the implementation of effective mitigation activities, given existing conditions throughout the County.

A questionnaire was distributed to the Wise County Office of Emergency Management and to the Hazard Mitigation Planning Team in order to initiate this assessment. This capability assessment was distributed to the participating jurisdictions to request information pertaining to existing plans, policies, and regulations that contribute to or hinder the ability to implement hazard mitigation activities, including legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities. The completed questionnaire was received on March 27, 2014.

Wise County's legal and regulatory capabilities are associated with the meaningful policies and projects designed to reduce the impacts of future hazard events. The administrative and technical capabilities are assessed by evaluating whether there are an adequate number of personnel to complete mitigation activities, and assessing the level of knowledge and technical expertise of local government employees. The fiscal capabilities are associated with the financial ability of a local government to implement mitigation activities.

In Appendix B, Table 4.1, Table 4.2, and *Table 4.3,* each provide a summary of the legal and regulatory capabilities, administrative and technical capabilities, and fiscal capabilities for Wise County and participating jurisdictions. To assess the capabilities of each participating jurisdiction, the number of "yes" answers is added horizontally in each Table. Then, a percentage is obtained relative to the total number of "yes" answers possible.

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Chapter Five: Plan Maintenance Process

(In compliance with 201.6(c)(4)(i))

5.1 Monitoring, Evaluating and Updating the Plan

In Compliance with requirement *§ 201.6(c)(4)(i)*, Wise County has developed a plan maintenance process which is described in the following paragraphs. Wise County, along with participating jurisdictions are responsible for monitoring implementation of the plan, executing a yearly evaluation of its effectiveness, and updating the plan within a 5-year cycle.

Following formal adoption by Wise County Commissioners Court, and formal adoption of the plan by City Council by each participating jurisdiction, the actions outlined in the Wise County Hazard Mitigation Plan would be implemented by the county and participating jurisdictions as described throughout this document.

The Wise County Emergency Management Coordinator will be responsible for ensuring the mitigation action items and implementation are monitored, evaluated, and reviewed biannually by emailing all the participating jurisdictions for updates on their individual action items. The progress of the action items will be tracked electronically as “in progress”, “deferred” or “completed”. This implementation will be included in the Mitigation Strategies for the 5 year update of the plan.

The Wise County Emergency Management Coordinator, working in conjunction with the respective jurisdictions, will be responsible for ensuring the mitigation plan is monitored, evaluated, and reviewed on an annual basis. This will be accomplished by calling an annual meeting of the planning committee, whose members will provide assistance and expertise for plan review, evaluating, updating, and monitoring. This meeting will be open to the public and public notices will encourage community participation. During this annual meeting, Wise County will provide information on the implementation status of each action included in the plan. As part of the evaluation, the planning committee will assess whether goals and objectives address current and expected conditions, whether the nature and/or magnitude of the risks have changed, if current resources are appropriate for implementing the plan, whether outcomes have occurred as expected, and if agencies and other partners participated as originally proposed. These activities will take place according to the timetable presented below:

Jurisdiction	Personnel	Activity	Schedule
Wise County	Emergency Management Coordinator	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years
City of Alvord	City Councilperson	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

Jurisdiction	Personnel	Activity	Schedule
City of Bridgeport	Police Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years
City of Chico	Code Enforcement Officer	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years
City of Paradise	City Secretary	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years
City of Runaway Bay	City Secretary	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

At least once every five (5) years, or more frequently, if such a need is determined by the participating jurisdiction, the multi-jurisdictional plan will undergo a major update. During this process, all sections of the plan will be updated with current information and analyses and new and/or modified mitigation action plans will be developed. The revised plan will be submitted for state and federal review and approval and presented to the Wise County Commissioner's Court and the respective incorporated cities', included in the Wise County plan, City Councils for approval. Likewise, each participating jurisdiction will undergo the same process for reviewing, revising and updating their respective plans and submitting same for state, federal and jurisdiction's respective local governing body approval. The plan will be updated every five years in accordance.

5.2 Plan Incorporation into Existing Planning Mechanisms *(In compliance with 201.6(c)(4)(ii))*

Based on the requirements set forth in § *201.6(c)(4(ii)*, the State of Texas Mitigation Plan, the vulnerability and capabilities assessment for each jurisdictions were carefully reviewed and considered when developing the mitigation actions for this plan. The Hazard Mitigation team will establish a process in which the mitigation strategy, goals, objectives and actions outlined in this plan be incorporated into the existing regional and local planning strategies.

Local and regional planning committees currently use comprehensive land use planning, capital improvements planning, and building code ordinances to guide development. The mitigation strategy, goals, objectives and actions outlined in this plan will be integrated in to these existing mechanisms as applicable. Those mechanisms include the following:

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
Wise County	Emergency Management Coordinator	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Wise County will consult the most recent version of the Hazard Mitigation Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the HazMAP will be brought before the Commissioners Court to be approved, via vote, for integration into the document wherever applicable.
		Emergency Action Plan updates	Every five years	
		Floodplain ordinances	As needed	
		Drought Contingency plans	As needed	
Alvord	City Councilperson	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Alvord will consult the most recent version of the Hazard Mitigation Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the HazMAP will be brought before the City Council to be approved, via vote, for integration into the document wherever applicable.
		Emergency Action Plan updates	Every five years	
		Floodplain ordinances	As needed	
		Drought Contingency plans	As needed	
Bridgeport	Police Chief	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Bridgeport will consult the most recent version of the Hazard Mitigation Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the
		Emergency Action Plan updates	Every five years	
		Floodplain ordinances	As needed	

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
		Drought Contingency plans	As needed	HazMAP will be brought before the City Council to be approved, via vote, for integration into the document wherever applicable.
Chico	Code Enforcement Officer	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Chico will consult the most recent version of the Hazard Mitigation Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the HazMAP will be brought before the City Council to be approved, via vote, for integration into the document wherever applicable.
		Emergency Action Plan updates	Every five years	
		Floodplain ordinances	As needed	
		Drought Contingency plans	As needed	
Paradise	City Secretary	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Paradise will consult the most recent version of the Hazard Mitigation Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the HazMAP will be brought before the City Council to be approved, via vote, for integration into the document wherever applicable.
		Emergency Action Plan updates	Every five years	
		Floodplain ordinances	As needed	
		Drought Contingency plans	As needed	
Runaway Bay	City Secretary	Budget Meetings.	Annually	During meetings to create, adopt, update, or otherwise change any documents that have an effect on vulnerability to natural hazards, Runaway Bay will consult the most recent version of the Hazard Mitigation
		Emergency Action Plan updates	Every five years	

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
		Floodplain ordinances	As needed	Action Plan. Provided there is sufficient political, fiscal, and administrative capability, actions detailed in the HazMAP will be brought before the City Council to be approved, via vote, for integration into the document wherever applicable.
		Drought Contingency plans	As needed	

Once the plan is adopted the Wise County Hazard Mitigation team will coordinate implementation with the engineering and planning and emergency management departments for the county, participating jurisdictions, river authorities, and drainage districts.

5.3 Continued Public Involvement *(In compliance with 201.6(c)(4)(iii))*

As stated in requirement § *201.6(c)(4)(iii)* The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process.

To address this requirement, ongoing public participation will be encouraged throughout the entire planning and implementation process. A copy of the plan will be provided on the Wise County website. The planning committee will continue meeting on a weekly basis to ensure the successful implementation of the plan and to discuss any additional issues regarding the emergency management of Wise County. The annual meetings for monitoring, evaluating, and updating the plan will be open to the public and public notices will encourage community participation.

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Appendix A: Planning and Public Meeting Documentation

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MEETING SIGN-IN SHEET

Meeting:	Wise County Local Mitigation Strategy Working Group	**Meeting Date:**	6/22/2012
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
Paul Jaworski	Patrol	City of Runaway Bay	940-393-1569	richier@runawaybay Texas.com
Kirk Gibson	Emergency Mgr.	City of Alvord	940-393-9828	Captain-Kirk@yahoo.com
SAM STARR	MAYOR	CITY OF PARADISE	940-389-6501	cjsestarr@yahoo.com
Teresa Moody	city secretary	City of Paradise	940-969-2114	cityhall@ci.paradise.tx.us
Caryn Dunn	Administrative Coord	Wise County	940-627-5743	caryn.dunn@co.wise.tx.us
COIT HARRIS	CODE ENFORCEMENT	CITY OF CHICO	940-644-2435	chicocitysecretary@embarqmail.com
RANDY SINGLETON	Chief of Police City of Bridgeport	City of Bridgeport	940-683-3430	RSINGLETON@cityofBridgeport.NET
Brandon Emmons	City of Administrator City of Bridgeport	City of Bridgeport	940-683-3417	bemmons@cityofbridgeport.net.
Michael Gaciri	NCTCOG	EP Specialist	817 695 9233	mgaciri@nctcog.org

MEETING SIGN-IN SHEET

Meeting:	Chico Hazard Mitigation Team Meeting	**Meeting Date:**	7/12/12
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	400 S. Hovey Street Chico, TX

Name	Title	Company	Phone	E-Mail
COIT HARRIS	CODE ENFORCEMENT	CITY OF CHICO	940-644-2435	chicocitysecretry@embarqmail.com
Anita Long	Adm. Assistant	City of Chico	940-644-2435	along5397@embarqmail.com

MEETING SIGN-IN SHEET

Meeting:	Runaway Bay Hazard Mitigation Team Meeting	**Meeting Date:**	7/12/12
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	101 Runaway Bay Drive Runaway Bay, TX

Name	Title	Company	Phone	E-Mail
Robert Ryan	Mayor	City of Runaway Bay	940-393-5433	rgtyan1@yahoo.com
Randy Searcy	P/W	city of Runaway	940-393-9104	rsearcy@runawaybaytexas.com
Rex Richie	Chief of Police	City of Runaway Bay	940-393-1569	richier@runawaybaytexas.com
Oneta Berghoefer	City Secretary Interim City Adm.	City of Runaway Bay	940-389-4844	oberghoefer@runawaybaytexas.com
Mary L. Henry	Judge	City Runaway Bay	940-575-4745	JudgeHenry@RunawayBayTexas.com

MEETING SIGN-IN SHEET

Meeting:	Bridgeport Hazard Mitigation Team Meeting	**Meeting Date:**	7/13/12
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	1000 Thompson Street Bridgeport, TX

Name	Title	Company	Phone	E-Mail
Brandon Emmons	City Administrator	Bridgeport	940-683-3400	bemmons@cityofbridgeport.net
James Elliott	Electric Foreman	Bridgeport	940-255-5490	jelliott@cityofbridgeport.net
Terry Long	Bridgeport Vol Fire Dept	Bridgeport	940-210-9495	tlong city of bridgeport.net
RANDY SINGLETON	POLICE CHIEF	BRIDGEPORT	940-683-3430	RSingleton@CityofBridgeport.NET
GARY BARNETT	STREET & DRAINAGE	BRIDGEPORT	940-683-3464	gbarnett@cityofbridgeport.net
Erika McComis	Police Admin. Manager	Bridgeport	940-683-3430	emccomis@cityofbridgeport.net

MEETING SIGN-IN SHEET

Meeting:	Alvord Hazard Mitigation Team Meeting	**Meeting Date:**	7/26/2012
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	1415 S FM 51 Decatur, TX

Name	Title	Company	Phone	E-Mail
Kirk Gibson	Emergency Mgr.	City of Alvord	940-393-9828	captain36078@yahoo.com
Ricky Wilson	Director of Public Works	City of Alvord	940-389-0145	Rwilson@cityofalvord.org
DEVON KENNEDY	WASTEWATER TREATMENT PLANT OPERATOR	CITY OF ALVORD	940-393-6377	DKENNEDY@CITYOFALVORD.ORG

MEETING SIGN-IN SHEET

Meeting:	Paradise Hazard Mitigation Team Meeting	**Meeting Date:**	7/26/2012
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	218 Main St. Paradise, Tx 76073

Name	Title	Company	Phone	E-Mail
Teresa Moody	City Secretary	City of Paradise	940-969-2114	teresa.moody@embarqmail.com

MEETING SIGN-IN SHEET

Meeting:	Wise County Hazard Mitigation Team Meeting	**Meeting Date:**	7/26/2012
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	1415 S FM 51 Decatur, TX

Name	Title	Company	Phone	E-Mail
Caryn Dunn	Admin. Coord.	WiseCounty	940-627-5743	caryndunn@yahoo.com
Chad Davis	Co. Engr.	Wise County	940-389-7270	chad.davis@co.wise.tx.us
Tom Goode	Public Works Dir.	Wise County	940 627-6655	tom.goode@co.wise.tx.us
Ross Jones	Public Works Maps	Wise County	940 627 6655	Ross.jones@co.wise.tx.us

HAZMAP Meeting
(8-14-12)

Chad Davis	Wise Co. Engr.	940 389-7270
Caryn Dunn	Admin Coord. W.C.	940-627-5788
Tom Goode	Wise County Public Works Director	940 627-6605
Francisco Sanchez	fsanchez@nctcog.org	817-608-2352

MEETING SIGN-IN SHEET

Meeting:	Bridgeport Hazard Analysis Meeting	**Meeting Date:**	11/15/2012 9:30am
Facilitator:	Francisco San Miguel	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
RANDY SINGLETON	Chief of Police	City of BRIDGEPORT	940-683-3430	RSINGLETON@City of Bridgeport.NET
Kevin Tran	Intern	NCTCOG	(214) 738-5209	KTRAN@NCTCOG.ORG
Francisco San Miguel	EP	NCTCOG	817-608-2352	fsanmiguel@nctcog.org

MEETING SIGN-IN SHEET

Meeting:	Chico Hazard Analysis Meeting	**Meeting Date:**	11/15/2012 11:00am
Facilitator:	Francisco San Miguel	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
COLT HARRIS	CODE ENFORCEMENT OFFICER	CITY OF CHICO	940-644-2435	coltlee@hotmail.com
KEVIN TRAN	INTERN	NCTCOG	(214) 738-5204	KTRAN@NCTCOG.ORG
Francisco San Miguel	EP	NCTCOG	817-608-2352	fsanmiguel@nctcog.org

MEETING SIGN-IN SHEET

Meeting:	Paradise Hazard Analysis Meeting	**Meeting Date:**	11/15/2012 1:30pm
Facilitator:	Francisco San Miguel	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
SAM FE STARR	MAYOR	PARADISE, TX	940-389-6501	cjsestarr@yahoo.com
Teresa Moody	City Secretary	City of Paradise	940.969-2114	cityhall@ci.paradise.tx.us
KEVIN TRAN	INTERN	NCTCOG	(214) 738-5209	KTRAN@NCTCOG.ORG
Francisco San Miguel	EP	NCTCOG	817-608-2552	fsanmiguel@nctcog.org

MEETING SIGN-IN SHEET

Meeting:	Wise County Hazard Analysis Meeting	**Meeting Date:**	11/15/2012 3:30pm
Facilitator:	Francisco San Miguel	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
Caryn Dunn	Admin. Coord.	Wise County	940-627-5743	caryn.dunn@co.wise.tx.us
Kevin Tran	Intern	NCTCOG	(214) 738-5209	KTran@NCTCOG.com
Francisco San Miguel	EP	NCTCOG	817-608-2352	fsanmiguel@nctcog.org

ALVORD

Board tables tax notes

BY BOB BUCKEL
bbuckel@wcmessenger.com

In what was literally a five-minute meeting, the Alvord ISD board of trustees Thursday night tabled consideration of issuing Maintenance Tax Notes to pave the parking lot and driveways around the middle school campus.

Superintendent Bill Branum asked the board to put the matter on hold "until we complete everything we need to do" to get the plan rolling.

Last week, the board talked about using just over $1 million in debt to finance the paving project as well as take care of a couple of other issues. Paying it off over 15 years would cost the district about $85,000 a year.

With no discussion, the board voted unanimously to table the matter. Branum said after the meeting that they would try to get the ball rolling before the holidays.

The board did vote on two items — terminating the contract of a teacher and establishing an Alvord ISD Hall of Fame — before heading back to the basketball tournament going on at the AHS gym.

The probationary contract of first-year middle school English teacher Paul McConnell was terminated, effective immediately, on a unanimous vote. Branum noted that he had briefed the board a few weeks earlier on the reasons for the action but said he could offer no further details.

The board also voted unanimously to appoint a committee to set up the guidelines and publicize the establishment of an Alvord ISD Hall of Fame.

"We want to make kids aware of the successful people who've come through the system and their accomplishments," Branum said. Board members said they thought the recognition would be "inspirational and motivational" to current students.

The meeting, which began at 6:08, was adjourned at 6:13.

DECATUR

Tuf Cooper starts fast in bid to repeat

BY BRANDON EVANS
bevans@wcmessenger.com

It took only 7.4 seconds for reigning tie-down roping champion Tuf Cooper to prove he wants to repeat for the world title.

That was the 22-year-old Decatur cowboy's time as he won the first round of the Wrangler National Finals Rodeo Thursday night at the Thomas and Mack Center in Law Vegas.

Cooper closed the gap between himself and Justin Maass to less than $1,400 after the first night of the 10-day event. He made big money on the first night considering he entered the finals trailing Maass by almost $20,000. Maass, of Giddings, finished 11th with a time of 9.9 and earned no money for his efforts.

Tuf's older brother and fellow Decatur cowboy Clif Cooper, 24, came in ninth place with a time of 9.2 seconds.

Trevor Brazile, also of Decatur, took a step closer to clinching his 10th all-around PRCA title when he and fellow team roper Patrick Smith of Lipan finished third in the first round with a solid time of 4.8 seconds. They took home nearly $11,000 each for the night.

Decatur steer wrestler K.C. Jones tied for seventh in the opening night of action when he brought down his animal in 4.1 seconds.

Competition continues through Dec. 15.

Wise County Public Meeting Notice

The North Central Texas Council of Governments invites all interested citizens, non-profits, businesses, and neighboring jurisdictions to comment on the Wise County Multijurisdictional Hazard Mitigation Action Plan. The date and location are listed below.

Monday December 10, 2012 10:00am

200 Rook Ramsey Drive Decatur, TX

WISE COUNTY DIRECTORY OF AREA CHURCHES

Church Briefs

WISE COUNTY COWBOY CHURCH
A COWBOY CHRISTMAS STORY
December 8, 9
6 – 8 p.m.
Hear the Real Story as you Ride Along the Trail Mule Drawn Wagons
2070 Old Denton Road, Decatur

FIRST BAPTIST CHURCH OF BRIDGEPORT
A REASON TO SING
Sunday, Dec 9 • 7 pm
1204 12th St., Bridgeport
www.fbcbridgeport.com

GRACE FELLOWSHIP
CHRISTMAS TOUR
FREE Community Event for Everyone
Food • Games • Music
Bridgeport – *Sunday, December 9*
Harwood Park • 4 – 6 pm
Poolville – *Friday, December 14*
Pool Elementary • 6 – 8 pm
Justin – *Saturday, December 15*
Harriet Creek Park noon – 3 pm

VICTORY FAMILY CHURCH
CHRISTMAS WITH VICTORY
Sunday, December 16
9 am & 11 am
Wednesday, Dec 19 • 7 pm
400 W. Hwy 380, DECATUR
www.VictoryFamilyChurch.com

FIRST BAPTIST CHURCH OF DECATUR
THE BALL BROTHERS CHRISTMAS TOUR
Sunday, December 16 6 am
FREE ADMISSIONS
1200 Preskitt, Decatur
940-627-3235

Trinity Baptist Church Boyd
Pastor: Terry Phillips
Traditional Worship Service
Sunday Bible Study .....9:30 a.m.
Sunday Worship .....10:45 a.m.
Evening Worship .....6 p.m.
Wednesday Prayer Service .....7 p.m.
455 W. Rock Island Avenue
Boyd, TX 76023 • 940-433-5281
Email: trinitybaptistboyd@embarqmail.com

Bring Your Family
Sunday School.....9:45 a.m.
Morning Worship .... 10:45 a.m.
Children's Church.....11 a.m.
Evening Prayer..... 6 p.m.
Evening Worship .....6:30 p.m.
Wednesday Night ..... 7 p.m.
IMMANUEL BAPTIST
106 S. Lane, Decatur
Office 627-5248 • Bus Ride 627-3980
Bro. Louis Horton
* Fundamental * Old-Fashioned * Missionary * Teaching & Preaching The King James Bible
Bus Ministry, Christian School

PARADISE UNITED METHODIST CHURCH
Pastor Patti Mahaffey
Bistro: 9:30 - 10:30 a.m.
Sunday School: 9:45 a.m.
Worship: 10:45 a.m.
Wed: Bible Study /Choir 6 p.m.
Active Women's Group - Nursery Available
301 Oak St., Paradise
940.969.2069

First United Methodist Church of Boyd
Sunday School 10 a.m. (All Ages)
Sunday Worship 11 a.m.
Wednesday Youth 6 p.m.
Rev. Sara Hardaway
940-433-5334
540 S. Allen St. (FM 730 S.) Boyd

Pleasant Grove Cowboy Church
4789 South FM 730
Decatur, TX 76234
940-627-2860
Sunday Worship: 10:30 am
www.pleasantgrovecowboychurch.com

Tree of Life Church
Wisdom is a Tree of Life to those who embrace her; happy are those who hold her tightly. Proverbs 3:18 NLT
Pastors
Dr. Francisco J & Karen L Valenzuela
Here at Tree of Life Church, we endeavor to make our conversation gracious and attractive so that we will have the right response for everyone. For we want everything we say and do, to be worthy of being kept in the memory of others.
We invite you to join us for Sunday Services at 11 a.m.
888 CR 4213 • Decatur
940-273-9014
www.fjvm.org • doctor@fjvm.org

Trinity Lutheran Church
"A Historic Church for every Generation"
Sunday School..... 8:45 a.m.
Worship..... 10 a.m.
1st & 3rd Thur. Bible Study..... 6:30 p.m.
Rev.Gerald Epperson
www.trinitylutheranbridgeport.org
940-683-5604
1307 10th St., Bridgeport

First Presbyterian Church
1307 Newby St. • Bridgeport, TX
940-683-4779
Rev. Lucia McKee Kremzar
Sunday Fellowship... 9:30 a.m.
Sunday School…10 a.m.
Sunday Worship…11 a.m.
Come & Share The Joy
"A Warm Welcome Awaits You at First Presbyterian."

fbcboyd
First Baptist Church, Boyd, TX
Where Faith and Adventure Meet!
140 N. FM 730 - Boyd
940-433-2607
Visit our website at www.fbcboyd.org or
Find us on Facebook - First Baptist Church of Boyd
Sunday School - 10 a.m. Sunday Worship - 11 a.m.
Pastor, Mark Autry
Nursery Available all services

Sycamore Baptist Church
Glorifying God Through His Word
Sunday School 9:45am
Worship Service 11:00am
See website for Sunday Evening activities
Wednesday Night 7:00pm
Bible Study, Children In Action, Youth
133 CR 2425
Decatur, Texas
940-627-2400
(From US 380 in Decatur, go north on FM 51 for 8 miles. Turn left on CR 2535, the church is 1/2 mile on the left)
www.sycamoredecatur.com

NEW SALEM FREEWILL BAPTIST CHURCH
SUNDAY
10 a.m.…Sunday School
11 a.m.……Morning Worship
940-627-5413
carwom@embarqmail.com
Hwy. 51 South
Decatur, Texas 76234

Victory Family Church
PUT VICTORY IN YOUR FAMILY
400 W HWY 380 Decatur
940-627-5820
www.victoryfamilychurch.com

Central Fellowship
Believe. Belong. Become.
Sunday
Class
9:30 a.m.
Worship Celebration
10:30 a.m.
Wednesday
Bible Classes
6:45 p.m.
Hwy. 380, 1 mile west of Hwy. 287, Decatur
940-627-6131
www.centralfellowship.com

Aurora Baptist Church
201 Derting Rd.
Aurora, TX 76078
817-638-9000
www.AuroraBaptistChurch.com
Pastor - Jimmy Withers
SUNDAY SERVICES
Life Application Bible Study - 9:30 AM
Morning Worship - 10:30 AM
Evening Worship - 6:00 PM
WEDNESDAY EVENING
(Summer Schedule)
7:00 PM
Kidz Kingdom - ages 3 - 5
Kidz Konnect - ages 6 - 11
The "Source" - Teens
Ladies' Bible Study "The Inheritance"
Pastor's Bible Study
Inreach / Outreach Ministry

Decatur Church of Christ
"Where Your Family Will Find A Home"
• Family Bible Study For All Ages
• The Childrens Place (A Mother's Day Out) 2 days a week
FM 51 South and Preskitt Rd.
Decatur, Texas
Phone 940-627-1912
www.decaturchurchofchrist.com
Sunday Bible Study 9 a.m.
Sunday Worship 10 a.m.
Sunday Evening. Small groups including a 5 p.m. meeting at the church
Wednesday Bible Study 7 p.m.

Is Something missing in Your Life?
Come to
Faith Baptist Church
and find out what it is.

Sunday Fellowship 9am
Sunday School 9:30am
Sunday Worship 10:30am
Bible Stories 3 yrs - Kindergarten
Team Kids 1st - 2nd Grades
Wednesday Meal 6:20pm
Wednesday Bible Study 7:05pm
Wednesday Childrens Activities 7pm
Mens & Ladies Bible Study
Nursery Provided Sunday & Wednesday

Where God's Word is Taught, and People From All Walks of Life are Welcome.
2882 Hwy 380
Decatur
Pastor Jerry L Miller
940.393.9331

Bring Your Family and Friends & Let's Celebrate the Christmas Season Together
Sunday, December 16 • 6:00 pm
FREE ADMISSION
1200 Preskitt Rd • Decatur, Texas
firstdecatur.us
940.627.3235
First Decatur Baptist Church
www.theballbrothers.com

MEETING SIGN-IN SHEET

Meeting:	Wise County Hazard Analysis Working Group- PUBLIC MEETING	**Meeting Date:**	12/10/12 10:00am
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
MARY E HENRY	JUDGE	RUNAWAY BAY	940-575-4845	JUDGEHENRY@RUNAWAYBAYTEXAS.COM
ROBERT RYAN	MAYOR	RUNAWAYBAY	575-4745	RGTYAN1@YAHOO.COM
TERESA MOODY	City Secretary	Paradise	969-2114	cityhall@ci.paradise.tx.us
SAM STARR	MAYOR	PARADISE	969-2114	SAMB
Patrick Dilger	LMS Intern	NCTCOG	214-682-3336	PDilger@NCTCOG.org
KEVIN TRAN	"	"		KTRAN@NCTCOG.ORG
RANDY SINGLETON	Chief of Police / EMERGENCY Mgr.	CITY OF BRIDGEPORT	940-683-3430	RSINGLETON@CityofBridgeport.NET

MEETING SIGN-IN SHEET

Meeting:	Wise County Hazard Analysis Working Group- PUBLIC MEETING	**Meeting Date:**	12/10/12 10:00am
Facilitator:	Francisco San Miguel, NCTCOG	**Place/Room:**	200 Rook Ramsey Drive Decatur, TX

Name	Title	Company	Phone	E-Mail
Caryn Dunn	Admin. Coord.	Wise County	940-627-5743	caryn.dunn@co.wise.tx.us
COIT HARRIS	CODE OFFICER	CITY OF CHICO	940-644-2435	coitlee@hotmail.com

MEETING SIGN-IN SHEET

Meeting:	Wise County Hazard Mitigation Meeting	**Meeting Date:**	8/9/2013
Facilitator:	Nicholas F. LaGrassa	**Place/Room:**	Wise County Justice Center

Name	Title	Company	Phone	E-Mail
Caryn Dunn	Office Manager/Asst. EMC	W.C.	940-627-5743	cojudge@co.wise.tx.us
Robert Ryan	Mayor	Runaway Bay	940-393-5433	rgryan1e@yahoo.com
Oneta Berghoefer	City Sec	Runaway Bay	940 389-4844	oberghoefer@runawaybaytexas.com
Mary Beth Henry	Judge	"	940575-4745	judgehenry@runawaybaytexas.com
COIT HARRIS	CODE ENFORCEMENT	CITY OF CHICO	940-644-2435	chicocitysecretary@embarqmail.com
Clint Mercer	EMC	Alvord	940-626-9550	cmercer@cityofalvord.org
RANDY SINGLETON	EMC/ POLICE CHIEF	CITY OF BRIDGEPORT	940-683-3430	RSINGLETON@cityofBridgeport.NET
Chuck Beard	FireMarshal/EMC	Wise County	940-627-5870	firemarshal@co.wise.tx.us
J.C. Travis	Deputy Fire Marshal	Wise County	817-988-3550	JCTravis21@Aol.com
Nicholas LaGrassa	EP program assistant	NCTCOG	817 608 2323	nlagrassa@nctcog.org
Andrea Wilson	INTERN EP	NCTCOG	2176959991	alwilson@nctcog.org

TRANSPORTATION

I'LL BUY THOSE YARD CARS as well as your good used cars. Arvin, (817)925-8768.

I BUY CARS & TRUCKS running or not. Call Steve, (940)595-1394.

Recreational vehicles

2011 CAN-AM 800 4-wheeler for sale. Like new. $8,900. (940)393-9634.

NOTICES

Legal notices

FRED L. GRAHAM (SA) 15H

Notice is hereby given that, acting under and pursuant to the Ordinances of the City of Boyd, Texas, on the 13th day of August, 2013, Devon Energy Production Company, L.P. filed with the Gas Inspector of the City of Boyd, an application to drill, complete and operate a well for gas upon property located in the J. Jordan Survey, A-457, Wise County, Boyd, Texas, more particularly shown of record in Volume 150, Page 97, Lease Records of Wise County, Texas, or per Tax Tract Number R000010246, Wise County, Texas.

NOTICE OF PUBLIC MEETING

The North Central Texas Council of Governments is hosting a public meeting for the discussion of the Wise County Hazard Mitigation Action Plan. The public is encouraged to attend and participate in these discussions. Topics include potential hazards, the severity of natural hazards, and any possible mitigation solutions.

In addition to the unincorporated County, the following cities are participating in the plan:

Alvord, Bridgeport, Chico, Paradise, Runaway Bay

Meeting will take place in the Fire Marshal's Office, 206 S State St, Decatur, TX 76234, Friday, August 23rd, 2013.

Meeting is scheduled to begin at 11am.

NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN AIR PERMIT RENEWAL

PERMIT NUMBER 22116

APPLICATION TXI Operations, LP, has applied to the Texas Commission on Environmental Quality (TCEQ) for renewal of Air Quality Permit Number 22116, which would authorize continued operation of the Bridgeport Crushed Stone Plant located at 1795 South Highway 101, Bridgeport, Wise County, Texas 76426. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=33.25972

TCEQ's jurisdiction to address in the permit process.

After the technical review is complete the executive director will consider the comments and prepare a response to all relevant and material, or significant public comments. If only comments are received, the response to comments, along with the executive director's decision on the application, will then be mailed to everyone who submitted public comments or who is on the mailing list for this application, unless the application is directly referred to a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING You may request a contested case hearing. The applicant or the executive director may also request that the application be directly referred to a contested case hearing after technical review of the application. A contested case hearing is a legal proceeding similar to a civil trial in state district court. Unless a written request for a contested case hearing is filed within 15 days from this notice, the executive director may act on the application. **If no hearing request is received within this 15 day period, no further opportunity for hearing will be provided.** According to the Texas Clean Air Act § 382.056(o) a contested case hearing may only be granted if the applicant's compliance history is in the lowest classification under applicable compliance history requirements and if the hearing request is based on disputed issues of fact that are relevant and material to the Commission's decision on the application. Further, the Commission may only grant a hearing on those issues raised during the public comment period and not withdrawn.

A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. If requesting a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to

please be aware that dress, like your physi dress, will become agency's public recor formation about this tion or the permit please call the Pub Program toll free at 1 Si desea informació puede llamar al 1-800

Further informatio obtained from TXI O 1341 West Mocking las, Texas 75247-69 Mr. Don C. Bell, Jr., Manager at (972) 647 Notice Issuance Date August 21, 2013

Bids & Propos

BID INVITA

The City of Lake B accepting sealed bi erty advertised on Consult the ad or c port City Hall at Mon.-Wed.-Fri., 9a. property details. B Noon on August 30, opened at the ne meeting on Septem City has the right to

NOTICE TO PR INVITATION

Competitive Se (CSP) for Retail El for the Northwes School District wil the Northwest ISD fice, Room #C10 Drive, Justin, TX 7 **P.M., September** Proposer shall ide proposal by typing the envelope:

Northwest In School CSP #0130 CSP for Retail El Attn: Joyce Pols Purch **2001 Texan Dr 76247 (P PO Box 77070, 76177-007**

The District shall open, and read a fied date and time name of the prop Conference Room Administration Ce Drive, Justin, TX 7

The proposal p tained beginning

MEETING SIGN-IN SHEET

Meeting:	Wise County Public Meeting #2	**Meeting Date:**	8/23/2013
Facilitator:	Nicholas F. LaGrassa – NCTCOG	**Place/Room:**	Wise County Fire Marshal's Office

Name	Title	Company	Phone	E-Mail
Nicholas LaGrassa	Emergency Preparedness Program Assistant	NCTCOG	8176c8 232?	nlagrassa@nctcog.org
Melanie Devine	Sr. Specialist	NCTCOG	817-695-9138	mdevine@nctcog.org
Angie Strickler	EP Spec	NCTCOG	817-966 3089	astrickler@nctcog.org
Chuck Beard	Wise County Fire Marshal	Wise County	940-627-5870	firemarshal@co.wise.tx.us
COIT HARRIS	CODE ENFORCEMENT OFFICER	CITY OF CHICO	940-644-2435	chicocitysecretary@embarqmail.com
Clint Mercer	EMC	City of Alvord	940-626-9550	cmercer@cityofalvord.org
Caryn Dunn	Admin Coord.	Wise County	940-627-5743	~~Caryn~~ cojudge@co.wise.tx.us
RANDY SINGLETON	POLICE CHIEF/ EMERGENCY MGT. COORD.	City of Bridgeport	940-683-3430	RSINGLETON@CityofBridgeport.NET

Appendix B: Capabilities Assessment

Appendix B: Capabilities Assessment

Table 4.1 Legal and Regulatory Capability Summary

Legal and Regulatory Capabilities															
Jurisdiction	**Building Code**	**Zoning Ordinance**	**Subdivision Ordinance or regulation**	**Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances wildfire ordinances, hazard setback requirements)**	**Growth management ordinances (also called "smart Growth" or anti-sprawl programs)**	**Site Plan review requirements**	**General or comprehensive plan**	**A capital improvements plan**	**An economic development plan**	**An emergency response plan**	**A post-disaster recovery plan**	**A post-disaster recovery ordinance**	**Real estate disclosure requirements**	**Other**	**% Yes per Jurisdiction**
Runaway Bay	Y	Y	Y	Y	N	Y	Y	N	N	N	N	N	N	N	**38%**
Alvord	Y	Y	Y	Y	N	Y	Y	N	Y	Y	N	N	Y	N	**69%**
Bridgeport	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	N	**85%**
Chico	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	**62%**
Paradise	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	N	N	N	**69%**
Wise County	N	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	N	**54%**
Average % Yes Capabilities															
Y- Yes N- No ?- Don't Know															

Table 4.2 Administrative and Technical Capability Summary

Administrative and Technical Capabilities											
Jurisdiction	**Planner(s) or engineer(s) with knowledge of land development and land management**	**Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure**	**Planners or engineer(s) with an understanding of natural and/or human caused hazards**	**Floodplain manager**	**Surveyors**	**Staff with education or expertise to assess the community's vulnerability to hazards**	**Personnel skilled in GIS**	**Scientists familiar with the hazards of the community**	**Emergency manager**	**Grant writers**	**% Yes per Jurisdiction**
Runaway Bay	N	N	N	Y	N	N	N	N	Y	N	**10%**
Alvord	Y	Y	Y	Y	Y	N	N	N	Y	N	**60%**
Bridgeport	Y	Y	Y	Y	N	Y	Y	N	Y	Y	**70%**
Chico	Y	Y	Y	Y	Y	Y	N	N	Y	Y	**80%**
Paradise	N	Y	Y	Y	N	Y	N	N	Y	N	**50%**
Wise County	N	N	Y	Y	N	Y	Y	N	Y	N	**50%**
Average % Yes Capabilities											
Y- Yes N- No ?- Don't Know											

Table 4.3 Fiscal Capability Summary

Fiscal Capabilities											
Jurisdiction	**Community Development Block Grants (CDBG)**	**Capital improvements project funding**	**Authority to levy taxes for specific purposes**	**Fees for water, sewer, gas, or electric service**	**Impact fees for homebuyers or developers for new developments/homes**	**Incur debt through general obligation bonds**	**Incur debt through special tax bonds**	**Incur debt through private activity bonds**	**Withhold spending in hazard-prone areas**	**Other**	**% Yes per Jurisdiction**
Runaway Bay	N	N	Y	Y	N	Y	Y	N	N	N	**44%**
Alvord	N	Y	Y	Y	Y	Y	N	N	Y	N	**67%**
Bridgeport	Y	Y	Y	Y	Y	Y	Y	N	N	N	**78%**
Chico	Y	Y	Y	Y	Y	Y	Y	N	Y	N	**89%**
Paradise	Y	Y	Y	Y	Y	Y	Y	Y	N	N	**89%**
Wise County	N	Y	Y	N	Y	Y	Y	N	N	N	**56%**
Average % Yes Capabilities											
Y- Yes N- No ?- Don't Know											