

**MITIGATION
ACTION
PLAN**

FOR

**FRANKLIN
COUNTY
TEXAS**

**INCORPORATED AND UNINCORPORATED
AREAS**



DEVELOPED BY THE ARK-TEX COUNCIL OF GOVERNMENTS

2016

FRANKLIN COUNTY TEXAS

FORWARD

Development of a comprehensive all-hazard Mitigation Plan was approved by the Division of Emergency Management, Texas Department of Public Safety, in a letter dated February 21, 2003. The Planning Project Number is DR-1379-3.145. This Hazard Mitigation Plan identifies the potential impact of natural and man-made hazards that threaten the nine (9) county region of the Ark-Tex Council of Governments. The specific counties are as follows: Bowie; Cass; Delta, Franklin, Hopkins, Lamar, Morris, Red River, and Titus. This Mitigation Action Plan is for ALL OF FRANKLIN COUNTY, except the City of Winnsboro. The City of Mt. Vernon is included in this plan for Franklin County. Winnsboro is located in both Franklin and Wood Counties. Wood County is located in the 14-county area served by the East Texas Council of Governments. The entire City of Winnsboro is included in the Wood County Hazard Mitigation Plan, which was prepared under the direction of the East Texas Council of Governments, and is, therefore, not included in this plan.

FEDERAL AUTHORITIES

Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)

Public Law (PL) 106-390 (Disaster Mitigation Act of 2000)

Code of Federal Regulations (CFR) 44

44 CFR Parts 78, 201, and 206

STATE AUTHORITIES

Emergency Management Plan for Franklin County, Texas

Joint Resolution Between the County of Franklin, Texas, and the City of Mount Vernon, Texas

Inter-local Agreements

Don Shipp, Ark-Tex Council of Governments, Texarkana, Texas reviewed this plan in November, 2007. Phone: (903) 832-8636. Fax: (903) 832-3441 or (903) 792-3012. gburtchell@atcog.org

SECTION I

FRANKLIN COUNTY TEXAS

PURPOSE

Hazard Mitigation is defined as any sustained action taken to reduce or eliminate the long-term risk to life and property from hazard events. Hazard mitigation planning places an emphasis on sustained actions to reduce long-term risk and this differentiates mitigation from preparedness and response tasks that are required to survive a disaster and from recovery tasks, which are essentially the return to pre-disaster status. Mitigation actions follow a disaster focus on making the situation safer and better than before the incident occurred. Mitigation is an essential component of emergency management. Effective mitigation actions can decrease the impact, the requirements and the expense of future hazard events.

Hazard mitigation planning is never ending. The primary purpose of this plan is to ensure that the residents, visitors, and businesses in Franklin County, Texas including the participating jurisdictions of Mount Vernon are safe and secure from natural hazards by reducing the risk and vulnerability before disasters happen, through federal, state, and local community communication, public education, as well as research, and data analysis. This plan is intended to serve as a guide in coordinating and implementing hazard mitigation policies, programs, and projects.

The Franklin County Emergency Management Plan has been developed, and the assessment level of planning preparedness is Intermediate. The Mitigation Action Plan (MAP) will only serve to enhance the county's capabilities in recognizing, planning for, responding to, and recovering from disaster. The county's history of the careful development, monitoring, and integration of emergency management and hazard mitigation planning is testament to its standing commitment to make the jurisdictions as disaster-resistant as possible.

The Plans, ordinances, maps and codes were reviewed by the Hazard Mitigation Committee and staff before mitigation action items and implementation strategies were determined. Information gathered from the Plans, ordinances, maps, permits, and codes were considered and incorporated into this Hazard Mitigation Plan. The lack of various plans and codes were considered also. This was factored in when considering the various mitigation action items and implementation strategies.

We cannot control natural phenomena such as floods, tornadoes, winter storms, wildfires and other hazardous events. Despite their destructiveness, these occurrences are part of the natural system.

- ❖ Upon approval by the State of Texas, submit the updated plan to FEMA and provide follow up technical assistance to the Franklin County Community Mitigation Planning Team to address any noted deficiencies subsequent to the review of the plan by FEMA.
- ❖ Coordinate adoption and final approval process by all City and Town Councils and the Commissioners Court of the updated and approved FEMA plan.
- ❖ Submit a final plan, with adoption documentation and approval signatures for all participating jurisdictions, to the State and FEMA and ensure plan is noted as complete and approved by both agencies.
- ❖ Prepare for and attend City Council/Commissioners Court/public meetings during plan consideration and plan adoption process.
- ❖ Complete and acquire approval of all necessary forms associated with the application for Franklin County's Multi-Jurisdictional Hazard Mitigation Grant.

A Multi-Jurisdictional Hazard Mitigation Planning Team (HMPT) was formed consisting of representatives appointed by local jurisdictions to work together with ATCOG in the plan development. The team's primary duties were:

- ❖ Ensure that the Franklin County HMPT includes representatives from the neighborhood stakeholders groups. Each participating city must provide at least one representative to the county team and provide active support and input. ATCOG will approve the final composition of the planning team.
- ❖ Assist ATCOG staff with identifying hazards and estimating potential losses from future hazard events.
- ❖ Assist ATCOG in developing and prioritizing mitigation actions to address the identified risks.
- ❖ Assist ATCOG in coordinating meetings to develop the plan.
- ❖ Identify the community resources available to support the planning effort.
- ❖ Assist with recruiting participants for planning meetings.
- ❖ Gain the support of neighborhood stakeholders for the recommendations resulting from the planning process.
- ❖ After adoption, appoint members to a committee to monitor and work toward plan implementation.
- ❖ After adoption, publicize the plan to neighborhood interests and ensure new community members are aware of the plan and its contents.
- ❖ Subsequent to State of Texas and FEMA approval of the plan, assume responsibility for bringing the plan to life by ensuring it remains relevant by monitoring progress, through regular maintenance and implementation projects.

THE PLANNING PROCESS

BENEFITS OF MITIGATION PLANNING

1. Increases public awareness and understanding of vulnerabilities as well as support for specific actions to reduce losses from future natural disasters.
2. Builds partnerships with diverse stakeholders increasing opportunities to leverage data and resources in reducing workloads as well as achieving shared community objectives.
3. Expands understanding of potential risk reduction measures to include structural and regulatory tools, where available, such as ordinances and building codes.
4. Informs development, prioritization, and implementation of mitigation projects. Benefits accrue over the life of the project as losses are avoided from each subsequent hazard event.

The Multi-Jurisdictional Planning Process.

A multi-jurisdiction plan was chosen to best prepare the communities of Franklin County for Hazards. The Ark Tex Council of governments worked hand in hand with the jurisdictions within the planning area of Franklin County to develop the current plan. It is through this regional cooperation that ATCOG can serve its members by working to continually improve the economic, social, educational, and safety aspects of life for citizens

Mitigation plans need to be a living document and to ensure this the plan must be monitored, evaluated, and updated on a five-year or less cycle. This includes incorporating the mitigation plan into county and local comprehensive or capital improvement plans as they are developed.

Organize Resources:

Effective planning efforts result in practical and useful plans, but written plans are only one element in the process. The planning process is as important as the plan itself. A successful planning process organizes resources by encouraging cooperation and bringing together a cross-section of government agencies, local entities, concerned citizens and other stake holders to reach consensus on how to achieve a desired outcome or resolve a community issue. Applying a community wide approach and including multiple aspects adds validity to the plan. Those involved gain a better understanding of the problem and how solutions and actions were devised. The result is a common set of community values and widespread support for directing financial, technical, and human resources to an agreed upon action.

- ✓ 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. This was done by having a public meetings. Postings and Notices were placed at the Courthouse and in two newspapers. The plan was also posted on the Franklin County website.

- ✓ Each participant was given an explanation of the Hazard Mitigation Planning Process. These opportunities were also used to gather hazard information, develop mitigation strategies, and edit the plan during the writing process.
- ✓ The review and incorporation of appropriate existing plans, studies, reports, technical information, and other research was included into the plan during its drafting process
- ✓ Support and information was obtained from other government programs and agencies such as the National Flood Insurance Program (NFIP), Natural Resources Conservation Service (NRCS), US Geological Survey (USGS), NOAA Weather, etc.

Risk and Vulnerability Assessment:

The plan must be reactive to hazards that face the community. It is not sufficient to just identify the hazards. The potential consequences of these hazards must be assessed. This phase included identifying and profiling all hazards, assessing vulnerability and risk. Research into the history of Franklin County to document past disasters was required. Local libraries, national weather records and the life experiences from local residents were used to assess the plan.

A general assessment included using local residents, historical data, Texas State Mitigation Plan, Local or Regional Reports, Strategic Plans, Flood Studies, and other data to establish the following:

- ◆ The type, location and extent of all hazards that can affect the jurisdiction, both historically and in the future.
- ◆ Past occurrences of hazard events in or near the community and the severity, duration, and the resulting influences on the area.
- ◆ Description of the jurisdictions vulnerability to those hazards including types and numbers of existing and future buildings, infrastructure and critical facilities in identified hazard areas.
- ◆ Probability or likelihood of hazard occurrence.
- ◆ General description of land uses and development trends for future land use decisions.

The development of a Multi-Jurisdictional Hazard Mitigation Plan involves the use of many types of information including historical data on previous disasters, information on critical infrastructures, zoning and flood plains maps, records, charts, etc., from many sources.

Develop Mitigation Strategies:

Written Strategies were developed to demonstrate how Franklin County, Texas intends to reduce losses identified in the Risk Assessment. It includes goals and objectives to guide the selection of mitigation activities and reduce potential losses. This is a blueprint for reducing the potential losses identified in the risk assessment. The Mitigation Strategy also includes:

- A description of mitigation objectives meant to reduce long-term vulnerabilities. These objectives were identified by the HMPT using hazard profiles, survey assessments, etc.
- Identification and a comprehensive analysis of a range of mitigation actions and projects.
- An Action Plan describing how the mitigation actions and projects were prioritized, and how they would be implemented and administered.



FRANKLIN COUNTY TEXAS

COUNTY GOVERNMENT

County government 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 commissioner's court. Franklin County has four-precinct commissioners and a county judge who serve on this court. This body conducts the general business of the county and oversees financial matters. The major elective offices found include the county judge and attorneys, county and district clerks, county treasurer, tax assessor-collector, justices of the peace, and constables. There is an auditor appointed by the district courts.

Economic Considerations.

Franklin County and the jurisdiction of Mount Vernon have very limited budgets. Their tax base and annual budgets are low. They will have to rely on grants and volunteerism to accomplish the bulk of the projects. **Franklin County experienced a 0% growth rate between April 1, 2010 to July 1, 2014, Texas has 254 counties and Franklin County ranks 125th in median house hold income. It is ranked 246th in land area size in the state.**

If you want to understand geology, study earthquakes. If you want to understand the economy, study the Depression. Ben Bernanke

Resource Information

Resource information was obtained from the following government programs and agencies:

National Flood Insurance Program (NFIP), which provided information about flooding and actions needed to satisfy compliance with NFIP.

The US Geological Survey (USGS), provided information that was incorporated into the hazards of drought and flooding.

Natural Resources Conservation Service (NRCS), provided information about water management and climate change that are found in the identified hazards of drought and extreme heat.

The Texas Hazard Mitigation Plan helped to develop the common language used in the Delta Mitigation Plans.

The Emergency Management Plan of Franklin County provided information regarding current emergency management preparedness. The information helped determine the most immediate needs relating to all identified mitigated hazards.

Fort Worth, Texas Mitigation Plan provided an example of action tables that was used to organize and clarify the actions.

Texas Wildfire Risk Assessment Portal (TXWRAP) provided statistical graphs and maps regarding wildfire activity in Franklin County. This information is found in the wildfire section of the Plan.

NOAA Weather web site provided information regarding climate data and global warming.

The US Census Bureau provided statistics and population information found throughout the plan.

The Franklin County Hazard Mitigation Plan 5-year update consists of Franklin County and the jurisdiction of Mount Vernon.

The Hazard Mitigation Action Team assisted in developing plan goals and action items by using their own skills sets and knowledge to create a more comprehensive plan. A variety of backgrounds and experience were evident in the team members, thus provided an eclectic view of mitigation needs and solutions.

Team meetings, telephone calls and e-mail communication played a role in team member contact and plan completion.

Meeting dates were scheduled as follows.

Scheduled Team Meeting Dates		
Date	Purpose	Location
May 25, 2016	Introduce county judge and EMC to Franklin update procedure	Franklin County Courthouse
June 8, 2016	Introduce Mount Vernon team members to Franklin update procedure.	Mount Vernon City Hall
June 23, 2016	Stakeholder and public comment meeting. Showed a PowerPoint presentation and worked on actions for city and county.	Franklin County Courthouse.

FRANKLIN COUNTY TEAM MEMBERS	
Name	Title
Robert Zinn	Franklin County EMC
Tina Rose	City Secretary of Mount Vernon
Darrek Ferrell	City Administrator of Mount Vernon
Scott Lee	Franklin County Judge

Franklin County Team Members Background and Contributions

Robert Zinn: Is an Inspector with the Franklin County Sheriff’s department. He met with ATCOG representative and judge Lee for the information meeting. He helped choose the appropriate hazards, suggested actions and developed ideas for plan integration. He also coordinated the meeting notices in the local paper and at the courthouse

Tina Rose is the city secretary. She attended meetings and provided information regarding stakeholder contacts, information about city capabilities. She provided input regarding actions and integration of the plan’s integration into other city documents.

Scott Lee is the Franklin County Judge. He assisted in organizing the meetings and provided information regarding county capabilities. Judge Lee also provided ideas for actions and provided information necessary to formulate risks and develop plan strategies. He participated in all team meetings.

Darrek Ferrell is the Mount Vernon City Administrator. Mr. Ferrell participated in the Mitigation meetings offering suggestions regarding actions. He also provided valuable city statistics necessary to formulate risks and develop plan strategies.

Stakeholders were selected to provide a wide variety of interested parties. Judges from neighboring counties, charity organizations, schools and city officials were invited to participate in the development of the plan.

Area Stakeholders				
Name	Title	Company	Location	Type of Contact
Margaret Sears	Mayor	Mt. Vernon, Texas	Mt. Vernon	email
Tina Phillips	Auditor	Franklin County	Mt. Vernon	email
Shane Sumrow	Safety Officer	Lowes RDC	Franklin County	email
Kevin Spence	Director	Cypress Springs Special Utility Dist.	Franklin County	email
Robert Newsom	County Judge	Hopkins County	Sulphur Springs	email
Jim Dial	Director for OSSF systems	Hopkins County Environmental	Sulphur Springs	email
Genia Burnaman	Chief Appraisal	Franklin County Appraisal District	Mt. Vernon	email
David Weidman	Director	Franklin Co. Water District	Mt. Vernon	email
Ricky Jones	Sheriff	Franklin County	Mt. Vernon	email
Bob McFarland	Director	Franklin County Industrial Foundation	Mt. Vernon	email
Bryan Jeanes	County Judge	Wood County	Quitman	email
Thomas Cravey	County Judge	Camp County	Pittsburgh	email
Brian Lee	County Judge	Titus County	Mount Pleasant	email

Stakeholders attending the June 23rd meeting:

Margaret Sears, Mayor of Mt. Vernon
Shane Sumrow, Safety Manager, Lowe's Distribution Center, Franklin County
Kevin Spence, Cypress Springs Special Utility District
Robert Newsom, Hopkins County Judge
Jim Dial, Hopkins County Environmental

Margaret Sears attended to have a better understanding of the mitigation plan process and to support the team members from Mt. Vernon.

Kevin Spence of the Cypress Springs Special Utility was particularly interested in issues such as water conservation and, drought and water usage. He participated in discussions regarding water availability for the area and the future needs of Franklin County and North Texas.

Public Participation

Public participation is a key component to strategic planning processes. Citizen participation offers citizens the chance to voice their ideas, interests, and opinions. Opportunities were given to the citizens of Franklin County to participate in planning and to review the plan. A Public meeting was held on June 23, 2016 after postings containing meeting information and defining mitigation were placed in the county paper, at the courthouse and on the county website. A **plan draft was posted on the Franklin County Website. Notices were posted at the courthouse in the local newspaper and on the Franklin County Website.**

*We always hear about the rights of
democracy, but the major responsibility of
it is participation.* Wynton Marsalis

SECTION II HAZARDS HAZARD IDENTIFICATION AND ASSESSMENT

Extreme Weather

The National Oceanic and Atmospheric Administration said that the year of 2010 tied with 2005 for the warmest on record. This is the 34th consecutive year with global temperatures above the 20th Century average.

Also according to NOAA since 1895 the temperature across the United States has increased at an average rate of approximately 0.12 F per decade, and the ten warmest average global temperatures since 1880 have all occurred in the last 13 years.

There are no national or major scientific institutions anywhere in the world that dispute the theory of anthropogenic climate change that will increase the likelihood of unstable weather patterns.

We must prepare for the increased potential of extremes in weather activity. According to an article published in the March 2011 issue of the prestigious science magazine *Nature*, most climate scientists agree that an increase of weather extremes has been a fundamental prediction of climate science for decades. Current data suggests that as the earth warms, precipitation extremes will become more intense, winter and summer, simply because warmer air can carry more water vapor. Weather statistics confirm that this has begun to happen.

These conclusions are particularly bad news for the storm-prone portions of the central and eastern United States, where strong winds are a major source of weather-related casualties. Also, according to NASA, Global warming will make severe thunderstorms and tornadoes a more common feature of U.S. weather.

The western United States won't catch a break either—while it is expected to get drier, the storms that do form are likely to have more lightning, which could then trigger more wildfires.

“Drier conditions near the ground combined with higher lightning flash rates per storm may end up intensifying wildfire damage,” said study leader Tony Del Genio of NASA's Goddard Institute for Space Studies in New York. The results of the study are detailed in the Aug. 17, 2007 issue of the journal *Geophysical Research Letters*.

No single weather event can be directly attributed to climate change. But as the globe warms up, Americans can expect more storms bearing down on much of the United States, scientists say.

Even increased snowfall has a climate change connection. That's not because the February 1, 2011 storm can be linked to rising atmospheric carbon dioxide levels or increasing global temperature – again, such a connection is impossible to make – but, according to climatologists, an increased propensity for winter storms is exactly what you'd expect in a warming world.

“There’s no inconsistency at all,” Michael Mann, the director of the Penn State Earth System Science Center, told LiveScience. “If anything, this is what the models project: that we see more of these very large snowfalls.”

Regardless of individual views regarding global warming, extreme weather patterns over the last ten years are self-evident. We can easily predict that continued extremes in weather, like those mentioned above, will occur in the foreseeable future.

All of Franklin County and Mt. Vernon are susceptible to several possible natural hazards. The Hazard Mitigation Team with the assistance of the Ark-Tex Council of Governments Hazard Mitigation Planner conducted a comprehensive Hazard Analysis beginning in May, 2003. The hazard analysis will be reviewed annually, and up-dated as needed during the Formal Review Process.

The Hazard Mitigation Team identified the following hazards that had the potential to cause personal or property damage in the county:

- Flood
- Tornado
- Winter Storm
- Thunderstorm Winds
- Hailstorm
- Drought
- Extreme Heat
- Wildfire

Hazards with distinct area of risk	Hazards without distinct area of risk
Flood	Drought
Tornado	Severe Winter Storm
Hailstorm	Extreme Heat
Thunderstorm Winds	
Wildfire	

The process for identifying hazards included looking at historical data to determine which hazards seemed to occur in Franklin County. Sources used were newspaper articles, general local knowledge of jurisdictions’ staff and local residents, NOAA Satellite and Information Service National Climatic Data Center reports, and advice from FEMA Hazard Mitigation Plan reviewers and Texas Department of Emergency Management staff.

Natural Hazards Most Likely to Occur in Franklin County.

Hazard	Type of Disaster	How Identified	Why Identified
Floods	Natural	<ul style="list-style-type: none"> • Review Repetitive Flood Properties • NOAA • Newspaper accounts • Input from public • Review of FIRMS 	<ul style="list-style-type: none"> • The County contains many creeks, streams and rivers • The County has experienced flooding in the past. • Flooding is a frequent issue
Tornado	Natural	<ul style="list-style-type: none"> • Public Input • National Weather Service • Past History • NCDC Data Base 	<ul style="list-style-type: none"> • Public Concern • Past History • Frequency
Winter Storms	Natural	<ul style="list-style-type: none"> • Past Disasters (2000 ice storm) costliest in recent memory • Public input • NOAA • National Weather Center 	<ul style="list-style-type: none"> • Little equipment to fight ice and snow • Heavy psychological toll on population • Population not educated about dealing with outages etc.
Thunderstorm Winds	Natural	<ul style="list-style-type: none"> • NOAA reports • Public Input • Newspaper Accounts 	<ul style="list-style-type: none"> • Wind shears an ongoing problem • Severe Windstorms occur every year
Droughts	Natural	<ul style="list-style-type: none"> • History • Review of NCDC database • Public Input 	<ul style="list-style-type: none"> • Costly to agri-business • Drought common to state and county
Extreme Heat	Natural	<ul style="list-style-type: none"> • History • Review of NCDC database • Public Input 	<ul style="list-style-type: none"> • Costly to agri-business • Extreme heat common to state and county
Wildfire	Natural	<ul style="list-style-type: none"> • Fire databases • Public Input • Texas Forestry • Newspaper Articles 	<ul style="list-style-type: none"> • More wildfire occurrences than any other natural disaster • Can be common to drought and storms • Rural areas most vulnerable

Potential Severity of Impact: (45% of Priority Risk Index)	
SUBSTANTIAL Index Value = 4	<ul style="list-style-type: none"> • Complete shutdown of facilities for 30 days or more • More than 50 percent of property destroyed or with major damage
MAJOR Index Value = 3	<ul style="list-style-type: none"> • Complete shutdown of critical facilities for at least 2 weeks • More than 25 percent of property destroyed or with major damage
MINOR Index Value = 2	<ul style="list-style-type: none"> • Complete shutdown of critical facilities for more than 1 week • More than 10 percent of property destroyed or with major damage
LIMITED Index Value = 1	<ul style="list-style-type: none"> • Shutdown of critical facilities and services for 24 hours or less • Less than 10 percent of property destroyed or with major damage

Probability of Future Events is categorized as Unlikely to “Highly Likely”. These terms are defined as follows:

Probability of Future Events: (30% of Priority Risk Index)	
Highly Likely Index Value = 4	Event probable in the next year. 1/1 = 1.00 (Greater than .33)
Likely Index Value = 3	Event probable in next 3 years 1/3 = .33 (Greater than 0.20, but less than or equal to 0.33)
Occasional Index Value = 2	Event probable in next 5 years 1/5 = 0.20 (Greater than 0.10, but less than or equal to 0.20)
Unlikely Index Value = 1	Event probable in next 10 years 1/10 = 0.10 (0.10 or less)

Formula for probability: # events divided by the # of years on record i.e. 10 flood events in a 20 year period would give a $10/20 = .50$ Value index of 4 (Highly Likely)

Warning Time: (15% of Priority Risk Index)	
Index Value = 4	Less than 6 hours
Index Value = 3	6 to 12 hours
Index Value = 2	12 to 24 hours
Index Value = 1	More than 24 hours

Duration: (10% of Priority Risk Index)	
Index Value = 4	More than a week
Index Value = 3	Less than a week
Index Value = 2	Less than 24 hours
Index Value = 1	Less than 6 hours

Priority Risk Index (PRI)	
High Risk	PRI of 3.0 or greater
Medium Risk	PRI score 2.0 to 3.0
Low Risk	PRI score less than 2.0

Significant Weather Hazards in Franklin County					
Hazard*	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	PRI Score
Floods	Limited PRI = .45	Highly Likely PRI = 1.20	6 to 12 hrs. PRI = .30	<24 hrs. PRI = .20	Medium 2.15
Tornados	Substantial PRI=1.8	Highly Likely PRI=1.20	< 6 hrs. PRI=.06	< 6 hrs. PRI=.10	High 3.16
Thunderstorm Winds	Limited PRI = .45	Highly Likely PRI = 1.20	<6 hours PRI + .6	< 6 hours PRI =.10	Medium 2.35
Hail	Limited PRI=1	Highly Likely PRI=4	<6 hrs. PRI 4	<6 hrs. PRI 1	Medium 2.35
Winter Storms	Minor PRI = 1.35	Highly Likely 1.20	> 24 hrs. PRI = 1	< one week PRI = 3	Medium 2.55
Drought	Substantial PRI = 1.8	Highly Likely PRI = 1.20	> than 24 hours PRI = .15	>Week PRI .40	High 3.25
Extreme Heat	Limited PRI 1	Highly Likely PRI 4	> 24 hrs. PRI 1	< a week PRI 3	Medium 2.1
Wildfires	Substantial PRI 4	Highly Likely PRI 4	< 6 hrs. PRI 4	< Week PRI 3	high 3.9

*Hazards considered significant enough for further evaluation.

PRI Value = (Impact x .45%) + Probability x 30%) + (Warning Time x 15%) + (Duration x 10%)

Vulnerability is categorized as “Low” to “High”. These terms are defined as follows:

Hazard Vulnerability	
LOW	Limited or no history of significant impacts to property, infrastructure and/or public safety.
MODERATE	People and facilities located in areas that have low levels of historic occurrence of impacts from hazard and/or in areas where impact is possible but not probable.
HIGH	People and facilities located in areas that have previously experienced impacts from hazards and/or in areas where impacts from hazards are possible and probable. Future damage to property and infrastructure is probable and/or a documented history of threat to public safety exists.

**FRANKLIN COUNTY DAMAGE ASSESSMENT
INCLUDING THE JURISDICTIONS OF MOUNT VERNON**

FRANKLIN COUNTY				
Structure Type	Value	75%	50%	25%
Residential	817,485,790	613,114,343	408,742,895	20,437,1448
Commercial	48,189,890	36,142,418	24,094,945	12,047,473
Industrial	21,369,970	16,027,478	10,684,985	5,342,493
Exempt Property	48,423,020	36,317,265	24,211,510	12,105,755
Totals	935,468,670	701,601,503	467,734,335	233,867,168

MOUNT VERNON				
Structure Type	Value	75%	50%	25%
Residential	64,485,660	48364,245	32,242,830	16,121,415
Commercial	36,296,440	27,222,330	18,148,220	9,074,110
Industrial	<i>No Industry</i>			
Exempt Property	33,365,030	25,023,772	16,682,515	8,341,258
Totals	134,147,130	100,610,348	67,073,565	33,536,783

*Everybody has losses - it's unavoidable
in life. Sharing our pain is very healing.*

Isabel Allende

HAZARD ANALYSIS

Simply put, hazard analysis is an evaluation of the types of hazards (emergencies) that have occurred in the past or could occur in the future, identification of the population at risk, and an evaluation of the hazards versus the population to determine overall vulnerability.

The following steps were taken:

- ❑ Identification of the Hazards. Determination of the hazards, both natural and technical, that could affect the county.
- ❑ Profiling the Hazard Events. Determination of how bad a hazard can get.
- ❑ Inventorying Assets. Determination of where and/or to what extent the hazards can affect the assets of the county or its jurisdictions'.
- ❑ Estimating Losses. Determining how the hazards will affect the county/city.

FLOOD

Flood Types

Flash Flood: A flash flood generally results from a torrential rain on a relatively small drainage area. Runoff from these rainfalls results in high floodwater that can cause destruction of homes, buildings, bridges, and roads. Flash floods are a threat to public safety in areas where the terrain is steep and surface runoff rates are high.

Riverine Floods: Riverine floods are caused by precipitation over large areas and differ from flash floods in their extent and duration. Floods in large river systems may continue for periods ranging from a few hours to many days.

Floodplains

100-Year Flood: There is one chance in 100, or a 1% chance of a flood of such magnitude or greater occurring in any given year. There is no guarantee that a similar flood will not occur in the next year, or in the next month.

Floodplain: The lowland and flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Floodway: That portion of the floodplain which is effective in carrying flow, within which this carrying capacity must be preserved and where water depths and velocities are the greatest. It is the area along the channel that provides for the discharge of the base flood so the cumulative increase in water surface elevation is no more than one foot.

Franklin County will be susceptible to flooding during periods of heavy rain. It is common to have hard rains that wash out roads, small creeks may overflow causing low areas to be

impassable. Driving conditions become dangerous when travelers take chances crossing high water in driving rain.

Mount Vernon has identified areas where roads are prone to flood during heavy rains. Police and city employees put barriers out to protect vehicles from washing out-reach quickly when water levels begin to rise.

National Flood Insurance Program

Franklin County is small in physical size and population. The county passed a resolution on May 22, 2000 to participate in the National Flood Insurance Program. Franklin County has locally generated maps that assist them in tracking areas that may be at risk for flooding and the county monitors new development to ensure that building codes are adhered to. The county has not been mapped by FEMA. Franklin County has an employee designated to monitor floodplain activity. According to Texas DEM there are no repetitive loss structures in the county.

Mount Vernon has 2,176 acres inside the city limits. The 100-year flood plain covers approximately 94 acres or 4.3% of the total acreage. Due to the location of the flood plain, it is estimated that a 100-year flood event in the city would cause minimal damage. There would be minimal or no property damage, but possibly some public threat or inconvenience. The total taxable value of all property in the city is approximately 70 million dollars. According to the Texas Department of Emergency Management there is no record of repetitive flood loss in Mt. Vernon or Franklin County.

Mount Vernon Texas, CID: 480821 passed a floodplain management resolution, dated May 22, 2000. The city of Mount Vernon possesses floodplain maps and the city has a designated employee who monitors for development activity in that area. Mount Vernon has no record of repetitive loss in their jurisdiction



Let it snow

Approximately one quarter inch of snow fell in Franklin County on Thursday, Feb. 1. Foliage, rooftops and vehicles were covered with a blanket of snow during the evening hours. (Optic Photo by Susan Reeves '07)

Record rain falls in January

A record 8.25 inches of rain fell in Franklin County during January. The amount is the most recorded during January since 1993 when 7.74 inches fell. The average rainfall amount for January is 3.007 inches.

No record high or low temperatures were recorded in January.

Highs were recorded in the 70s for two days, in the 60s for eight days, in the 50s for 10 days, in the 40s for nine days, and in the 30s for two days. The average high for the month of January was 55°.

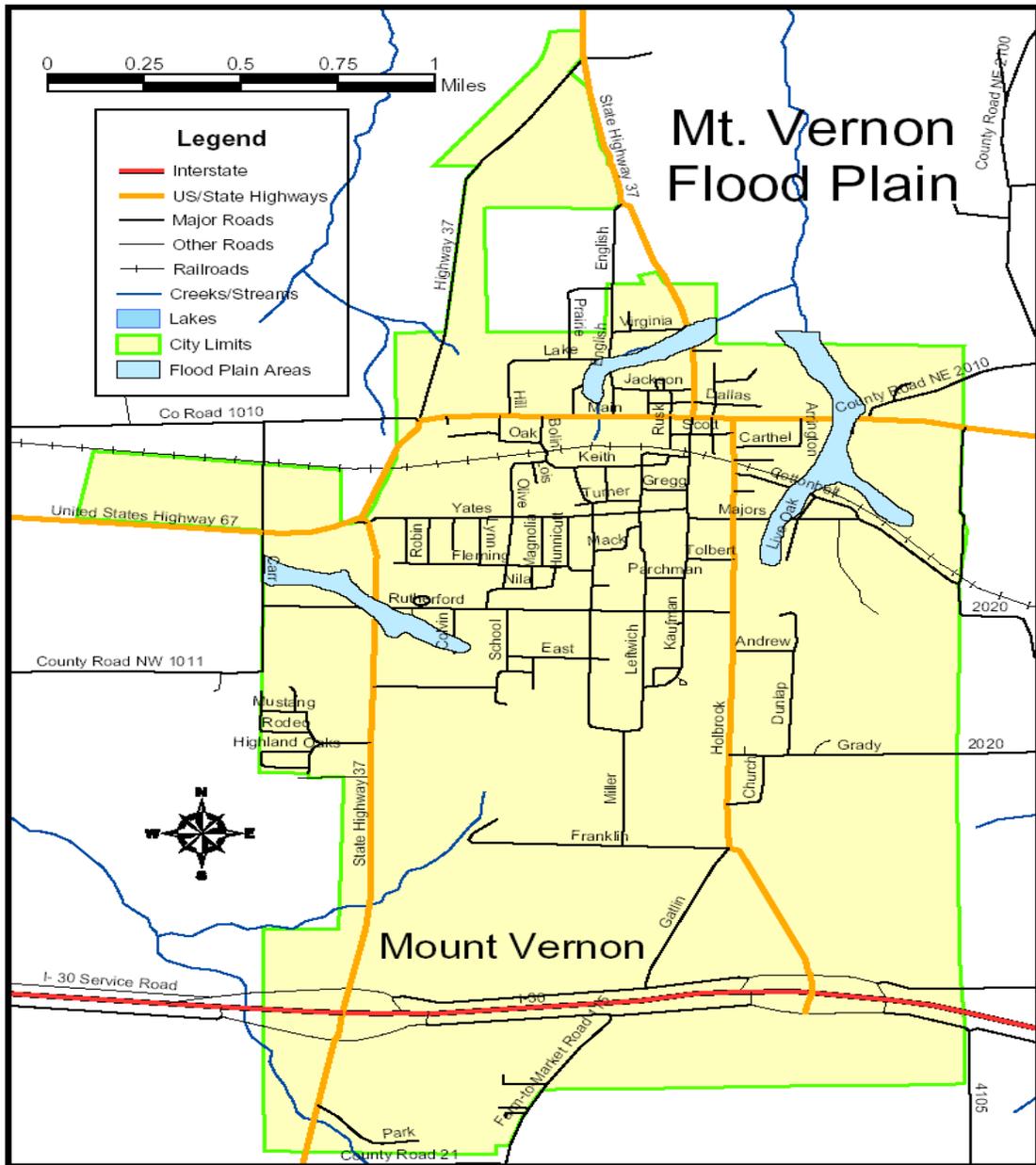
Lows were recorded in the 50s for one day, in the 40s for seven days, in the 30s for 22

days, and in the teens for one day. The average low for the month was 37.6°.

The weather information given below was recorded at the National Oceanic and Atmospheric Agency official weather station in Mount Vernon for the 24 hour period ending 7 a.m. on the day listed for the period of Wednesday, Jan. 31, 2007 through Tuesday, Feb. 6, 2007.

Day	Max.	Min.	Rain
Wednesday	53	34	0
Thursday	44	33	0
Friday	43	34	0.32
Saturday	43	29	0
Sunday	53	29	0
Monday	61	34	0
Tuesday	67	40	0

- Pat Wright '07



There were 14 days that flash flood events were recorded in Franklin County since record keeping began in 1996. In several cases flooding was recorded for Franklin County and Mt. Vernon on the same day. Mt. Vernon recorded a total of 11 events and Franklin Co. unincorporated recorded 8. After original plan adoption 3 events were recorded in Franklin County and 2 in Mt. Vernon.

History of Flash Flooding in Franklin County			
Date	Location	Description	Cost
11/24/96	Mt. Vernon	Service Roads were completely underwater and closed	0.00K
02/20/97	Hagansport	Cr2220 was closed due to high water	0.00K
02/16/01	Mt. Vernon	I-30 Service roads closed from the western county line to mile marker 145. High water over FM 3122 and numerous secondary roads flooded. Hwy. 37 was flooded	0.00K
06/05/04	Franklin Co. & Mt. Vernon	Numerous county roads under water. Doppler radar estimates of 6 to 8 inches of rain just southeast of town	0.00K
07/05/05	Mt. Vernon	Numerous city streets were flooded	5.00K
05/14/08	Mt. Vernon	Excessive heavy rainfall resulted in a portion of Holbrook Street flooded	0.00K
05/03/09	Franklin Co.	Several roads flooded across the southern end of the county including Hwy. 37 just north of Hwy. 900	0.00K
08/01/09	Mt. Vernon	Water covering multiple roads throughout the city.	0.00K
10/13/09	Mt. Vernon	High water was reported over Hwy. 67 in town	0.00K
10/22/09	Franklin Co. & Mt. Vernon	Numerous county roads were flooded throughout the county. The I-30 service road in Mt. Vernon was flooded and briefly closed as well.	0.00K
06/10/10	Franklin Co. & Mt. Vernon	Several roads were under high water in town of Mt. Vernon Other county roads were flooded and closed as well.	0.00K
Flash Flooding Since Franklin Plan Adoption			
03/20/12	Franklin Co. & Mt. Vernon	A woman and her two children had to be rescued when they drove their car into a flooded roadway. Numerous roads were underwater throughout the county	0.00K
12/12/15	Franklin Co.	Several Farm to Market roads, including 3250 and 3170 were flooded and closed near the Purley community	0.00K
12/27/15	Franklin Co. and Mt. Vernon	Widespread flooded was reported across the county and the city of Mt. Vernon	0.00K
		Total	5.00K

Franklin County Flood Risk					
Jurisdiction	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	Risk PRI
Mt. Vernon	Limited PRI=.45	Highly Likely PRI= 1.20	6 to 12 hrs. PRI = .30	< 24 hrs. PRI =.20	Medium 2.15
Franklin Co.	Limited PRI = .45	Highly Likely PRI = 1.20	6 to 12 hrs. PRI = .30	<24 hrs. PRI = .20	Medium 2.15

EXTENT: Possible Amounts of Flooding Within Jurisdictions		
Jurisdiction	From	To
Franklin County	¼ inch	3 feet
Mount Vernon	¼ inch	1 foot.

Estimated Property Loss at 25 %	
Franklin County	233,867,168
Mount Vernon	33,536,783

Location: Historically, the entire County area has suffered from moderate flooding. If future trends occur as they have in the past, the County area will continue to have floods. Countywide, the Highways, FM Roads, County Roads, and city streets will continue to flood. County Roads, FM Roads, and state highways are depicted on the Franklin County map on page 13. Franklin County could see heavier rainfall as climate change impacts the region.

According to FEMA, Franklin County has not been mapped. There are no available FEMA flood maps for Franklin County.

PROBABILITY: Flash floods are possible at any time during the storm season. These types of floods occur often during that period. According to the NOAA weather service in Shreveport, LA, a flash flood is defined as flooding that occurs within 6 hours after or during a rain.

VULNERABILITY: The probability of a flash flood and the inability to accommodate the existing drainage on some of the FM roads can be a problem.. Over 2 to 3 inches of rain per hour is considered a heavy rain in Franklin County. Flooding is likely to occur in rural areas if that amount falls for several hours. There is a moderate chance of flooding if rain falls at a rate of 1-2 inches per hour and slight for anything under. The vulnerability rating for Mt. Vernon and Franklin County is moderate.

IMPACT: The rural areas of Franklin County will continue to have issues with flooding. There have been no injuries or deaths recorded. The impact of flash floods varies locally. Roads will flood in rural county areas after heavy rains. There are no repetitive loss properties, and no reported deaths or injuries due to flooding with minimal financial loss. In the participating jurisdiction improvements such as new culverts and the retrenching of ditches could help to minimize the problem, however, should it rain hard enough in a short period of time, streets will flood. Franklin County and Mount Vernon are responsive to the dangers of high water and know

to place warning signs out for motorists when needed. The Damage Assessment Tables found on pages 25, demonstrate the amount of damage that can be possible.

TORNADOES

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm (or sometimes as a result of a hurricane) and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity and wind-blown debris. Tornado season is generally March through August, although tornadoes can occur at any time of the year. They tend to occur in the afternoons and evenings: over 80 percent of all tornadoes strike between noon and midnight.

Compared with other States, Texas ranks number one for frequency of Tornadoes, number of deaths, number of injuries and for cost of damages. When compared to other States by the frequency per square mile, Texas ranks number 10 for the frequency of tornadoes, number 16 for fatalities, number 21 for injuries per area and number 21 for costs per area.

Mount Vernon Tornadoes

The Mt. Vernon City Hall, the United State Post Office and the elementary school are all located within striking distance of a single tornado. The population of Mount Vernon in 2000 was 2,286. There were an estimated 1,034 households in Mount Vernon valued at 41,901,750. However, historically the chance of tornado activity in Mount Vernon in any year is unlikely. Due to the population and number of houses in the area the impact could be substantial.

A tornado can cause major problems with infrastructure. Power lines are often down creating power outages and the possibility of electrocution from live downed wires. Fires can occur from electrical shorts and ruptured gas lines.

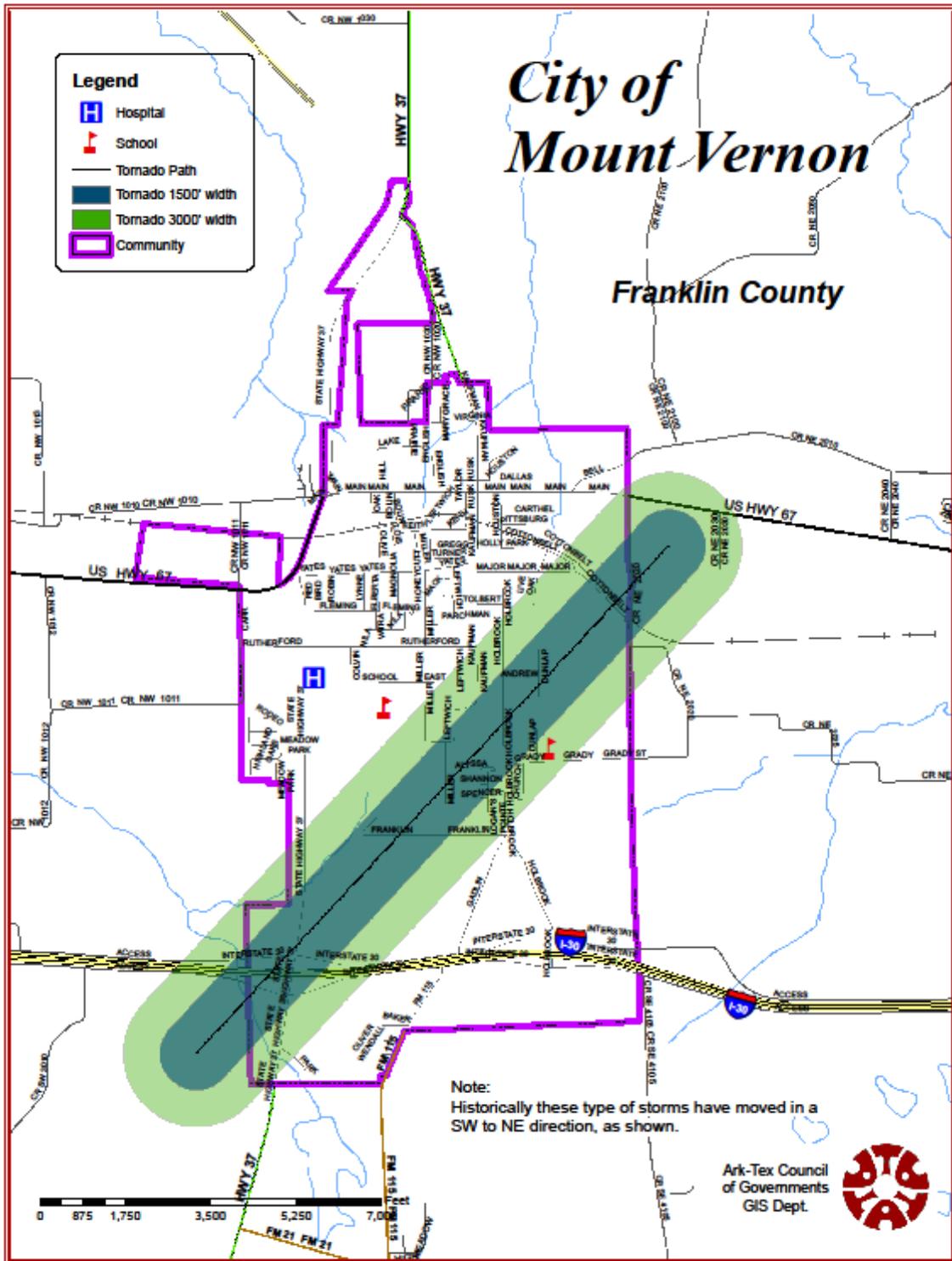
Communications in the area may be disabled, with both land telephone lines and cell service blackouts. Falling trees often block roads and cause major structural damage to houses and businesses. Depending on the severity of a tornado, businesses could lose needed revenue if their services or customer availability is disrupted. Employees might suffer from layoff or terminations. Area hospitals could be over-run with injuries and casualties.

Efficient coordination of emergency services including police, fire departments and utility company repair support would play a vital role in lessening impact and reducing injury. Alternate routes to reach schools and housing might need to be established due to debris and fallen trees

The **Enhanced Fujita Scale**, or **EF Scale**, shown on the following page in Table 2.51, is the scale for rating the strength of tornadoes in the United States estimated via the damage they cause. Implemented in place of the Fujita scale, it was used starting February 1, 2007. The scale has the same basic design as the original Fujita scale, six categories from zero to five representing increasing degrees of damage. It was revised to reflect better examinations of tornado damage surveys, so as to align wind speeds more closely with associated storm damage. The new scale takes into account how most structures are designed, and is thought to be a much more accurate representation of the surface wind speeds in the most violent tornadoes.

Source: http://en.wikipedia.org/wiki/Enhanced_Fujita_Scale

Enhanced Fujita (EF) 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; mobile 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; mobile 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; incredible phenomena will occur.
source: http://en.wikipedia.org/wiki/Enhanced_Fujita_Scale		



PREVIOUS OCCURENCES OF TORNADOES IN FRANKLIN COUNTY

(National Climatic Data Center)

Eleven Tornadoes were reported in Franklin County between 1961 and 2015. No deaths and three injuries were recorded.

Begin Date	Location	F SCALE	Description	\$PrD
03/26/61	4 miles S. of Mt. Vernon.	F3	The tornado demolished 3 homes and damaged several others. A father and 6 children were in one home when it was completely demolished. The occupants were blow from the dwelling, with one suffering minor injuries. The others were unhurt. A total of 18 farms in Franklin County suffered some damage to homes or other buildings.	25K
02/05/86	2 miles South of Mt. Vernon	F1	The tornado touched down briefly a few miles south of Mt. Vernon and was accompanied by golf ball hail. Trees and power lines were downed by the tornado.	0
06/04/86	NW. Franklin County	F0	A tornado touched down briefly in open country in the northwest part of the county near the border with Hopkins county	0
04/19/95	3 Miles East of Hagansport	F0	A brief tornado touchdown was reported.	0
05/04/99	4 Miles East of Mount Vernon	F3	Damage confined to broken branches off trees and snapped twigs.	0
07/13/00	4 Miles North NE of Winnsboro	F1	Numerous large tree limbs and a few pine tops broken. Tornado was confined to the county over farmland and forest with no structures in its path.	0
05/14/08	2Miles NW of Winnsboro	F1	3 miles long, 100 yards. wide	10K
12/27/08	2 Miles W. of New Hope	F0	1 Mile long 50 yards wide	15K
Tornado Occurrence Since Original Plan Adoption				
10/24/10	North Northwest of Mt. Vernon	F0	Only a few trees sustained damage in the area between Hwy.37 and County Rd.1030. winds estimated between 60 & 65 mph.	0.00K

04/03/12	2 Miles E. of Hagansport	F0	A tornado touched down in an open field just north of FM 71. Where several; trees were snapped. The tornado traveled northeast across CR 2130, where a top of a tree was snapped off, with the tornado continuing across another open field, snapping large branches and uprooting a large tree. This tornado lifted shortly thereafter in a heavily wooded area near the Sulphur River. Maximum winds 65-75 mph.	0.00K
12/12/15	3 miles W. of Purley	F2	Tornado touched down near CR 3250 and traveled in a northerly direction, crossing CR 2376. Numerous trees were snapped and/or uprooted along the path of this tornado. Around wo structures suffered damage including 4 mobile homes that were completely destroyed. Four of the 20 homes suffered major damage. Two people were injured in one of the mobile homes.	2M
Total				2.050M

Tornados in Franklin County 1961-2015
Probability/Severity

Fujita Scale	Tornados	Percent
F0	5	45
F1	3	27
F2	1	1
F3	2	27
F4	0	0
F5	0	0
Total	11	100

Franklin County Tornado Risk					
Jurisdiction	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	Risk PRI
Mt. Vernon	Substantial PRI=1.8	Unlikely PRI=.30	< 6 hrs. PRI=.06	< 6 hrs. PRI=.10	Medium 2.26
Franklin Co.	Substantial PRI=1.8	Highly Likely PRI=1.20	< 6 hrs. PRI=.06	< 6 hrs. PRI=.10	High 3.16

Estimated Property Loss at 40 %	
Franklin County	374,187,468
Mount Vernon	53,658,852

PROBABILITY: There is an anomaly that has occurred within the recorded data. The first record of a tornado occurs in 1961, then there is a lapse of twenty-five years before another tornado is recorded. No other data sources were able to verify activity during the span. Using the recorded data from 1986-2015, there is a 90% chance that a tornado will occur during any given year. Tornadoes are most frequent in the months of April, May and June. Franklin County has had 2 recorded tornadoes in December! While tornadoes can occur at any time during the day or night, they tend to form during the late afternoon and into the evening. The expected tornado size would range between 25 to 1000 yards wide, with a path from one to several miles long. Most tornadoes are expected to touchdown for relatively short periods of time in a bounce type pattern. The occurrence of a tornado touchdown on an annual basis is considered highly likely in the county but unlikely for the participating jurisdiction of Mt. Vernon because it represent only 3% of the total county area. The above Risk table addresses probability for the Franklin County and Mt. Vernon

VULNERABILITY: All of Franklin County and the jurisdiction of Mount Vernon is vulnerable to tornado damages. The damage potential is substantial due to the number of mobile homes, manufactured housing and older wood framed homes found in the county. Although MT. Vernon has no recorded tornadic activity it could receive the greatest damage due to population density. The tornado vulnerability of Mt. Vernon is low while Franklin County vulnerability is high.

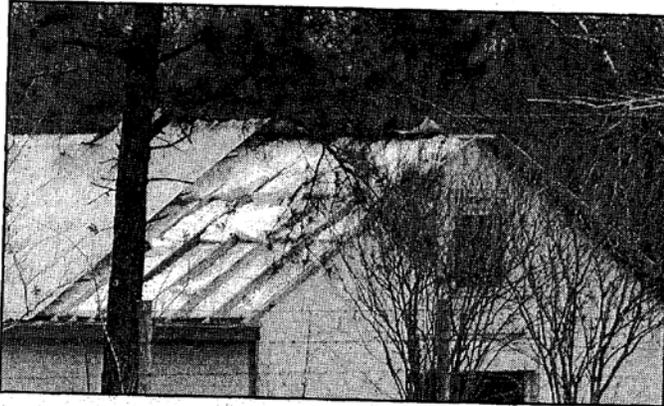
EXTENT: Based on a historical trend over the past 40 years, Franklin County will experience one or more tornados annually. The expected tornado size would range between 25 to 1000 yards wide, with a path from one to 10 miles long. Most tornadoes are expected to touchdown for relatively short periods of time in a bounce type pattern. The occurrence of a tornado touchdown on an annual basis is considered high. Historically the severity has ranged from F0 to F3. From this data the jurisdictions assume that will remain in that range. The entire scale presented is used to determine ranges and severity. The Damage Assessment Tables found on pages 25, demonstrate the amount of damage that can be possible

LOCATION: All of Franklin County can possibly be affected. Tornadoes have an unpredictable pattern, so the entire County is subject to being hit by a tornado.

SUMMARY: Franklin County is located in tornado alley. There have been 11 tornado events recorded in Franklin County with no deaths and 2 injuries recorded over the 54 year history. Warning sirens, safe rooms, enforced modern building codes and generators for emergency power are needed safeguards for the small community of Mt. Vernon help protect its citizens from tornadoes.

1-8-09

Mount Vernon Optic-Herald



Tornado confirmed in county

The National Weather Service confirmed that a tornado with winds of approximately 65 mph occurred in Franklin Co. along CRSE4315 near the Good Hope Cemetery about 11:37 a.m. Dec. 27. The path was approximately 50 yds. wide and 1.4 mi. long. The tornado was on the ground for about two minutes, and peeled a metal roof from this shop building belonging to Jimmy Favors. Insulation from the building was strewn into the trees to the east and several large trees and limbs were downed. One of the limbs fell on a neighboring house, poking a hole in the roof. Farther east, large pine trees were snapped along CRSE4350 south of the refinery. (Optic Photo '09)

WINTER STORMS

A winter storm is a hazard that poses a threat to the entirety of the planning area. Winter Storms in the context of this document refers to Freezing Rain, Ice Storms, Blizzards, and Heavy Snow events that may occur during the winter months in Franklin County. The National Weather Service (NWS) glossary defines Ice Storms, Blizzards, and Heavy Snow events as:

Freezing Rain is “rain that falls as a liquid but freezes into glaze upon contact with the ground.”

“An **ice storm** is an occasion when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater.”

“A **blizzard** means that the following conditions are expected to prevail for a period of 3 hours or longer:

- Sustained wind or frequent gusts to 35 miles an hour or greater; and
- Considerable falling and/or blowing snow (i.e., reducing visibility frequently to less than ¼ mile).”

“A **heavy snow** generally means...

- snowfall accumulating to 4" or more in depth in 12 hours or less; or
- snowfall accumulating to 6" or more in depth in 24 hours or less

In forecasts, snowfall amounts are expressed as a range of values, e.g., "8 to 12 inches." However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as "...up to 12 inches..." or alternatively "...8 inches or more..."

The following National Weather Service warnings detail the potential extent of a storm.

National Weather Service WATCH: A message indicating that conditions favor the occurrence of a certain type of hazardous weather. For example, a severe winter weather watch means that a severe winter weather event is expected in the next six hours or so within an area approximately 120 to 150 miles wide and 300 to 400 miles long (36,000 to 60,000 square miles). The NWS Storm Prediction Center issues such watches. Local NWS forecast offices issue other watches 12 to 36 hours in advance of a possible hazardous- weather or flooding event. Each local forecast office usually covers a state or a portion of a state.

NWS WARNING: Indicates that a hazardous event is occurring or is imminent in about 30 minutes to an hour. Local NWS forecast offices issue warnings on a county-by-county basis.

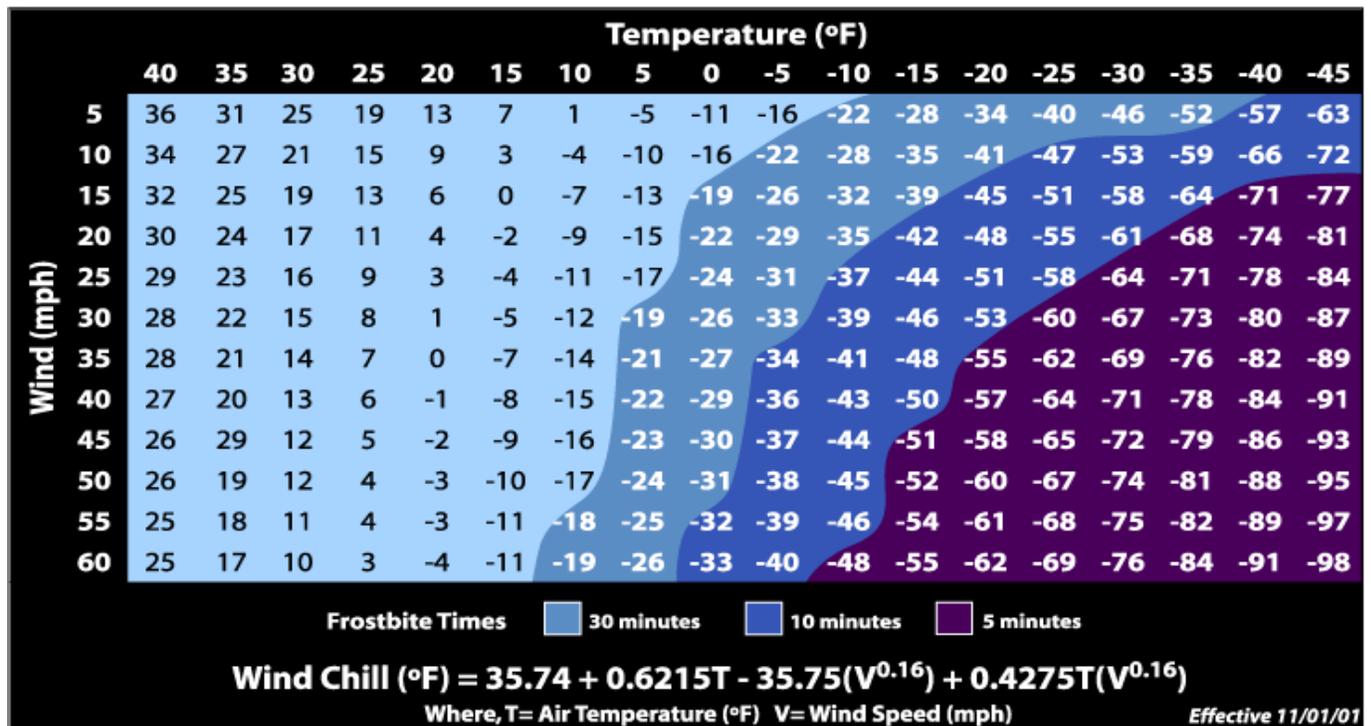
Winter Storm WATCH: A winter storm is occurring, or will soon occur, in your area.

Winter Storm WARNING: Means sustained winds or frequent gusts to 35 miles per hour or greater and considerable falling or blowing snow (reducing visibility to less than a quarter mile) are expected to prevail for a period of three hours or longer, and dangerous wind chills are expected in the warning area.

The *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 is used 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



Source: National Weather Service and NOAA

Ice storms most commonly develop along a line stretching from northern Texas to Newfoundland in slow-moving low-pressure systems where there is a large temperature difference between the warm Gulf air and cold Arctic air. Local accumulations of ice may be heavy if the storm stalls over a region for an extended time. Ice storms lasting 12 hours or more generally produce ice accumulations several centimeters thick. The typical ice storm swath is 30 miles wide and 300 miles long. Ice storms generally warrant major headlines only one year in three.

Ice storms typically begin with snow and strong easterly winds conditions well ahead of an approaching warm front. The snow, however, changes briefly to sleet and then to rain that freezes on impact, coating all exposed surfaces with a growing layer of ice.

For drivers, the consequences of icing can be serious, for stopping distances on glaze ice are ten times greater than on dry pavement, and double that on packed snow.

Power and communication systems using overhead lines are perhaps hardest hit by ice storms. Hanging wire cables collect ice until the cable breaks or the rain stops. Animal and plants may be killed or injured by ice accumulation. Damage to trees rivals disease and insects as destructive agents.

The Christmas Day storm of 2000 clobbered counties along a 260-mile stretch of the Red River. Franklin County was one of several counties declared a disaster area.

Back-to-back December weather fronts slammed North Texas with ice that produced the perfect ice storm. Many electric cooperatives were sent to their knees by the fury of the storms.

Potential Damage/Loss Due To Ice Storms

Life and Property

Slick roads and other surfaces cause traffic accidents resulting in death and injury. People shoveling snow have heart attacks. Property is at risk from flooding. Trees, power lines, telephone lines and subject to damage from accumulation of ice and snow. Trees fall on utility lines and houses.

Roads and Bridges

Fallen trees across roads can block access to emergency services. The ability to travel after an ice storm is a priority issue for hospitals, utilities and emergency service vehicles.

Power Lines

Falling trees are a major cause of power outages resulting in interruption of services and damaged property. Downed power lines also create the danger of electrical shock.

Water Lines

Cast iron mainlines frequently break during severe freezes. Also, residential water lines often fail.

The potential for severe winter storms is high and records indicate that the cost can be in the millions of dollars, depending on the severity of the storm. (see Table 2.9)

Mount Vernon Winter Storms

In the event of a major winter storm, Mount Vernon could be affected physically, economically and socially. As stated earlier in this document, drivers face serious consequences from a winter ice storm. Stopping distances on glaze ice are ten times greater than on dry pavement, and double that on packed snow. Emergency vehicles from the police and fire departments of Mount Vernon are brought to a crawl when responding to emergency situations. Ambulance service must take extra time and care responding to accidents and emergency medical situations because of the hazard of ice on the streets and highways. It is possible that emergency vehicles would have to find alternate ways into neighborhoods because of downed trees and power lines. In Mount Vernon many yards and streets are lined with tall trees that are subject to damage. Also communications with emergency teams can be compromised because of downed phone lines.

Public schools typically close when hazardous driving conditions exist. The city of Mount Vernon is not equipped to clear roads and de-ice thoroughfares efficiently. Mount Vernon can be out as long as a week during a major ice storm. In many instances the ice partially melts during the daylight hours only to re-freeze the following night causing patches of “black ice;” i.e., ice that is difficult to detect from a moving vehicle.

When Mount Vernon is faced with a winter storm that causes a power failure families and individuals may be forced to vacate their homes and seek alternate housing such as hotels or emergency shelters because so many homes are heated by electricity. The elderly and the young are particularly susceptible to cold temperatures and both populations must take additional precautions to stay warm. Sunny Acres nursing home in Mount Vernon poses special problems regarding staying warm during such an event.

In past winter storms, residences that were heated with gas or propane or had gas cooking appliances in the kitchen, or gas log inserts in the fireplace fared much better than homes that were all electric. Homes with central gas heating were still left in the cold because the systems are run electrically.

Businesses would suffer due to a winter storm. In the storm of 2000 the pharmacy, gas stations and convenience stores closed due to power outages.

Fuel became scarce creating hardships for both employees and employers. This in turn, causes lost wages and income, plus profit loss due to damaged merchandise and perishables. The local veterinary clinic might find its practice compromised because of power loss, making it impossible to keep ill animals warm or to perform necessary procedures. Clients would hesitate to navigate dangerous roads in order to come to the clinic with ill or injured pets.

Franklin County Winter Risk					
Jurisdiction	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	Risk PRI
Mt. Vernon	Minor PRI = 1.35	Highly Likely 1.20	> 24 hrs. PRI = 1	< one week PRI = 3	Medium 2.55
Franklin Co.	Minor PRI = 1.35	Highly Likely 1.20	> 24 hrs. PRI = 1	< one week PRI = 3	Medium 2.55

HISTORY OF WINTER STORMS IN FRANKLIN COUNTY

There have been 24 Snow and ice events were reported in Franklin County between 01/06/97 and 03/04/15. The Data is from the National Climatic Data Center and includes events listed under Winter Storms, Winter Weather and Ice Storms. The smallest amounts of ice or snow can cause havoc to small rural communities. The entire county was affected equally for each event listed.

Date	Description	PrD
01/06/97	There was 2 to 4 inches of freezing rain and sleet across the area. Numerous accidents were reported along with power outages. Several highways were closed.	0.00K
01/14/97	Ice Accumulations of ¼ to ½ inch occurred across portions of northeast Texas. Several Traffic accidents resulted.	0.00K
12/22/98	Freezing rain and Sleet. Overall ice accumulations were less than on inch. The ice accumulated mainly across exposed surfaces such as trees and powerlines as well as bridges and overpasses. A few automobile accidents and downed trees and powerlines were the worst result on the storm.	0.00K
01/26/2000	Ice accumulations of one to four inches fell across most of the area with the ice and snow accumulations near 8 inches. Thousands of homes were left without power due to ice covered tree limbs falling and snapping powerlines. Also, hundreds of chicken houses were destroyed and 7 million chicks were killed. Barns, carports, and weak structure homes suffered collapse from the weight of the ice and snow. Traffic accidents were numerous.	0.00K
12/12/2000	Widespread freezing rain, Ice accumulations on average of one inch were common. An estimated 235,000 residents lost power from snapped power lines. Upwards of 29 transmission lines atop “H” shaped steel towers were snapped due to the weight of the ice. One man was killed and another injured when a tree limb laden with ice fell on them	0.00K
12/24/2000	After trying to recover from an ice storm earlier in the month, another even more devastating ice storm struck the northern third of northeast Texas. Freezing rain resulted in ice accumulation ranging from ¼ to 3 inches. Tens of thousands of trees and numerous power lines were either broken or felled from the weight of the ice leaving vast regions of northeast Texas without power for weeks	0.00K
12/07/05	Light freezing rain mixed with sleet fell across portions of Franklin, Titus and Red River Counties in extreme Northeast Texas. There was a report of on tree down in Mt. Pleasant from ice accumulation but no other damage reports were received. Freezing rain accumulation of 1/8 of an inch or less did result in scattered power outages.	0.00K
02/19/06	Light freezing rain and freezing drizzle falling across much of the region. Ice accumulations were very light...mainly less than one quarter of an inch across most places. While road surfaces remained wet from ground warmth, most elevated bridges and overpasses saw some ice accumulation which resulted in numerous traffic accidents. Many elevated bridges and overpasses had to be closed due to the ice accumulation.	0.00K
01/28/09	Trace amounts of freezing rain resulted in a few slick bridges and overpasses across the county.	0.00K

03/21/10	Snow totals ranged from near trace amounts to near 4 inches. While the event was not considered significant for most areas, there were a number of traffic accidents across the region.	0.00K
Winter Events Occurring After the Original Plan Adoption		
01/09/11	One quarter to one half inch of freezing rain and sleet was reported initially across the northern half of Northeast Texas with the snow being the predominant precipitation type during the afternoon and evening of January 9 th . Mr. Vernon recorded 3 inches of snow.	0.00K
02/03/11	Franklin County recorded 7 inches of snow. Icy roads and auto accidents occurred across the area.	0.00K
02/09/11	Franklin County reported 1 inch of snow	0.00K
12/25/12	Accumulating snow was common across several counties in Northeast Texas. This heavy wet snow resulted in several trees downed along with powerlines which cut power to many locations across Northeast Texas. There were also several accidents reported from the accumulation snow on area roadways and bridges	0.00K
01/15/13	With surface temperature near of slightly below freezing, the precipitation fell as a mixture of freezing rain and sleet before changing over to light snow across the northern third of NE Texas. Only light ice accumulation from the freezing rain and sleet were noted across NE. Some bridges and overpasses quickly became slick resulting in a few automobile accidents. Power outages were reported from falling limbs due to the weight of the ice	0.00K
11/24/13	There was a period of freezing rain and sleet across portions of Northeast Texas. Ice accumulation was mostly less than an inch and mainly just north of the I-20 corridor of Northeast Texas. The accumulation was mainly on elevated objects such as bridges, overpasses, trees, powerlines and car tops.	0.00K
12/06/13	Freezing rain and sleet fell across the region. Ice accumulation was mainly less than ¼ of an inch but resulted in accumulation on bridges and overpasses, trees, and powerlines. Some traffic accidents were noted across Northeast Texas during the height of the winter weather along with a few power outages	0.00K
02/07/14	There was snow across the northern half of Northeast Texas mainly near one inch in accumulation. The snow caused some slick spots across some locations, mainly across elevated bridges and overpasses	0.00K
02/11/14	Precipitation became widespread across the region late in the afternoon and especially during the overnight hours of February 11 th and 12 th . During the onset of precipitation, a mixture of rain and sleet was the predominant precipitation type with some sleet accumulations near ¼ inch. There was even a brief transition of moderate snow across portions of the region as well. During the evening and overnight hours of the event, the transition turned to predominantly freezing rain with ice accumulation mainly less than 1/4 of an inch across Northeast Texas. Impacts included several automobile accidents that occurred from icing in elevated bridges and overpasses as well as isolated power outages from ice accumulating on limbs which fell across powerlines	0.00K
03/02/14	Widespread sleet accumulations of ½ to 1 inch were reported. Freezing rain and sleet resulted in numerous automobile accidents along with power outages from failing limbs and trees throughout the northern half of Northeast Texas	0.00K
01/11/15	Ice accumulation was relegated to trees and elevated exposed objects including powerlines and some bridge surfaces. Ice accumulations were mostly near on tenth of an inch across the region	0.00K
02/23/15	Freezing rain accumulations across Northeast Texas, mainly along and	0.00k

	north of the Interstate 20 corridor were near one tenth of an inch or less. Sleet accumulations along and north of the Interstate 20 corridor ranged from near ½ to near 1 ½	
02/25/15	Snowfall totals across Northeast Texas along and north of the I-20 corridor ranged from 1 inch to near 7 inches.	0.00K
03/04/15	Freezing rain amounts were near 1/10 of an inch with sleet accumulations mainly less than ½ inch. Snow amounts were less than 4 inches with widespread one to three inches reported across the northern half of Northeast Texas.	0.00K

LOCATION: Historically, the entire County has been affected by winter storms. If this trend continues, the entire County would be affected.

PROBABILITY: The probability of the occurrence of a freeze is high, given historical weather patterns. Fifteen winter storms have occurred between 1994 and 2010. It is highly likely that a winter storm will occur in any given year. Franklin County and Mount Vernon share the same likelihood of experiencing a winter storm.

VULNERABILITY: The small towns and communities of Franklin County are vulnerable to severe cold, snow and ice storms.. Jurisdictions could lose power to its sewage and water plant, power to homes and damage to city infrastructure. The elderly could suffer from lack of heat and lights during a winter storm. Small businesses could experience lost revenue due to reduced traffic during winter storm events. Falling trees and tree limbs could damage property and block roadways in the county and Mount Vernon. Auto accidents related to travel on the icy roads increase. All of Franklin County shares the same vulnerability. Franklin County and Mt. Vernon share a vulnerability rating of high because the number of people impacted by a freeze is low, and compared to other events the economic costs are not as dramatic.

IMPACT: Although East Texas does not have severe winters it is not immune from some of the hazards of cold weather. Every year, winter weather indirectly kills hundreds of people in the U.S, primarily from automobile accidents but from overexertion, and hypothermia as well. As little as ¼ of an inch of ice can begin to cause power outages and damage to vegetation.

Heavy accumulations of ice can bring down trees and power lines, disabling electric power and communications for days. Heavy snow or ice can immobilize communities by shutting down transportation into, out of, and within the county. In rural areas and smaller communities homes and farms may be isolated for days. Livestock and other animals can die from exposure. When the event happens in the early spring, crops such as fruit can be destroyed. Franklin County and Mount. Vernon can expect ice accumulations on streets, power lines and trees that will range from ¼ to ¾ of an inch. The Damage Assessment Tables found on page 25 demonstrate the amount of damage that can be possible.

EXTENT: A temperature range between 32 degrees f. and 10 degrees f. is the range of temperature anticipated in Franklin that would create conditions for winter storms. (See the wind chill chart on page 41).

Accumulations of eight inches of ice were recorded in January of 2000. The most damaging storms occurred in December of 2000 when 235,000 people were left without power. In an area that is not equipped to handle wintry blasts as little as one inch of ice can cause major problems. The region was declared a disaster area at a cost of 154.5 million dollars. Franklin County will continue to have ice storms and wintry weather. The extent of damage will vary, but the disaster of 2000 appears to have been an extreme event. After the 2000 ice storm \$37,00 dollars in public assistance funding was awarded to Franklin County.

Summary: In rural East Texas, when moist gulf air meets arctic temperatures winter storms can occur. The storms usually take their toll from heavy accumulations of ice that form, often overnight, on trees, power lines and structures. In the more remote areas of the county homes may be without electrical power for days but critical facilities in most urban areas are operating within a few days. Mount Vernon and rural Franklin County may have power outages lasting one week or longer.

DRAFT

THUNDERSTORM WINDS

Thunderstorm winds are typically straight-line winds and do most of the damage when accompanying a thunderstorm. Sometimes people think that a tornado has struck because the straight-line winds can be as powerful as a strong tornado but straight-line winds do not spin. A downburst is an example of a straight line wind. 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.

According to research by Jeremy Pal, a professor of civil engineering and environmental science at Loyola Marymount University severe thunderstorms with accompanying high winds are predicted to increase dramatically in the United States and in some cities, like Atlanta, Ga., New York, and Dallas, storms are expected to double by the end of the century.

The Beaufort Scale below is the standard for measuring wind effects on both land and sea.

Beaufort Scale			
Beaufort Number	Wind Speed	Seaman's Term	Effects on Land
0	Under 1	Calm	Calm; Smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction; vanes do not move
2	4-7	Light Breeze	Wind Felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze	Leaves, small twigs in constant motion; light flags extended
4	13-18	Moderate Breeze	Dust, leaves, and loose paper raised up; small branches move.
5	19-24	Fresh Breeze	Small trees begin to sway
6	25-31	Strong Breeze	Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale	Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale	Twigs and small branches broken off trees.
9	47-54	Strong Gale	Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale	Seldom experienced on land; trees broken; structural damage occurs
11	64-72	Storm	Very rarely experienced on land; usually with widespread damage
12	73 or higher	Hurricane	Violence and destruction.

Source: www.mountwashington.org

THUNDERSTORM WINDS PREVIOUS OCCURRENCES IN FRANKLIN COUNTY

Only those storms listing property damage are shown in the chart below. All of the events are recorded as “Thunderstorm Winds”. A total of 76 days severe thunderstorms were recorded between 1980 and 2014, by the National Climatic Data Center for Franklin County. A total of 1.38 million dollars in damages was reported and is reflected in the table below. Building damage range from cosmetic, to roofs being blown off various structures.

History of Thunderstorm Winds

Begin Date	Location	Description	Magnitude	\$ PD
01/23/93	Not Known	¾ inch hail reported. Extensive tree damage occurred.	Not Known	.50K
10/18/93	Purley	A tree blown down on the road.	Not Known	.50K
11/14/93	1 mile east of Greenwood	9 mile long path of downburst winds. Damage to 2 dairy barns with two milk cows killed. Trees and power lines downed, trees blown onto houses.	Not Known	500K
11/04/94	2 miles North West of Scroggins	Trees blown onto county road near Scroggins.	Not Known	5K
04/17/95	Mount Vernon	Tree limbs and power lines blown down.	Not Known	2K
08/20/95	1 miles West of Mount Vernon	Power lines blown down.	Not Known	2K
09/08/96	15 miles North of Mount Vernon	The top of a metal grain silo blown off south of Sulphur River.	60 Knots	10K
06/13/97	10 miles North East of Mount Vernon	Considerable damage to trees and power lines. Some homes and businesses damaged by trees.	80 Knots	50K
04/26/99	Mount Vernon	Trees and power lines toppled.	60 Knots	20K
04/26/99	Mount Vernon	Damage to business and 18 wheeler blown over.	60 Knots	60K
03/19/02	Mount Vernon	Straight line winds damaged Huntington Tile Group Facility. 20,000 square feet tin metal roofing and two large stacks blown away.	70 Knots	100K
06/02/04	Mt. Vernon	Several trees downed throughout the County, including one tree on a home near Lake Cypress Springs in the Hickory Hills Subdivision.	65 Knots	50K
06/02/04	Hagansport	1 Fatality reported near Hagansport when a tree fell on top of a mobile home on CR 1040.	65 Knots	25K
05/10/08	Mt. Vernon	A few trees were downed in town. Power poles were snapped near a restaurant on the south service road at the 146 exit off I-30. The storm also damaged the roof at the local Dairy Queen	55 Knots	10K
06/10/2009	Cypress	Several trees were snapped and uprooted on either side of Hwy. 37. A workshop had its metal roof blown off.	54 Knots	3K

Thunderstorm Winds After Original Plan Adoption				
04/11/11	Mt. Vernon	A large tree was uprooted in a front yard along with 3 other trees downed in Mt. Vernon. Shingles were also off a home along CR 3330. A large tree was also downed on Hwy. 37.	53 Knots	.10
04/25/11	3 miles SW of Macon	Numerous Trees downed on homes near Lake Cypress Springs with several roofs damaged	60 Knots	250.00K
07/04/11	Mt. Vernon	Trees were downed along CR 3310. Portions of a tin roof were removed from a building in town	39 Knots	5.00K
08/13/13	1 mile N. of Purley	Trees were downed on Hwy. 37 and FM 900 near Purley, Texas There was also a report of minor roof damage from thunderstorm wind gusts.	53 Knots	5.00K
04/03/14	5 miles north of Mt. Vernon	This storm downed trees, caused considerable damage to outbuildings and removed shingles from several roofs	70 Knots	50.00K
10/13/14	Mt. Vernon	Wind gusts blew across the south side of Mt. Vernon. Damage consisted of significant loss of a roof of a poorly constructed small business and a partial collapse of the exterior walls. A nearby bank also experienced minor roof damage. Two 18 wheelers were overturned and there was damage to a Gas Station at the intersection of Hwy. 37 and interstate 30.	70 Knots	250.00K
Total				1.38 M

Franklin County Thunderstorm Winds Risk					
Jurisdiction	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	Risk PRI
Mt. Vernon	Limited PRI = .45	Highly Likely PRI = 1.20	<6 hours PRI + .6	< 6 hours PRI =.10	Medium 2.35
Franklin Co.	Limited PRI = .45	Highly Likely PRI = 1.20	<6 hours PRI + .6	< 6 hours PRI =.10	Medium 2.35

Estimated Property Loss at 20 %	
Franklin County	187,093,734
Mount Vernon	26,829,426

LOCATION: Historically, all of Franklin County has been affected by thunderstorms. If this trend continues, the entire County will be subject to thunderstorms.

PROBABILITY: Given the climate and history, thunderstorms are highly likely during the storm season. Thunderstorms are most prolific in the spring and summer months, however, thunder storms may occur at any time in Franklin County given the right conditions.. Climate change could influence the likelihood and severity of the storms.

VULNERABILITY: The County is susceptible to high thunderstorm winds.. Franklin County and Mount Vernon have a vulnerability rating of moderate. Damage potential is higher in populated areas. Deteriorating infrastructure, mobile homes business signage and crops are most susceptible to damage

IMPACT/EXTENT: According to NOAA Satellite and Information Service of the National Climatic Data Center, there were 76 days of thunderstorm wind events reported in Franklin County between 1980 and 2014. The magnitudes ranged from 52 knots to 70 knots. Franklin County and the jurisdiction of Mt. Vernon may see winds increase due to climate change. Trees, limbs, and awnings are particularly susceptible to wind damage from thunderstorm winds.

There have been no reported injuries or deaths from thunderstorm wind events in Franklin County. Storms may cause power outages, disruptions of transportation and property damage. Historical data indicate that the entire county is susceptible to windstorms during the thunderstorm season and, depending on the severity, costs will vary. See the Damage Assessment Tables on page 25 demonstrating possible loss for the county and each participating jurisdiction.

Summary: High winds, associated with thunderstorms can be destructive. Thunderstorms also spawn tornadoes. Deteriorating infrastructure, mobile homes business signage and crops are most susceptible to damage to Franklin County and its jurisdictions. Thunderstorm winds are the most common with an accumulated past occurrence cost exceeding any of the other Franklin County hazards.

“Joy weathers any storm: Happiness rides the waves.” Todd Stocker, writer & pastor

HAILSTORMS

Hail is a form of precipitation that occurs at the beginning of thunderstorms. It is in the form of balls or lumps of ice, usually called hailstones. Hail is formed when raindrops pass through a belt of cold air on their way to earth. This belt of cold air causes the raindrops to freeze into small blocks of ice. The formation of hail requires the presence of cumulonimbus or other convective clouds with strong updrafts. The air turbulence that accompanies thunderstorms aids the formation of hailstones. The water that goes into the formation of hailstones is super cooled water, that is to say, it is at a temperature below freezing point but still in the form of a liquid. Hailstones start falling when they become too heavy to be supported by air currents.

Hailstones are not formed of single raindrops. However the process of formation of a hailstone does start with the freezing of a single raindrop. This may be carried by a strong current to the level where rain is still falling as drops. And as this again passes through the cold air belt, new raindrops may cling to the frozen hailstone, thus increasing its size. Hailstones grow in size by repeated collisions with super-cooled water. This water is suspended in the cloud through which the particle is traveling. Those single frozen raindrops that do not get carried back to the raindrop level remain as smaller hailstones.

Hailstorms are very common in middle latitudes and a heavy shower generally lasts around 15 minutes. Hailstorms generally occur during mid to late afternoon. Big hailstones falling with force are known to have caused fatal harm to human and animal life.

*“Gather out of star-dust,
Earth-dust,
Cloud-dust,
Storm-dust,
And splinters of hail,
One handful of dream-dust,
Not for sale.”*

Langston Hughes

The following chart shows the Combined NOAA/TORRO Hailstorm Intensity Scales:

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

Sources: www.noaa.gov and www.torro.org

HISTORY OF HAILSTORMS IN FRANKLIN COUNTY

The NOAA Satellite and Information Service, National Climatic Data Center, reports that there have been 62 hail events reported between 1979 and 2014 in Franklin County, with no injuries or deaths reported. There has only been \$500 of property damage reported. Twenty-six (26) of the events reported the smallest magnitude of .75 inches, and eight (8) of the events reported the largest magnitude of 2.75 inches. Hail events were reported throughout Franklin County, as well as Mt. Vernon, Winnsboro, and the communities of Cypress, Purley, Scroggins, and Hagansport.

Mount Vernon Hailstorms

Hail can damage roofs, siding, windows, cars, and satellite dishes. Each year hailstorms cause millions of dollars of damage to crops like corn and soy beans. It can rip the leaves off of trees and in extreme cases, kill small animals. Business signage can be destroyed by large hail. In Mount Vernon, Texas probability of a hailstorm occurring is high due to the number of thunderstorms that visit our area each year.

In Mount Vernon there are many wood framed houses that were built in the early post World War II period that are more likely to experience structural damage from hailstorms. Roofs of homes and businesses are very susceptible to hail damage, resulting in repairs costing hundreds or even thousands of dollars to a single family dwelling. Many new homes are built with additional roof-top skylights that many break or crack during periods of large hail. Water damage as well as roof repair becomes a factor when skylights break. Also, cars that are open to the elements are susceptible to hair damage, including broken windshields and dented car bodies.

Many Mount Vernon homes are richly landscaped with valuable plants that can suffer in a major hailstorm.

Franklin County Hail Risk					
Jurisdiction	Impact (45%)	Probability (30%)	Warning Time (15%)	Duration (10%)	Risk PRI
Mt. Vernon	Limited PRI = .45	Highly Likely PRI = 1.20	<6 hours PRI + .6	< 6 hours PRI =.10	Medium 2.35
Franklin Co.	Limited PRI = .45	Highly Likely PRI = 1.20	<6 hours PRI + .6	< 6 hours PRI =.10	Medium 2.35

Estimated Property Loss at 2%		
Franklin County	Residential	16,349,716
Mount Vernon	Residential	1,289,713

LOCATION: Hail storms are unpredictable, but since they occur before thunderstorms, and thunderstorms have historically occurred throughout the County, and if the trend continues, all of Franklin County could be affected by hailstorms.

PROBABILITY: Given the history, hailstorms are highly likely throughout Franklin County. Mount Vernon and Franklin County share the same probability and risk.

VULNERABILITY: Buildings, autos, and crops, can be damaged by hail. Hail is often part of thunderstorm activity. In rare cases hail can cause physical injury. The vulnerability rating of Mount Vernon and Franklin County is high. Wooden Structures exist in all the jurisdictions in Bowie County. Repainting and even replacing lumber may be necessary if the storms are severe enough. Anyone who has an uncovered automobile could experience expensive repair costs. Also all the buildings in the jurisdictions have glass windows and many dwelling in all the jurisdictions have roofs that will be susceptible to hail damage.

Impact/Extent: The impact of a hailstorm has historically been limited however, large size hail can cause injuries. Hail can damage autos, roofs, siding and crops. A 2% loss to residential property in the county could result in a monetary value of \$16,349,716. See the tables on page 25 for a more comprehensive look at possible damage values. There have been several instances of 2.75 in hail recorded in Franklin County, but pea size and smaller are the most common causing no damage. Franklin County can anticipate hail up to 2.75 inches and larger in the future due to climate change. All jurisdictions will be affected equally.

Summary: Hailstorms are unpredictable and often associated with thunderstorm activity. Thunderstorms have historically occurred throughout the county, and if the trend continues, all of Franklin County and the jurisdiction of Mount Vernon could be affected by hailstorms.

DROUGHT

A drought is a period of abnormally dry weather that persists long enough to produce a serious hydrologic imbalance (for example crop damage, water supply shortage, etc.) The severity of the drought depends upon the degree of moisture deficiency, the duration and the size of the affected area.

There are four different ways that drought can be defined:

- ❑ Meteorological – a measure of departure of precipitation from normal. Due to climatic differences what is considered a drought in one location may not be a drought in another location.
- ❑ Agricultural – refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- ❑ Hydrological – occurs when surface and subsurface water supplies are below normal.
- ❑ Socioeconomic – refers to the situation that occurs when physical water begins to affect people.

Drought is a period of time when precipitation falls below normal levels.

Defining the beginning or the end of a drought can be difficult. Some droughts may be short in duration, but more severe in their intensity. Low humidity and high temperatures usually accompany a drought, which means that any additional moisture evaporates quickly before it has the chance to improve conditions.

Droughts not only lead to water shortages, they produce widespread crop failure and environmental stress, and in recent years have caused more than 300 Texas cities and utilities to resort to ordinances or other measures to limit water use. The extreme heat associated with some droughts has led to heat related deaths, job losses among agricultural workers, and significant acreage and property destroyed by wildfires.

Drought ends when it rains. When enough precipitation has fallen, a region's soil moisture profile will improve enough to sustain plants and crops. Once recovery continues to the extent that the water levels of lakes, rivers, wells and reservoirs have returned to normal, then a drought is considered over.

The 1996, 1998 and 2000 Texas Droughts

The statewide droughts of 1996 and 1998 produced widespread crop failure, significant environmental stress and required more than 300 cities and utilities to implement some form of water demand management. Most of these demand management measures were taken because the utility could not treat and distribute water as fast as it was being used.

The drought of 1996 began with below normal precipitation in November 1995. Precipitation (meteorological drought) did not return to "normal" until August 1996, and reservoir levels (hydrological drought) generally did not begin to recover until October of that year. This 10-

month drought period saw significant drops in reservoir and aquifer levels over much of Texas. Agriculture impacts as a result of the drought were estimated to be in the range of \$5 billion.

Of the two droughts, the 1996 drought had more impact on water supplies. Statewide reservoir levels dropped to 68 percent of conservation storage capacity, similar to the drought of 1984 when storage capacity dropped to 66 percent.

The 1998 drought was shorter in duration. It began with an abrupt end to the much wetter conditions caused by El Nino and beginning of La Nina in March 1998. It did not end until five months later in the fall of 1998, with devastating floods in much of the state. By November 1998, crop moisture indices for the whole state had returned to adequate levels, and statewide reservoir levels had returned to 82 percent of capacity. Total losses were estimated to be more than \$6 billion. The extreme heat also led to 131 heat-related deaths, more than 14,000 farm workers out of jobs and almost a half a million acres burned by wildfires.

The 2000 drought caused about 595 million in crop losses and 178 counties were declared federal agricultural disaster areas. As of September, North Texas had been rainless for 77 days, surpassing the no-rain record of 59 days set in 1934 and 1950.

Data is insufficient to project total losses on a severe drought. A severe drought like the 1996, 1998 and 2000 droughts would cause significant loss in basic agriculture items along with timber and livestock losses.

Figure 2.5 provided by TexasWaterInfo.Net provides an Explanation of the Palmer Drought Severity Index by Texas Climatic Divisions. PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture. As of July 1, 2006, Texas Climatic Division, which includes Franklin County, was shown to be -3.82 . The PDSI Legend shows that -4 to -3 is severe drought. Figure 2.6, provided by the NOAA Climate Prediction Center, which shows the Palmer Forecast for the United States by division, also shows that Franklin County, as of May, 2007, is near normal. Figure 2.7, the USDA Top Soil Moisture Short-Very Short Percent of State Area for May 27, 2007, shows the state of Texas as not Dry or Very Dry.

The wide variety of disciplines affected by drought, its diverse geographical and temporal distribution, and the many scales drought operates on make it difficult to develop both a definition to describe drought and an index to measure it. Many quantitative measures of drought have been developed in the United States, depending on the discipline affected, the region being considered, and the particular application. Several indices developed by Wayne Palmer, as well as the Standardized Precipitation Index, are useful for describing the many scales of drought.

Common to all types of drought is the fact that they originate from a deficiency of precipitation resulting from an unusual weather pattern. If the weather pattern lasts a short time (say, a few weeks or a couple months), the drought is considered *short-term*. But if the weather or atmospheric circulation pattern becomes entrenched and the precipitation deficits last for several months to several years, the drought is considered to be a *long-term* drought. It is possible for a region to experience a long-term circulation pattern that produces drought, and to have short-term changes in this long-term pattern that result in short-term wet spells. Likewise, it is possible

for a long-term wet circulation pattern to be interrupted by short-term weather spells that result in short-term drought

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PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.

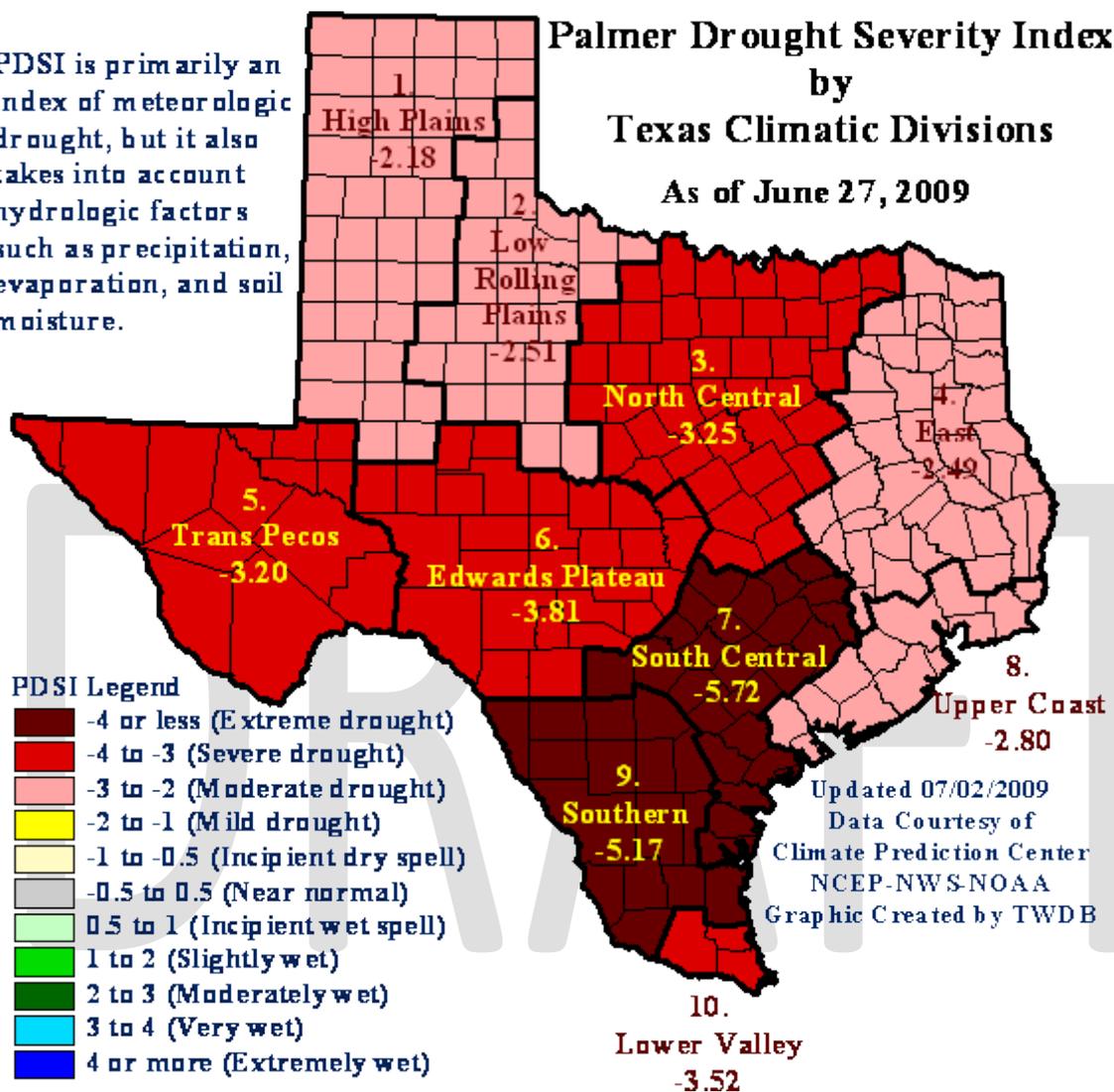
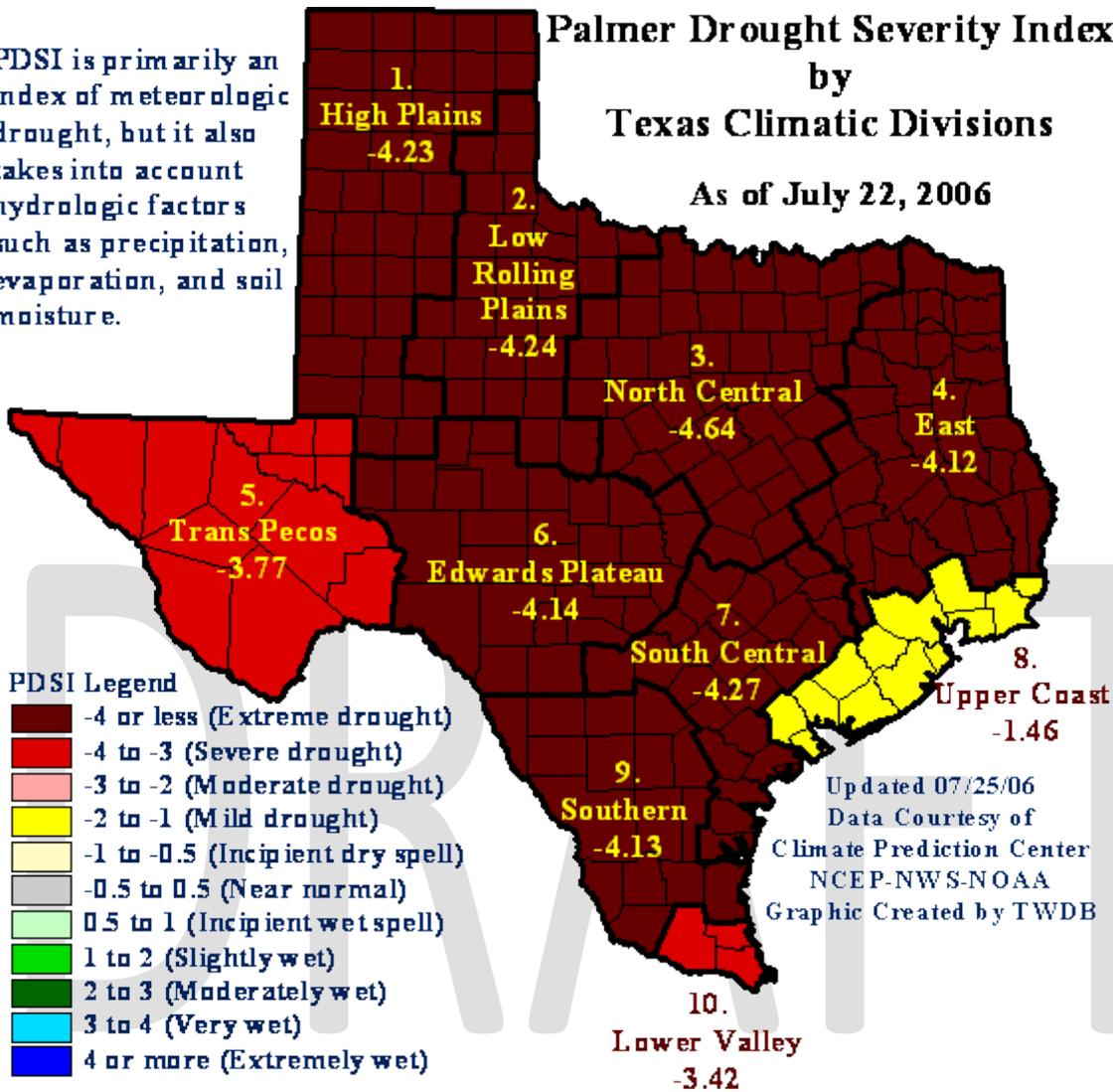


Figure 2.4

PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.

Palmer Drought Severity Index by Texas Climatic Divisions

As of July 22, 2006



DROUGHT PREVIOUS OCCURENCES IN FRANKLIN COUNTY

Begin Date	Location	Description
05/01/96	18 Counties Including Franklin	May was one of the hottest and driest on record. Over ninety percent of cooperative observers reported rainfall far below climatologic averages. Some reporting stations in northeast Texas including New Summerfield had no measurable rainfall the entire month. Numerous industries were hard hit including agricultural, timber, crop and livestock.
06/01/98	21 Counties Including Franklin	None Reported
07/01/98	22 Counties Including Franklin	None Reported
08/01/2005	13 Counties Including Franklin	The abnormally dry summer months of June, July, and August across the country resulted in moderate to extreme drought conditions. The drought and extreme heat resulted in burn bans for much of the middle Red River Valley country of Northeast Texas. The drought continued to take its toll on the agricultural and hydrological community of the region as well. The lack of rainfall through the period resulted in many crops being unusable which put a significant strain on the farming community. Water conservation measures were also in place in some areas as pool stages on various lakes were well be low normal.
Begin Date	Location	Description
12/01/2005	21 Counties Including Franklin	High fire danger continued across all of Northeast and East Central Texas. The month was a continuation to a devastating drought that impacted much of the eastern half of the state throughout 2005. Many lakes and reservoirs remained near or set all time record lows levels and a series of dry cold fronts that blew through the region during the month did not help the already dry conditions. Several small fires broke out across the region during the month, but the resulting damage was minimal. Burn bans continued for many counties across Northeast Texas as most of the region experienced rainfall deficits of some 15-20 inches for the year.
Drought Occurrences After the 2010 Plan Approval.		
12/01/2010-03/31/12	The entire state recorded drought conditions at one point.	This drought reached historical proportions creating severe drought conditions throughout the state of Texas. In September of 2011 the Northeast County of Cass experienced the greatest forest fire ever recorded in East Texas. There were 16 months of drought
07/01/13-09/31/13		Drought conditions redeveloped across portions of Northeast Texas during the month of July. Rainfall for the month across the drought stricken counties averaged between one and two inches with isolated higher amounts. As a result, these counties were classified as being under D2 Severe Drought status.

Mount Vernon Drought

In the event that Franklin County experiences a significant drought the jurisdiction could be affected physically, socially and economically.

Due to the high number of droughts experienced in the last 10 years there is a high probability that Mount Vernon will continue to suffer from droughts.

Municipalities like Mount Vernon may face the challenge of securing water supplies at a reasonable cost although current history does not indicate that water shortage has been a problem in the past.

When drought occurs, hydro-electric power plants can be stressed due to water shortages and demand because water is often used to drive the turbines that generate electricity and drought with high heat will increase electrical use. Mount Vernon residents see the end results as an increase in electric bills.

The importance of fresh, safe drinking water becomes more of an issue during times of draught when water shortages become critical. Pollutants are more concentrated when water supplies are low because pollutants and bacterial become more concentrated.

During a period of drought residents are often asked to ration their water, although Mount Vernon has never had to ration its water supply. People may be asked to rotate the days of watering yards by address on odd and even sides of the street. In areas where the soil is not stable foundation problems occur; especially with houses that are built on slab concrete. Prices in the grocery markets are inflated because foods that are typically available locally have to be shipped in from areas not experiencing draughts.

However the vulnerability for the town is low. Mount Vernon gets its water from Lake Cypress Springs and has not needed to ration water use.

Burn bans are often placed in effect because the dry grass can be susceptible to flash fires that could threaten residential neighborhoods.

Franklin County Drought Risk					
COMMUNITY	POTENTIAL IMPACT 45%	PROBABLITY 30%	Warning 15%	Duration 10%	RISK
Mt. Vernon	Substantial PRI = 1.8	Highly Likely PRI = 1.20	> than 24 hours PRI = .15	>Week PRI .40	High 3.25
Franklin Co.	Substantial PRI = 1.8	Highly Likely PRI = 1.20	> than 24 hours PRI = .15	>Week PRI .40	High 3.25

Estimated Loss Potential for Crops & Livestock		
Type	2014 Estimates in US \$	35% Loss
Watermelon		
Grapes		
Bedding Plants		
Flowering Pot Plants		
Foliage Pot Plants		
Poultry Broilers		
Breeder Cattle, Beef		
Breeder calves		
Slaughter Cattle		

LOCATION: Historically, drought has affected the all of Franklin County including the jurisdiction of Mt. Vernon. The agricultural areas, which are the rural parts of the County, would be affected more so than the urban areas.

PROBABILITY: Droughts will continue to occur in the region when the conditions are right. It is a normal, recurrent feature of climate. A drought will affect Franklin County and its participating jurisdictions. According to the Texas Almanac, there were 15 recorded droughts between 1892 and 2011. Historically a drought can last from a few days to over a year.

VULNERABILITY: The region is vulnerable when there is a deficiency of precipitation over an extended period of time. All of Franklin County and the jurisdiction of Mt. Vernon are vulnerable to drought. For Mt. Vernon, droughts have a social dynamic that includes affecting the elderly and young, causing depression, creating job loss, requiring residents to relocate due to economic impact and rising costs for food. Franklin County and Mt. Vernon share a vulnerability rating of low.

IMPACT/EXTENT: Franklin County Drought Defined: Drought is determined by using the Palmer Drought Index which is illustrated on the following page. It is based on precipitation and temperature data for the area. The scale ranges from 3.99, which is very wet to -4.00 or less, which is considered extreme drought. The scale is most accurate when used to determine drought over a period of months. See the Damage Assessment Tables on page 25. The extent of drought experienced in Franklin County and its jurisdictions will range from 0 Abundantly Dry to 4 Exceptional Drought (see drought monitor on page 60 for further detail).

The impact of a drought on Franklin County include economic problems due to high food prices, the water from municipal works can drop in quality causing illness, lawns and other plants are impacted. Public safety can be threatened by the increased likelihood of wildfires. There can be as much of a 50% loss of crops due to drought. This loss also affects the farmer's ability to feed livestock.

According to the Office of Cyber and Infrastructure Analysis, droughts can cause sinkhole formation when they collapse occur they may result in water waste water pipe breaks buried nearby. These breaks can result in unfiltered water entering form lakes and streams and, eventually, aquifers used as drinking water sources, sullyng the drinking water supply. Also contamination of water sources can occur during drought conditions. Water reservoirs may experience increased pollutant levels and lower levels of oxygen contributing to higher concentrations of illness-causing bacteria and protozoa, as well as toxic blue- green algae blooms. Events such as these could shut a critical facility down for a month or more.

SUMMARY: Drought is seen as an issue for Franklin County and Mount Vernon. If the climatologists' predictions are correct, more severe drought may be in store for the future

DRAFT

EXTREME HEAT

Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans die from adverse effects of extreme heat. In the disastrous heat wave of 1980, more than 1,250 people died. These are the direct casualties. No one can know how many more deaths are advanced by heat wave weather-how many diseased or aging hearts surrender that under better conditions would have continued functioning. The New York Times recently said, “Compared to other weather-related causes of death, heat is a quiet but prolific killer, causing more deaths annually in the United States — about 130 — than flooding, lightning, tornadoes, hurricanes or cold, according to federal data.”

North American summers are hot; most summers see heat waves in one section or another of the United States. East of the Rockies, they tend to combine both high temperature and high humidity although some of the worst have been catastrophically dry.

The stagnant atmospheric conditions of the heat wave trap pollutants in urban areas and add the stresses of severe pollution to the already dangerous stresses of hot weather, creating a health problem of undiscovered dimensions. The high inner-city death rates also can be read as poor access to air-conditioned rooms. While air conditioning may be a luxury in normal times, it can be a lifesaver during heat wave conditions. The cost of cool air moves steadily higher, adding what appears to be a cruel economic side to heat wave fatalities. Indications from the 1978 Texas heat wave suggest that some elderly people on fixed incomes, many of them in buildings that could not be ventilated without air conditioning, found the cost too high, turned off their units, and ultimately succumbed to the stresses of heat. Elderly persons, small children, chronic invalids, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions, especially during heat waves in areas where a moderate climate usually prevails.

Based on the latest research findings, the National Weather Service has devised the Heat Index (HI). The HI, given in degrees F, is an accurate measure of how hot it really feels when relative humidity (RH) is added to the actual air temperature. Exposure to full sunshine can increase HI values by up to 15 degrees Fahrenheit. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous. The following shows heat index/heat disorders.

The Heat Index will be mitigated to any combination of temperature and humidity that ranges from 100 degrees F. to 114 degrees F. Temperatures of 90 degrees and higher will be considered extreme heat.

Heat Index and Disorders	
Table 2.21	
Temperatures	Heat Disorder
130 degrees or higher	Heatstroke/Sunstroke, highly higher likely with continued exposure.
105 degrees – 130 degrees	Sunstroke, heat cramps or heat exhaustion likely and heatstroke possible with prolonged exposure and/or physical activity.
90 degrees – 105 degrees	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity.
89 degrees – 90 degrees	Fatigue possible with prolonged exposure and/or physical activity.

The following chart shows the past history of Extreme Heat occurrences in the Franklin County Region from 2006 through 2014. Source of data is the National Weather Service Forecast Office in Shreveport, Louisiana. The entire county was affected equally for each event listed.

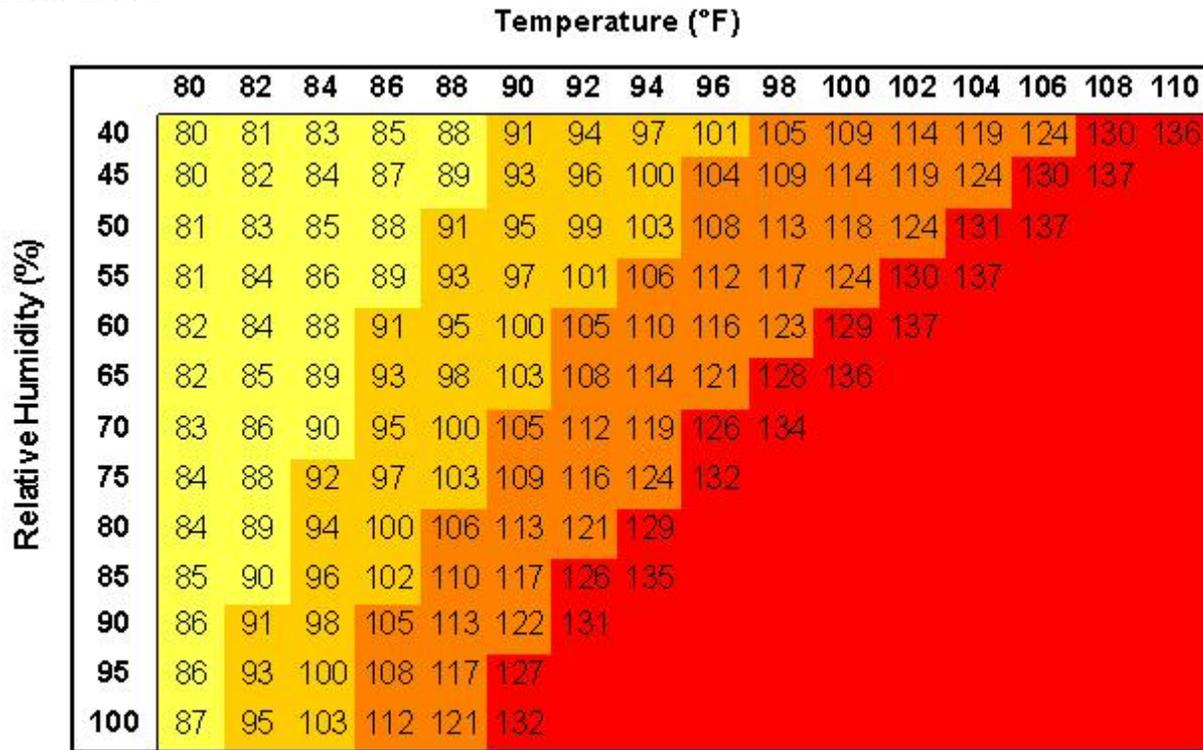
EXTREME HEAT PREVIOUS OCCURRENCES IN FRANKLIN COUNTY				
Table 2.22				
Month/Year	Days above 90	Highest Temp	Days 100 +	Avg. High
June 2006	16	96	0	89.8
July 2006	25	104 (2 days)	10	96.
August 2006	28	102 (2days)	9	96.3
June 2007	7	93	0	87.2
July 2007	9	91 (2 days)	0	86.9
August 2007	30	101 (5 days)	6	95.3
June 2008	15	92	0	89
July 2008	24	102	3	94.6
August 2008	16	104 (2 days)	3	89.3
June 2009	17	100 (2 days)	2	90.6
July 2009	17	99 (2 days)	0	91.5
August 2009	12	92 (2 days)	0	88.2
June 2010	26	99	0	92.6
July 2010	27	100 (2days)	2	93.4
August 2010	30	105	13	98.2
Extreme Heat Days After the Original Plan Adoption				
June 2011	28	103 (2 days)	4	84.3
July 2011	31	106	19	88
August 2011	30	111	26	89.5
June 2012	25	107	7	82.4
July 2012	27	103	5	85.1

August 2012	28	101	3	83.6
June 2013	16	100	1	79.8
July 2013	23	100	1	80.7
August 2013	25	101	6	83.2
June 2014	10	94	0	79.1
July 2014	16	100	1	78.3
August 2014	24	97 (2 days)	0	81.2

DRAFT

FRANKLIN COUNTY EXTREME HEAT RISK					
COMMUNITY	POTENTIAL IMPACT 45%	PROBABLITY 30%	Warning 15%	Duration 10%	RISK
Franklin County Unincorporated	Limited PRI = .45	Highly Likely PRI = 1.2	> 24 hrs. PRI = .15	< a week PRI .30	Medium 2.1
Mount Vernon	Limited PRI 1	Highly Likely PRI 4	> 24 hrs. PRI 1	< a week PRI 3	Medium 2.1

NOAA's National Weather Service
Heat Index



Extreme heat is often categorized in terms of weather events with drought. As stated in this document earlier, many deaths each year are heat related.

In Franklin County, those at greatest risk of death in heat waves are the urban-dwelling elderly without access to an air-conditioned environment for at least part of the day. Thus the issues of prevention and mitigation combine issues of the aging and of public health. Nursing Homes, located in Bowie County, take special precautions to ensure that residents are kept at comfortable temperatures. Should the cooling system in such a facility fail, evacuation would have to occur in a matter of hours while the system was being repaired.

Extreme heat can have an impact on infrastructure which is often affected in urban areas. Asphalt roads soften and concrete roads have been known to "explode" lifting 3 - 4 foot pieces of concrete. During the 1980 heat wave hundreds of miles of highways buckled (NOAA, 1980)

Mount Vernon Extreme Heat

Extreme heat is often categorized in terms of weather events with draught. As sated in this document earlier many deaths each year are heat related.

In Mount Vernon Texas those at greatest risk of death due to excessive heat are the urban-dwelling elderly without access to an air-conditioned environment for at least part of the day. Thus the issues of prevention and mitigation combine issues of the aging and of public health.

Infrastructure is often affected in urban areas such as Mount Vernon. Asphalt roads soften and concrete roads have been known to "explode" lifting 3 - 4 foot pieces of concrete. During the 1980 heat wave hundreds of miles of highways buckled (NOAA, 1980)

Further economic impact occurs when stress is placed on automobile cooling systems, diesel trucks and railroad locomotives. This leads to an increase in mechanical failures. Train rails develop sun kinks and distort. Refrigerated goods experience a significant greater rate of spoilage due to extreme heat. Additional impact will be felt as food prices rise due to crop loss. Also, there are several large chicken farms and cattle ranches in the area that can be devastated by drought and extreme heat.

The demand for electric power during heat waves is well documented. According to the Institute for Research in the Atmosphere at Colorado State University, "In 1980, consumers paid \$1.3 billion more for electric power during the summer than the previous year. The demand for electricity, 5.5% above normal outstripped the supply, causing electric companies to have rolling black outs."

LOCATION: The entire county would be affected by extreme heat. Extreme heat affects the denser populated area of Mt. Vernon in addition to the rural areas.

PROBABILITY: It is likely that extreme heat waves will continue to occur in the region when the conditions are right. It is a normal, recurrent feature of climate. Franklin County typically has three or four extreme heat occurrences every summer. It is highly likely that Franklin County and the jurisdiction of Mt. Vernon will experience extreme heat.

Vulnerability: The region is vulnerable when there is a deficiency of precipitation over an extended period of time and high temperatures. The extent of damage or injury increases with the temperature and relative humidity levels. All of Franklin County and the jurisdiction of Mt. Vernon are vulnerable and share the same risk. The elderly, young and ill are most vulnerable to extreme heat. Crops and livestock are stressed during extended periods of extreme heat suffer, Extreme heat causes heat stroke, time lost on the job and psychological stress. **The vulnerability rating for Franklin County and Mr. Vernon is high.**

IMPACT/EXTENT: According to the NOAA weather service in Shreveport, Louisiana, extreme heat by definition exists when over a two day period, the heat index high reaches 105-109 with a minimum evening index temperature of 75 degrees or better. The heat index is calculated by combining air temperature and humidity levels. The full range of the heat index

on the preceding page is applicable for Franklin County and its jurisdictions. There is no specific history regarding property or crop damage due to excessive heat available for examples of loss in dollars. The financial loss could be extensive. Extreme heat in conjunction with drought can impact crop and livestock production. (see the Estimated loss potential on page (drought) for more detail.) Poultry in particular are sensitive to hot conditions “Extreme heat is when the heat index is measured over 100 degrees.

Extreme Heat can cause brown outs and black outs when customers tax power grid capacity trying to stay comfortable. Extreme heat can also impact infrastructure buckling roads. Franklin County has experienced heat index ranges from 100 F to 114 degree F”. Because of climate change future Franklin County can expect temperature highs to reach an extreme of 144 degrees F. and higher in the future.

Summary: Hot temperatures are part of the East Texas landscape. During the months of June, July and August we can expect temperatures of over 100 degrees. The citizens who live in Franklin County and the participating jurisdiction of Mt. Vernon are aware of extreme heat’s lethal potential and take precautions to prevent overheating and heat related strokes. Models produced by the environmental sciences project increase incidents of extreme temperature climate change due to global warming.

The demand for electric power during heat waves is well documented. According to the Institute for Research in the Atmosphere at Colorado State University, “In 1980, consumers paid \$1.3 billion more for electric power during the summer than the previous year. The demand for electricity, 5.5% above normal, outstripped the supply, causing electric companies to have rolling black outs.”

“It ain’t the heat, it’s the humidity.”

Yogi Berra

Mount Vernon Optic Herald Thursday August 25, 2005

Temperature hits 106 degrees

The temperature in Franklin County soared to 106 degrees on Tuesday, Aug. 23. The sizzling condition was not a record, however, as 108 degrees was recorded on Aug. 2 and 3, 1998.

It was the seventh day in a row that temperatures passed the 100 degree mark in Mount Vernon, drying out grass, brush and timber and increasing the possibility of wild fires. A burn ban was reinstated Monday, Aug. 22 by the Franklin County Commissioners Court.

The temperature in Franklin County reached 104° degrees on Monday, Aug. 22. A heat wave of this length, seven days, last occurred in August

of 1980.

The weather information given below was recorded at the National Oceanic and Atmospheric Agency official weather station in Mount Vernon for the 24 hour period ending 7 a.m. on the day listed for the period of Aug. 17, 2005 through Aug. 23, 2005.

Day	Max.	Min.	Rain
Wednesday	98	76	0
Thursday	100	76	0
Friday	101	77	0
Saturday	102	78	0
Sunday	101	75	0
Monday	100	74	0
Tuesday	104	74	0

- Marie Dacus '05

F. L. Weller

September filled with record high temperatures

Nine record high temperatures were recorded in September 2005 in Franklin County with seven days over 100 degrees.

Records were set beginning on Sept. 18 and continued consecutively through Sept. 23.

The first record temperature on the 18th was 98°. The previous record was 95° on the same day in 1980. The second record was 100°, previously set at 95° on Sept. 19, 1980. The third record was set with a temperature of 101°. The previous record was set on Sept. 20, 1986 with a temperature of 97°.

The fourth record was set on Sept. 21 with a temperature of 102°. The previous record was 98° on the same day in 1978. On Sept. 22, a record high of 103° was set. The previous record was 97° in 1986. The sixth consecutive record was set on Sept. 23 with a temperature of 101°. The previous record was set on the same day in 1980 with a temperature of 95°.

A record high of 100° was set on Sept. 26. The previous was set on the same day in 1977 with a temperature of 95°. The eighth record was set on Sept. 27 with a temperature of 100°. The previous record was

Sept. 29 with a temperature of 96°. The previous record was set on the same day in 1981 with a temperature of 93°.

Highs were recorded in the 100s for seven days, in the 90s for 21 days, in the 80s for one day, and in the 70s for one day.

The average high for the month of September was 95.7°.

No record lows were set during the month.

Lows were recorded in the 80s for two days, in the 70s for 12 days, and in the 60s for 16 days. The average low for the month was 69°.

Only 1.97 inches of rain fell in Mount Vernon during September. Average for the month is 3.70 inches. Year-to-date,

Franklin County has received 21.77 inches of rain. The average for this time of year is 33.1 inches.

The weather information given below was recorded at the National Oceanic and Atmospheric Agency official weather station in Mount Vernon for the 24-hour period ending 7 a.m. on the day listed for the period of Sept. 28, 2005 through Oct. 4, 2005.

Day	Max.	Min.	Rain
Wednesday	94	78	0
Thursday	96	68	0.07
Friday	75	61	0
Saturday	80	61	0
Sunday	90	67	0
Monday	92	72	0
Tuesday	90	71	0

- Marie Dacus '05

WILDFIRE

Wildfires typically start in woodland or prairie areas. They can occur naturally though they are often exacerbated by human activities. Wildfires can be hard to control as they threaten homes and communities located nearby. Wildfires happen in every state, and they do not respect county or state lines. The impact of fire reaches well beyond the initial flames and smoke. Even if firefighters are able to protect homes and business, the aftermath of wildfire can be just as devastating as floods.

In Texas, the greatest high-danger fire threats are forest, brush and grass fires. The East Texas Piney Woods belt of commercial timber is most susceptible to forest fires. In East Texas, the most monetary damage was caused by arson. Arsonists were responsible for 1 of every 4 fires. Debris burning is and continues to be the major cause of fires. Other causes such as control burns, construction fires and other miscellaneous fires rank second.

A HISTORY OF WILDFIRES IN TEXAS

Wildfires are nothing new to the State of Texas. They are a part of our natural history and have shaped many of our native Texas ecosystems. What is new is the unprecedented growth and development that is occurring in locations across the state that were once rural. It is in this area where development meets native vegetation that the greatest risk to public safety and property from wildfire exists. Wildfires typically start in woodland or prairie areas. They can occur naturally though they are often exacerbated by human activities. Wildfires can be hard to control as they threaten homes and communities located nearby. Wildfires happen in every state, and they do not respect county or state lines. The impact of fire reaches well beyond the initial flames and smoke. Even if firefighters are able to protect homes and business, the aftermath of wildfire can be just as devastating as floods.

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Texas has had some significant fires in the urban wild land interface areas, where combustible homes meet combustible fuels. In 1996, the Poolville Fire burned 141 structures and 16,000 acres in Parker and Wise counties west of Fort Worth. During the 2000 fire season, 48 homes were lost to wildfires in Texas that burned more than a quarter of a million acres.

In 1996, a historical record number of fires and losses in terms of acreage lost due to fires that burned across the state during a four-month period of the traditional fire season in the state. A total of 113 homes and 170,000 acres were lost due to fire in what is undoubtedly the worst siege of fire in the history of Texas. Over three hundred- trained fire fighters were brought in from

across the nation to assist and supplement the Texas Forest Service personnel in control of these fires. The Southern States Forest Fire Compact was invoked in order for Texas to receive help in terms of personnel and equipment from neighboring states.

Over the five-year period of 1991 – 1995, an average of 1178 fires a year burned an average of 17,022 acres with the average fire size being 14 acres. Compare this to 1996, when 2622 fires burned 76,581 acres with an average fire size of 29 acres.

Texas Wildfire Facts

- 1900 local Fire Departments
- Debris Burning is the number one cause of wildfire
- 96% of wildfires are caused by humans
- 3,500 homes lost 2005-2011
- 118,700 wildfires reported 2005-2011
- 80% of wildfires within 2 miles of a community
- 8.9 million acres burned 2005-2011
- 12% of wildfires are caused by arson
- 24 civilian fatalities 2005-2009

Should any part of the State of Texas experience extended periods of fair, windy weather, implementation of countywide bans on outdoor burning may be advised as a wild fire prevention tool in that area. The Texas Forest Service recommends that local governments consider a KBDI of 600 and above for imposition of burn bans. Other indicators that dictate the need for a burn ban include: 1000 HR fuel moisture, Energy Release Component and run occurrence of local fire departments.

The Keetch-Byram Drought Index (KBDI) is basically a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI is the most widely used drought index system by fire managers in the south. It is also one of the only drought index systems specifically developed to equate the effects of drought with potential fire activities. The result of this system is a drought index number ranging from 0 to 800 that accurately describes the amount of moisture that is missing. A rating of zero defines the point where there is no moisture deficiency and 800 is the maximum drought possible. These numbers correlate with potential fire behavior as follows in Table 2.26:

Expected Fire Conditions With Varying KBDI Levels

0 – 200 Low Fire Danger	Soil and fuel moisture is high. Most fuels will not readily ignite or burn. However, with sufficient sunlight and wind, cured grasses and some light surface fuels will burn in spots and patches.
200 – 400 Moderate Fire Danger	Fires more readily burn and will carry across an area with no “gaps”. Heavier fuels will still not readily ignite and burn. Also, expect smoldering and the resulting smokes to carry into and possibly through the night.
400 – 600 High Fire Danger	Fire intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems.
600 – 800 Extreme Fire Danger (600 – 800 continued)	Surface litter and most organic layers are consumed. 1000-hour fuels contribute to intensity. Stumps will burn to the end of roots underground. Any dead snag will ignite. Spotting from snags is a major problem if close to line. Expect dead limbs on trees to ignite from sparks. Expect extreme intensity on all fires that makes control efforts difficult. With winds above 10 miles per hour, spotting is the rule. Expect increased need for resources for fire suppression. Direct initial attack is almost impossible. Only rapid response time to wildfire with complete mop-up and patrol will prevent a major fire situation from developing.

Potential Wildfire Damages and Losses In Franklin County

The “urban wildfire interface” is the Geographic area where combustible homes are mixed with combustible vegetation. The determination of specific wildfire hazard sites depends on several factors.

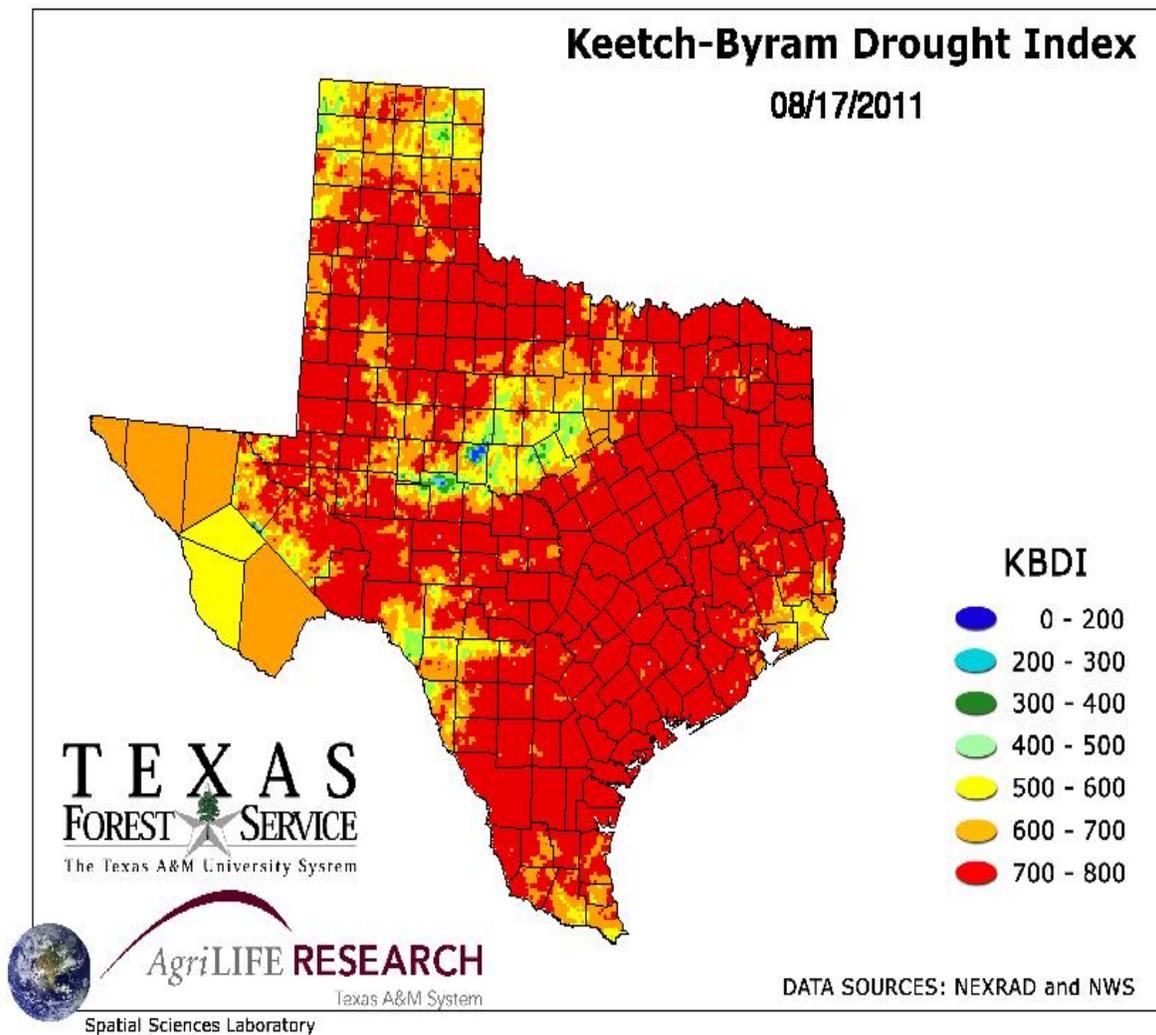
- ❑ Topographic location and fuels;
- ❑ Site/building construction and design;
- ❑ Defensible space;
- ❑ Accessibility;
- ❑ Fire protection response; and
- ❑ Water availability.

Franklin County residents are served by a variety of local fire departments. No wild/forest fire events were reported in Franklin County between 01/01/1950 and 03/31/2007, according to the National Climatic Data Center. No estimate is available for potential dollar damages from Wildland fires. There are no historical fire events in Franklin County. At the time of submission

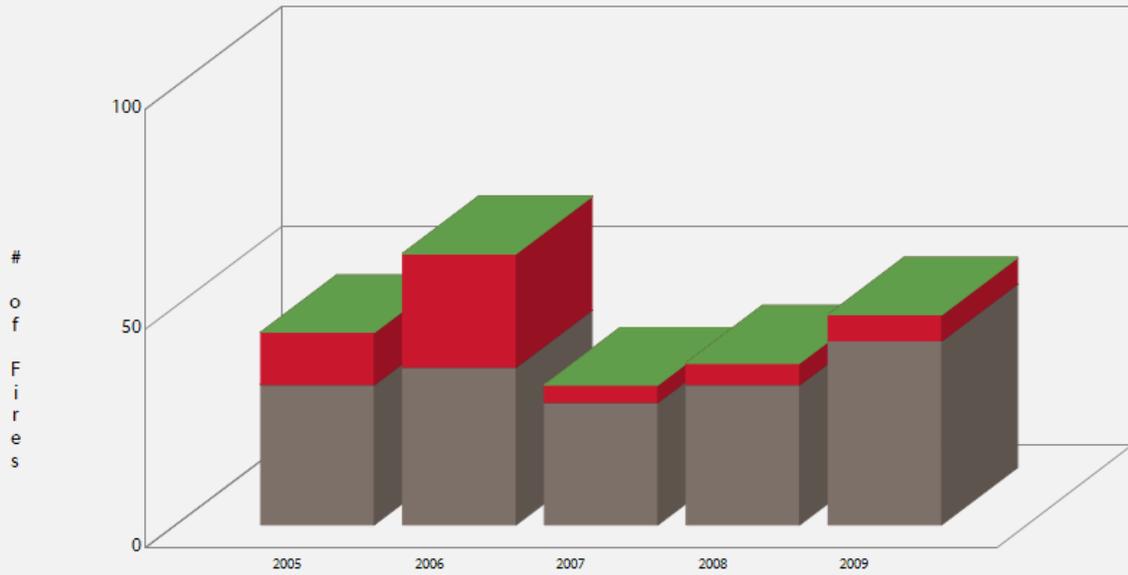
of this plan, data was insufficient to conduct a risk analysis. However, Franklin County is at risk of fires due to the frequency of drought situations that occur.

Figure 2.18 shows the current 14 day outlook for KBDI for Franklin County at 600-800 in July of 2009. From 400-500, fire intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems. Franklin County comprises 294 square miles of the post oak belt and is heavily wooded; post oak, blackjack oak, and pine trees predominate. The terrain varies from nearly level to rolling, and the soils are predominantly loam with clay sub-soils. The county is drained by the Sulphur River, which forms its northern boundary, and Big Cypress Creek, which runs through the southern portion.

The devastating drought of 2011 left most of Texas like a tinderbox ready for Wildfire. In June of 2011 a record 235 counties were placed under a burn ban. The map below indicates the Drought index for Franklin County on August 17, 2011 was at the highest level.



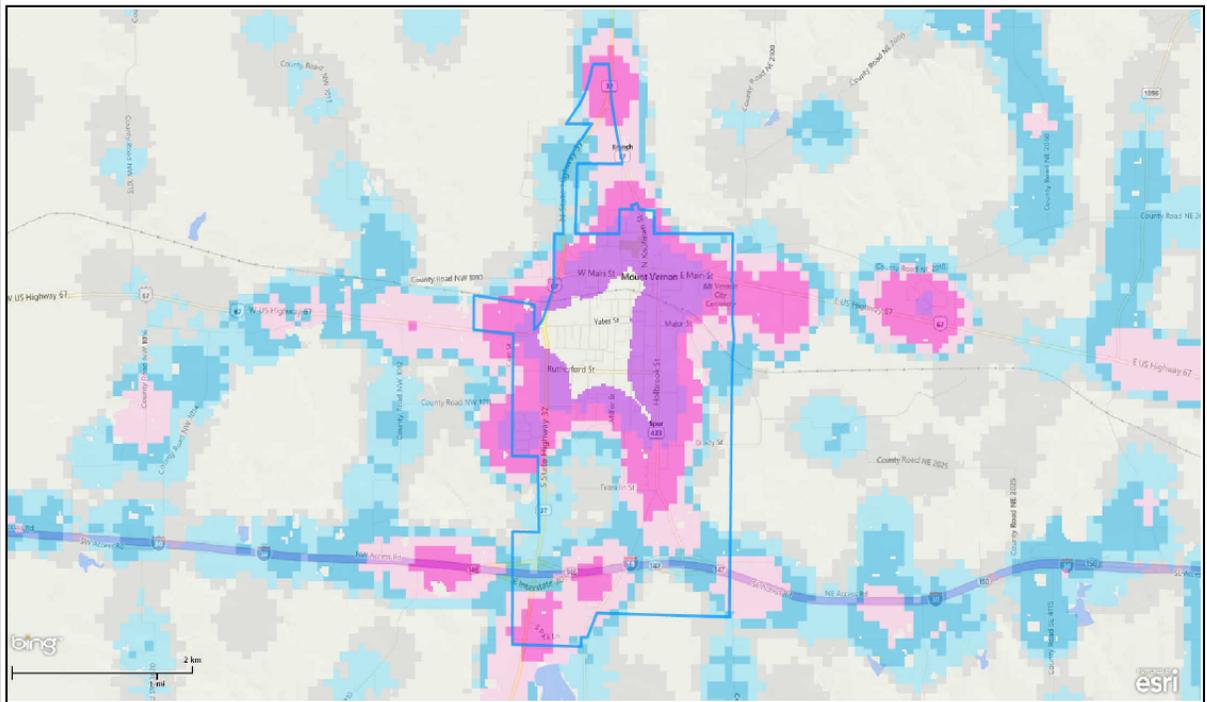
Franklin County
Number of Wildfires Reported by Agency
2005 - 2009



	2005	2006	2007	2008	2009
Local	32	36	28	32	42
State	12	26	4	5	6
Federal	0	0	0	0	0

Wildland Urban Interface (WUI)

Mt. Vernon



Report Created:
05/20/2016 4:09 PM

Texas Wildfire Risk Assessment 2010
www.texaswildfirerisk.com



The user assumes the entire risk related to their use of the Texas Wildfire Risk Assessment and either the published or derived products from these data. Texas A&M Forest Service is providing these data "as is" and disclaims any and all warranties, whether expressed or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose. In no event will Texas A&M Forest Service be liable to you or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of these data.

Mount Vernon Wildfires

There is no history of wildfires threatening Mount Vernon, Texas. Fires are likely to occur in the city but are not caused by Wildfires as defined. House and apartment fires in Mount Vernon have not been known to spread over significant areas.

Probability: Historical weather conditions indicate that the probability of occurrence is possible. The threat of fires cannot be eliminated but public education and the use of prescribed burns can be used to better manage this hazard.

Number of Wildfires Reported Since Last Update	
Franklin County	538
Mount Vernon	

Vulnerability: The most vulnerable month for wildfires is July. The Vulnerability rating for Mt. Vernon and Franklin County is **HIGH**.

Extent: There were 223 fires reported to the Texas Forestry Service between 2006 and 2009.. The KDBI Levels of 200 (moderate) to 800 (extreme) are considered when mitigating wildfires. The Franklin county and participating jurisdiction of Mount Vernon will consider the full range of the KDBI scale when mitigating wildfires. See Damage Assessment tables on page 25-26 for estimates of financial impacts. The following table demonstrates the extent of current intensity levels and the extent that each jurisdiction can expect in the foreseeable future.

Texas Forest Service Fire Intensity Ratings		
Jurisdiction	Low	High
Franklin County	1	4
Mount Vernon	2	3

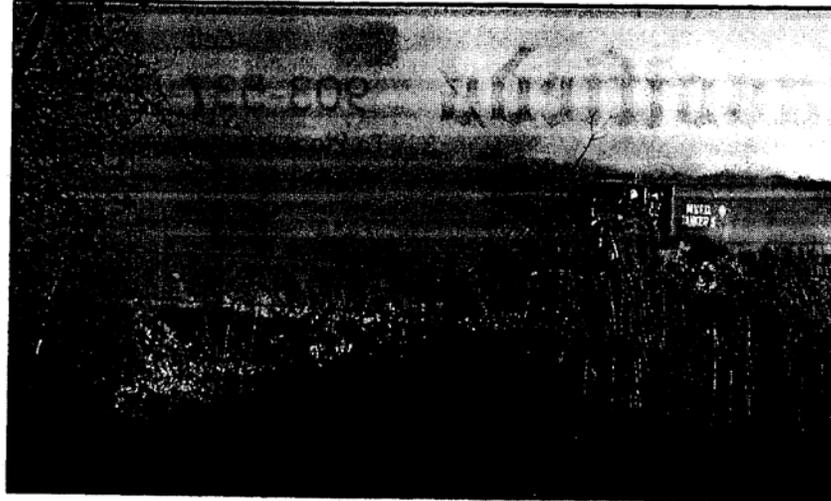
1, Very Low: Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment. **2, Low:** Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools. Texas A&M Forest Service TxWRAP User Manual October 2012 Page 60 **3, Moderate:** Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property. **4, High:** Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property. **5: Very High:** Very large flames up to 150 feet in length; profuse short-range spotting, frequent long range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

Estimated Property Loss at 35%	
Franklin Co.	327,414,035
Mt. Vernon	46,951,496

Location: Forests, thick underbrush and dry pasture can pose a threat any time and all of Franklin County could possibly be affected, depending on where the wildfire started.

FRANKLIN COUNTY WILDFIRES					
COMMUNITY	POTENTIAL IMPACT 45%	PROBABLITY 30%	Warning 15%	Duration 10%	RISK
Franklin Unincorporated	Substantial PRI = 1.80	Highly Likely PRI = 1.20	<6 hrs. PRI = .60	< a week PRI .30	High 3.9
Mt. Vernon	Substantial PRI = 1.80	Highly Likely PRI = 1.20	> 24 hrs. PRI = .60	< a week PRI = 30	High 3.9

Humor starts like a wildfire, but then continues on, smoldering, smoldering for years. Robert Orben



Prairie fire

Several acres of land were destroyed by two fire on Tuesday, Dec. 15 in northern Franklin County. North Franklin Volunteer Fire Department, volunteers from Mount Vernon Fire Department and the Talco Volunteer Fire Departments responded to the blaze. (Optic Photo by Lillie Bush-Reves '06)

Burn ban being strictly enforced

The burn ban in Franklin County is being strictly enforced following a proclamation by the Franklin County Commissioners Court on Friday, Dec. 30 that a local state of disaster is proclaimed in the

county. The proclamations were passed due to the threat of wildfires due to drought and other weather related conditions in the area.

No outdoor burning of any

kind is allowed and is punishable by a fine of up to \$500.

Fire rings, fire pits, outdoor grills and chimineas are not allowed for use during this state of disaster.

- Marie Dacus '06

Wildland fires spread across North and Central Texas

Wildland fires that caused at least three fatalities and the loss of more than 100 structures, including 78 homes, and the extreme fire behavior made for a disastrous time across the north central portion of Texas earlier this week. Eight new fires for 13,310 acres started in the area, with an additional 15 fires for 493 acres in East Texas.

In Cooke County, the Walnut Bend Fire caused one fatality when a homeowner was overrun by the fire while trying to wet down her yard. Twenty four homes were evacuated, and eight homes were lost. In

Callahan County, the entire town of Cross Plains was under an evacuation order. Two fatalities were reported, and as many as 50 homes were destroyed as well as numerous businesses and at least one church. Very dense smoke, extreme fire behavior and shortage of resources caused difficulties, and it was impossible to take action at the head of the fire for some time. The placement of resources was concentrated on structure protection.

The loss of 20 homes was due to a 30-acre fire in Hood County. Propane tank explo-

sions, thick vegetation and poor road access added to containment problems. In addition, fires on the Somerville/Bosque counties line, as well as in Llano, Gillespie, Tarrant, Tyler and Wise counties were responded to by Texas Forest Service.

In North Texas, above normal temperatures and dry weather is expected to continue for the next seven days. There is potential for additional red flag events Friday over the Southwest quarter of the area, then again on Sunday over the far western counties.

- TFS '06

Omitted Negligible Hazards

EARTHQUAKES

It has been determined that earthquakes are not an issue for Franklin County. No earthquake has occurred since the Hazard Mitigation Plan Adoption and there is no recorded history of earthquakes ever occurring in Franklin County. After careful consideration it was determined that earthquakes will not be mitigated in the 2016 Franklin County Five-Year Update

Section III Mitigation Plan Update Strategy for Franklin County

The previous goals and actions were never acted on and many of the old actions are no longer valid. The plan was never incorporated into other planning mechanisms as intended. Measures have been taken to ensure annual reviews. This updated plan represents the most current data available regarding actions needed to reduce loss of life and property through mitigation. The five-year update is seen as an opportunity to set actions in place that are current, valid and obtainable.

- A new way to measure risk has been introduced in the 5 year update. There are no changes noted that would impact the development of the plan.
- Added language reflects a desire to see that the Plan is acted upon in a measured fashion with at least annual meetings being held to monitor overall action priorities and progress.
- No natural event has occurred since the original plan that would alter the current plan's prioritization.
- There have been no new developments in the county or jurisdiction that would alter vulnerability. Franklin County has experienced a .4% variation in population from April 2010-July 2014.
- There have been no changes politically or financially that would impact the plan's development.

Franklin County recognizes the importance of dedicated involvement regarding the integration of the plan into existing county and participating jurisdiction plans and budgets and codes. Franklin County has initiated a proactive course of action that includes annual reviews and reports to the Franklin County Commissioners Court and the city council of Mount Vernon.

The presiding Franklin County Judge or his/her appointed representative will maintain a schedule to ensure that the plan is addressed and updated in a timely manner.

MITIGATION GOALS AND LONG TERM STRATEGY

GOALS

Mitigation Plan Goals

The Franklin County Mitigation Action Plan goals describe the direction that Franklin County agencies, organizations, and citizenry can take to minimize the impacts of natural hazards. Specific recommendations are outlined in the action items. These goals help guide direction of future activities aimed at reducing risk and preventing loss from natural hazards.

Goal #1: Protect Life and Property

- ❑ Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.
- ❑ Improve hazard assessment information to make recommendations for discouraging new development in areas vulnerable to natural hazards.

Goal #2: Public Awareness

- ❑ Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.
- ❑ Provide information on tools, and funding resources to assist in implementing mitigation activities.

Goal #3: Natural Systems

- ❑ Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

Goal #4: Partnerships and Implementation

- ❑ Persuade leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

Goal #5: Emergency Services

- ❑ Establish policy to ensure mitigation projects for critical facilities, services and infrastructure.
- ❑ Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations and business.
- ❑ Integrate natural hazard mitigation activities with emergency operation plans and procedures.

SECTION IV MITIGATION ACTIONS AND IMPLEMENTATION PLAN

In order to determine the following mitigation actions, several meetings were held in Franklin County, which were previously mentioned. Mitigation Ideas: Possible Mitigation Measures by Hazard Type. A Mitigation Planning Tool For Communities, FEMA-R5, 9/02, was used as a guide in compiling the mitigation actions to be considered. Mitigation action items were presented to the committee and those in attendance. Those individuals reviewed the items presented and made the decision to select the mitigation actions.

Additional meetings were held between ATCOG staff preparing this plan and the Franklin County Emergency Management Coordinator, Franklin County Judge, and Mt. Vernon City Manager to discuss the selected Priority Actions for Franklin County and Mt. Vernon. It is important for the individual(s) reviewing this plan to realize that some mitigation alternatives may not be viable given a particular set of hazard conditions. The Priority Actions For Franklin County and Mt. Vernon listed were selected for consideration because both Franklin County and the City of Mt. Vernon are of the opinion that the area is in greater danger from tornadoes than any other hazard.

Any new buildings built in Mt. Vernon will be built according to the Southern Building Code, adopted in 1998. Mt. Vernon is in the process of revising and adopting the 2003 International Building Code. This addresses reducing the effects of hazards on **new** buildings and infrastructure.

The Franklin County HMAP will be incorporated into a variety of new and existing planning mechanisms for Mount Vernon and Franklin County including: grant applications ,human resource manuals, ordinances, building codes and budgets.

Franklin County Hazard Mitigation Actions 2011 No mitigation planning occurred after initial plan adoption.

Hazard	Action	Disposition	Explanation
Flood	Mt. Vernon: Evaluate elevation requirements for new residential and non-residential structures and explore raising base flood elevation on new residential constructions.	Delete	
	Mt. Vernon: Disseminate PSA's and Newspaper Articles through local media about dangers of flooded county roads	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co. Work with TXDOT to clearly mark roads that are prone to flooding	Reword and deferred.	Needs editing to meet standards
	Franklin Co. Inform citizens of dangers of driving on roadways and bridges that are flooded. Use NOAA "Turn Around, Don't Drown.	Reword and deferred	Needs editing to meet standards
Tornado	Mr. Vernon: Construct FEMA standard community safe room	Defer	
	Mr. Vernon: Publicize Public Awareness by disseminating information at public events and	Delete	Does not meet current FEMA standards for

	newspaper.		acceptable actions
	Franklin Co.: Work with high risk communities to apply for a Community safe Room Project	Defer	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Develop a program to provide NOAA weather radios to limited income residents that live in high risk areas such as mobile home parks.	Defer	No action taken in original 2011 plan
Winter Storms	Mt. Vernon: Purchase back-up generators for water and sewage facilities.	Defer	Will elaborate
	Mt. Vernon: Develop “Citizen Call in Plan” identifying hazardous limbs and trees.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Apply for funding to purchase mobile generators for critical facilities	Reword and defer	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Educate residents on making home emergency kits using the Ready America Plan		
Thunderstorm Winds	Mt. Vernon: Update existing building codes to protect structures from wind damage.	Defer	No action taken in original 2011 plan
	Mt. Vernon: Educate residents on the importance of NOAA weather radios in homes and businesses.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Explore the requirements and benefits of participating in the NWS Storm Ready Program	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Educate the public about the dangers of high winds found in thunderstorms.	Defer and edit	No action taken in original 2011 plan
Hail	Mt. Vernon: Develop and maintain a method for documenting local weather events for future disaster declarations.	Delete	Does not meet current FEMA standards for acceptable actions
	Mt. Vernon: Distribute emergency preparedness information related to weather hazards.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Modernize local storm sirens to ensure adequate coverage in all areas of the community.	Defer	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Inform residents of Home and Business Insurance available to cover hail damaged roofs.	Delete	Does not meet current FEMA standards for acceptable actions
Drought	Mt. Vernon: Conduct workshops on conserving water, xeriscaping and managing drought impacts.	Defer and edit	No action taken in original 2011 plan
	Mt. Vernon: Implement water conservation plan.	Defer and edit	No action taken in original 2011 plan
	Franklin Co.: Conduct workshops on conserving water, xeriscaping and managing drought impacts.	Defer and edit	No action taken in original 2011 plan
	Franklin Co.: Implement water conservation plan.	Defer and edit	No action taken in original 2011 plan
Extreme Heat	Mt. Vernon: Radio/TV, newspapers, PSA’s advising public of hazards of heat and heat advisories.	Delete	Does not meet current FEMA standards for acceptable actions

	Mt. Vernon: Request local agencies and private business projects for critical facilities, services and infrastructure.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Work with the Franklin County service organizations to host a local fan drive as their community service project.	Defer and edit	No action taken in original 2011 plan
	Franklin Co.: Radio/TV/newspapers PSA's advising public of hazards of heat and heat advisories	Delete	Does not meet current FEMA standards for acceptable actions
Wildfire	Mt. Vernon: KBDI Response: air surveillance will be activated at 6000 KBDI. Publish burn ban information	Delete	
	Mt. Vernon: Apply for grants to update fire equipment.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Develop Fire Wise Program in rural communities that are at risk.	Delete	Does not meet current FEMA standards for acceptable actions
	Franklin Co.: Develop a protocol for fire jurisdictions to communicate.	Delete	Does not meet current FEMA standards for acceptable actions

DRAFT

The comprehensive range of specific mitigation actions and projects are listed below. A cost benefit review was performed to help decide which action items are feasible. The cost estimate and funding source are listed below. A cost benefit analysis will be performed prior to submission of any application to FEMA. Priorities listed below are defined as

High 1-3 Years; Medium 3-7 Years; Low 8+ Years.

NOTE: All Mount Vernon projects are subject to availability of federal and local funding as well as availability of local staff to administer the project.

Mount Vernon Flood

Mount Vernon Flood Action #1	Purchase emergency mobile generators for critical facility use during power outages.
Mitigation Goal/Objective	<i>Goal #1 Protect Life and Property</i>
Priority	Medium
Funding Source(s)	FEMA Grants
Estimated Cost	Medium (10k-25k)
Responsible Agency	Mt. Vernon City Council
Estimated Completion Time	5 years
Effect on New Buildings	This could protect buildings from sewage flooding and water contamination.
Effect on Existing Buildings	This could protect buildings from sewage flooding and water contamination
Comments:	It is important during times of stress and outages that critical facilities such as waste treatment plants and water supplies remain operational.
Mount Vernon Flood Action #2	Widen ditches to increase volume capacity of flash flood waters
Mitigation Goal/Objective	<i>Goal # 1 Protect Life and Property</i>
Priority	High
Funding Source(s)	City and grant money
Estimated Cost	Medium (10k-25k)
Responsible Agency	Mt. Vernon Public Works Department
Estimated Completion Time	3 years
Effect on New Buildings	This could protect new building from flash flooding
Effect on Existing Buildings	This could protect new building from flash flooding
Comments:	By widening ditches, especially in poor drainage areas the likelihood of flooding is decreased.

Mount Vernon Tornado

Mount Vernon Tornado Action #1	Develop and implement the Texas Individual Tornado Safe Room Program
Mitigation Goal/Objective	<i>Goal 1: Protect life and property</i>
Priority	Medium
Funding Source(s)	FEMA Grant monies
Estimated Cost	High (25K)
Responsible Agency	Mt. Vernon City Council
Estimated Completion Time	8 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Safe rooms in homes save lives by protecting individuals from high winds and flying debris.

Mount Vernon Tornado Action #2	Develop and implement a public education program that will provide the public with understanding of their risk to Tornado events and the mitigation methods to protect themselves, their family and their property.
Mitigation Goal/Objective	Goal 1: Protect Life and Property <i>Goal 2: Public Awareness</i>
Priority	High
Funding Source(s)	City
Estimated Cost	Low (0k-10k)
Responsible Agency	Mt. Vernon Fire Chief/EMC
Estimated Completion Time	2 years
Effect on New Buildings	This could help reduce damage by implementing ideas about home and business protection from tornadic winds.
Effect on Existing Buildings	This could help reduce damage by implementing ideas about home and business protection from tornadic winds
Comments:	Educating the public is an integral part of mitigation.

Mount Vernon Winter Storms

Mount Vernon Winter Storms Action #1	Purchase back-up generators for water and sewage facilities.
Mitigation Goal/Objective	1. Protect Life and Property 1. a. Implement activities that assist in protecting lives by making homes, business, infrastructure critical facilities and other property more resistant to natural hazards.
Priority	Medium
Funding Source(s)	FEMA
Estimated Cost	None
Responsible Agency	Mount Vernon
Estimated Completion Time	1 year and ongoing
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	

Mount Vernon Winter Storm Action #2	Conduct workshops regarding how to mitigate your home from damages of winter storms.
Mitigation Goal/Objective	Goal #1: Protect Life and Property Goal #2: Public awareness
Priority	High
Funding Source(s)	Mt. Vernon City Council
Estimated Cost	Low (0-10k)
Responsible Agency	Mt. Vernon Fire Dept./ EMC
Estimated Completion Time	3 years
Effect on New Buildings	Education empowers citizens and businesses to take action.
Effect on Existing Buildings	Education empowers citizens and businesses to take action.
Comments:	

Mount Vernon Thunderstorm Winds

Mount Vernon Thunderstorm Winds Action #1	Purchase emergency mobile generators for critical facility use during power outages.
Mitigation Goal/Objective	Goal #1 Protect Life and Property
Priority	Medium
Funding Source(s)	FEMA Grants
Estimated Cost	Medium (10k-25k)
Responsible Agency	Mt. Vernon City Council/EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	It is important during times of stress and outages that critical facilities such as waste treatment plants and water supplies remain operational.

Mount Vernon Thunderstorm Winds Action #2	Provide public workshops and information regarding mitigating homes against thunderstorm winds.
Mitigation Goal/Objective	Goal #1: Protect Life and Property Goal # 2: Public Awareness
Priority	Medium
Funding Source(s)	Mt. Vernon City Council
Estimated Cost	Low (0-10k)
Responsible Agency	City Fire Department/EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Public awareness and education can minimize loss and protect lives by giving citizens the tools needed to take action.

Mount Vernon Hail

Mount Vernon Hail Action #1	Install hail resistant film on the windows of critical facilities.
Mitigation Goal/Objective	Goal #1 Protect Life and Property
Priority	Medium
Funding Source(s)	City of Mt. Vernon
Estimated Cost	Low (0-10k)
Responsible Agency	Mt. Vernon Public Works
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	

Mount Vernon Hail Action #2	Conduct a workshop for residents about the prevalence of hailstorms and how to protect your home and property form hail damage.
Mitigation Goal/Objective	Goal #1 Protect Life and Property Goal #2 Public Awareness.
Priority	High
Funding Source(s)	City of Mt. Vernon
Estimated Cost	Low (0-10k)
Responsible Agency	City Fire Dept./ EMC
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Public awareness and education can minimize loss and protect lives by giving citizens the tools needed to take action.

Mount Vernon Drought

Mount Vernon Drought Action #1	Conduct workshops on conserving water, xeriscaping and managing drought impacts
Mitigation Goal/Objective	<i>Goal #2: Public Awareness</i> b) Provide information on tools, and funding resources to assist in implementing mitigation activities. <i>Goal #3: Natural Systems</i> Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
Priority	Low
Funding Source(s)	County
Estimated Cost	Low
Responsible Agency	City of Mt. Vernon
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	

Mount Vernon Drought Action # 2	Develop and implement a drought contingency plan to include water conservation, building code requirements, and mandatory water rationing.
Mitigation Goal/Objective	<p style="text-align: center;">Goal #3: Natural Systems</p> <p>a) Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions</p> <p style="text-align: center;">Goal #4: Partnerships and Implementation</p> <p>a) Develop leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.</p>
Priority	Low
Funding Source(s)	City of Mount Vernon
Estimated Cost	Low
Responsible Agency	City of Mount Vernon
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Water shortage has not been a major problem in NE Texas

Mount Vernon Extreme Heat

Mount Vernon Extreme Heat Action #1	Provide workshops on how to mitigate infrastructure from the effects of extreme heat.
Mitigation Goal/Objective	<i>Goal #2: Public Awareness</i>
Priority	Low
Funding Source(s)	City of Mt. Vernon
Estimated Cost	Low (0-10k)
Responsible Agency	Mt. Vernon EMC
Estimated Completion Time	8 years
Effect on New Buildings	The workshop would contain information about insulation.
Effect on Existing Buildings	The workshop would contain information about insulation.
Comments:	

Mount Vernon Extreme Heat Action #2	Conduct fan drives for low-income and elderly who cannot afford air conditioning.
Mitigation Goal/Objective	<p>Goal#1: Protect Life and Property</p> <p>Goal #4: Partnerships and Implementation.</p>
Priority	High
Funding Source(s)	Local business organization
Estimated Cost	Low
Responsible Agency	City of Mount Vernon
Estimated Completion Time	3 years
Effect on New Buildings	Not applicable
Effect on Existing Buildings	Not Applicable
Comments:	

Mount Vernon Wildfires

Mount Vernon Wild Fire Action #1	Develop and implement a building vegetation clearance program.
Mitigation Goal/Objective	Goal #1: Protect Life and Property Goal #4: Partnerships and Implementation
Priority	Medium
Funding Source(s)	City of Mt. Vernon
Estimated Cost	Medium (10-25k)
Responsible Agency	Mt. Vernon Public Works
Estimated Completion Time	7 years
Effect on New Buildings	This would protect new buildings from Wildfire/Urban Interface
Effect on Existing Buildings	This would protect existing buildings from Wildfire/Urban Interface
Comments:	Much can be accomplish when the private and public sector joins hands

Mount Vernon Wild Fire Action #2	Conduct a wildfire education program stressing the dangers of trash burning in order to help prevent wildfires.
Mitigation Goal/Objective	<i>Goal #2 Public Awareness</i>
Priority	High
Funding Source(s)	City of Mt. Vernon
Estimated Cost	Low (0-10k)
Responsible Agency	Mt. Vernon Fire Chief
Estimated Completion Time	3 years
Effect on New Buildings	Out of control trash burning can destroy a new building
Effect on Existing Buildings	Out of control trash burning can destroy an existing building.
Comments:	Programs such as this can empower citizens to take precautionary action.

Franklin County Mitigation Actions Table

NOTE: All Franklin County projects are subject to availability of federal and local funding as well as availability of local staff to administer the project.

Franklin County Floods

Franklin County Flood Action #1	Purchase Emergency mobile generators to use with emergency equipment during power outages for critical facilities.
Mitigation Goal/Objective	Goal #1: Protect Life and Property
Priority	Medium
Funding Source(s)	FEMA Grant
Estimated Cost	Medium (10-25k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Generators keep critical equipment operational during power outages.

Franklin County Flood Action #2	Develop and implement the Turn Around, Don't Drown Program
Mitigation Goal/Objective	<i>Goal #1 Protect Life and Property</i>
Priority	High
Funding Source(s)	State of Texas
Estimated Cost	Low (0-10k)
Responsible Agency	Franklin County Emergency Manage
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	This program is known to save lives.

Franklin County Tornado Actions

Franklin County Tornado Action #1	Develop and implement a public education program that will provide the public with understanding of their risk to Tornado events and the mitigation methods to protect themselves, their family and their property.
Mitigation Goal/Objective	Goal 1: Protect Life and Property Goal 2: Public Awareness
Priority	High
Funding Source(s)	City
Estimated Cost	Low (0k-10k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	2 years
Effect on New Buildings	This could help reduce damage by implementing ideas about home and business protection from tornadic winds.
Effect on Existing Buildings	This could help reduce damage by implementing ideas about home and business protection from tornadic winds
Comments:	Educating the public is an integral part of mitigation.

Franklin County Tornado Action #2	Develop a program to provide NOAA weather radios to limited-income residents that live in high risk areas such as mobile home parks.
Mitigation Goal/Objective	<p style="text-align: center;">Goal #1: Protect Life and Property</p> <p>a) Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.</p> <p style="text-align: center;">Goal #4: Partnerships and Implementation</p> <p>a) Develop leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.</p>
Priority	high
Funding Source(s)	County, fund raisers, county business leadership
Estimated Cost	Medium
Responsible Agency	VFD, EMC, County
Estimated Completion Time	Three years
Effect on New Buildings	Not Applicable
Effect on Existing Buildings	Not applicable
Comments:	

Franklin County Winter Storm Actions

Franklin County Winter Storm Action #1	Purchase Emergency mobile generators to use with emergency equipment during power outages for critical facilities.
Mitigation Goal/Objective	Goal #1: Protect Life and Property
Priority	Medium
Funding Source(s)	FEMA Grant
Estimated Cost	Medium (10-25k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Generators keep critical equipment operational during power outages.

Franklin County Winter Storm Action #2	Mitigate protecting power lines from the impacts of winter storms by establishing standards for all utilities regarding tree pruning around lines.
Mitigation Goal/Objective	<p style="text-align: center;">Goal 1: Protect Life and Property</p> <p>Goal 3: Natural Systems</p>
Priority	Medium
Funding Source(s)	Franklin County
Estimated Cost	Medium (10-25k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Mitigate protecting power lines from the impacts of winter storms by establishing standards for all utilities regarding tree pruning around lines.

Franklin County Thunderstorm Winds Actions

Franklin County Thunderstorm Winds Action #1	Provide a community awareness campaign concerning the risks and consequences of thunderstorm winds. By educating the public n High winds, loss of life and property may be mitigated as they take steps to secure their property and respond to warning.
Goal/Objective	<i>Goal #2: Public Awareness</i>
Priority	High
Funding Source(s)	Franklin County
Estimated Cost	Low (0-10k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Educating the Public will help protect life and property

Franklin County Thunderstorm Winds Action #2	Purchase Emergency mobile generators to use with emergency equipment during power outages for critical facilities.
Mitigation Goal/Objective	<i>Goal #1: Protect Life and Property</i>
Priority	Medium
Funding Source(s)	FEMA Grant
Estimated Cost	Medium (10-25k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Generators keep critical equipment operational during power outages.

Franklin County Hail Actions

Franklin County Hail Action #1	Install hail resistant film on the windows of critical facilities.
Mitigation Goal/Objective	Goal #1 Protect Life and Property
Priority	Medium
Funding Source(s)	Franklin County
Estimated Cost	Low (0-10k)
Responsible Agency	Franklin County Public Works
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	

Franklin County Hail Action #2	Conduct a workshop for residents about the prevalence of hailstorms and how to protect your home and property from hail damage.
Mitigation Goal/Objective	Goal #1 Protect Life and Property Goal #2 Public Awareness.
Priority	High
Funding Source(s)	Franklin County
Estimated Cost	Low (0-10k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	3 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Public awareness and education can minimize loss and protect lives by giving citizens the tools needed to take action.

Franklin County Drought Actions

Franklin County Drought Action #1	Conduct workshops on conserving water, xeriscaping and managing drought impacts.
Mitigation Goal/Objective	Goal #2: Public Awareness b) Provide information on tools, and funding resources to assist in implementing mitigation activities. Goal #3: Natural Systems Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions
Priority	Low
Funding Source(s)	Franklin County
Estimated Cost	Low
Responsible Agency	County
Estimated Completion Time	2 years and ongoing
Effect on New Buildings	Not applicable
Effect on Existing Buildings	Not applicable
Comments:	

Franklin County Drought Action #2	Develop and implement a drought contingency plan to include water conservation, building code requirements, and mandatory water rationing.
Mitigation Goal/Objective	Goal #3: Natural Systems a) Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions Goal #4: Partnerships and Implementation a) Develop leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.
Priority	Low
Funding Source(s)	Franklin County
Estimated Cost	Low
Responsible Agency	Franklin County
Estimated Completion Time	3 years
Effect on New Buildings	Not Applicable
Effect on Existing Buildings	Not Applicable
Comments:	Water shortage has not been a major problem in NE Texas

Franklin County Extreme Heat Actions

Franklin County Extreme Heat Action #1	Provide workshops on how to mitigate infrastructure from the effects of extreme heat.
Mitigation Goal/Objective	<i>Goal #2: Public Awareness</i>
Priority	Low
Funding Source(s)	Franklin County
Estimated Cost	Low (0-10k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	8 years
Effect on New Buildings	The workshop would contain information about insulation.
Effect on Existing Buildings	The workshop would contain information about insulation.
Comments:	

Franklin County Extreme Heat Action #2	Develop and implement new cooling centers and advertise their locations for extreme heat events in existing, air conditioned structures such as churches and county facilities. This would constitute a small investment yet provide a valuable service to people during episodes of extreme heat.
Mitigation Goal/Objective	Goal #1: Protect Life and Property Goal 4# Partnership and Implementation Goal #5: Emergency Services
Priority	Medium
Funding Source(s)	FEMA Grant
Estimated Cost	Medium (10-25k)
Responsible Agency	Franklin County EMC
Estimated Completion Time	7 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	This action will be more critical as the earth grows warmer.

Franklin County Wildfire Actions

Franklin County Wildfire Action #1	Develop Fire Wise Program in rural communities that are at risk.
Mitigation Goal/Objective	<i>Goal #1: Protect Life and Property</i> a) Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.
Priority	High
Funding Source(s)	County
Estimated Cost	Low
Responsible Agency	County
Estimated Completion Time	3 years
Effect on New Buildings	Not Applicable
Effect on Existing Buildings	Not Applicable
Comments:	

Franklin County Wildfire Action #2	Purchase Emergency mobile generators to use with emergency equipment during power outages for critical facilities.
Mitigation Goal/Objective	<i>Goal #1: Protect Life and Property</i>
Priority	Medium
Funding Source(s)	FEMA Grant
Estimated Cost	Medium (10-25k)
Responsible Agency	County EMC
Estimated Completion Time	5 years
Effect on New Buildings	
Effect on Existing Buildings	
Comments:	Generators keep critical equipment operational during power outages.

DRAFT

“The bureaucracy is expanding to meet the needs of the expanding bureaucracy.

“ Oscar Wilde

Priority Actions that are listed for Franklin County and the City of Mt. Vernon are the same. Meetings took place with the committee, and meetings and discussions took place between the Franklin County Judge, Franklin County Emergency Management Coordinator, and the Mt. Vernon City Manager. Actions were prioritized using the STAPLE+E criteria. The actions do not adversely affect a particular segment of the population or cause relocation of lower income people. They provide long-term reduction of losses and have minimal secondary adverse impacts. They do not have adverse effects on the environment, and are consistent with the community’s environmental goals, and have mitigation benefits while they are environmentally sound. The following table explains the STAPLE+E criteria.

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

The Franklin County Judge and the Emergency Management Coordinator will be responsible for implementing the action items that affect Franklin County. The Mt. Vernon City Manager will be responsible for implementing actions items that affect the City of Mt. Vernon. Timeframes for completion are listed with the mitigation action tables.

SECTION V

Monitoring, Implementation, Evaluating, Updating and Integration

Franklin County and each participating jurisdiction will be responsible for implementing its own mitigation actions contained in Section IV. Each action has been assigned to a specific person or local government office that is responsible for implementing it. Franklin County and its jurisdictions have very lean budgets and staff. They rely on grants and federal funding for many of the improvements that are made within their borders. State law requires that the city council and the Commissioners' Court of Franklin County approve changes to budgets, improvement plans and mitigation plans. The governing bodies of each participating jurisdiction have adopted the mitigation action plan for their jurisdictions.

The Franklin County Commissioners will be responsible for adopting the Franklin County Mitigation Action Plan. (All jurisdictions must officially adopt and commit to implementation of the plan to be covered by the plan. This includes all participating cities/towns). This governing body has the authority to make public policy regarding natural hazards. The Franklin County Mitigation Plan will be submitted to the Texas Department of Emergency Management for review and upon their approval, TDEM will then submit the plan to the Federal Emergency Management Agency (FEMA) for review and final approval. The review will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201. Once accepted by FEMA, Franklin County/City will formally adopt it and gain eligibility for Hazard Mitigation Grant Program funds.

Monitoring

To prevent issues regarding meeting the goals of The Franklin County Hazard Mitigation Action Plan it is agreed that the county and participating jurisdictions will evaluate the plan on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process will include a definite schedule and timeline, and will identify the local agencies and organizations participating in plan evaluation. Agencies participating in the plan review will include public works, emergency management or fire department, representatives for the city councils or commissioners' court, and mayors or city managers.

Also at this meeting time the Hazard Mitigation Committee Members will monitor the progress of the mitigation actions for their respective communities. The County Judge or his/her designated appointee will organize the meeting. The public will be invited to attend and will be encouraged to provide feedback. Monitoring and evaluation will occur at this meeting.

The meeting will review the progress of each action for each community to assess if the action is being completing in a timely fashion and if additional resources need to be directed to complete the actions. Monitoring the plan's actions is important to keep accountability for all team members.

They will also review the risk assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. This plan can and will pave the

way for other plans, codes and programs. A written record of the annual meeting, along with any project reports, will be accomplished and kept on file in the county office. Every five years the updated plan will be submitted to the State Hazard Mitigation Officer.

The Status of the Hazard Mitigation Actions will be monitored by the designated emergency management coordinator for each jurisdiction on a quarterly basis. Preparation for the Five Year Plan Update will begin no later than 1 year prior to the plan expirations date. Again, the public will be invited to attend and will be encouraged to provide feedback.

Implementation

The Franklin County Hazard Mitigation Committee will be responsible for coordinating implementation of the five year plan action items and undertaking the formal review process. The county formed a Hazard Mitigation Committee that consists of members from local agencies, organizations, and citizens.

Upon formal adoption of the plan, hazard mitigation team members from each participating jurisdiction will review all comprehensive land use plans, capital improvement plans, Annual Budget Reviews, Emergency Operations or Management Plans, transportation plans, and any building codes to guide and control development. The hazard mitigation team members will work to integrate the hazard mitigation strategies into these other plans and codes. Each jurisdiction will conduct annual reviews of their comprehensive and land use plans and policies and analyze the need for any amendments in light of the approved hazard mitigation plan. Participating jurisdictions will ensure that capital improvement planning in the future will also contribute to the goals of this hazard mitigation plan to reduce the long-term risk to life and property from all hazards. Within one year of formal adoption of the hazard mitigation plan, existing planning mechanisms will be reviewed by each jurisdiction.

The Franklin County HMAP will be incorporated into a variety of new and existing planning mechanisms for **Mount Vernon and Franklin County governments** including: grant applications, human resource manuals, ordinances, building codes and budgets. Each team member will communicate new ideas and issues found within the plan to the city boards. The county and its participating jurisdictions will consider how to best incorporate the plans together. This includes incorporating the mitigation plan into county and local comprehensive or capital improvement plans as they are developed.

The Status of the Hazard Mitigation Actions will be monitored by the designated emergency management coordinator for each jurisdiction on a quarterly basis. Preparation for the Five-Year Plan Update will begin no later than 1 year prior to the plan expirations date.

Updating

Preparation for the Five-Year Plan Update will begin no later than 1 year prior to the plan expirations date. The County Judge or his/her designated appointee will organize a meeting with the Hazard Mitigation Committee Members to begin the update process. The committee member will organize all data gathered during the monitoring and evaluation meetings to assist with the plan update. The committee members will also assess the need for additional participating jurisdictions for the plans update. The public will be invited to attend and will be encouraged to provide feedback.

Copies of the Plan will be kept at the county courthouse and all city halls. The existence and location of these copies will be publicized in the appropriate local papers. The plan includes the address and the phone number of the county department responsible for keeping track of public comments on the Plan.

Franklin County is committed to supporting the cities, communities and other jurisdictions in the planning area as they implement their mitigation plans. Franklin County will review and revise as needed, the long-range goals and objectives in its strategic plan and budgets to ensure that they are consistent with this mitigation action plan. Franklin County will work with participating jurisdictions to advance the goals of the is hazard mitigation plan through its routine, ongoing, long-range planning, budgeting and work processes.

Integration

Mount Vernon, has a population 2,678. The following are the city of Mount Vernon's authorities, policies, programs and resources available to accomplish hazard mitigation actions and strategies. The city of Mount Vernon has a mayor, a fire chief, and a police department, and maintenance department. Mount Vernon has building codes, and zoning ordinances. Mount Vernon will integrate data and action recommendations into the existing capital improvements plan so that hazard mitigation will always be a consideration for future growth. A city council member or the city manager will propose the plans integration into the city council who will vote on it at the monthly city council meeting. The mayor will sign this into action after a majority vote. To improve and expand capabilities, the City of Mount Vernon should establish a Hazard Mitigation Team to address their Hazard Mitigation Plan. They could benefit from additional training and staff to support mitigation plan activities.

Unincorporated Franklin County population 7,980. The following are Franklin County's authorities, policies, programs and resources available to accomplish hazard mitigation action and strategies. Franklin County has a county judge and four commissioners. It has volunteer fire departments and a public works department. There is a county emergency management coordinator. Unincorporated Bowie County will integrate data and action recommendations into the existing maintenance program. The county judge or county commissioner will propose the integration to the County which will vote on it at the monthly city council meeting. The county judge will sign this into action after a majority vote. To improve and expand capabilities, Franklin County should establish a team to develop public-private initiatives addressing disaster related issues.

RESOLUTION

WHEREAS, the County of Franklin and the City of Mt. Vernon recognize their vulnerability and the many potential hazards shared by all residents; and

WHEREAS; the County of Franklin and the City of Mt. Vernon each have recognized the need to prepare a Mitigation Action Plan; and

WHEREAS, the County of Franklin and the City of Mt. Vernon have decided to jointly prepare one Mitigation Action Plan.

THEREFORE BE IT RESOLVED that the County of Franklin and the City of Mt. Vernon hereby jointly adopt and approve said Mitigation Action Plan; and

BE IT FURTHER RESOLVED that the Franklin County Judge and the Mayor of Mt. Vernon shall mutually appoint a Hazard Mitigation Coordinator to coordinate all aspects of the Mitigation Action Plan including its review and maintenance, for the County of Franklin and the City of Mt. Vernon in accordance with this resolution.

RESOLVED THIS _____ **DAY OF** _____, 2010.

County Judge, Franklin County

ATTEST _____
County Clerk

RESOLUTION

WHEREAS, the County of Franklin and the City of Mt. Vernon recognize their vulnerability and the many potential hazards shared by all residents; and

WHEREAS; the County of Franklin and the City of Mt. Vernon each have recognized the need to prepare a Mitigation Action Plan; and

WHEREAS, the County of Franklin and the City of Mt. Vernon have decided to jointly prepare one Mitigation Action Plan.

THEREFORE BE IT RESOLVED that the County of Franklin and the City of Mt. Vernon hereby jointly adopt and approve said Mitigation Action Plan; and

BE IT FURTHER RESOLVED that the Franklin County Judge and the Mayor of Mt. Vernon shall mutually appoint a Hazard Mitigation Coordinator to coordinate all aspects of the Mitigation Action Plan including its review and maintenance, for the County of Franklin and the City of Mt. Vernon in accordance with this resolution.

RESOLVED THIS _____ **DAY OF** _____, 2010.

Mayor, City of Mt. Vernon

ATTEST _____
City Secretary

DRAFT

APPENDIX

DRAFT

Existing Reservoirs
(North East Regional Water Plan) Table 1.1A

Lake/Reservoir	County	Built	Area (acres)	Capacity (ac-ft)	Supply (ac-ft)
Red River Basin					
Crook	Franklin	1923	1,226	9,664	1,000
Pay Mayse Lake	Franklin	1967	5,993	124,500	59,900
Sulphur River Basin					
Big Creek Lake	Delta	1986	520	4,890	1,518
Cooper	Delta	1991	19,280	310,000	146,520
Rivercrest	Red River	1953	555	7,100	10,000
Langford Creek Lake	Red River	1966	162	2,334	1,215
Lake Sulphur Springs	Hopkins	1974	1,557	14,370	7,800
Lake Wright Patman	Bowie/Cass	1954	33,750	265,300	180,000
Cypress Creek Basin					
Lake Bob Sandlin	Titus/Franklin	1975	9,460	213,350	60,500
Cypress Springs	Franklin	1971	3,400	72,800	15,300
Ellison Creek	Morris	1943	1,516	24,700	23,000
Monticello Lake	Titus	1973	2,000	40,100	16,300
Tankersley Lake	Titus	Na	Na	Na	2,230
Welsh Reservoir	Titus	Na	1,365	23,587	0

Table 1.2A
Population

City	Population
Mount Vernon	2,286

Table 1.3A
Comparisons

People Facts	Franklin County	Texas
Population 2001 estimate	9,727	21,235,018
Population percent change, April 1, 2000-July 1, 2001	2.8%	2.3%
Persons under 5 years old, percent 2000	5.7%	7.8%
Persons under 18 years old, percent 2000	24.3%	28.2%
Persons 65 years old and over, percent 2000	18.5%	9.9%
White persons, percent 2000	89.2%	71.0%
Black or African American persons, percent 2000	3.9%	11.5%
American Indian and Alaska Native person, percent 2000	0.6%	0.6%
Persons reporting some other race, percent 2000	5.1%	11.7%
Persons reporting two or more races, percent 2000	0.9%	2.5%
Female persons, percent 2000	51.5%	50.4%
Persons of Hispanic or Latino origin, percent 2000	8.9%	32.0%
White persons not of Hispanic/Latino origin, percent 2000	85.9%	52.4%

Table 1.4A
Economy

Business Quick Facts	Franklin County	Texas
Private non-farm establishments, 1999	191	467,087
Private non-farm employment, 1999	5,655	7,763,815
Private non-farm employment, percent change 1990-1999	24.2%	32.4%
Non-employer establishments, 1999	504	1,236,927
Manufacturers shipments 1997 (\$1000)	NA	297,657,003
Retail sales, 1997 (\$1000)	37,191	182,516,112
Retail sales per capita, 1997	\$3,893	\$9,430
Minority-owned firms, percent of total, 1997	Fewer than 100 firms	23.9%
Women-owned firms, percent of total, 1997	Fewer than 100 firms	25.0%
Housing units authorized by building permits, 2000	3	141,231
Federal funds and grants, 2001 (\$1000)	38,658	112,530,383
Local government employment-full-time equivalent, 1997	314	850,380

Table 1.5A
Quarterly Sales Tax Report

City	Year	Quarter	Gross Sales\$	Outlets (avg.)
Franklin County	2006	1, 2, 3, and 4	108,655,214	218
Mount Vernon	2006	1, 2, 3, and 4	86,861,793	103

(Window On State Government)

Table 1.6A
Employed Civilian Population 16 Years And Over
Franklin County

Occupation	Number	Percent
Population 16 years and over (Employed)	3,874	100
Management, professional, and related occupations	1,099	28.4
Service occupations	529	13.7
Sales & office occupations	890	23.0
Farming, fishing, and forestry occupations	88	2.3
Construction, extraction, and maintenance occupations	613	15.8
Production, transportation, and material moving occupations	655	16.9
Industry		
Agriculture, forestry, fishing/hunting, and mining	369	9.5
Construction	427	11.0
Manufacturing	458	11.8
Wholesale trade	104	2.7
Retail trade	597	15.4
Transportation and warehousing, and utilities	219	5.7
Information	68	1.8
Finance, insurance, real estate, and rental/leasing	123	3.2
Professional, scientific, management, administrative	176	4.5
Educational, health and social services	766	19.8
Arts, entertainment, recreation and food service	160	4.1
Public administration	149	3.8
Other services	258	6.7

Table 1.7A
Workers

Class of Worker (Of Total Table 1.5)	Number	Percent
Private wage and salary workers	2,528	73
Government workers	563	14.5
Self-employed workers in own business	470	12.1
Unpaid family workers	13	0.3

Table 1.8A
Income (1999)

	Number	Percent
Households	3,739	100
Less than \$10,000	437	11.7
\$10,000 to \$14,999	363	9.7
\$15,000 to \$24,999	639	17.1
\$25,000 to \$34,999	572	15.3
\$35,000 to \$49,999	720	19.3
\$50,000 to \$74,999	525	14.0
\$75,000 to \$99,999	184	4.9
\$100,000 to \$149,999	200	5.3
\$150,000 to \$199,999	61	1.6
\$200,000 or more	38	1.0
Median household income (dollars)	31,955	(x)

Table 1.9A
Education

Educational Attainment	Number	Percent
Population 25 years and over	6,421	100
Less than 9 th grade	484	7.5
9 th to 12 th grade, no diploma	966	15.0
High school graduate (includes equivalency)	2,286	35.6
Some college, no degree	1,359	21.2
Associate degree	286	4.5
Bachelor's degree	698	10.9
Graduate or professional degree	342	5.3
Percent high school graduate or higher	77.4	(x)
Percent bachelor's degree or higher	16.2	(x)

Table 1.10A
Housing

County Units	Number	Percent
Total housing units	5,132	100
Units built 1939 or earlier	355	6.9
Units built 1940 to 1959	652	12.7
Units built 1960 to 1969	558	10.9
Units built 1970 to 1979	1,139	22.2
Units built 1980 to 1989	1,296	25.3
Units built 1990 to 1994	396	7.7
Units built 1995 to 1998	625	12.2
Units built 1999 to March 2000	111	2.2

Table 1.11A
Franklin County/City Finances

Taxing Unit Name	Total Tax Rate	\$ Total Levy
Franklin County	0.558380	2,659,308
Mount Vernon	0.626970	436,678
Mount Vernon ISD	1.328000	6,162,629

(Window on State Government)

INVENTORY CLASSIFICATION
BY OCCUPANCY CLASS
Franklin County
Table 1.12A

TYPE	VALUE \$
Residential	424,786,540
Apartments	3,422,150
Vacant Lots	27,799,220
Agriculture	162,555,710
Commercial	59,698,100
Mobile Homes	4,928,240
Industrial	41,088,667
Schools	
Hospitals	33,648,820
TOTAL	758,530,517

Dollar Exposure by Sector # in \$1000's of Dollars
Franklin County (HAZUS)

Table 1.13A

Sector #	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
100	159,946	148	354	0	0	411	0	160,859
200	83,150	21,088	4,875	305	1,779	259	1,897	113,353
300	72,720	8,234	7,827	209	1,088	208	81	90,367

Building Count by Sector Number – Franklin County

Table 1.14A

Sector #	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
100	2,214	0	0	0	0	0	0	2,214
200	834	25	5	2	2	0	2	870
300	980	9	6	1	1	0	0	997

Residential Square Footage Inventory for Franklin County Sectors
By Sector Number and Type (1,000's of Square Feet)

Table 1.15A

Sector No.	Single Family	Mobile Home	Multi-Family	Temporary Lodging	Institutional Dormitory	Nursing Home
100	2,628.0	462.0	1.0	0.0	0.0	0.0
200	1,167.0	43.0	156.0	6.7	96.6	12.0
300	1,165.0	201.0	29.0	0.0	0.0	0.0

Commercial Square Footage Inventory for Franklin County Sectors
By Sector Number and Type (1,000's of Square Feet)

Table 1.16A

Sector No.	Retail	Wholesale	Personal Repair	Professional	Banks	Hospitals	Med Offices	Recreation	Theaters
100	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0
200	176.8	47.8	61.0	70.0	10.5	0.0	31.1	10.0	0.0
300	53.7	22.9	21.6	41.0	7.2	0.0	0.0	9.1	0.0

Industrial/Agricultural/Religious Square Footage Inventory for Franklin
County Sectors by Sector Number and Type (1,000's of Square Feet)

Table 1.17A

Sector No.	Heavy Ind.	Light Ind.	Drugs/Food	Metals Processing	Hi-Tech	Construction	Agriculture	Religious
100	5.2	0.0	3.0	0.0	0.0	0.0	0.0	0.0
200	28.4	54.5	0.0	3.7	0.0	26.4	27.7	24.7
300	107.0	7.7	0.0	42.4	0.0	24.3	19.0	15.1

Government/Education Square Footage Inventory for Franklin County
By Sector Number and Type (1,000's of Square Feet)

Table 1.18A

Sector No.	General Government	Emergency Response	Schools	Colleges
100	7.3	0.0	0.0	0.0
200	4.6	0.0	30.3	0.0
300	3.7	0.0	1.3	0.0

Table 1.19A

FRANKLIN COUNTY PROFILE

POPULATION	
<i>County Population</i>	
Census 2000:	9,458
Census 1990:	7,802
Census 1950:	6,257
Population of the County Seat (Mount Vernon)	
Census 2000:	2,286
Census 1990:	2,219
GENERAL INFORMATION	
County Size in Square Miles	
Land Area:	286
Water Area:	9
Total Area:	295
Population Density (per Square Miles) 2000	33.06
INCOME	
Per Capita Income (BEA)	\$19,623
Median Per Capita Income, 1999 (Census)	\$31,955
Median Household Income, 1999 (Census)	\$37,064
Median Family Income, 1999 (Census)	\$17,563
<i>Poverty (1999)</i>	
Percent of Population in Poverty	15.81
Percent Population Under 18 in Poverty	20.81
COUNTY FINANCES	
Property Taxes, 2001 (Comptroller)	
Total County Tax Rate:	\$0.510170
Total Market Value:	\$742,877,265
Total Appraised Value Available for County Taxation:	\$540,383,631
Total Actual Levy:	\$2,750,691
Average Wage Per Job (BEA)	
2001:	\$22,561
2000:	\$22,404
1990:	\$15,155
ROAD AND BRIDGE EXPENDITURES, 2001	
County Roads, Construction:	\$189,973
County Roads, Maintenance:	\$387,286
County Roads, Rehabilitation:	\$0

County Bridges, Construction:	\$2,926
County Bridges, Maintenance:	\$14,783
County Bridges, Rehabilitation:	\$0
Right of Way Acquisition:	\$12,467
Other Road Expenditures:	\$805,870
TOTAL ROAD AND BRIDGE EXPINDITURES	\$1,413,305

(The County Information Project, June 2003)

Franklin County Transportation System Dollar Value (\$1000's)

Table 1.20A

Description	Value
Highway Roads	840,700
Highway Bridges	60,000
Railway Tracks	44,865
Airport Facilities	4,000

(From HAZUS)

Franklin County Utility System Dollar Value (\$1000's)

Table 1.21A

Description	Value
Potable Water Distribution Lines	149,135
Waste Water Distribution Lines	89,480
Oil Pipelines	4,777
Natural Gas Facilities	1,000
Natural Gas Distribution Lines	59,653
Electric Power Distribution Lines	44,740
Communication Facilities	4,000
Communication Distribution Lines	19,886

(From HAZUS)

Franklin County
ENVIRONMENTAL PROFILE

Population
Table 1.22A

Number	Value (Rank)
Population in 2000	9,458 (168)
Population Projected for 2020	12,263 (166)

142Water Quality
Table 1.23A

Indicator	Value (Rank)
Toxics Released to Surface Waters, 1999 (Pounds)	0 (56*)
Number of State Wastewater Discharge Permits, 2000	3 (184)
Total Permitted Discharge (Millions of Gallons Per Day)	0.45 (200)
Number of Quality Impaired Surface Water Bodies, 1998	1 (59)

Water Quantity
Table 1.24A

Indicator	Value (Rank)
Total Water Use 1997 (Acre-Feet)	3,591 (216)
Surface Water Use, 1997 (Acre-Feet)	2,141 (148)
Ground Water Use, 1997 (Acre-Feet)	1,450 (208)
Water Used for Irrigation, 1997 (Acre-Feet)	44 (216)
Per Capita Water Use 1997 (Gallons per Day)	117 (233)
Projected Total Water Use, 2020 (Acre-Feet)	5,385 (205)
Total Number of Active Surface Water Rights Permits, 2000	16 (122)
Total Authorized Volume of Water, 2000 (Acre-Feet)	27,645 (91)
Number of Real-Time Stream-flow Monitors in County	1

Land Table
1.25A

Indicator	Value (Rank)
Total Area of County (Thousands of Acres)	297 (247)
Area Dedicated to Irrigated Cropland 1997 (Acres)	54 (216)
Toxics Released to Land, 1999 (Pounds)	0 (61*)
Toxics Released by Underground Injection, 1999 (Pounds)	0 (13*)
Number of National Superfund Sites, 2000	0 (21*)
Number of State Superfund Sites, 2000	0 (37*)
Number of Contaminated Voluntary Cleanup Sites, 2000	1 (65)

Wildlife and Biodiversity Table 1.26A

Indicator	Value (Rank)
Number of Eco-Regions Found in the County	2

Air Quality
Table 1.27A

Indicator	Value (Rank)
Industrial Air Emissions of Criteria Pollutants, 1999 (Tons)	4,572 (78)
Toxics Released to Air, 1999 (Pounds)	10 (126)
Additional Cancer Risk Due to Hazardous Air Pollutants (Per 1,000,000 people)	85 (117)
Number of Ambient Air Quality Monitors	0

Waste
Table 1.28A

Indicator	Value (Rank)
Number of Facilities Releasing Toxics, 1999	1 (106)
Total Environmental Releases of Toxics, 1999 (Pounds)	10 (127)
Industrial Hazardous Waste Generated, 1997 (Tons)	32.68 (107)
Hazardous Waste Managed, 1997 (Tons)	27.33 (111)
Facilities with Permits to Treat, Store or Dispose of Hazard Waste, 2000	0 (55*)
Number of Leaking Underground Storage Tanks, 2001	10 (203)
Number That Still Need to be Cleaned Up, 2001	2 (212)
Number of Municipal Solid Waste Landfills Operating, 1996	0 (139*)
Volume of Landfills in, 1996 (Acres)	0 (139*)

Energy
Table 1.29A

Indicator	Value (Rank)
Number of Power Plants, 1999	0 (86*)
Total Number of Oil Wells, 2000	369 (119)
Number of Regular Producing Oil Wells, 2000	125 (138)
Total Number of Gas Wells, 2000	44 (142)
Number of Regular Producing Gas Wells, 2000	40 (135)

*Indicator value for this county is tied for lowest value in the state

Note: Rankings are done across all 254 counties in Texas. Counties with the highest value for an indicator are ranked number one.

INVENTORY CLASSIFICATION
BY OCCUPANCY CLASS (Mt. Vernon)

Table 1.31A

TYPE	VALUE \$
Residential	41,901,750
Apartments	2,421,100
Vacant Lots	1,259,100
Agriculture	2,472,420
Commercial	8,827,047
Mobile Homes	457,620
Industrial	22,885,270
Schools	
Hospitals	23,450,640
TOTAL	130,674,947

MOUNT VERNON
Table 1.32A
Comparisons

People Facts (percent 2000)	Number	Percent
Population 2000	2,286	100
Persons under 5 years old	162	7.1
Persons 18 years and older	1,669	73.0
Persons 65 years and older	430	18.8
White persons	1,765	77.2
Black or African American persons	309	13.5
American Indian and Alaska Native	14	0.6
Asian persons	7	0.3
Persons reporting some other race	164	7.2
Female population	1,222	53.5
Persons of Hispanic or Latino origin	247	10.8
White persons, not of Hispanic/Latino origin	2,039	89.2

Table 1.33A
Income

	Number	Percent
Households	924	100
Less than \$10,000	150	16.2
\$10,000 to \$14,999	95	10.3
\$15,000 to \$24,999	179	19.4
\$25,000 to \$34,999	105	11.4
\$35,000 to \$49,999	170	18.4
\$50,000 to \$74,999	146	15.8
\$75,000 to \$99,999	29	3.1
\$100,000 to \$149,999	35	3.8
\$150,000 to \$199,999	6	0.6
\$200,000 or more	9	1.0
Median household income (dollars)	28,824	(x)

Table 1.34A
Education

Educational Attainment	Number	Percent
Population 25 years and over	1,497	100
Less than 9 th grade	128	8.6
9 th to 12 th grade, no diploma	228	15.2
High school graduate (includes equivalency)	488	32.6
Some college, no degree	322	21.5
Associate degree	81	5.4
Bachelor's degree	164	11.0
Graduate or professional degree	86	5.7
Percent high school graduate or higher	76.2	(x)
Percent bachelor's degree or higher	16.7	(x)

Table 1.35A
Housing

Mount Vernon Units	Number	Percent
Total housing units	1,034	100
Units built 1939 or earlier	164	15.9
Units built 1940 to 1959	229	22.1
Units built 1960 to 1969	170	16.4
Units built 1970 to 1979	259	25.0
Units built 1980 to 1989	123	11.9
Units built 1990 to 1994	30	2.9
Units built 1995 to 1998	50	4.8
Units built 1999 to March 2000	9	0.9

Table 1.36A
Poverty Status 1999

Below poverty level	Number	Percent
Families	90	X
Percent below poverty level		14.9
Individuals	389	X
Percent below poverty level		17.8

Table 1.37A
Mount Vernon Finances

Total taxable value	\$69,648,881
2000 City tax rate	\$0.626970
Actual levy	\$436,678
Mount Vernon ISD taxable value	\$475,066,195
2000 ISD tax rate	\$1.328000
Actual levy	\$6,162,629

The following chart shows property/content values for specific structures for
Franklin County
Table 1.38A

Address	Department	Year Build	Building Value	Contents Value
501 Airport Rd.	Terminal	1985	68,000	40,000
205 N. Kaufman	Old Jail	1910	50,000	45,000
1015 N. Main	Tax Office Winnsboro	1980	27,000	10,000
FM 900	Truck Storage	1983	12,000	0
201 S. Kaufman	Office	1913	51,000	10,000
115 S. Scroggins	Fire Station	1976	15,000	150,000
208 S. Hwy 37	Antenna (Radio)	1993	25,000	0
203 N. Taylor	Meal Center	1990	189,000	60,000
101-103 S Kaufman	Museum	1910	100,000	60,000
FM 71/Hwy 37	Truck Storage	1991	51,503	0
100 E Main	Library	1913	610,007	200,000
101 E Dallas	Courthouse	1912	1,500,000	300,000
CR 2100	PCT 2 Storage	1991	38,000	0
Hwy 115	PCT 4 Storage	1991	70,100	0
502 E Main	Office/Maint.	1988	231,641	50,000
FM 900 Purley	Fire Station	1991	50,000	15,000
FM 900 Purley	Storage	1997	72,000	25,000
502 E Main	Paper Stocks	1991	40,000	0
502 E Main	Storage	1991	8,600	0
502 E Main	Household Stock	1991	15,000	0
502 E Main	Warehouse	1985	40,000	10,000
Hwy 37/71	Fire Department	1993	100,000	20,000
208 S Hwy 37	Jail/Sheriff	1993	2,000,000	300,000
102 S Kaufman	Restrooms	1995	50,000	0
101 S Kaufman	Depot	1999	100,000	50,000
101 S Kaufman	Office/Museum	1993	100,000	100,000
102 S Kaufman	Blacksmith	1993	50,000	25,000
Thruston House	Visitors Center	2003	250,000	50,000

(Taken from Personal Property Schedule – Tax Roles)

The following chart shows property/content values for specific structures for the city of (Mt Vernon).

Table 1.39A

Address	Department	Year Build	Building Value \$	Contents Value
305 N. Kaufman	Pool	1960	57,780	2,000
109 N. Kaufman	City Hall	1961	295,880	96,632
330 S. SH-37	Fire Station	1987	123,989	15,000
925 S. Holbrook	Maintenance	1988	113,290	50,000
208 Jackson	Park	1994	7,771	
S. SH-37	Pump Station	1977	50,000	
Lowe's	Pump Station	1995	70,000	
Grady Street	Pump Station	1983	50,000	
SH-67	Pump Station	1979	35,000	
Carr Street	Pump Station	1979	80,000	
322 N. Kaufman	Sewer Plant	1977	1,546,920	15,000
FM 115	Water Plant	1967	1,650,000	10,000
Lake Cypress	Water Pump	1985	140,000	
106 Scott	Water Tower	1952	241,000	
298 W. SH-37	Water Tower	1979	242,840	
208 Jackson	Pool	1960	1,890	
305 N. Kaufman	Restroom	1984	31,702	
305 N. Kaufman	Picnic Cover	1999	661	
305 N. Kaufman	Picnic Cover	1999	367	

(Taken from Personal Property Schedule – Tax Roles)

Table 2.1A
Population Trends
 (Source: U.S. Census Data)

JURISDICTION	1990	2000
Mt. Vernon	2,219	2,286
Franklin County	7,802	9,548

Table 2.2A
Housing Trends
 (Source: U.S. Census Data)

JURISDICTION	TOTAL HOUSING UNITS	OCCUPIED	VACANT	OWNER OCCUPIED	RENTER OCCUPIED
Mt. Vernon	2000-1,045 1990-964	2000-903 1990-846	2000-142 1990-118	2000-577 1990-542	2000-326 1990-304
Franklin County	2000-5,132 1990-4,219	2000-3,754 1990-3,017	2000- 1,378 1990- 1,202	2000-2,965 1990-2,300	2000-789 1990-717

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Inventory Assets step 3

Date: June, 2004

What will be affected by the hazard event?

Task A. Determine the proportion of buildings, the value of buildings Worksheet #3a, and the population in your community or state that are located in hazard areas.

Hazard Flood Plains, Franklin County, Census Tract Sector 2

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community Or State	# in Hazard Area	% in Hazard Area	\$ in Community Or State	\$ in Hazard Area	% in Hazard Area	# in Community Or State	# in Hazard Area	% in Hazard Area
Residential	4,028	24	.59	245,816,000	730,540	.297	9,548	58	.60
Commercial	36	3	8.3	29,470,000	13,750	.047	9,548	*N/A	*N/A
Industrial	11	0	0	13,056,000	0	0	9,548	0	0
Agricultural	3	0	0	514,000	0	0	9,548	0	0
Religious/ Non-profit	3	1	33	2,867,000	30,380	1.06	9,548	*N/A	*N/A
Government	0	0	0	878,000	0	0	9,548	0	0
Education	2	0	0	1,978,000	0	0	9,548	0	0
Utilities	3,877.50 kms	*N/A	*N/A	372,671,000	*N/A	*N/A	9,548	0	0
Total	**4,083	**28	**41.89	**294,579,000	*774,670	**1.41	9,548	58	.60

*NA – Not Available

** -Excluding Utilities

Source: (1990) HAZUS, Census 2000, 2004 County Tax Appraisal Dist.

Task B. Determine whether (and where) you want to collect additional inventory data.

- | | | |
|---|------|------|
| | Y | N |
| 1. Do you know where your greatest damages may occur in your hazard areas? | X___ | ___ |
| 2. Do you know whether your critical facilities will be operational after a hazard event? | X___ | ___ |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages? | X___ | ___ |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? | X___ | ___ |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | X___ | ___ |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? | ___ | X___ |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? | ___ | X___ |

Worksheet #3a

Inventory Assets **step 3**

Date: June, 2004

What will be affected by the hazard event?

Jurisdiction: Franklin County, Census Tract Sector 1

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

Hazard: Tornados, Winter Storms, Thunderstorm Winds, Drought, Hazardous Materials, Wildfires Earthquakes,

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community Or State	# in Hazard Area	% in Hazard Area	\$ in Community Or State	\$ in Hazard Area	% in Hazard Area	# in Community Or State	# in Hazard Area	% in Hazard Area
Residential	4,028	2,214	55	245,816,000	159,946,000	65	9,548	4,791	50
Commercial	36	0	0	29,470,000	148,000	.5	9,548	4,791	50
Industrial	11	0	0	13,056,000	354,000	3	9,548	4,791	50
Agricultural	3	0	0	514,000	0	0	9,548	4,791	50
Religious/ Non-profit	3	0	0	2,867,000	0	0	9,548	4,791	50
Government	0	0	0	878,000	411,000	47	9,548	4,791	50
Education	2	0	0	1,978,000	0	0	9,548	4,791	50
Utilities	3,877.50 kms	2,772.33 kms	71	372,671,000	NA	NA	9,548	4,791	50
Total	**4,083	*2,214	**54	**294,579,000	**160,859,000	**55	9,548	4,791	50

*NA – Not Available

Source: HAZUS

**-Excluding Utilities

Task B. Determine whether (and where) you want to collect additional inventory data.

- | | Y | N |
|---|---------------|---------------|
| 1. Do you know where your greatest damages may occur in your hazard areas? | <u> X </u> | <u> </u> |
| 2. Do you know whether your critical facilities will be operational after a hazard event? | <u> X </u> | <u> </u> |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages? | <u> X </u> | <u> </u> |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? | <u> X </u> | <u> </u> |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <u> X </u> | <u> </u> |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? | <u> </u> | <u> X </u> |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? | <u> </u> | <u> X </u> |

Worksheet #3a

Inventory Assets **step 3**

Date: June, 2004

What will be affected by the hazard event?

Jurisdiction: Franklin County, Census Tract Sector 2

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

Hazard: Tornados, Winter Storms, Thunderstorm Winds, Drought, Hazardous Materials, Wildfires Earthquakes,

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community Or State	# in Hazard Area	% in Hazard Area	\$ in Community Or State	\$ in Hazard Area	% in Hazard Area	# in Community Or State	# in Hazard Area	% in Hazard Area
Residential	4,028	834	21	245,816,000	83,150,000	34	9,548	2,345	25
Commercial	36	25	69	29,470,000	21,088,000	72	9,548	2,345	25
Industrial	11	5	45	13,056,000	4,875,000	37	9,548	2,345	25
Agricultural	3	2	67	514,000	305,000	59	9,548	2,345	25
Religious/ Non-profit	3	2	67	2,867,000	1,779,000	62	9,548	2,345	25
Government	0	0	0	878,000	259,000	29	9,548	2,345	25
Education	2	2	100	1,978,000	1,897,000	96	9,548	2,345	25
Utilities	3,877.50 kms	197.43 kms	5	372,671,000	NA	NA	9,548	2,345	25
Total	**4,083	**870	**21	**294,579,000	**113,353,000	**38	9,548	2,345	25

*NA – Not Available

Source: HAZUS

** -Excluding Utilities

Task B. Determine whether (and where) you want to collect additional inventory data.

- | | Y | N |
|---|--------------|--------------|
| 1. Do you know where your greatest damages may occur in your hazard areas? | <u> X </u> | _____ |
| 2. Do you know whether your critical facilities will be operational after a hazard event? | <u> X </u> | _____ |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages? | <u> X </u> | _____ |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? | <u> X </u> | _____ |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <u> X </u> | _____ |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? | _____ | <u> X </u> |
| 7. Is additional data needed to justify the expenditure of community or state funds for _____ | <u> X </u> | _____ |

mitigation initiatives?

DRAFT

Worksheet #3a

Inventory Assets

step **3**

Date: June, 2004

What will be affected by the hazard event?

Jurisdiction: Franklin County, Census Tract Sector 3

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

Hazard: Tornados, Winter Storms, Thunderstorm Winds, Drought, Hazardous Materials, Wildfires Earthquakes,

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community Or State	# in Hazard Area	% in Hazard Area	\$ in Community Or State	\$ in Hazard Area	% in Hazard Area	# in Community Or State	# in Hazard Area	% in Hazard Area
Residential	4,028	980	24	245,816,000	72,720,000	30	9,548	2,322	24
Commercial	36	9	25	29,470,000	8,234,000	28	9,548	2,322	24
Industrial	11	6	55	13,056,000	7,827,000	60	9,548	2,322	24
Agricultural	3	1	33	514,000	209,000	41	9,548	2,322	24
Religious/ Non-profit	3	1	33	2,867,000	1,088,000	38	9,548	2,322	24
Government	0	0	0	878,000	208,000	24	9,548	2,322	24
Education	2	0	0	1,978,000	81,000	4	9,548	2,322	24
Utilities	3,877.50 kms	907.74 kms	23	372,671,000	NA	NA	9,548	2,322	24
Total	**4,083	**997	**24	**294,579,000	**90,367,000	**31	9,548	2,322	24

*NA – Not Available

Source: HAZUS

**-Excluding Utilities

Task B. Determine whether (and where) you want to collect additional inventory data.

- | | Y | N |
|---|---------------|---------------|
| 1. Do you know where your greatest damages may occur in your hazard areas? | <u> X </u> | <u> </u> |
| 2. Do you know whether your critical facilities will be operational after a hazard event? | <u> X </u> | <u> </u> |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages? | <u> X </u> | <u> </u> |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? | <u> X </u> | <u> </u> |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | <u> X </u> | <u> </u> |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? | <u> </u> | <u> X </u> |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? | <u> </u> | <u> X </u> |

Worksheet #3b

Inventory Assets

step 3

Date: June, 2004

What will be affected by the hazard event?

Task C. Compile a detailed inventory of what can be damaged by a hazard event.

Inventory the assets (critical facilities, businesses, historic, cultural, and natural resource areas, and areas of special consideration), that can be damaged by a hazard event.

Hazard: Tornadoes, Winter Storms, Thunderstorm Winds, Drought, Hazardous Materials, Earthquakes, Wildfires, Floods

Name or Description of Asset	Sources of Information	Critical Facility	Vulnerable Populations	Economic Assets	Special Considerations	Historic/Other Considerations	Size of Building (sq ft)	Replacement Value (\$)	Contents Value (\$)	Function Use or Value (\$)	Displacement Cost (\$ per day)	Occupancy or Capacity (#)	Other Hazard Specific Information
		✓	✓	✓	✓	✓							
Terminal	Tax Roles	X					NA	\$68,000	\$40,000	NA	NA	NA	NA
Old Jail	Tax Roles	X					NA	\$50,000	\$45,000	NA	NA	NA	NA
Tax Office	Tax Roles	X					NA	\$27,000	\$10,000	NA	NA	NA	NA
Fire Station (S. Scroggins)	Tax Roles	X					NA	\$15,000	\$150,000	NA	NA	NA	NA
Radio Antennae	Tax Roles	X					NA	\$25,000	0	NA	NA	NA	NA
Meal Center	Tax Roles		X				NA	\$189,000	\$60,000	NA	NA	NA	NA
Museum	Tax Roles					X	NA	\$100,000	\$60,000	NA	NA	NA	NA
Library	Tax Roles				X		NA	\$610,007	\$200,000	NA	NA	NA	NA
Courthouse	Tax Roles	X					NA	\$1,00,000	\$300,000	NA	NA	NA	NA
Precinct 2 Storage	Tax Roles	X					NA	\$38,000	NA	NA	NA	NA	NA
Precinct 4 Storage	Tax Roles	X					NA	\$71,100	NA	NA	NA	NA	NA
Fire Station (Purley)	Tax Roles	X					NA	\$50,000	\$15,000	NA	NA	NA	NA
Storage (Purley)	Tax Roles	X					NA	\$72,000	\$25,000	NA	NA	NA	NA

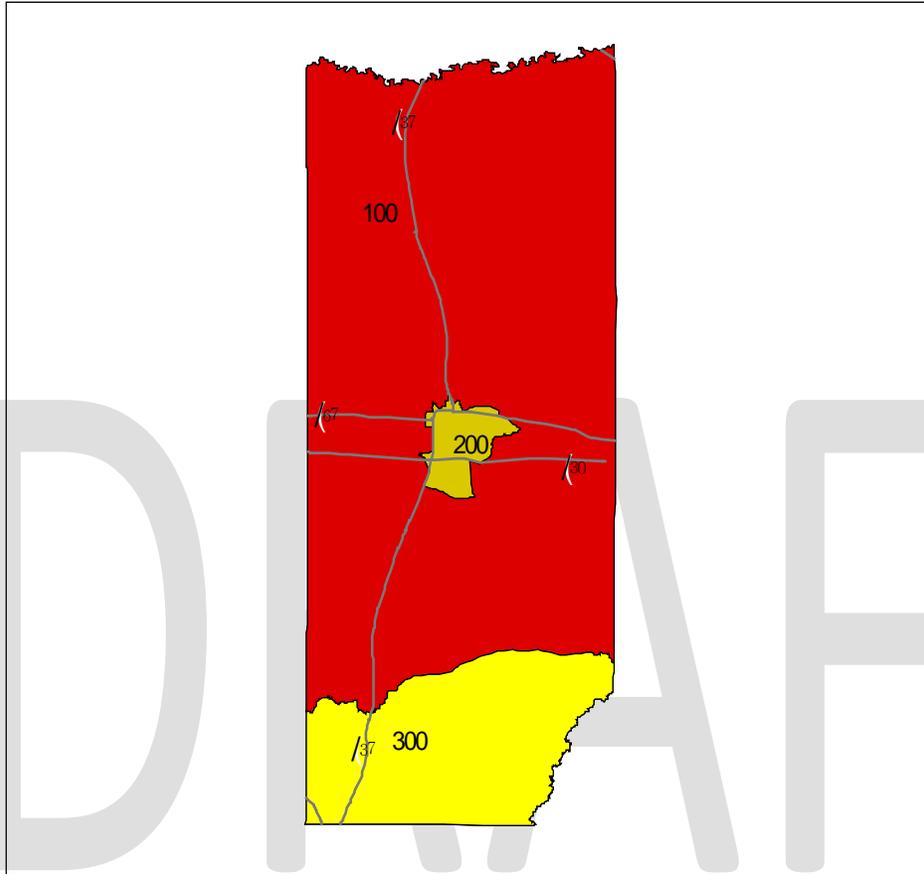
Warehouse	Tax Roles	X					NA	\$40,000	\$10,000	NA	NA	NA	NA
Fire Dept. (Hwy. 37/71)	Tax Roles	X					NA	\$100,000	\$20,000	NA	NA	NA	NA
Jail/Sheriff Dept.	Tax Roles	X					NA	\$2,000,000	\$300,000	NA	NA	NA	NA
Depot	Tax Roles					X	NA	\$100,000	\$50,000	NA	NA	NA	NA
Office/Museum	Tax Roles					X	NA	\$100,000	\$100,000	NA	NA	NA	NA
Blacksmith	Tax Roles					X	NA	\$50,000	\$25,000	NA	NA	NA	NA
Thruston House (Visitor's Center)	Tax Roles					X	NA	\$250,000	\$50,000	NA	NA	NA	NA
<u>Mt. Vernon</u>													
City Hall	Tax Roles	X					NA	\$295,880	\$96,632	NA	NA	NA	NA
Fire Station	Tax Roles	X					NA	\$123,989	\$15,000	NA	NA	NA	NA
Maintenance	Tax Roles	X					NA	\$113,290	\$50,000	NA	NA	NA	NA
Pump Station	Tax Roles	X					NA	\$50,000	NA	NA	NA	NA	NA
Pump Station	Tax Roles	X					NA	\$70,000	NA	NA	NA	NA	NA
Pump Station	Tax Roles	X					NA	\$50,000	NA	NA	NA	NA	NA
Pump Station	Tax Roles	X					NA	\$35,000	NA	NA	NA	NA	NA
Pump Station	Tax Roles	X					NA	\$80,000	NA	NA	NA	NA	NA
Sewer Plant	Tax Roles	X					NA	\$1,546,920	\$15,000	NA	NA	NA	NA
Water Plant	Tax Roles	X					NA	\$1,650,000	\$10,000	NA	NA	NA	NA
Water Pump	Tax Roles	X					NA	\$140,000	NA	NA	NA	NA	NA
Water Tower	Tax Roles	X					NA	\$241,000	NA	NA	NA	NA	NA
Water Tower	Tax Roles	X					NA	\$242,840	NA	NA	NA	NA	NA

NA—Not Available

METHODOLOGY: Methodology used to determine the potential dollar loss estimates includes information from 1990 Hazus, 2000 Census data, insurance policies, and 2003 data from the Franklin County Tax Assessor's Office.

FRANKLIN COUNTY SECTORS

Figure 1.0 A



Franklin County

Mitigation Action Plan

Sectors

△ HRD.shp
Population

1852 - 2154
2154 - 2456
2456 - 2758
2758 - 3060
3060 - 3362
3362 - 3664
Srbndy.shp

Sep. 10 2003

(c) 1997-2002 FEMA.

Figure 1.1 A
 County Emergency Response
 HAZMAT

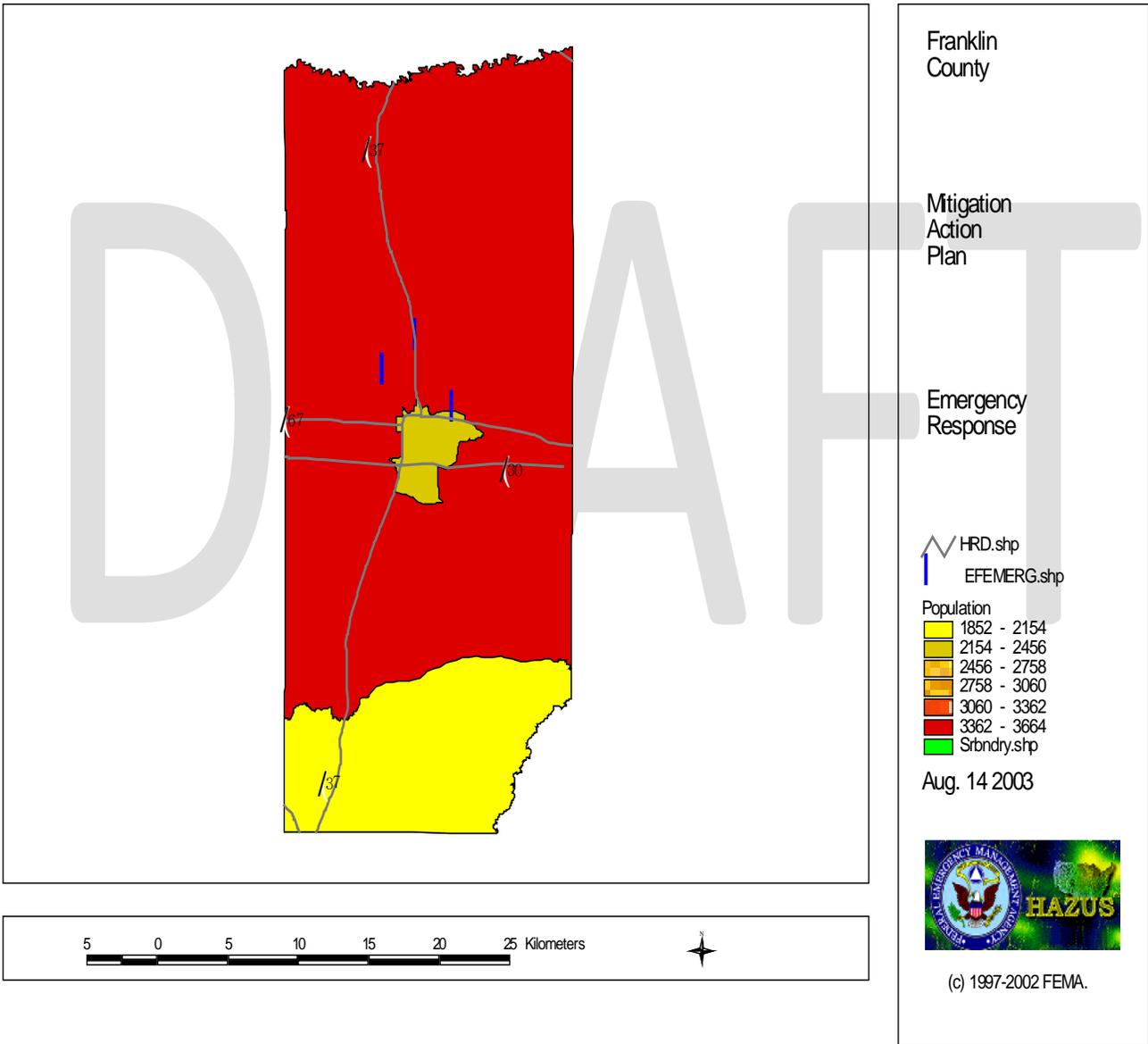


Figure 1.2 A
County Health Facilities

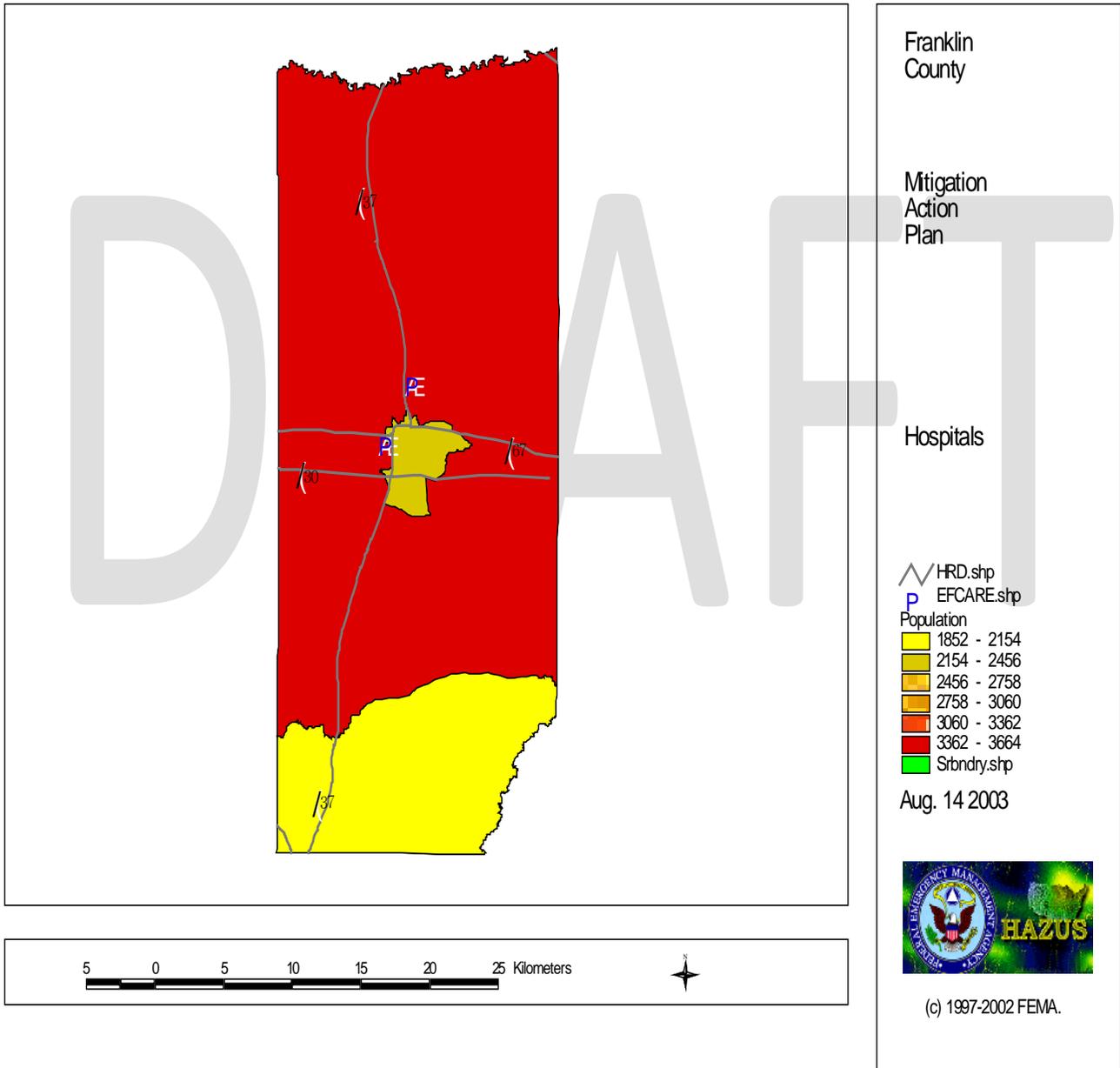


Figure 1.3A
Highways

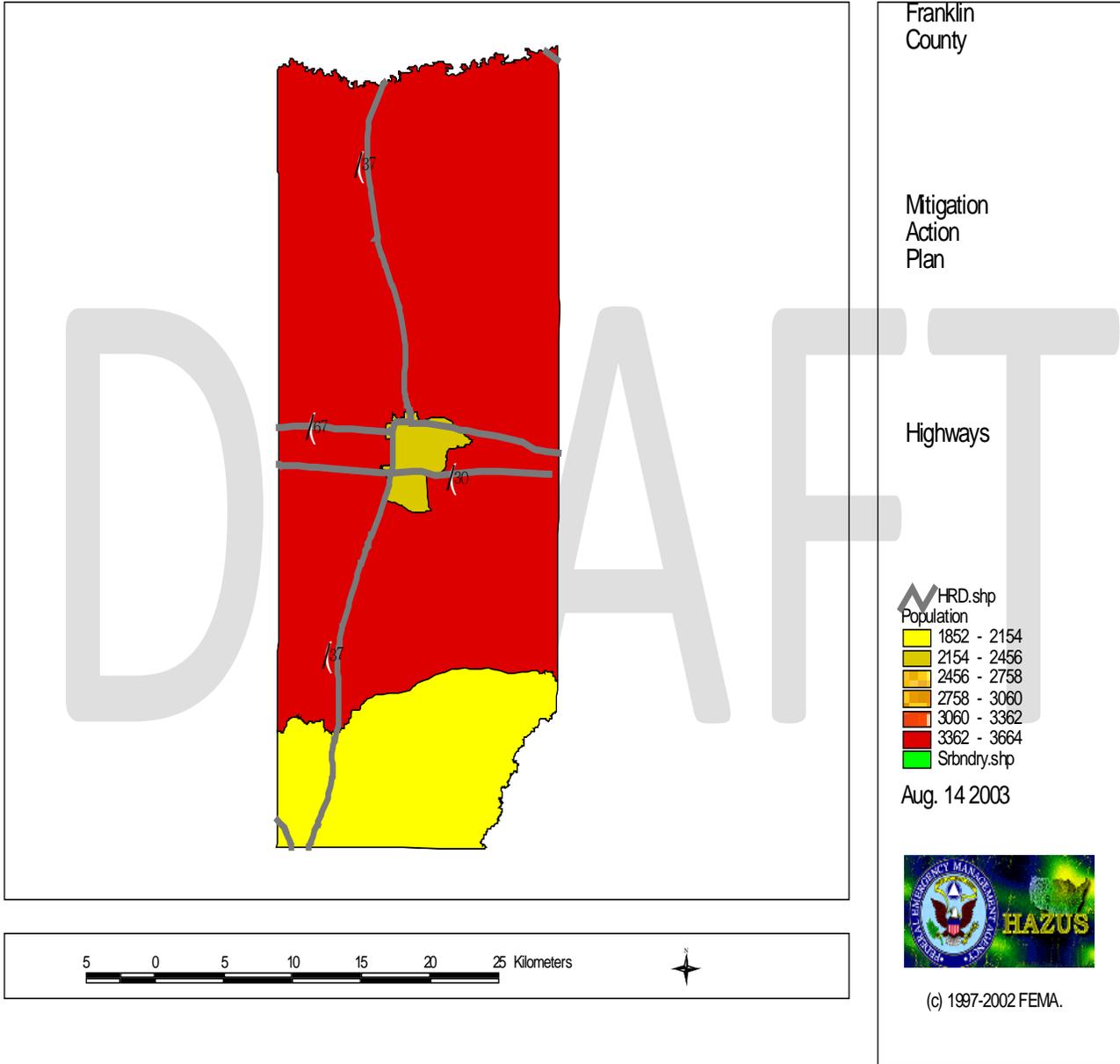


Figure 1.4A
Dams

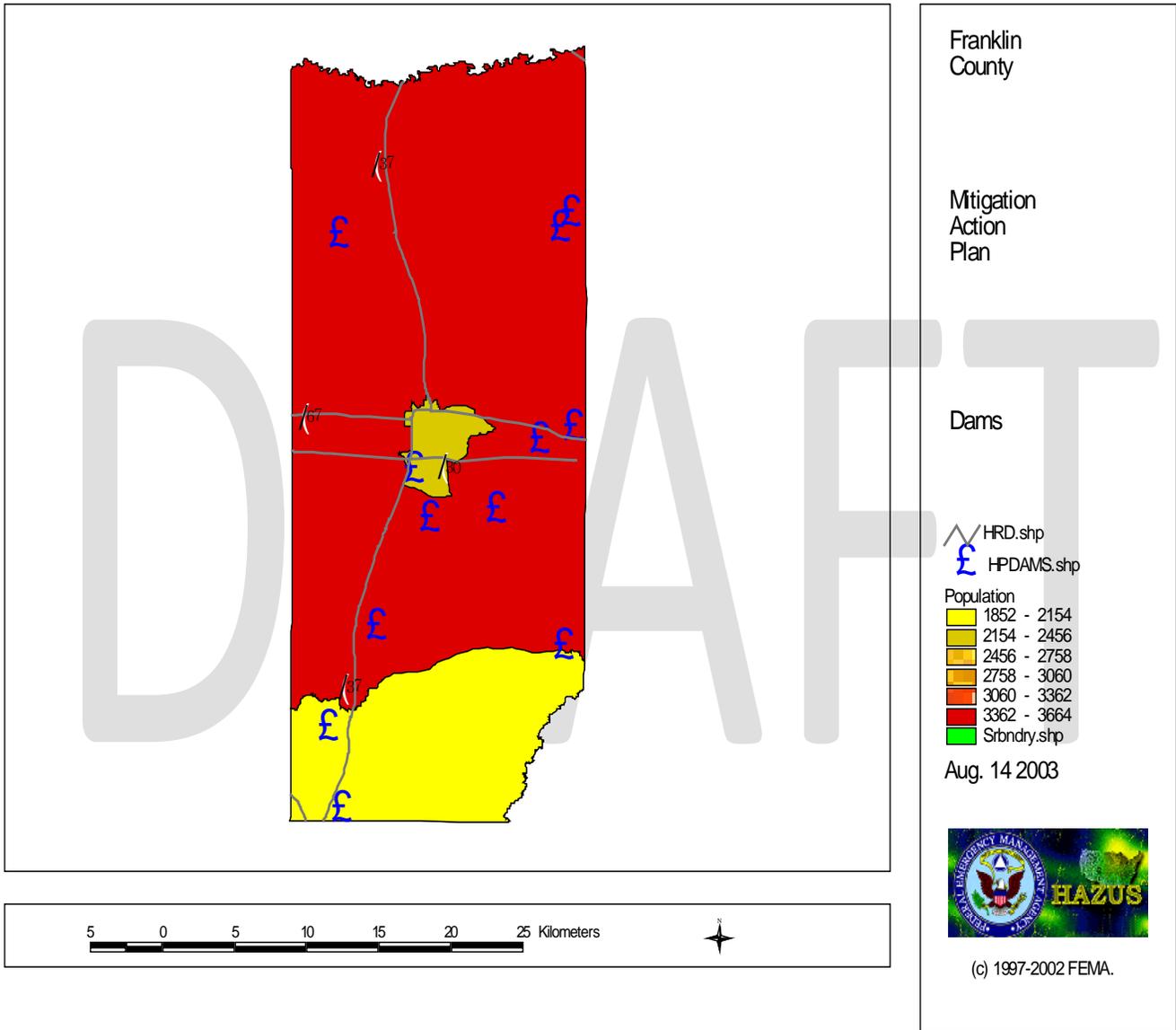


Figure 1.5A
Schools

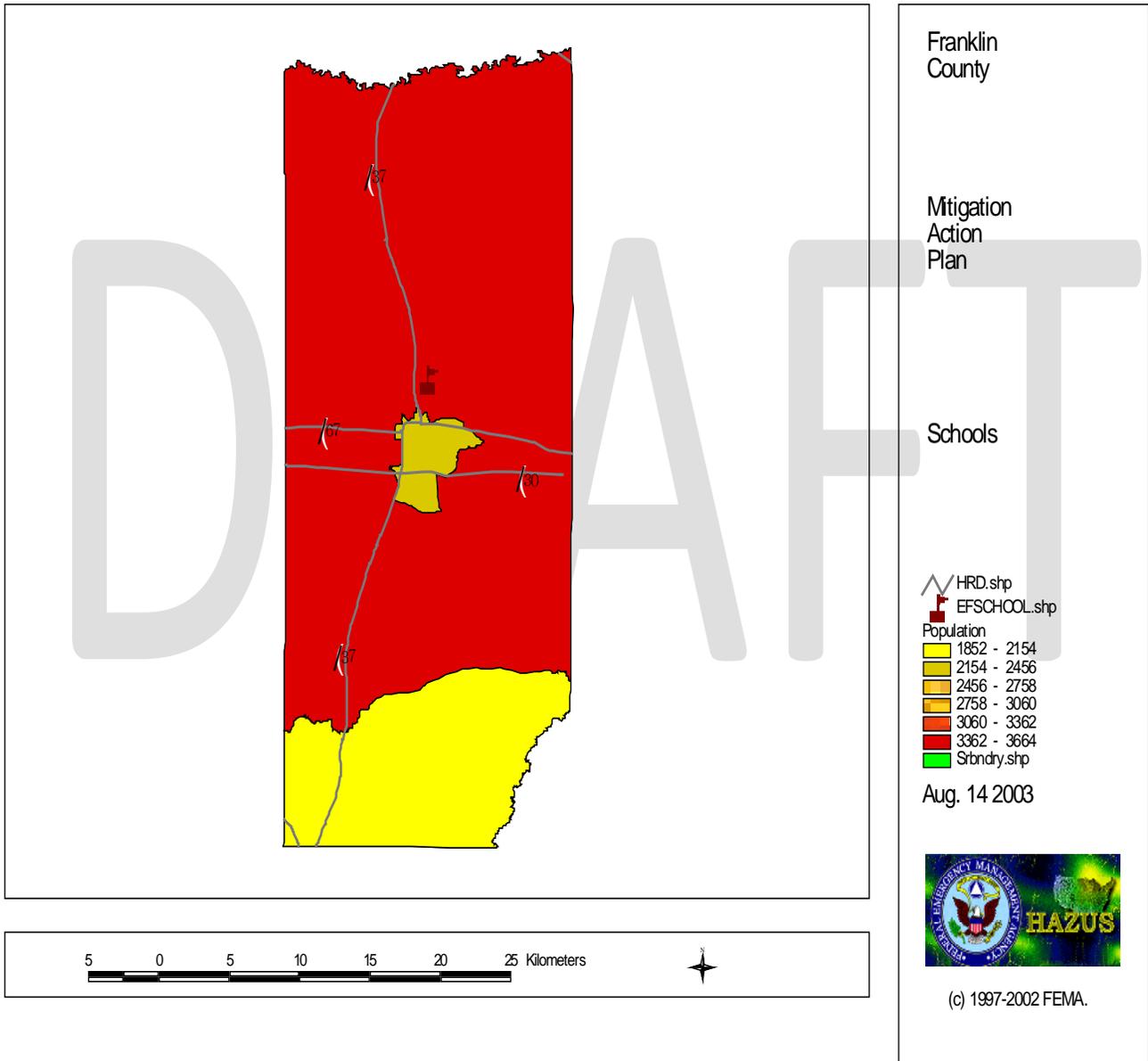


Figure 1.6 A
HAZMAT Locations

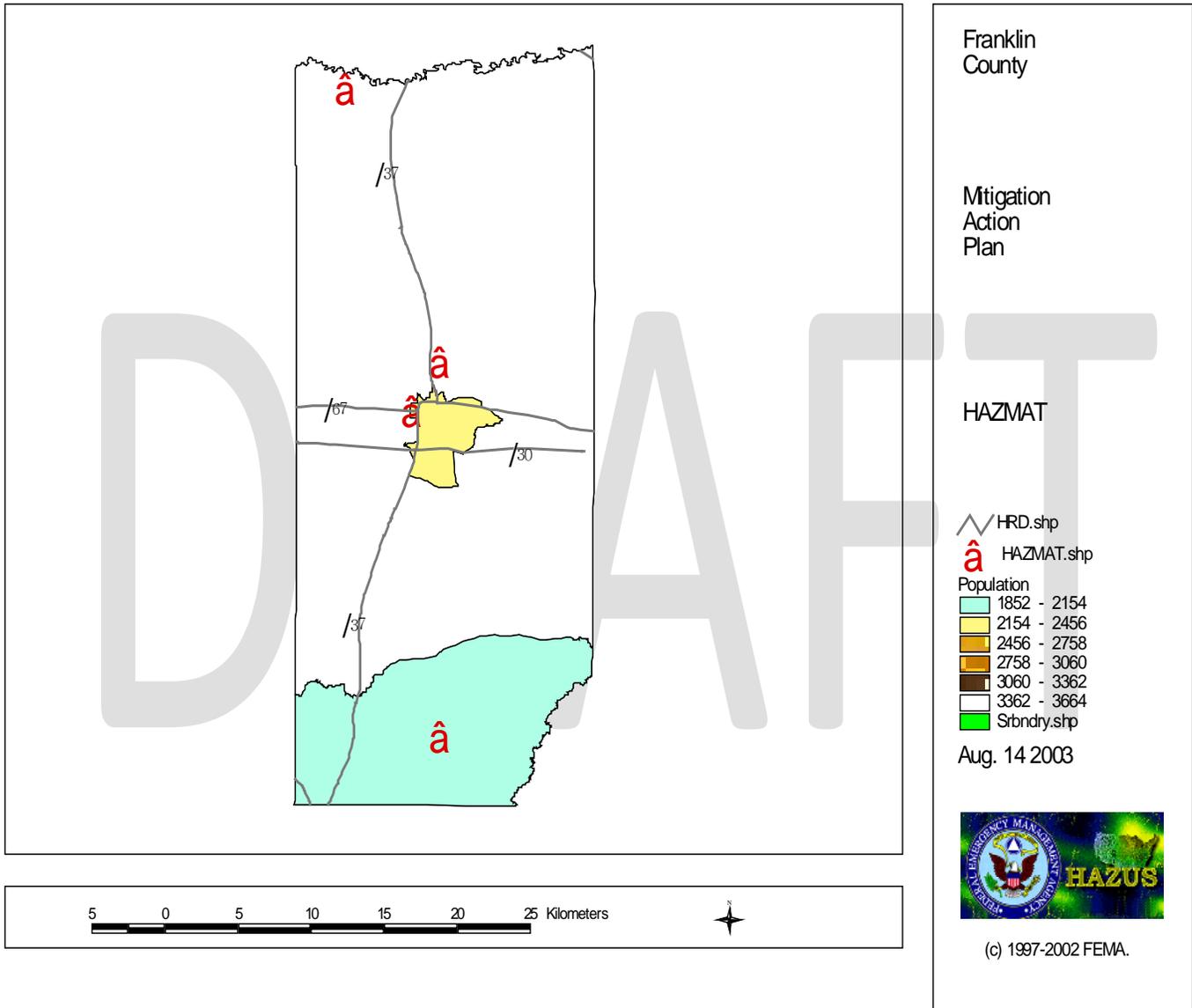


Figure 1.7 A
Communications

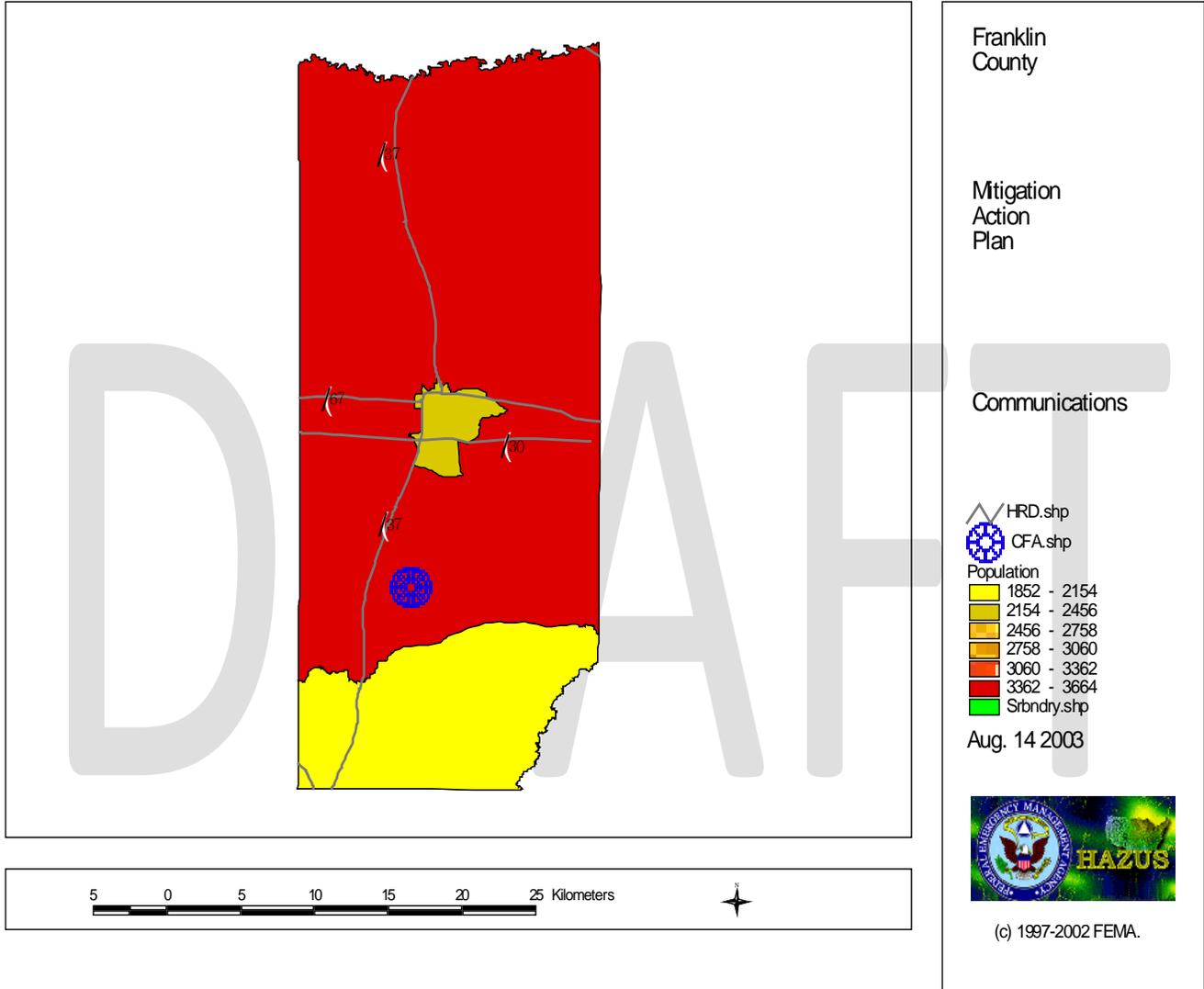


Figure 1.8 A
Pipelines

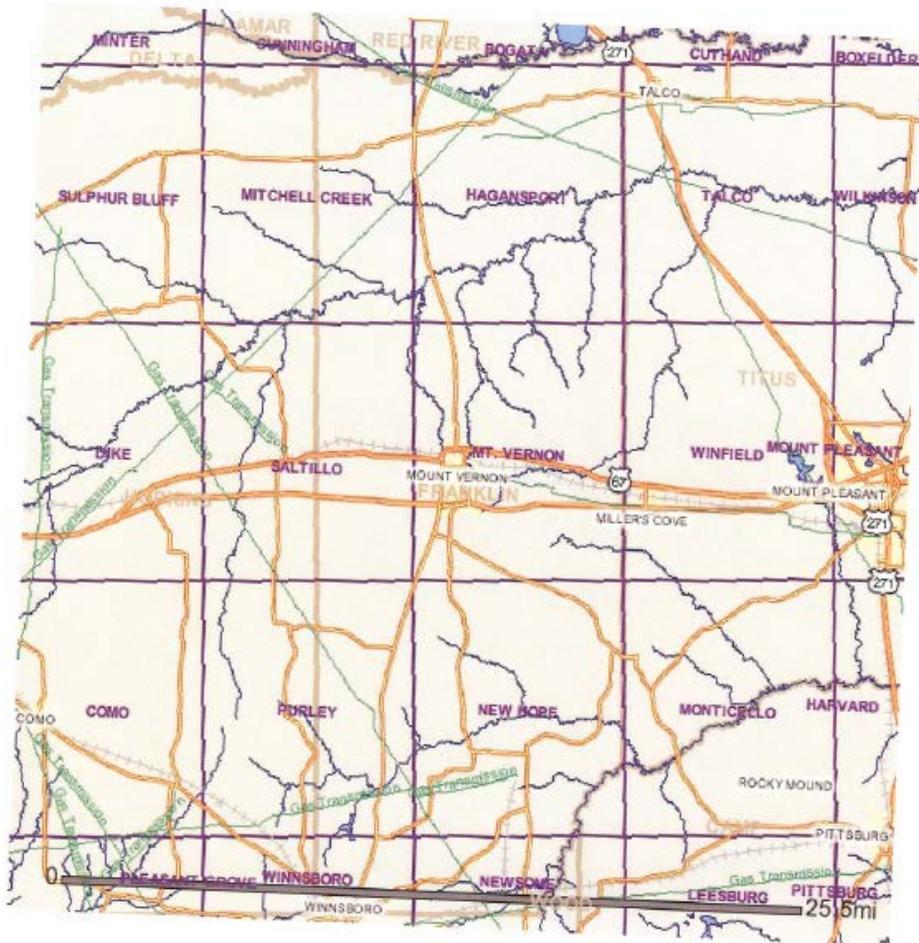
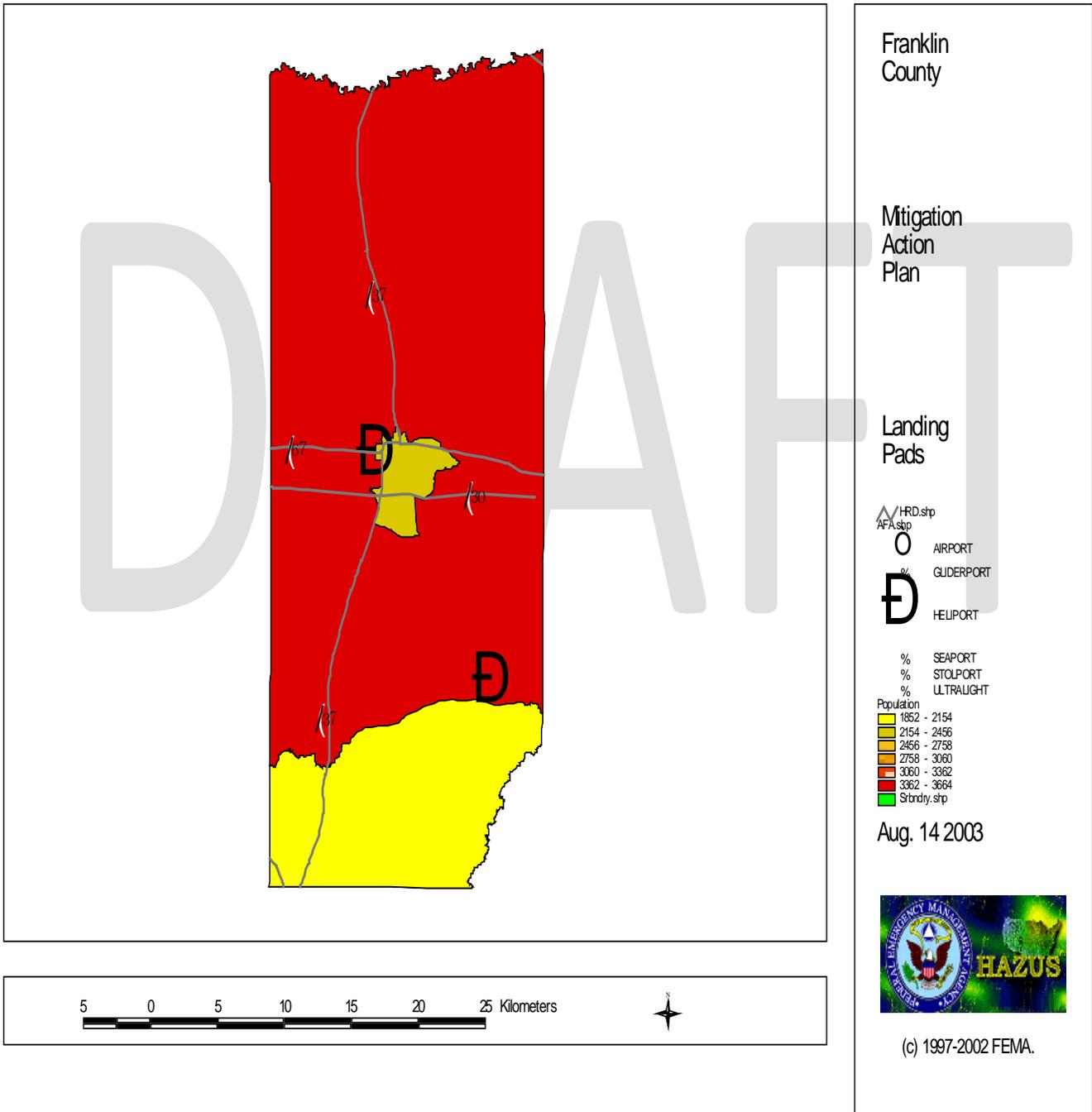
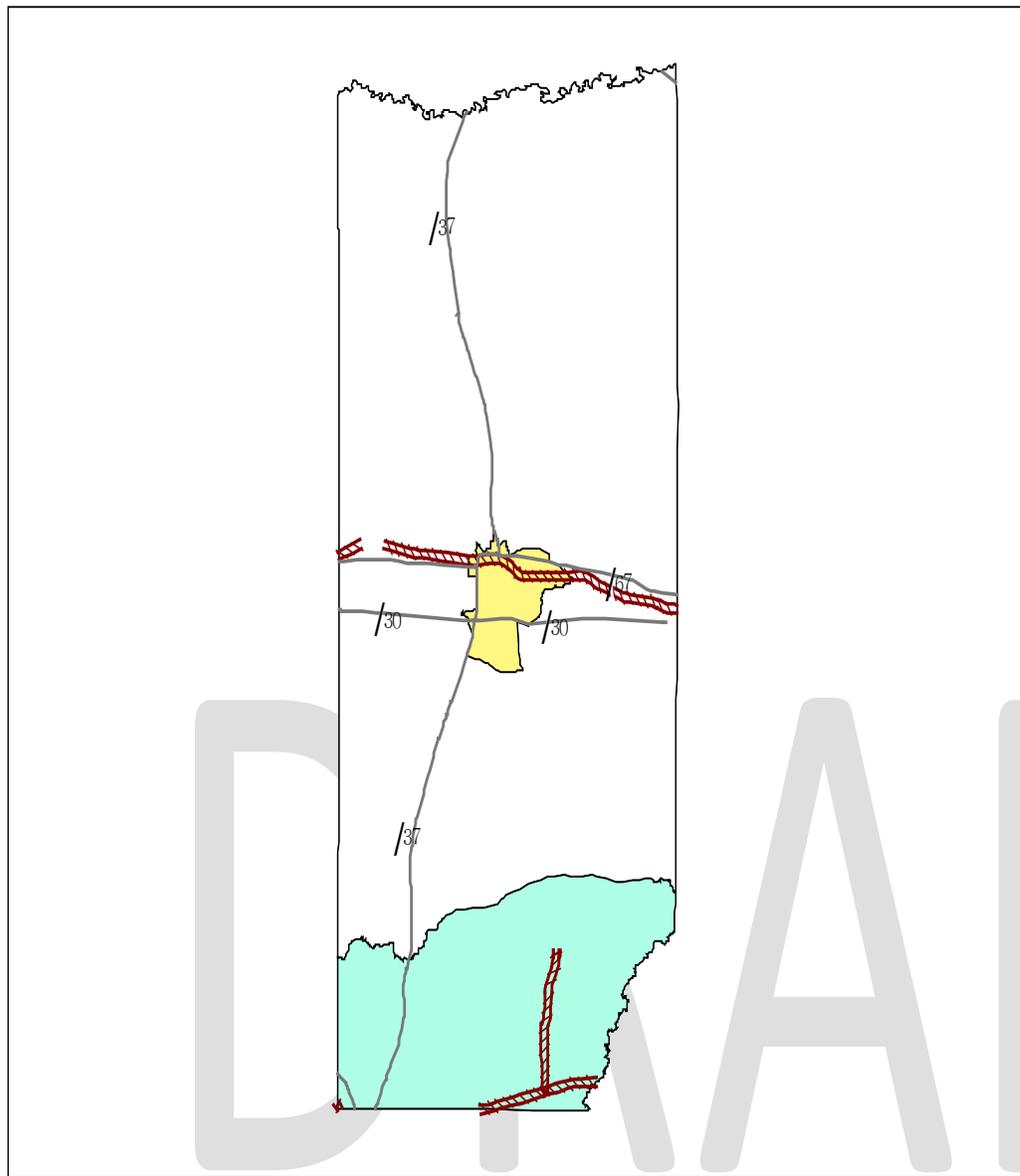


Figure 1.9 A
Landing Pads





Franklin
County

Mitigation
Action
Plan

Railways

- HRD.shp
- RTR.shp
- Population
- 1852 - 2154
- 2154 - 2456
- 2456 - 2758
- 2758 - 3060
- 3060 - 3362
- 3362 - 3664
- Srbdry.shp

Aug. 14 2003



(c) 1997-2002 FEMA.



RAILWAYS
FIGURE 1.10 A