LUBBOCK COUNTY
HAZARD MITIGATION ACTION PLAN

UPDATE 2022

Maintaining a Safe, Secure, and Sustainable Community

H2O PARTNERS

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SECTION 1: INTRODUCTION

BACKGROUND

Lubbock County is located is northwest Texas on the Southern High Plains. Lubbock, its largest city and county seat, is located 327 miles northwest of Dallas and 122 miles south of Amarillo. Lubbock County is surrounded by the following counties: Hale County to the north, Floyd County to the northeast, Crosby County to the east, Garza County to the southeast, Lynn County to the south, Terry County to the southwest, Hockley County to the west, and Lamb County to the northwest.

Texas is prone to extremely heavy rains and flooding with half of the world record rainfall rates (48 hours or less).[1] While flooding is a well-known risk, Lubbock County is susceptible to a wide range of natural hazards, including but not limited to extreme heat, tornadoes, hail, and wildfires. These life-threatening hazards can destroy property, disrupt the economy, and lower the overall quality of life for individuals.

While it is impossible to prevent an event from occurring, the effect from many hazards to people and property can be lessened. This concept is known as hazard mitigation, which is defined by the Federal Emergency Management Agency (FEMA) as *sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects.*[2] Communities participate in hazard mitigation by developing hazard mitigation plans. The Texas Division of Emergency Management (TDEM) is required to review the plan and FEMA has the authority to review and approve hazard mitigation plans through the Disaster Mitigation Act of 2000.

In 2004, Lubbock County participated in a Hazard Mitigation Action Plan (HMAP) for the South Plains Association of Governments (SPAG). The Plan was approved by FEMA in 2005. In 2012, Lubbock County took the lead in sponsoring the development of a new, stand-alone comprehensive Hazard Mitigation Plan for the County and participating jurisdictions, as well as additional entities that wished to join as part of the new Plan. This Plan was approved by FEMA in January 2015.

The Disaster Mitigation Act requires that hazard mitigation plans be reviewed and revised every five years to maintain eligibility for Hazard Mitigation Assistance (HMA) grant funding. Since FEMA approved the Lubbock County HMAP in 2015, the County began the process of developing a Hazard Mitigation Action Plan Update in order to maintain eligibility for grant funding within the five-year window. The HMAP Update planning process provided an opportunity for Lubbock

[1] http://www.floodsafety.com/texas/regional-info/san-antonio-flooding/
[2] http://www.fema.gov/hazard-mitigation-planning-resources

County to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss. The 2015 HMAP expired in 2020, therefore Lubbock County selected H2O Partners, Inc. to write and develop the 2022 HMAP Update, hereinafter titled: "Lubbock County Hazard Mitigation Plan Update 2022: Maintaining a Safe, Secure, and Sustainable Community" (Plan or Plan Update). This is a multi-jurisdictional plan; the participating jurisdictions include: Lubbock County, Village of Buffalo Springs, City of Idalou, City of Lubbock, Town of New Deal, Town of Ransom Canyon, City of Shallowater, City of Slaton, City of Wolfforth, Abernathy ISD, Frenship ISD, Idalou ISD, Lubbock ISD, Lubbock-Cooper ISD, New Deal ISD, Roosevelt ISD, Shallowater ISD, Slaton ISD, Betty M. Condra School for Education Innovation, South Plains College, Texas Tech University Systems, Texas Tech University Health Sciences Center, Lubbock Reese Redevelopment Authority, Lubbock County Hospital District, Lubbock County WCID #1, and South Plains Association of Governments.

Hazard mitigation activities are an investment in a community's safety and sustainability. It is widely accepted that the most effective hazard mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made. A comprehensive review to a hazard mitigation plan addresses hazard vulnerability that exists today and in the foreseeable future. Therefore, it is essential that a plan identify projected patterns of how future development will increase or decrease a community's overall hazard vulnerability.

SCOPE

The focus of the Plan Update is to identify activities to mitigate hazards classified as "high" or "moderate" risk, as determined through a detailed hazard risk assessment conducted for Lubbock County and the participating jurisdictions. The hazard classification enables the participating jurisdictions to prioritize mitigation actions based on hazards which can present the greatest risk to lives and property in the geographic scope.

PURPOSE

The Plan Update was prepared by Lubbock County, participating jurisdictions, and H2O Partners, Inc. The purpose of the Plan Update is to protect people and structures and to minimize the costs of disaster response and recovery. The goal of the Plan Update is to minimize or eliminate long-term risks to human life, property, operations, and the environment from known hazards by identifying risks and implementing cost-effective hazard mitigation actions. The planning process is an opportunity for participating jurisdictions within Lubbock County, stakeholders, and the general public to evaluate and develop successful hazard mitigation actions to reduce future risk of loss of life and damage to property resulting from a disaster in Lubbock County.

The Mission Statement of the Plan Update is, "*Maintaining a secure and sustainable future through the revision and development of targeted hazard mitigation actions to protect life and property.*"

Participating jurisdictions within Lubbock County, and planning participants identified ten natural hazards to be addressed by the Plan Update. The specific goals of the Plan Update are to:

- Provide a comprehensive update to the 2015 HMAP;
- Minimize disruption to participating jurisdictions within Lubbock County following a disaster;

- Streamline disaster recovery by articulating actions to be taken before a disaster strikes to reduce or eliminate future damage;
- Demonstrate a firm local commitment to hazard mitigation principles;
- Serve as a basis for future funding that may become available through grant and technical assistance programs offered by the State or Federal government. The Plan will enable participating jurisdictions within Lubbock County to take advantage of rapidly developing mitigation grant opportunities as they arise; and
- Ensure that participating jurisdictions within Lubbock County maintain eligibility for the full range of future Federal disaster relief.

AUTHORITY

The Plan is tailored specifically for participating jurisdictions within Lubbock County and plan participants including Planning Team members, stakeholders, and the general public who participated in the Plan Update development process. The Plan complies with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108–264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). Additionally, the Plan complies with the Interim Final Rules for the Hazard Mitigation Planning and Hazard Mitigation Grant Program (44 CFR, Part 201), which specify the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA's "Local Mitigation Plan Review Guide" (October 2011), and the "Local Mitigation Planning Handbook" (March 2013). Additionally, the Plan is developed in accordance with FEMA's Community Rating System (CRS) Floodplain Management Plan standards and policies.

SUMMARY OF SECTIONS

Sections 1 and 2 of the Plan Update outline the Plan's purpose and development, including how Planning Team members, stakeholders, and members of the general public were involved in the planning process. Section 3 profiles Lubbock County's population and economy.

Sections 4 through 14 present a hazard overview and information on individual natural hazards in the planning area. The hazards generally appear in order of priority based on potential losses to life and property, and other community concerns. For each hazard, the Plan Update presents a description of the hazard, a list of historical hazard events, and the results of the vulnerability and risk assessment process.

Section 15 presents hazard mitigation goals and objectives. Section 16 gives an analysis for the previous actions and Section 17 presents hazard mitigation actions for Lubbock County and the participating jurisdictions. Section 18 identifies Plan maintenance mechanisms.

The list of planning team members and stakeholders is located in Appendix A. Public survey results are analyzed and presented in Appendix B. Appendix C contains a detailed list of critical facilities for the area. Appendix D contains information regarding Dam locations within Lubbock County. Appendix E contains information regarding workshops and meeting documentation.

Capability Assessment results for participating jurisdictions within Lubbock County are in Appendix F.[3]

[3] Information contained in some of these appendices are exempt from public release under the Freedom of Information Act (FOIA).

SECTION 2: PLANNING PROCESS

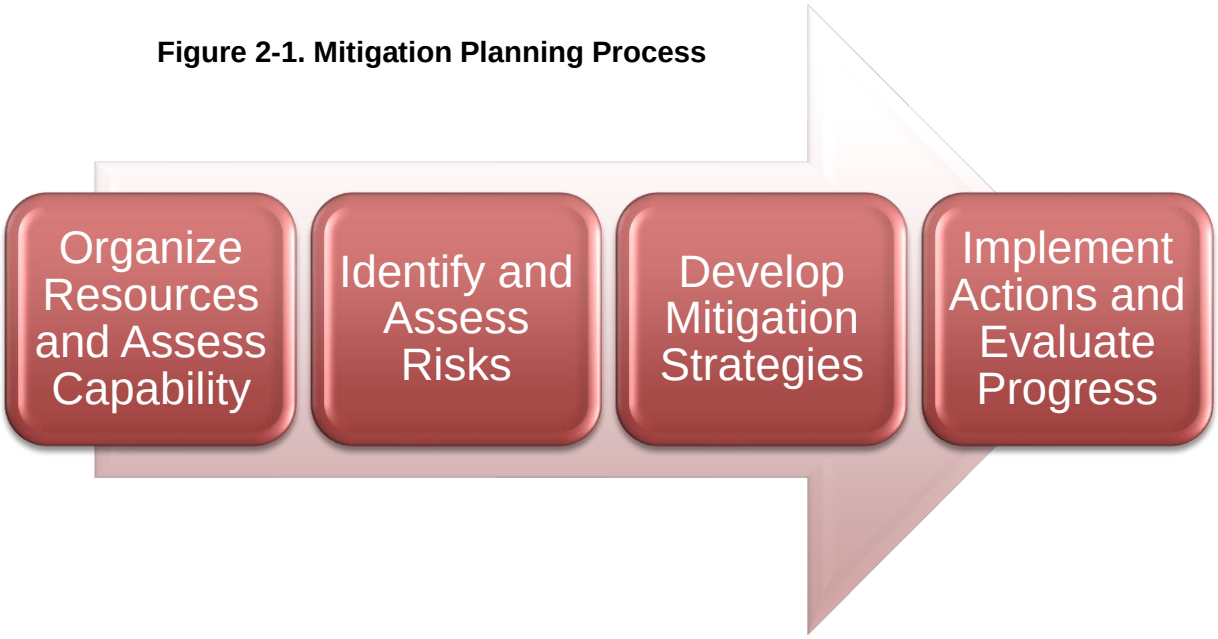
PLAN PREPARATION AND DEVELOPMENT

Hazard mitigation planning involves coordination with various constituents and stakeholders to develop a more disaster-resistant community. Section 2 provides an overview of the planning process including the identification of key steps and a detailed description of how stakeholders and the public were involved.

OVERVIEW OF THE PLAN

Lubbock County hired H2O Partners, Inc. (Consultant Team), to provide technical support and oversee the development of the Lubbock County Hazard Mitigation Action Plan Update 2022. The Consultant Team used the FEMA "Local Mitigation Plan Review Guide" (October 1, 2011), and the "Local Mitigation Planning Handbook" (March 2013) to develop the Plan Update. The overall planning process is shown in Figure 2-1 below.

Figure 2-1. Mitigation Planning Process



Lubbock County, participating jurisdictions, and the Consultant Team met in November 2021 to begin organizing resources, identify Planning Team members, and conduct a Capability Assessment.

PLANNING TEAM

Key members of H2O Partners, Inc. developed the Plan Update in conjunction with the Planning Team. The Planning Team was established using a direct representation model. Some of the responsibilities of the Planning Team included: completing Capability Assessment surveys, providing input regarding the identification of hazards, identifying mitigation goals, and developing mitigation strategies. An Executive Planning Team consisting of key personnel from each of the participating jurisdictions within Lubbock County, shown in Table 2-1, was formed to coordinate planning efforts and request input and participation in the planning process. Table 2-2 reflects the Advisory Planning Team, consisting of additional representatives from area organizations and departments from the participating jurisdictions within Lubbock County that participated throughout the planning process.

Table 2-1. Executive Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Lubbock County	Emergency Management Coordinator
Village of Buffalo Springs	City Administrator
City of Idalou	Chief of Police
City of Lubbock	Director of the Office of Emergency Management
Town of New Deal	Chief of Police
Town of Ransom Canyon	Emergency Management Coordinator / Chief of Police

ORGANIZATION / DEPARTMENT	TITLE
City of Shallowater	Emergency Management Coordinator / Fire Chief
City of Slaton	City Administrator
City of Wolfforth	Deputy Emergency Management Coordinator
Abernathy Independent School District	Director of Curriculum and Instruction
Frenship Independent School District	Director of Student Services
Idalou Independent School District	Superintendent
Lubbock Independent School District	Director of School Safety and Security
Lubbock-Cooper Independent School District	Director of Student Services
New Deal Independent School District	Superintendent
Roosevelt Independent School District	District Police Chief
Shallowater Independent School District	Assistant Superintendent of Curriculum and Instruction
Slaton Independent School District	ISD Chief of Police
Betty M. Condra School of Education Innovation	Superintendent / CEO
South Plains College	Executive Director of Administrative Services
Texas Tech University Systems	Emergency Management Director
Texas Tech University Health Sciences Center	Emergency Management Coordinator
Lubbock County Hospital District	Safety Officer
Lubbock County Water Control District #1	General Manager
Lubbock Reese Redevelopment Authority	Director of Operations
South Plains Association of Governments	Program Specialist

Table 2-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Lubbock County	County Judge
Lubbock County	Department Director of Public Works
Lubbock County	Deputy Emergency Management Coordinator
Lubbock County	Director of Facilities

ORGANIZATION / DEPARTMENT	TITLE
Lubbock County	Director of IT
Lubbock County	Director of Public Works
Lubbock County	Director of Purchasing
Lubbock County	Lead Civil Attorney
Village of Buffalo Springs	Mayor
City of Idalou	City Administrator
City of Lubbock	Deputy Director of Office of Emergency Management
Town of New Deal	Mayor
Town of Ransom Canyon	Police Lieutenant
City of Shallowater	City Administrator
City of Slaton	Chief of Police
City of Slaton	Mayor
City of Wolfforth	Fire Chief
Abernathy Independent School District	Superintendent
Frenship Independent School District	Chief of Police
Idalou Independent School District	Chief of Police
Lubbock Independent School District	Chief of Police
Lubbock- Cooper Independent School District	Assistant Superintendent of Business and Personnel
New Deal Independent School District	Chief Financial Officer
Roosevelt Independent School District	Superintendent
Shallowater Independent School District	Chief of Police
Slaton Independent School District	Assistant Emergency Management Coordinator / Human Resources
Slaton Independent School District	Superintendent
South Plains College	Chief of Police
South Plains College	Dean of the South Plains College Reese Center
South Plains College	Police Lieutenant

ORGANIZATION / DEPARTMENT	TITLE
Texas Tech University Systems	Associate Managing Director
Lubbock County Hospital District	Assistant Director
Lubbock County Hospital District	Director of Trauma / Burn Services
Lubbock County Water Control District #1	Board Member
Lubbock Reese Redevelopment Authority	Executive Director
South Plains Association of Governments	Regional Director

Additionally, a Stakeholder Group was invited to participate in the planning process via e-mail. The Consultant Team, Planning Teams, and Stakeholder Group coordinated to identify mitigation goals, and develop mitigation strategies and actions for the Plan. Appendix A provides a complete listing of all participating Planning Team members and stakeholders from participating jurisdictions within Lubbock County by organization and title.

Based on results of completed Capability Assessment, participating jurisdictions within Lubbock County described methods for achieving future hazard mitigation measures by expanding existing capabilities. For example, several of the jurisdictions do not have a Comprehensive Master Plan in place. Other options for improving capabilities include the following:

- Establishing Planning Team members with the authority to monitor the Plan and identify grant funding opportunities for expanding staff.
- Identifying opportunities for cross-training or increasing the technical expertise of staff by attending free training available through FEMA and the Texas Division of Emergency Management (TDEM) by monitoring classes and availability through preparingtexas.org.
- Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes.
- Developing ordinances that will require all new developments to conform to the highest mitigation standards.

Sample hazard mitigation actions developed with similar hazard risk were shared at the meetings. These important discussions resulted in development of multiple mitigation actions that are included in the Plan Update to further mitigate risk from natural hazards in the future.

The Planning Team developed hazard mitigation actions for mitigating risk from all of the hazards including potential flooding, hail, and extreme heat. The actions include but are not limited to drainage improvement projects, installing generators at critical facilities, and educating citizens to practice hazard mitigation techniques.

PLANNING PROCESS

The process used to prepare the Plan Update followed the four major steps included at Figure 2-1. After the Planning Team was organized, a capability assessment was developed and distributed at the Kick-Off Workshop. Hazards were identified and assessed, and results associated with each of the hazards were provided at the Risk Assessment Workshop. Based on Lubbock County's identified vulnerabilities, specific mitigation strategies were discussed and

developed at the Mitigation Strategy Workshop. Finally, Plan maintenance and implementation procedures were developed and are included in Section 18. Participation of Planning Team members, stakeholders, and the public at each of the workshops is documented in Appendix E.

At the Plan development workshops held throughout the planning process described herein, the following factors were taken into consideration:

- The nature and magnitude of risks currently affecting the community;
- Hazard mitigation goals to address current and expected conditions;
- Whether current resources will be sufficient for implementing the Plan Update;
- Implementation problems, such as technical, political, legal, and coordination issues that may hinder development;
- Anticipated outcomes; and
- How participating jurisdictions within Lubbock County, agencies, and partners will participate in implementing the Plan Update.

KICKOFF WORKSHOP

The Kickoff Workshop was held on January 13, 2022 at the Lubbock Civic Center with a virtual attendance option available. The initial workshop informed participating officials and key department personnel about how the planning process pertained to their distinct roles and responsibilities and engaged stakeholder groups including, but not limited to American Red Cross, Texas A&M Forest Service, local volunteer fire departments, local medical partners, news outlets, and surrounding counties. In addition to the kickoff presentation, participants received the following information:

- Project overview regarding the planning process;
- Public survey access information;
- Hazard Ranking form; and
- Capability Assessment survey for completion.

A risk ranking exercise was conducted at the Kickoff Workshop to get input from the Planning Team and stakeholders pertaining to various risks from a list of natural hazards affecting the planning area. Participants ranked hazards high to low in terms of perceived level of risk, frequency of occurrence, and potential impact.

HAZARD IDENTIFICATION

At the Kickoff Workshop, and through e-mail and phone correspondence, the Planning Team conducted preliminary hazard identification. The Planning Team in coordination with the Consultant Team reviewed and considered a full range of natural hazards. Once identified, the teams narrowed the list to significant hazards by reviewing hazards affecting the area as a whole, the 2018 State of Texas Hazard Mitigation Plan, and initial study results from reputable sources such as federal and state agencies. Based on this initial analysis, the teams identified a total of ten natural hazards which pose a significant threat to the planning area.

RISK ASSESSMENT

An initial risk assessment for participating jurisdictions within Lubbock County was completed in March 2022 and results were presented to Planning Team members at the Risk Assessment Workshop held on March 31, 2022 at the Lubbock County Sheriff's Academy with a virtual attendance option available. At the workshop, the characteristics and consequences of each

hazard were evaluated to determine the extent to which the planning area would be affected in terms of potential danger to property and citizens.

Property and crop damages were estimated by gathering data from the National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA). The assessment also examined the impact of various hazards on the built environment, including general building stock, critical facilities, lifelines, and infrastructure. The resulting risk assessment profiled hazard events provided information on previous occurrences, estimated probability of future events, and detailed the spatial extent and magnitude of impact on people and property. Each participant at the Risk Assessment Workshop was provided a risk ranking sheet that asked participants to rank hazards in terms of the probability or frequency of occurrence, extent of spatial impact, and the magnitude of impact. The results of the ranking sheets identified unique perspectives on varied risks throughout the planning area.

The assessments were also used to set priorities for hazard mitigation actions based on potential loss of lives and dollar losses. A hazard profile and vulnerability analysis for each of the hazards can be found in Sections 4 through 14.

MITIGATION REVIEW AND DEVELOPMENT

Developing the Mitigation Strategy for the Plan involved identifying mitigation goals and new mitigation actions. A Mitigation Workshop was held on May 19, 2022 at the Lubbock County Sheriff's Academy with a virtual attendance option available. In addition to the Planning Team, stakeholder groups were invited to attend the workshop. Regarding hazard mitigation actions, workshop participants emphasized the desire for tornado and winter storm projects. Additionally, the participating jurisdictions were proactive in identifying mitigation actions to lessen the risk of all the identified hazards included in the Plan Update.

An inclusive and structured process was used to develop and prioritize new hazard mitigation actions for the Plan Update. The prioritization method was based on FEMA's STAPLE+E criteria and included social, technical, administrative, political, legal, economic, and environmental considerations. As a result, each Planning Team Member assigned an overall priority to each hazard mitigation action. The overall priority of each action is reflected in the hazard mitigation actions found in Section 17.

Planning Team Members then developed action plans identifying proposed actions, costs and benefits, the responsible organization(s), effects on new and existing buildings, implementation schedules, priorities, and potential funding sources.

Specifically, the process involved:

- Listing optional hazard mitigation actions based on information collected from previous plan reviews, studies, and interviews with federal, state, and local officials. Workshop participants reviewed the optional mitigation actions and selected actions that were most applicable to their area of responsibility, cost-effective in reducing risk, easily implemented, and likely to receive institutional and community support.
- Workshop participants inventoried federal and state funding sources that could assist in implementing the proposed hazard mitigation actions. Information was collected, including the program name, authority, purpose of the program, types of assistance and eligible projects, conditions on funding, types of hazards covered, matching requirements, application deadlines, and a point of contact.

- Planning Team Members considered the benefits that would result from implementing the hazard mitigation actions compared to the cost of those projects. Although detailed cost-benefit analyses were beyond the scope of the Plan Update, Planning Team Members utilized economic evaluation as a determining factor between hazard mitigation actions.
- Planning Team Members then selected and prioritized mitigation actions.

Hazard mitigation actions identified in the process were made available to the Planning Team for review. The draft Plan Update was maintained on file by Lubbock County and participating jurisdictions, and was made available to the general public for review.

REVIEW AND INCORPORATION OF EXISTING PLANS

REVIEW

Background information utilized during the planning process included various studies, plans, reports, and technical information from sources such as FEMA, the United States Army Corps of Engineers (USACE), the U.S. Fire Administration, National Oceanic and Atmospheric Administration (NOAA), the Texas Water Development Board (TWDB), the Texas Commission on Environmental Quality (TCEQ), the Texas State Data Center, Texas Forest Service, the Texas Division of Emergency Management (TDEM), and local hazard assessments and plans. Section 4 and the hazard-specific sections of the Plan (Sections 5-14) summarize the relevant background information.

Specific background documents, including those from FEMA, provided information on hazard risk, hazard mitigation actions currently being implemented, and potential mitigation actions. Previous hazard events, occurrences, and descriptions were identified through NOAA's National Centers for Environmental Information (NCEI). Results of past hazard events were found through searching the NCEI. The USACE studies were reviewed for their assessment of risk and potential projects in the region. State Data Center documents were used to obtain population projections. The State Demographer webpages were reviewed for population and other projections and included in Section 3 of the Plan. Information from the Texas Forest Service was used to appropriately rank the wildfire hazard, and to help identify potential grant opportunities. Materials from FEMA and TDEM were reviewed for guidance on Plan Update development requirements.

INCORPORATION OF EXISTING PLANS INTO THE HMAP PROCESS

A Capability Assessment was completed by key departments from the participating jurisdictions within Lubbock County which provided information pertaining to existing plans, policies, ordinances, and regulations to be integrated into the goals and objectives of the Plan Update. The relevant information was included in a master Capability Assessment, Appendix F.

Existing projects and studies were utilized as a starting point for discussing hazard mitigation actions among Planning and Consultant Team members. For example, Lubbock County has completed several actions, including obtaining limited portable generators as backups and updating several fixed site generators at County facilities. The City of Lubbock has completed many actions, including installing gravity flow storm sewer pipe as part of the Northwest Lubbock Drainage Improvements project, and retrofitting pump station's emergency electric generator with automatic switchover capabilities. The City of Shallowater has completed several drainage projects. The City of Wolfforth upgraded their outdoor warning siren system.

Additionally, policies and ordinances were reviewed by several of the participating jurisdictions. These jurisdictions have included actions to develop and adopt higher building code standards. Other plans were reviewed, such as Emergency Operations Plan, to identify any additional mitigation actions. Finally, the 2018 State of Texas Hazard Mitigation Plan, developed by TDEM, was discussed in the initial planning meeting in order to develop a specific group of hazards to address in the planning effort. The 2018 State Plan was also used as a guidance document, along with FEMA materials, in the development of the Lubbock County Hazard Mitigation Action Plan Update 2022.

INCORPORATION OF THE HMAP INTO OTHER PLANNING MECHANISMS

Planning Team members will integrate implementation of the Plan Update with other planning mechanisms for Lubbock County, such as the Emergency Operations Plan. Existing plans for participating jurisdictions will be reviewed and incorporated into the Plan Update, as appropriate. This section discusses how the Plan will be implemented by the participating jurisdictions within Lubbock County. It also addresses how the Plan will be evaluated and improved over time, and how the public will continue to be involved in the hazard mitigation planning process.

Participating jurisdictions within Lubbock County will be responsible for implementing hazard mitigation actions contained in Section 17. Each hazard mitigation action has been assigned to a specific County, City, Town, Village, ISD or special district department that is responsible for tracking and implementing the action.

A funding source has been listed for each identified hazard mitigation action and may be utilized to implement the action. An implementation time period has also been assigned to each hazard mitigation action as an incentive and to determine whether actions are implemented on a timely basis.

Participating jurisdictions within Lubbock County will integrate hazard mitigation actions contained in the Plan Update with existing planning mechanisms such as ordinances, Emergency Operations or Management Plans, and other local and area planning efforts. Lubbock County will work closely with area organizations to coordinate implementation of hazard mitigation actions that benefit the planning area in terms of financial and economic impact.

Upon formal adoption of the Plan Update, Planning Team members from the participating jurisdictions will review existing plans along with building codes to guide development and ensure that hazard mitigation actions are implemented. Each of the jurisdictions will be responsible for coordinating periodic review of the Plan Update with members of the Advisory Planning Team to ensure integration of hazard mitigation strategies into these planning mechanisms and codes. The Planning Team will also conduct periodic reviews of various existing planning mechanisms and analyze the need for any revisions or updates in light of the approved Plan Update. Participating jurisdictions within Lubbock County will ensure that future long-term planning objectives will contribute to the goals of the Plan to reduce the long-term risk to life and property from moderate and high-risk hazards. Within one year of formal adoption of the Plan, existing planning mechanisms will be reviewed and analyzed as they pertain to the Plan Update.

Planning Team members will review and revise, as necessary, the long-range goals and objectives in its strategic plan and budgets to ensure that they are consistent with the Plan Update.

Furthermore, Lubbock County will work with neighboring jurisdictions to advance the goals of the Plan Update as it applies to ongoing, long-range planning goals and actions for mitigating risk to natural hazards throughout the planning area.

Table 2-3 identifies types of planning mechanisms and examples of methods for incorporating the Plan into other planning efforts.

Table 2-3. Examples of Methods of Incorporation

Planning Mechanism	Incorporation of Plan
Annual Budget Review	Various departments and key personnel that participated in the planning process for participating jurisdictions within Lubbock County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.
Capital Improvement Plans	Several participating jurisdictions within Lubbock County have a Capital Improvement Plan (CIP) in place. Prior to any revisions to the CIP, County, City, Town, Village, ISD and special district departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Comprehensive Plans	Several participating jurisdictions within Lubbock County have Long-term Comprehensive Development Plans in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 13 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when participating jurisdictions within Lubbock County update their management plans or develops new plans.
Grant Applications	The Plan will be evaluated by participating jurisdictions within Lubbock County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan Revision may be necessary to include the action in the Plan.

Planning Mechanism	Incorporation of Plan
Regulatory Plans	Currently, several participating jurisdictions within Lubbock County have regulatory plans in place, such as Emergency Management Plans, Continuity of Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when County, City, Town, Village, ISD, and special district departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.

Appendix F provides an overview of Planning Team members' existing planning and regulatory capabilities to support implementation of mitigation strategy objectives. Appendix F also provides further analysis of how each intends to incorporate hazard mitigation actions into existing plans, policies, and the annual budget review as it pertains to prioritizing grant applications for funding and implementation of identified hazard mitigation projects.

It should be noted for the purposes of the Plan Update that the HMAP has been used as a reference when reviewing and updating all plans and ordinances for the entire planning area, including all participating jurisdictions. The Emergency Management Plans developed for Lubbock County, Village of Buffalo Springs, City of Idalou, City of Lubbock, Town of New Deal, City of Shallowater, City of Slaton, City of Wolfforth, Abernathy ISD, Frenship ISD, Idalou ISD, Lubbock ISD, Lubbock-Cooper ISD, New Deal ISD, Roosevelt ISD, Slaton ISD, South Plains College, Texas Tech University System, Texas Tech University Health Sciences Center, Lubbock County Hospital District, Lubbock County WCID #1, and Lubbock County Reese Redevelopment Authority are updated every 5 years and incorporates goals, objectives and actions identified in the mitigation plan.

PLAN REVIEW AND PLAN UPDATE

As with the development of Plan Update, participating jurisdictions within Lubbock County will oversee the review and update process for relevance and if necessary, make adjustments. At the beginning of each fiscal year, Planning Team Members will meet to evaluate the Plan and review other planning mechanisms to ensure consistency with long-range planning efforts. In addition, planning participants will also meet once a year, by conference call or presentation, to re-evaluate prioritization of the hazard mitigation actions.

TIMELINE FOR IMPLEMENTING MITIGATION ACTIONS

Both the Executive Planning Team (Table A-1, Appendix A) and the Advisory Planning Team (Table A-2, Appendix A) will engage in discussions regarding a timeframe for how and when to implement each hazard mitigation action. Considerations include when the action will be started, how existing planning mechanisms' timelines affect implementation, and when the action should be fully implemented. Timeframes may be general, and there will be short, medium, and long-term goals for implementation based on prioritization of each action, as identified on individual Hazard Mitigation Action worksheets included in the Plan Update for participating jurisdictions within Lubbock County.

Both the Executive and Advisory Planning Team will evaluate and prioritize the most suitable hazard mitigation actions for the community to implement. The timeline for implementation of actions will partially be directed by participating jurisdictions' comprehensive planning process, budgetary constraints, and community needs. Participating jurisdictions within Lubbock County are committed to addressing and implementing hazard mitigation actions that may be aligned with and integrated into the Plan Update.

Overall, the Planning Team is in agreement that goals and actions of the Plan Update shall be aligned with the timeframe for implementation of hazard mitigation actions with respect to annual review and updates of existing plans and policies.

PUBLIC AND STAKEHOLDER INVOLVEMENT

An important component of hazard mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the Planning Team with a greater understanding of local concerns and increases the likelihood of successfully implemented hazard mitigation actions. If citizens and stakeholders, such as local businesses, non-profits, hospitals, and schools are involved, they are more likely to gain a greater appreciation of the risks that hazards may present in their community and take steps to reduce or mitigate their impact.

The public was involved in the development of the Lubbock County Hazard Mitigation Action Plan Update 2022 at different stages prior to official Plan approval and adoption. Public input was sought using three methods: (1) open public meetings; (2) survey instruments; and (3) making the draft Plan Update available for public review on participating jurisdictions' websites.

The draft Plan Update was made available to the general public for review and comment on participating jurisdictions' websites. The public was notified at the public meetings that the draft Plan Update would be available for review. No feedback was received on the draft Plan Update, although it was given on the public survey, and all relevant information was incorporated into the Plan Update. Public input was utilized to assist in identifying hazards that were of most concern to the citizens of the County and what actions they felt should be included and prioritized.

The Plan Update will be advertised and posted on Lubbock County and participating jurisdictions' websites upon approval from FEMA, and a copy will be kept at the Lubbock County Courthouse.

STAKEHOLDER INVOLVEMENT

Stakeholder involvement is essential to hazard mitigation planning since a wide range of stakeholders can provide input on specific topics and from various points of view. Throughout the planning process, members of community groups, local businesses, neighboring jurisdictions, schools, and hospitals were invited to participate in development of the Plan Update. The Stakeholder Group (Table A-3 in Appendix A, and Table 2-4, below), included a broad range of representatives from both the public and private sector and served as a key component in Lubbock County's outreach efforts for development of the Plan Update. Documentation of stakeholder meetings is found in Appendix E. A list of organizations invited to attend via e-mail is found in Table 2-4.

Table 2-4. Stakeholder Working Group

AGENCY	TITLE	PARTICIPATED
Abernathy (City of)	Emergency Management Coordinator	
Abernathy Volunteer Fire Department (VFD)	Fire Chief	
Aerocare Ambulance	Program Director	
American Red Cross	Lubbock Location, Interim Executive Director	
American Red Cross	Lubbock Disaster Program Manager	X
American Red Cross	Representative	X
ATMOS Energy	Operations Manager	
ATMOS Energy	Operations Manager	
ATMOS Energy	Vice President of Public Affairs	
Bailey County	Emergency Management Coordinator	
Breedlove Foods	Representative	X
Breedlove Foods	Representative	X
Buffalo Springs Volunteer Fire Department (VFD)	Fire Chief	
Capital Area Council of Governments	Director of Regional Planning & Services	
Capital Area Council of Governments	Regional Service Program Specialist	
Citibus	Representative	X
Cochran County	Emergency Management Coordinator	
Covenant / Grace Systems (Medical Facility)	Emergency Management Coordinator / Safety Officer	X
Crosby County	Emergency Management Coordinator	
Daily Toreador	New Editor	
Department of Homeland Security	General Staff	
Dickens County	Emergency Management Coordinator	
El Editor	Publisher	
Environmental Protection Agency, Region 6	Regional Administrator	
Floyd County	Emergency Management Coordinator	

AGENCY	TITLE	PARTICIPATED
Floyd County (Floydada)	Emergency Management Coordinator	
Floyd County (Lockney)	Emergency Management Coordinator	
Garza County	Emergency Management Coordinator	
Hale County	Emergency Management Coordinator	
Hale County (Plainview)	Emergency Management Coordinator	
Hockley County	Emergency Management Coordinator	
Idalou Volunteer Fire Department (VFD)	Fire Department	
KAMC	General Manager	
KBTE / KLLL / KMMX	Senior Vice President	
KBZO	General Manager	
KCBD / KJTV	Assistant News Director	
KCBD / KJTV	Assistant News Director	
KFYO News Talk Radio	Brand Manager	
KFYO News Talk Radio	Digital Managing Editor	
KFYO News Talk Radio	Market President	
King County	Emergency Management Coordinator	
KLBK	General Manager	
KRBL	Station Manager	
KRFE AM 580	Owner	
KSSL	Station Manager	
KWBF 98.7 / 1420	Owner	
KWBF 98.7 / 1420	Station Manager	
Lamb County	Emergency Management Coordinator	
Lamb County (Littlefield)	Emergency Management Coordinator	
Lation Lubbock	Publisher	
Lubbock Avalanche Journal	Managing Editor	
Lubbock Heart Hospital	Emergency Management Coordinator	

AGENCY	TITLE	PARTICIPATED
Lubbock National Weather Service (NWS)	Meteorologist In Charge (MIC)	
Lubbock National Weather Service (NWS)	Warning Coordination Meteorologist	
Lubbock Power & Light	Representative	X
Lubbock State Supported Living Center	Risk Manager	
Lynn County	Emergency Management Coordinator	
Motley County	Emergency Management Coordinator	
My Slaton	Editor	
New Deal Volunteer Fire Department (VFD)	Fire Chief	
NOAA	Chief of Policy, Planning & Communications	
Ransom Canyon Volunteer Fire Department (VFD)	Fire Chief	
Rise Academy	Director of Operations	X
Roosevelt Volunteer Fire Department (VFD)	Fire Chief	
Salvation Army	Disaster Service Coordinator	X
Salvation Army	Major	
Shallowater Volunteer Fire Department (VFD)	Fire Chief	
Slaton Volunteer Fire Department (VFD)	Fire Chief	
Slatonite News	General Manager	
South Plains Electric Cooperative	Emergency Management Coordinator	
South Plains Electric Cooperative	Risk Manager	
Starcare Specialty Health System	Risk Management Coordinator	X
Terry County	Emergency Management Coordinator	
Terry County (Brownfield)	Emergency Management Coordinator	
Texas A&M Agrilife Extension	District 02- South Plains	
Texas A&M Agrilife Extension	District 02- South Plains	
Texas A&M Forest Service	Regional Fire Coordinator	X

AGENCY	TITLE	PARTICIPATED
Texas A&M Forest Service	Regional Fire Coordinator	X
Texas A&M Forest Service	Branch Fire Coordinator	X
Texas Commission on Environmental Quality, Region 11	Regional Director	
Texas Commission on Environmental Quality, Region 11	ERC	
Texas Commission on Environmental Quality	Regional Representative	X
Texas Department of Transportation	District Engineer	
TEEX	Regional Coordinator	X
Texas Department of Emergency Management (TDEM)	Region 5, DC 2 Coordinator	
Texas Department of Emergency Management (TDEM)	Mitigation Coordinator	X
Texas Department of Emergency Management (TDEM)	Regional Representative	X
Texas Department of Emergency Management (TDEM)	Unit Chief	
Texas Department of Emergency Management (TDEM)	Assistant Chief	X
Texas House District 28	Senator	
Texas House District 83	Legislative Representative	
Texas House District 84	Legislative Representative	
Texas Parks and Wildlife	Park Superintendent	
Texas State Guard	Sergeant	X
Texas Water Board	Outreach Specialist	
UMC Emergency Medical Service (EMS)	Director	
United Methodist	Disaster Response Coordinator	
U.S. Army Corps of Engineers	Southwest Division Representative	

AGENCY	TITLE	PARTICIPATED
U.S. Fish and Wildlife	Public Affairs for Texas	
U.S. Fish and Wildlife	Regional Outreach Coordinator	
West Carlisle Volunteer Fire Department (VFD)	Fire Chief	
Wolfforth Volunteer Fire Department (VFD)	Fire Chief	
Woodrow Volunteer Fire Department (VFD)	Fire Chief	
XCEL Energy	Regional Community Manager	
Yoakum County	Emergency Management Coordinator	

Stakeholders and participants from neighboring communities that attended the Planning Team and public meetings played a key role in the planning process. For example, thunderstorm wind was one of the concerns to stakeholders, so participating jurisdictions included actions to update/upgrade current communications equipment, and to educate the public how to use current alert system during severe weather events.

PUBLIC MEETINGS

A series of public meetings were held throughout the planning area to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. Each participating jurisdiction within Lubbock County released information regarding the public meetings in their area to increase public participation in the Plan Update development process, through posting on their website, on social media sources including Facebook and Twitter, through the local media, and/or posting the information on bulletin boards in public facilities. A sampling of these notices can be found in Appendix E, along with the documentation on the public meetings. Representatives from area neighborhood associations and area residents were invited to participate.

Public meetings were held on the following dates and locations:

- January 13, 2022, Lubbock Civic Center and Virtually via Microsoft Teams
- March 31, 2022, Lubbock County Sheriff's Academy and Virtually via Microsoft Teams
- May 19, 2022, Lubbock County Sheriff's Academy and Virtually via Microsoft Teams

PUBLIC PARTICIPATION SURVEY

In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders and to obtain data regarding the identification of any potential hazard mitigation actions or problem areas. The survey was promoted by local officials and a link to the survey was posted on participating jurisdictions' websites. A total of 149 surveys were completed online. The survey results are analyzed in Appendix B. Participating jurisdictions within Lubbock County reviewed the input from the surveys and decided which information to incorporate into the Plan as hazard mitigation actions. For example, many citizens mentioned concerns about tornados, and suggested installing tornado sirens and building tornado shelters. In response, several actions

were added to the Plan to construct community-wide storm shelters within the jurisdictions and throughout ISD campuses, promote residential storm shelters/ safe rooms program, and to upgrade and expand outdoor warning siren systems.

SECTION 3: COUNTY PROFILE

OVERVIEW

Lubbock County is one of the oldest inhabited places in the state, if not the oldest. In the northern part of the City of Lubbock is the archeological site known as the Lubbock Lake Site, the first archeological site in Texas to be entered on the National Register of Historic Places. There, in Yellow House Canyon, preserved in the twenty-foot wall of a dry lakebed, lies one of the very few known records of human habitation in Texas reaching back uninterrupted for at least 12,000 years.

Lubbock County was attractive to the growing number of people lured to West Texas by the favorable land laws of the state as well as by fertile soil. The census of 1890 listed only 33 people in the county, but after it was taken a wave of settlers in the summer and fall of that year boosted the number of county residents to about 100, many of them cattle raisers. Formal organization of Lubbock County came on March 10, 1891, when an election was held for the purpose and Lubbock was made the county seat. The new county was named for Col. Thomas S. Lubbock, former Texas Ranger, Confederate officer, and brother of a former governor.

Lubbock County seemed destined to join its neighbors as a thinly populated farming county, however two factors intervened to change this: the coming of the railroad and Texas Tech. With the coming of the railroads, the population jumped from 3,624 in 1910 to 11,096 in 1920 and 39,104 in 1930. The other event critical to the growth of Lubbock County, the opening of Texas Technological College (now Texas Tech University), occurred in 1925. The County's population was 211,651 by 1980. By contrast, no neighboring county had as many as 40,000 residents, whereas all counties in the region had populations of fewer than 10,000 in 1910.

Lubbock County has a total of 901 square miles, of which 895.6 square miles are land and 5.4 square miles are covered by water. Its soils are mainly brown to reddish-brown loams and sandy loams, with smaller areas of grayish-brown, silty clay loams. These overlie a clay subsoil, and beneath that, a hardpan of caliche made of calcium carbonate. This caliche forms the Caprock, which has generally prevented streams from cutting their way through the area. Beneath the caliche zone lie beds of water-filled sand of varying thickness but averaging about 300 feet. These make up a part of the great Ogallala Aquifer.

SECTION 3: COUNTY PROFILE

Figure 3-1 shows the general location of Lubbock County along with the Cities, Towns, and Village that are located within the County.

Figure 3-1. Location of Lubbock County

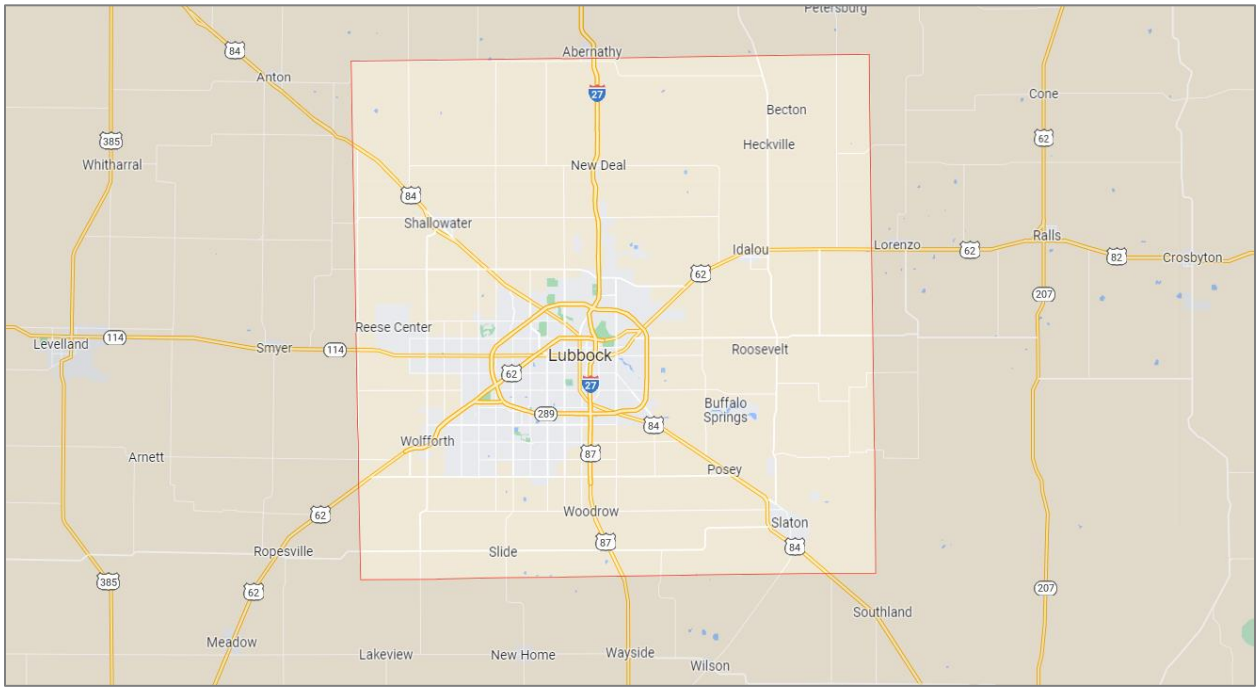
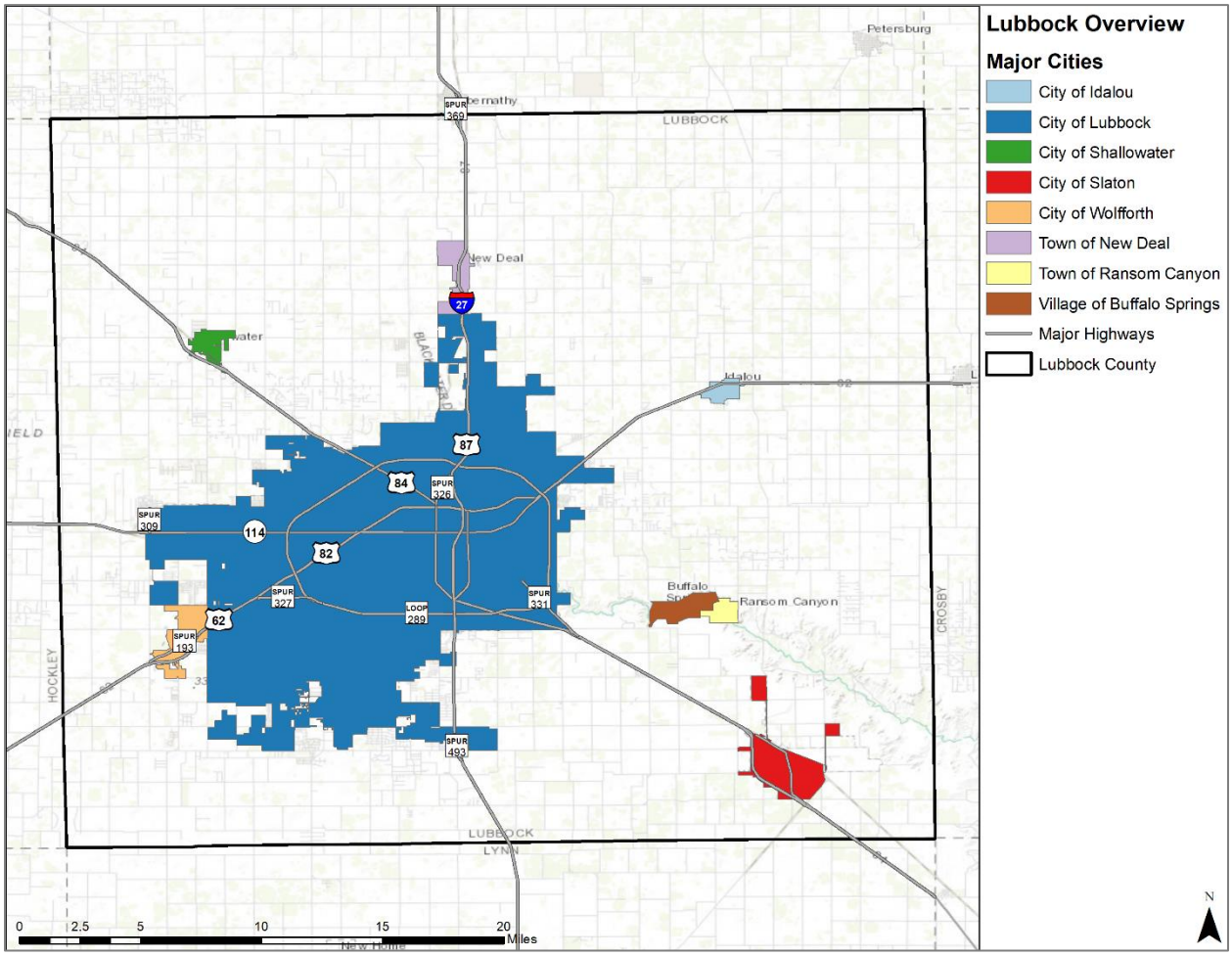


Figure 3-2 shows the participating jurisdictions within Lubbock County that are covered in the risk assessment analysis of the Plan Update.

Figure 3-2. Lubbock County Planning Area



Provided in Table 3-1 below is a listing of the jurisdictions in Lubbock County that participated in the Lubbock County Hazard Mitigation Action Plan Update 2022.

Table 3-1. Participating Jurisdictions

PARTICIPATING JURISDICTIONS	
Lubbock County	Lubbock-Cooper ISD
Village of Buffalo Springs	New Deal ISD
City of Idalou	Roosevelt ISD
City of Lubbock	Shallowater ISD
Town of New Deal	Slaton ISD
Town of Ransom Canyon	Betty M. Condra School for Education Innovation
City of Shallowater	South Plains College
City of Slaton	Texas Tech University Systems
City of Wolfforth	Texas Tech University Health Sciences Center
Abernathy ISD	Lubbock Reese Redevelopment Authority
Frenship ISD	Lubbock County Hospital District
Idalou ISD	Lubbock County WCID #1
Lubbock ISD	South Plains Association of Governments

POPULATION AND DEMOGRAPHICS

In the official Census population county, as of April 1, 2020, Lubbock County has a population of 310,639 residents. Table 3-2 provides the population distribution by jurisdictions within Lubbock County based on the 2010 and 2020 Census information.[1]

Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate and there are many variables involved in achieving an accurate estimation of people living in a given area at a given time.

[1] Source: https://demographics.texas.gov/Data/Decennial/2010/, https://www.census.gov/en.html and https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2020/

Table 3-2. Population Distribution by Jurisdiction

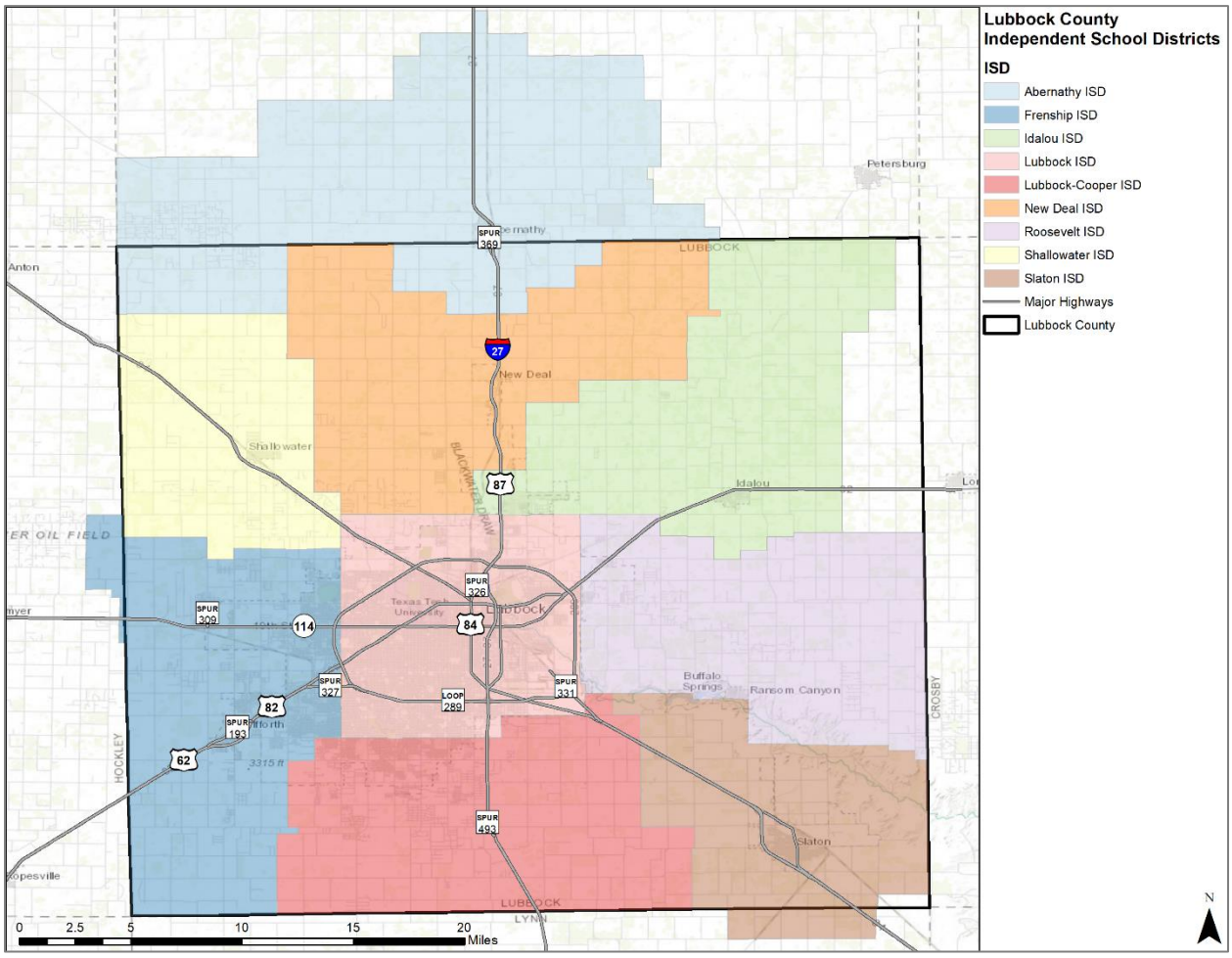
JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2020 POPULATION	PERCENTAGE (based on 2020 Population)	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS[2]		
				Youth (Under 5)	Elderly (Over 65)	Below Poverty Level
Village of Buffalo Springs	453	468	0.1%	8	109	5
City of Idalou	2,250	2,193	0.7%	96	377	311
City of Lubbock	229,573	257,141	82.8%	17,082	31,496	51,146
Town of New Deal	794	730	0.2%	21	159	214
Town of Ransom Canyon	1,096	1,189	0.4%	35	233	10
City of Shallowater	2,484	2,964	1.0%	104	413	132
City of Slaton	6,121	5,858	1.9%	540	830	1,161
City of Wolfforth	3,670	5,521	1.8%	612	355	463
Unincorporated Lubbock County	32,390	34,575	11.1%	1,917	4,359	3,611
Lubbock County	**278,831**	**310,639**	**100%**	**20,415**	**38,331**	**57,053**

ISD POPULATION

Figure 3-3 shows the participating Independent School Districts within Lubbock County that are covered in the risk assessment analysis of the Plan Update.

[2] The Estimated Vulnerable or Sensitive Populations are based off the 2020 American Community Survey 5-Year Estimates Data Profiles.

Figure 3-3. ISDs within the Lubbock County Planning Area



The mission of Abernathy ISD (AISD) to provide a challenging environment their approximately 820 students so that they can become prepared, confident, and well-rounded people of integrity. Students come to Abernathy ISD from Hale and Lubbock Counties for gift/talented classes, special education, athletics, band, dual credit courses, vocational programs, a school-wide Title 1 program, kindergarten, pre-k programs. AISD has received recognition for attendance records, graduates of their Recommended Program, and college-level readiness in English-Language Arts and Math. Abernathy ISD provides services for children under the age of 5.

Founded in 1936, Frenship ISD serves more than 10,800 students across 14 campuses and both Wolfforth and Lubbock communities. Their mission is to educate and develop all students by providing a foundation to empower them to reach their maximum potential and realize their opportunity of choice. Due to their designation as a fast-growth school district, Frenship ISD plans to add a second high school, fourth middle school, and ninth elementary school over the next four years. Frenship ISD characterizes their culture as “The Frenship Way,” which embodies the history, tradition of excellence, high expectations, and commitment to community and leadership that they have incorporated into their over 80 years of existence. Frenship ISD provides services for children under the age of 5.

Idalou ISD (IISD), home of the Wildcats with 984 students, upholds its vision of continuing the tradition to learn, serve, and inspire across their three campuses. IISD's mission is to develop lifelong problem solvers, productive, empathetic citizens, and self-motivated learners committed to future success. Idalou ISD provides services for children under the age of 5.

Lubbock ISD (LISD) is a community-oriented school district with the mission of "every child, every day." The district has strong ties with Texas Tech University, a local state university that has students who often volunteer in LISD led programs. On September 14, 2017, the Lubbock Independent School District passed a Resolution to initiate the process of designation as a District of Innovation in order to increase community control over operations and to support the innovation and local initiatives to improve the education outcome of students within their community. Lubbock ISD provides services for children under the age of 5.

Lubbock-Cooper ISD (LCISD) is a 5a district, with several years of meeting TEA statuses. The school system holds several titles for academic and athletic competitions, and is the second-fastest growing district in the state. LCISD has a vision of ensuring that all students that graduate from the school system with academic, technological, and interpersonal skills to succeed in the challenging world they will enter. LCISD sets annual goals to ensure that their students meet these skills sets. Lubbock-Cooper ISD provides services for children under the age of 5.

New Deal ISD (NDISD) can be found six miles north of Lubbock and serves approximately 700 students with a well-balanced and rigorous curriculum. The Class AA school district is committed to the success of their students, with STAAR results regularly above the state average and several Gold Performance awards given by the Texas Education Agency. NDISD has a storied history of extracurricular accolades with focuses in both academia and athletics. New Deal ISD provides services for children under the age of 5.

Roosevelt Independent School District (RISD) is a student-centered school system where each child is valued as an individual. This small, rural district is located 8.5 miles east of Lubbock, and serves the communities of Ransom Canyon, Buffalo Springs, and Acuff. RISD's mission statement is "growing students one season at a time," with a belief system that is built around diverse educational opportunities, role models, future potential, and the celebration of excellence. Roosevelt ISD provides services for children under the age of 5.

Shallowater Independent School District (SISD) is a public school system based in Shallowater, Texas. This rural school district is located 12 miles northwest of the city of Lubbock and serves students that reside within northwestern Lubbock County. On October 19th, 2020, the Shallowater ISD Board of Trustees voted to adopt a resolution to begin the process of becoming a District of Innovation. On January 18th, 2021, the SISD Board of Trustees approved a district plan that will be followed for a term of five years and may be amended at anytime by the district. Shallowater ISD provides services for children under the age of 5.

Slaton Independent School District is a public school district based in Slaton, Texas. In addition to Slaton, the district serves students in rural southeastern Lubbock County and parts of Ransom Canyon. A small portion of extreme northeastern Lynn County lies within the district. The mission of Slaton Independent School District is to inspire and empower all students to lead extraordinary lives and embrace the possibilities of the 21st century through relevant, engaging learning experiences led by inspirational and nurturing educators. Slaton ISD provides services for children under the age of 5.

Betty M. Condra School for Education Innovation is a charter school district located in Lubbock, Texas. They are focused on helping students achieve their potential in life by eliminating roadblocks to academic achievement, increasing self-esteem and encouraging the development of character and social-emotional skills. The Condra School provides students with the tools necessary for academic success and life skills that will allow them to excel in a traditional public-education setting. The Betty M. Contra School for Education Innovation does not provide services for children under the age of 5.

Table 3-3 provides the number of people employed by each participating ISD.

Table 3-3. ISD Population

INDEPENDENT SCHOOL DISTRICT	EMPLOYEES	STUDENTS	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS	
			Children (Under 5)	Staff Works Outdoors
Abernathy ISD	138	820	35	25
Frenship ISD	1,500	10,860	400	100
Idalou ISD	139	948	18	20
Lubbock ISD	5,000	27,000	2,000	500
Lubbock-Cooper ISD	1,050	7,613	248	98
New Deal ISD	105	740	31	25
Roosevelt ISD	175	1,117	53	100
Shallowater ISD	300	1,749	85	40
Slaton ISD	288	1,278	189	31
Betty M. Condra School for Education Innovation	48	385	0	6

SPECIAL DISTRICTS (UNIVERSITY) POPULATION

South Plains College is a comprehensive, two-year community college that serves the greater South Plains area of Texas with innovative educational programs that span the arts and sciences, technical education, continuing education and workforce development. Serving a 14-county area that comprises the southern portion of the Texas High Plains, the college's main campus is located in Levelland. SPC also offers educational programs at two locations in Lubbock – the SPC Lubbock Center and the SPC Reese Center – as well as an extension center in Plainview.

The Texas Tech University System is a state university system in Texas consisting of five universities in the state of Texas, of which three are general-academic universities, Texas Tech University, Angelo State University, and Midwestern State University, and two health-related institutions, Texas Tech University Health Sciences Center and Texas Tech University Health Sciences Center El Paso. Focused on advancing higher education, health care, research and outreach, the TTU System is headquartered in Lubbock, Texas, and provides its universities with the resources needed to meet the global challenges of today and the future.

The Texas Tech University Health Sciences Center (TTUHSC) is a public medical school based in Lubbock, Texas, with additional campuses in Abilene, Amarillo, Dallas, El Paso, and the Permian Basin. TTUHSC educates students, provides patient care and conducts biomedical and clinical research. They graduate the most health care professionals in the state of Texas. Nationally recognized for innovative programs, academic achievement, and cutting-edge research, they train the next generation of highly qualified health professionals.

Table 3-4 provides the number of people employed by each participating university special district.

Table 3-4. University Special District Population

INDEPENDENT SCHOOL DISTRICT	EMPLOYEES	STUDENTS	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS	
			Children (Under 5)	Staff Works Outdoors
South Plains College	900	2,000	0	15
Texas Tech University Systems	11,666	36,422	95	289
Texas Tech University Health Sciences Center	2,625	1,717	0	0

SPECIAL DISTRICTS (OTHER) POPULATION

Lubbock Reese Redevelopment Authority, formerly Reese Air Force Base, was created by the acts of the 75th Texas Legislator as codified in Chapter 396 of the Local Government Code of Texas. The Authority is a political subdivision of Texas. The conversion of a former Air Force Base into a business and research park that took place over 20 years ago continues to stimulate economic growth for the area. By creatively repurposing existing military assets and continually upgrading and developing new features, Reese strives to become the paradigm for redevelopment projects.

Lubbock County Hospital District is a Medical Group that has only one practice medical office located in Lubbock, Texas. There are 43 health care providers, specializing in Nurse Practitioner, Internal Medicine, Hospitalist, Family Practice, Geriatric Medicine, Physician Assistant, Endocrinology, Registered Dietitian or Nutrition Professional, Cardiovascular Disease, and more, being reported as members of the medical group.

Lubbock County WCID #1 was developed in 1957 to provide the residents of Lubbock County with a recreational area. However, per Senate Bill 1715, the district is a local government that controls the floodwaters and conservation of the water supply in Lubbock County. The District provides sewage services and garbage pickup to each of the residents on Buffalo Springs Lake. The District is a self-supported entity and does not receive any government or tax funds to operate. Gate admission, camping fees, water bills, and lot leases are the only funds that support the day-to-day operations throughout the year. Revenue is spent on maintenance and security for the well-being of the residents and customers. The Board of Directors and Staff are dedicated to enhancing the water quality, fishery, boating safety, and aesthetic value of Buffalo Springs Lake.

South Plains Association of Governments (SPAG) is a voluntary association created by the local governments within state planning region two. Authorized by state law, SPAG is an independent political subdivision of the state and is an instrument of local governments. The SPAG planning

region encompasses 15 counties covering 13,737 square miles. Approximately 60% of the region's population is located in Lubbock County, which is geographically centered in the region. The economy is dominated by agriculture, agribusiness, and service industries.

Table 3-5 provides the number of people employed by each participating special district.

Table 3-5. Special District Population

SPECIAL DISTRICT	STAFF / EMPLOYEES	RESIDENTS THE DISTRICT SERVES	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS
			Staff Works Outdoors
Lubbock Reese Redevelopment Authority	9	0	4
Lubbock County Hospital District	4,600	450 / day	75
Lubbock County WCID #1	22	710	14
South Plains Association of Governments	34	15 Counties & 46 Cities	0

POPULATION GROWTH

The official 2020 Lubbock County population is 310,639. Overall, Lubbock County experienced an increase in population between 1980 and 2020 by 46.77%, or an increase by 98,988. The City of Idalou and the City of Slaton both experienced a decrease in population between 1980 and 2020. Between 2010 and 2020, the City of Idalou, the Town of New Deal, and the City of Slaton experienced a population decline, while the other participating jurisdictions, including Lubbock County as a whole, experienced a population growth. Table 3-6 provides historic growth rates in Lubbock County.

Table 3-6. Population for Lubbock County, 1980-2020

JURISDICTIONS	1980	1990	2000	2010	2020	POP CHANGE 1980-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Village of Buffalo Springs	-	453	493	453	468	-	-	15	3.31%
City of Idalou	2,348	2,074	2,157	2,250	2,193	-155	-6.60%	-57	-2.53%
City of Lubbock	174,361	186,206	199,564	229,573	257,141	82,780	47.48%	27,568	12.01%
Town of New Deal	637	521	708	794	730	93	14.60%	-64	-8.06%
Town of Ransom Canyon	561	763	1,011	1,096	1,189	628	111.94%%	93	8.49%
City of Shallowater	1,932	1,708	2,086	2,484	2,964	1,032	53.42%	480	19.32%
City of Slaton	6,804	6,078	6,109	6,121	5,858	-964	-13.90%	-263	-4.30%

JURISDICTIONS	1980	1990	2000	2010	2020	POP CHANGE 1980-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
City of Wolfforth	1,701	1,941	2,554	3,670	5,521	3,820	224.57%	1,851	50.44%
Unincorporated Lubbock County	23,307	22,892	27,946	32,390	34,575	11,268	48.35%	2,185	6.75%
Lubbock County	**211,651**	**222,636**	**242,628**	**278,831**	**310,639**	**98,988**	**46.77%**	**31,808**	**11.41%**

FUTURE DEVELOPMENT

To better understand how future growth and development in the County might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. This section includes an analysis of the projected population change and economic impacts.

Population projections from 2010 to 2050 are listed in Table 3-7, as provided by the Office of the State Demographer, Texas State Data Center, and the Institute for Demographic and Socioeconomic Research. Population projections are based on a 0.5 scenario growth rate, which is 50 percent of the population growth rate that occurred during 2000-2010. This information is only available at the County level; however, the population projection shows an increase in population density for the County, which would mean overall growth for the County.

Table 3-7. Lubbock County Population Projections

LAND AREA (SQ MI)	2010		2020		2030		2040		2050	
	Population									
	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
895.6	278,831	311.33	317,210	354.19	367,552	410.40	420,729	469.77	475,308	530.71

ECONOMIC IMPACT

Building and maintaining infrastructure depends on the economy, and therefore, protecting infrastructure from risk due to natural hazards in the planning area is important to the participating jurisdictions within Lubbock County. Whether it's expanding culverts under a road that washes out during flash flooding, shuttering a fire station, or flood-proofing a wastewater facility, infrastructure must be mitigated from natural hazards in order to continue providing essential utility and emergency response services in a fast-growing planning area.

Major employers in the area are critical to the health of the economy, as well as effective transportation connectivity.

The mission of Slaton Economic Development Corporation, Type B, is to enrich the quality of life of its citizens by strengthening the business community through promoting the retention and

expansion of existing businesses to ensure development and growth while also devoting resources toward attracting new businesses.

The mission of Wolfforth Economic Development Corporation is to promote managed growth by recruiting quality business and family projects and development and redeveloping community assets that make Wolfforth THE place to be.

EXISTING AND FUTURE LAND USE AND DEVELOPMENT TRENDS

The following jurisdictions have a Master or Comprehensive Plan in place: City of Lubbock, Town of Ransom Canyon, City of Shallowater, City of Slaton, City of Wolfforth, Lubbock-Cooper ISD, New Deal ISD, Roosevelt ISD, Texas Tech University Systems and Lubbock Reese Redevelopment Authority. These plans are part of a continuous process to provide an environment for the citizens and to consider the general desire of the community to conserve, preserve, and protect the natural environment of their jurisdiction. These plans are used to guide individuals in making decisions which affect the community with the understanding of the long-term effects.

The City of Lubbock has adopted the Plan Lubbock 2040 Comprehensive Plan, which will allow city staff, decision-makers, and citizens to utilize the document by implementing the objectives and tasks identified as being crucial to the community in achieving their vision. The Implementation Plan outlines the steps to be taken on the top 5 priority goals as recommended in the Plan, as well as the adopted Master Thoroughfare Plan 2018.

The City of Wolfforth Comprehensive Plan 2030 sets forth policies and guidelines that the City of Wolfforth can adopt to implement a strategy to shape its desired future to the benefit of its citizenry. The Comprehensive Plan is a guide for decision-makers and a tool for managing community change to achieve this desired quality of life.

Texas Tech University Systems has a Lubbock Campus Master Plan 2014 Update that identifies key principles, ideas, and creative solutions to enhance their campus infrastructure and built environment into a continuum of cohesive connection of buildings, spaces, landscaping, points of interest, public art, pathways, streets, and multiple design elements. Documentation of these principles in the update will assist future leadership and partners in preserving their celebrated architectural heritage.

SECTION 4: RISK OVERVIEW

HAZARD DESCRIPTION

Section 4 is the first phase of the Risk Assessment, providing background information for the hazard identification process and descriptions for the hazards identified. The Risk Assessment continues with Sections 5 through 14, which include hazard descriptions and vulnerability assessments.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, participating jurisdictions within Lubbock County identified ten natural hazards that are addressed in the Hazard Mitigation Plan Update and were identified as significant, as shown in Table 4-1. The hazards were identified through input from Planning Team members and a review of the current 2018 State of Texas Hazard Mitigation Plan (State Plan). Readily available online information from reputable sources such as federal and state agencies were also evaluated and utilized to supplement information as needed.

In general, there are three main categories of natural hazards: atmospheric, hydrologic, and technological. Atmospheric hazards are events or incidents associated with weather generated phenomenon. Atmospheric hazards that have been identified as significant for the Planning Area include extreme heat, hail, lightning, thunderstorm wind, tornado, and winter storm (Table 4-1).

Hydrologic hazards are events or incidents associated with water related damage and account for over 75 percent of Federal disaster declarations in the United States. Hydrologic hazards identified as significant for the planning area include flood, and drought.

Technological hazards refer to the origins of incidents that can arise from human activities, such as the construction and maintenance of dams. They are distinct from natural hazards primarily because they originate from human activity. The risks presented by natural hazards may be increased or decreased as a result of human activity, however they are not inherently human-induced. Therefore, dam failure is classified as a quasi-technological hazard and referred to as “technological” in Table 4-1 for purposes of description.

For the Risk Assessment, the wildfire hazard is considered “other,” since this hazard is not considered atmospheric, hydrologic, nor technological.

Table 4-1. Hazard Descriptions

HAZARD	DESCRIPTION
ATMOSPHERIC	
Extreme Heat	Extreme heat is the condition whereby temperatures hover ten degrees or more above the average high temperature in a region for an extended period of time.
Hail	Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and subsequent cooling of the air mass.
Lightning	Lightning is a sudden electrostatic discharge that occurs during an electrical storm. This discharge occurs between electrically charged regions of a cloud, between two clouds, or between a cloud and the ground.
Thunderstorm Wind	A thunderstorm occurs when an observer hears thunder. Radar observers use the intensity of the radar echo to distinguish between rain showers and thunderstorms. Lightning detection networks routinely track cloud-to-ground flashes, and therefore thunderstorms.
Tornado	A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. The destruction caused by tornadoes ranges from light to catastrophic, depending on the location, intensity, size, and duration of the storm.
Winter Storm	Severe winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 miles per hour, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.
HYDROLOGIC	
Drought	A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality.

HAZARD	DESCRIPTION
Flood	The accumulation of water within a body of water, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, and shallow flooding.
OTHER	
Wildfire	A wildfire is an uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.
TECHNOLOGICAL	
Dam Failure	Dam failure is the collapse, breach, or other failure of a dam structure resulting in downstream flooding. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and severe property damage if development exists downstream of the dam.

Hazards that weren't considered significant and were not included in the Plan Update are located in Table 4-2, along with the evaluation process used for determining the significance of each of these hazards. Hazards not identified for inclusion at this time may be addressed during future evaluations and updates.

Table 4-2. Other Hazards Deferred

HAZARD CONSIDERED	REASON FOR DETERMINATION
Coastal Erosion	The planning area is not located on the coast, therefore coastal erosion does not pose a risk.
Earthquake	According to the State Plan, an earthquake occurrence for the Lubbock County planning area is considered exceedingly rare. Although a small event is possible, it would pose little to no risk for the area. There is no history of impact to critical structures, systems, populations or other community assets or vial services as a result of earthquake and non is expected in the future.
Expansive Soils	There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of expansive soils and none is expected in the future.

HAZARD CONSIDERED	REASON FOR DETERMINATION
Hurricane Wind	The planning area is not located within 200 miles of the coast; therefore, hurricanes do not pose a risk. Any remnants of a hurricane or tropical storm system would only include thunderstorm winds and rainfall and would be covered under thunderstorm wind or flood mitigation measures.
Land Subsidence	There are no historical occurrences of land subsidence for the planning area and it is located in an area where occurrences are considered rare. There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of land subsidence and none is expected in the future.

NATURAL HAZARDS AND CLIMATE CHANGE

Climate change is defined as a long-term hazard which can increase or decrease the risk of other weather hazards. It directly endangers property due to sea level rise and biological organisms due to habitat destruction.

Global climate change is expected to exacerbate the risks of certain types of natural hazards impacted through rising sea levels, warmer ocean temperatures, higher humidity, the possibility of stronger storms, and an increase in wind and flood damages due to storm surges. While sea level rise is a natural phenomenon and has been occurring for several thousand years, the general scientific consensus is that the rate has increased in the past 200 years, from 0.5 millimeters per year to 2 millimeters per year.

Texas is considered one of the more vulnerable states in the U.S. to both abrupt climate changes and to the impact of gradual climate changes to the natural and built environments. Mega-droughts can trigger abrupt changes to regional ecosystems and the water cycle, drastically increase extreme summer temperature and fire risk, and reduce availability of water resources, as Texas experienced during 2011-2012.

Paleoclimate records also show that the climate over Texas had large changes between periods of frequent mega-droughts and the periods of mild droughts that Texas is currently experiencing. While the cause of these fluctuations is unclear, it would be wise to anticipate that such changes could occur again and may even be occurring now.

OVERVIEW OF HAZARD ANALYSIS

The methodologies utilized to develop the Risk Assessment are a historical analysis and a statistical approach. Both methodologies provide an estimate of potential impact by using a common, systematic framework for evaluation.

Records retrieved from National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA) were reported for participating jurisdictions within Lubbock County. Remaining records identifying the occurrence of hazard events in the planning area and the maximum recorded magnitude of each event were also evaluated.

SECTION 4: RISK OVERVIEW

The use of geographic information system (GIS) technology to identify and assess risks for Lubbock County, and evaluate community assets and their vulnerability to the hazards.

The four general parameters that are described for each hazard in the Risk Assessment include frequency of return, approximate annualized losses, a description of general vulnerability, and a statement of the hazard's impact.

Frequency of return was calculated by dividing the number of events in the recorded time period for each hazard by the overall time period that the resource database was recording events. Frequency of return statements are defined in Table 4-3, and impact statements are defined in Table 4-4 below.

Table 4-3. Frequency of Return Statements

PROBABILITY	DESCRIPTION
Highly Likely	Event is probable in the next year.
Likely	Event is probable in the next three years.
Occasional	Event is probable in the next five years.
Unlikely	Event is probable in the next ten years.

Table 4-4. Impact Statements

POTENTIAL SEVERITY	DESCRIPTION
Substantial	Multiple deaths. Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major	Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed or with major damage.
Minor	Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Limited	Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

Each of the hazard profiles includes a description of a general Vulnerability Assessment. Vulnerability is the total of assets that are subject to damages from a hazard, based on historic recorded damages. Assets in the region were inventoried and defined in hazard zones where appropriate. The total amount of damages, including property and crop damages, for each hazard is divided by the total number of assets (building value totals) in that community to determine the

percentage of damage that each hazard can cause to the community. Risk and consequences will be addressed and covered within each hazard profile under the Vulnerability and Impact section as well as under the Assessment of Impact sections, where applicable.

To better understand how future growth and development in the Lubbock County region might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. Hazard vulnerability for all participating jurisdictions within Lubbock County was reviewed based on recent development changes that occurred throughout the planning area. Lubbock County has increased slightly between 2010 and 2020 according to the U.S. Census Bureau, therefore there has been no significant factors or development trends with a consequential effect or increase in vulnerability to the population, infrastructure and buildings for hazards.

Once loss estimates and vulnerability were known, an impact statement was applied to relate the potential impact of the hazard on the assets within the area of impact.

Table 4-5. Hazard Risk Ranking

HAZARD	FREQUENCY OF OCCURENCE	POTENTIAL SEVERITY
Thunderstorm Wind	Highly Likely	Substantial
Hail	Highly Likely	Minor
Winter Storm	Highly Likely	Substantial
Lightning	Highly Likely	Substantial
Drought	Highly Likely	Minor
Tornado	Highly Likely	Substantial
Wildfire	Highly Likely	Limited
Extreme Heat	Highly Likely	Limited
Flood	Highly Likely	Minor
Dam Failure	Unlikely	Limited

SECTION 5: THUNDERSTORM WIND

HAZARD DESCRIPTION

Thunderstorms create extreme wind events which includes straight line winds. Wind is the horizontal motion of the air past a given point, beginning with differences in air pressures. Pressure that is higher at one place than another sets up a force pushing from the high toward the low pressure; the greater the difference in pressures, the stronger the force. The distance between the area of high pressure and the area of low pressure also determines how fast the moving air is accelerated.

Thunderstorms are created when heat and moisture near the Earth's surface are transported to the upper levels of the atmosphere. By-products of this process are the clouds, precipitation, and wind that become the thunderstorm.

According to the National Weather Service (NWS), a thunderstorm occurs when thunder accompanies rainfall. Radar observers use the intensity of radar echoes to distinguish between rain showers and thunderstorms.

Straight line winds are responsible for most thunderstorm wind damages. One type of straight-line wind, the downburst, is a small area of rapidly descending air beneath a thunderstorm. A downburst can cause damage equivalent to a strong tornado and make air travel extremely hazardous.

LOCATION

Thunderstorms wind events can develop in any geographic location and are considered a common occurrence in Texas. Therefore, a thunderstorm wind event could occur at any location within Lubbock County's planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, as these storms develop randomly and are not confined to any geographic area within the County. It is assumed that the Lubbock County planning area is uniformly exposed to the threat of thunderstorms winds.

SECTION 5: THUNDERSTORM WIND

EXTENT

The extent or magnitude of a thunderstorm wind event is measured by the Beaufort Wind Scale. Table 5-1 describes the different intensities of wind in terms of speed and effects, from calm to violent and destructive.

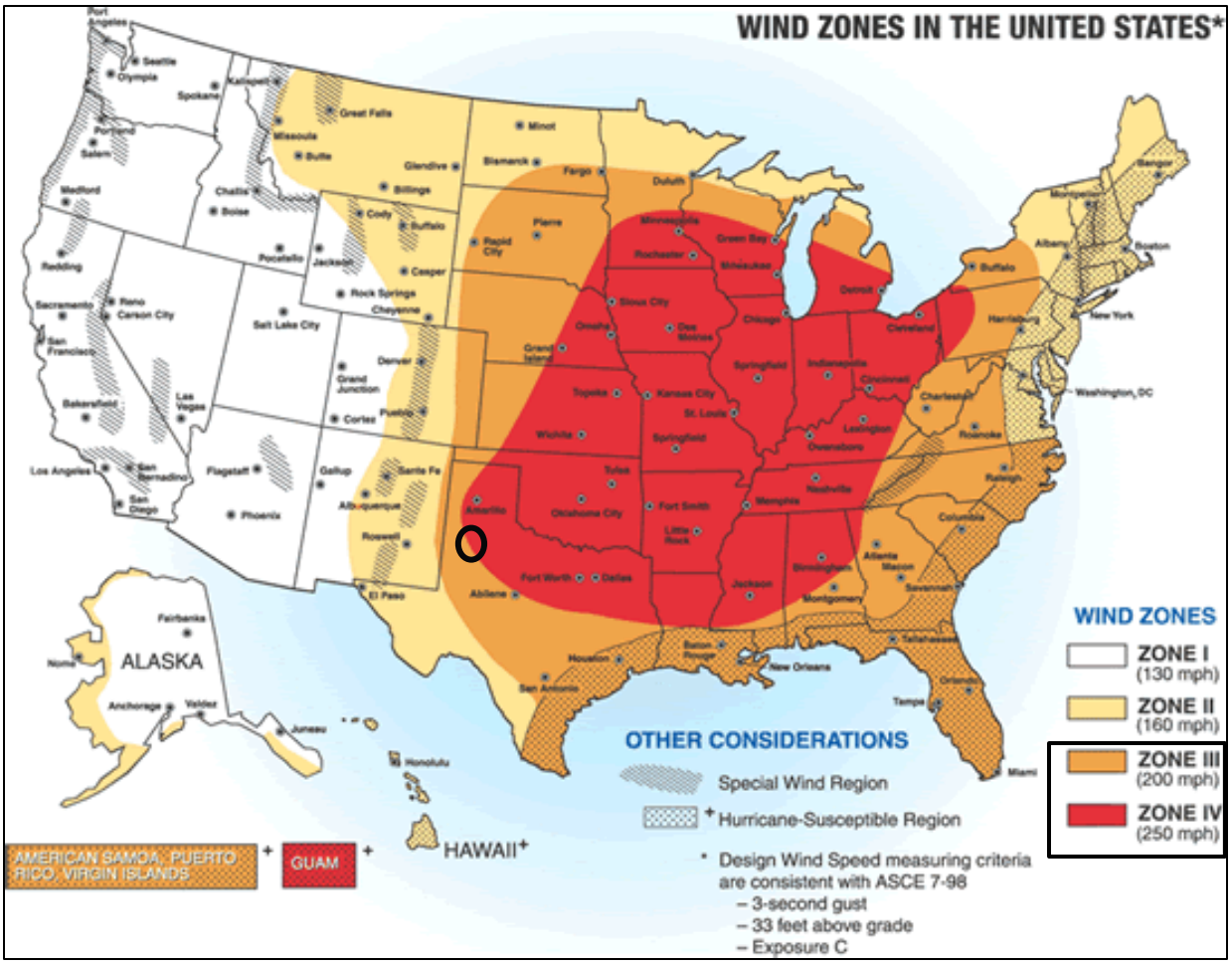
Table 5-1. Beaufort Wind Scale[1]

FORCE	WIND (MHP)	WMO CLASSIFICATION	APPEARANCE OF WIND EFFECTS
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-8	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	9-14	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	15-21	Moderate Breeze	Dust, leaves and loose paper lifted, small tree branches move
5	22-28	Fresh Breeze	Small trees in leaf begin to sway
6	29-36	Strong Breeze	Larger tree branches moving, whistling in wires
7	37-44	Near Gale	Whole trees moving, resistance felt walking against wind
8	45-53	Gale	Whole trees in motion, resistance felt walking against wind
9	54-62	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	63-72	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	73-83	Violent Storm	If experienced on land, widespread damage
12	84+	Hurricane	Violence and destruction

Figure 5-1 displays the wind zones as derived from NOAA.

[1] Source: World Meteorological Organization

Figure 5-1. Wind Zones in the United States[2]



On average, the planning area experiences one to two thunderstorm wind events every year. The County is located in Zone III and Zone IV, meaning they can experience winds up to 250 mph. Lubbock County has experienced a significant wind event or an event with winds in the range of "Force 12" on the Beaufort Wind Scale with winds at or above 84 mph. Based on historical occurrences for thunderstorm wind events, a Force 12 on the Beaufort Wind scale is the maximum force anticipated for future events in the planning area.

HISTORICAL OCCURRENCES

Tables 5-2, 5-3, and 5-4 depict historical occurrences of thunderstorm wind events for the Lubbock County planning area according to the National Centers for Environmental Information (NCEI) data. Since January 1961, 468 thunderstorm wind events are known to have impacted the Lubbock County planning area, based upon NCEI records. An additional thunderstorm event was reported by the planning team. Table 5-3 presents information on known historical events impacting the Lubbock County planning area with resulting damages, injuries or fatalities. It is

[2] Lubbock County is indicated by the circle.

important to note that high wind events associated with other hazards, such as tornadoes, are not accounted for in this section.

The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for climate data; however, it is important to note that the only incidents recorded are those that are reported to the NCEI from 1955 through December 2021 have been factored into this risk assessment. In the tables that follow throughout this section, some occurrences seem to appear multiple times in one table. This is due to reports from various locations throughout the County. In addition, property damage estimates are not always available. Where an estimate has been provided in a table for losses, the dollar amounts have been altered to indicate the damage in 2022 dollars. Historical thunderstorm wind data for all of the participating jurisdictions are provided on a County-wide basis per the NCEI database.

Historical thunderstorm wind data for the ISDs are provided within the Lubbock County events or the participating jurisdictions in which the ISD resides per the NCEI database as they do not have events reported separate and apart from the reported county and jurisdiction events. There have been no reported losses as a result of thunderstorm wind for the participating school districts.

Historical thunderstorm wind data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Lubbock Reese Redevelopment Authority has reported $214,960 in structural damages due to thunderstorm wind events. These damages have been added to the total damages reported to the NCEI due to thunderstorm wind events. There have been no reported losses as a result of thunderstorm wind for all other special districts participating within the Plan Update.

Table 5-2. Historical Thunderstorm Wind Events with Reported Damages, 1955-2021

MAXIMUM WIND SPEED RECORDED (MPH)	NUMBER OF REPORTED EVENTS
0-30	44
31-40	12
41-50	59
51-60	233
61-70	67
71-80	14
81-90	4
91-100+	1
Unknown	34

Table 5-3. Historical Thunderstorm Wind Events, 1955-2021[3]

JURISDICTION	DATE	MAGNITUDE (MPH)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	3/29/1993	67	0	0	$978,928	$0
City of Lubbock	5/16/1993	0	0	0	$9,749	$0
City of Lubbock	12/12/1993	0	0	0	$96,416	$0
Lubbock County	5/25/1994	0	0	0	$95,304	$0
Lubbock County	5/25/1994	80	0	0	$95,304	$0
City of Lubbock	6/29/1994	0	0	0	$94,982	$0
City of Lubbock	6/29/1994	0	0	0	$94,982	$0
City of Shallowater	6/29/1994	0	0	0	$9,498	$0
Lubbock County	9/14/1994	62	0	0	$9,409	$0
City of Lubbock	9/14/1994	0	0	0	$9,409	$0
City of Shallowater	5/15/1995	55	0	0	$3,694	$0
City of Lubbock	5/26/1995	0	0	0	$1,847	$0
Lubbock County	5/9/1996	Unknown	0	0	$898	$0
City of Lubbock	5/14/1996	Unknown	0	0	$62,836	$0
City of Lubbock	6/13/1996	Unknown	0	0	$179,418	$0
City of Lubbock	4/10/1997	55	0	0	$701,993	$0
City of Lubbock	8/18/1997	Unknown	0	0	$175	$0
Lubbock County	3/27/1998	51	0	0	$3,467	$0
Lubbock County	11/9/1998	52	0	0	$1,714	$0
Lubbock County	4/14/1999	52	0	0	$33,832	$0
Lubbock County	5/4/1999	51	0	0	$16,916	$0
City of Lubbock	4/28/2000	Unknown	0	0	$6,565	$0
Lubbock County	6/11/2000	68	0	0	$3,262	$0
City of Lubbock	6/11/2000	Unknown	0	0	$1,631	$0
City of Lubbock	6/11/2000	Unknown	0	0	$3,262	$0

[3] Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Damage values are in 2022 dollars.

SECTION 5: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (MPH)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	6/11/2000	Unknown	0	0	$3,262	$0
City of Lubbock	6/11/2000	Unknown	0	0	$8,154	$0
City of Wolfforth	6/11/2000	Unknown	0	0	$1,631	$0
City of Lubbock	3/23/2001	Unknown	0	0	$7,978	$0
Lubbock County	5/30/2001	Unknown	0	0	$158,215	$0
Lubbock County	5/30/2001	Unknown	0	1	$79,107	$0
Lubbock County	5/30/2001	Unknown	0	0	$316,430	$0
City of Lubbock	5/30/2001	Unknown	0	0	$31,643	$0
City of Wolfforth	5/30/2001	Unknown	0	0	$189,858	$0
City of Wolfforth	5/30/2001	Unknown	0	0	$7,910,748	$7,910,748
City of Lubbock	6/24/2001	Unknown	0	0	$4,738	$0
Lubbock County	6/4/2002	62	0	0	$3,126	$0
Lubbock County	6/4/2002		0	0	$23,442	$0
City of Lubbock	6/4/2002	Unknown	0	0	$15,628	$0
City of Shallowater	6/4/2002	Unknown	0	0	$23,442	$0
Lubbock County	4/28/2003	52	0	0	$6,119	$0
City of Shallowater	6/26/2003	56	0	0	$7,652	$0
City of Lubbock	5/8/2004	72	0	0	$22,302	$0
Lubbock County	9/13/2005	49	0	0	$14,142	$0
Lubbock County	9/17/2005	58	0	0	$212,134	$0
Lubbock County	3/12/2006	54	0	0	$70,357	$0
Lubbock County	3/20/2006	53	1	9	$267,358	$0
Lubbock County	4/6/2006	52	0	0	$69,764	$0
Lubbock County	4/15/2006	51	0	0	$181,386	$0
City of Lubbock	5/3/2006	55	0	0	$6,942	$0
City of Idalou	5/20/2006	65	0	0	$381,806	$0
City of Lubbock	5/20/2006	54	0	0	$138,839	$0

SECTION 5: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (MPH)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	5/21/2006	57	0	0	$34,710	$0
Lubbock County	6/21/2006	59	0	0	$415,694	$0
City of Idalou	6/22/2006	61	0	0	$69,282	$0
Lubbock County	10/26/2006	43	0	0	$104,490	$0
Lubbock County	11/14/2006	58	0	0	$69,764	$0
Lubbock County	2/24/2007	61	0	0	$172,696	$0
City of Lubbock	3/25/2007	61	0	0	$13,691	$0
Lubbock County	9/26/2007	55	0	0	$101,137	$0
Lubbock County	12/27/2007	39	0	0	$2,677	$0
Lubbock County	1/29/2008	36	0	0	$133,195	$0
Lubbock County	5/21/2008	51	0	2	$324,453	$0
City of Wolfforth	5/21/2008	56	0	0	$129,781	$0
City of Lubbock	5/27/2008	52	0	0	$6,489	$0
City of Shallowater	6/19/2008	56	0	0	$32,122	$0
City of Lubbock	8/14/2008	53	0	0	$25,666	$0
Lubbock County	12/8/2008	52	0	0	$133,735	$0
Lubbock County	12/14/2008	50	0	0	$33,434	$0
Lubbock County	4/9/2009	54	0	0	$329,615	$0
City of Lubbock	5/12/2009	48	0	0	$2,629	$0
City of New Deal	5/26/2009	54	0	0	$6,573	$0
Lubbock County	6/4/2009	82	0	0	$32,587	$0
City of Wolfforth	6/14/2009	57	0	0	$423,626	$0
Lubbock County	12/8/2009	55	0	0	$325,480	$0
City of Slaton	3/8/2010	65	0	0	$2,584	$0
Lubbock County	5/10/2010	51	0	0	$19,329	$0
City of Wolfforth	6/20/2010	55	0	0	$25,798	$0
City of Lubbock	9/2/2010	61	0	0	$128,708	$0

SECTION 5: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (MPH)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	9/2/2010	52	0	0	$25,742	$0
City of Lubbock	10/21/2010	52	0	0	$1,285	$0
Lubbock County	10/25/2010	43	0	0	$0	$321,369
Lubbock County	2/27/2011	36	0	1	$254,077	$0
Lubbock County	4/29/2011	59	0	0	$12,501	$0
Lubbock County	8/11/2011	52	0	0	$62,051	$0
Lubbock County	10/17/2011	64	0	0	$31,042,615	$0
Lubbock County	1/22/2012	52	0	0	$124,037	$0
Lubbock County	2/20/2012	37	0	1	$12,349	$0
Lubbock County	3/8/2012	45	0	0	$12,256	$0
City of Wolfforth	4/29/2012	83	0	0	$6,109,655	$0
City of Idalou	6/14/2012	56	0	0	$2,450	$0
City of Lubbock	6/14/2012	70	0	0	$245,033	$0
Lubbock County	8/24/2012	61	0	0	$427,130	$0
Lubbock County	9/26/2012	65	0	0	$60,748	$0
City of Slaton	9/26/2012	61	0	1	$0	$0
Lubbock County	12/14/2012	61	0	0	$3,061	$0
City of Lubbock	12/14/2012	52	0	0	$612	$0
City of Lubbock	12/14/2012	61	0	0	$2,449	$0
City of Shallowater	12/14/2012	61	0	0	$3,674	$0
City of Wolfforth	3/17/2013	52	0	0	$604	$0
Lubbock County	3/23/2013	56	0	0	$1,208	$0
Lubbock County	3/23/2013	56	0	0	$3,623	$0
Lubbock County	4/30/2013	56	0	0	$302	$0
City of Lubbock	4/30/2013	50	0	0	$120,908	$0
Lubbock County	6/5/2013	71	0	0	$1,204,039	$12,040
City of Lubbock	6/5/2013	63	0	0	$481,615,732	$120,404

SECTION 5: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (MPH)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	6/29/2013	56	0	0	$3,612	$0
Lubbock County	4/28/2014	35	0	0	$59,296	$0
Lubbock County	5/26/2014	52	0	0	$2,364	$0
City of Wolfforth	6/7/2014	65	0	0	$2,359,188	$0
City of Wolfforth	6/7/2014	83	0	0	$353,878	$0
City of Shallowater	4/8/2015	66	0	0	$59,414	$0
City of Shallowater	5/28/2015	52	0	0	$4,729	$0
Lubbock County	7/6/2015	61	0	0	$28,273	$0
Lubbock County	8/23/2015	56	0	0	$944	$0
City of Lubbock	11/16/2015	70	0	0	$118,460	$0
Lubbock County	4/26/2016	56	0	0	$5,875	$0
Lubbock County	7/6/2016	56	0	0	$14,021	$0
City of Lubbock	7/14/2016	78	0	0	$233,679	$0
Lubbock County	8/10/2016	61	0	0	$11,673	$0
City of Shallowater	8/23/2016	56	0	0	$4,669	$0
City of Lubbock	8/22/2017	52	0	0	$573	$0
City of Shallowater	9/17/2017	65	0	0	$45,563	$0
City of Wolfforth	10/6/2017	52	0	0	$3,419	$0
City of Lubbock	10/5/2018	61	0	0	$3,335	$0
Lubbock County	2/11/2019	38	0	0	$3,337	$0
Lubbock County	3/13/2019	35	0	0	$2,765,006	$0
Lubbock County	4/10/2019	56	1	0	$0	$0
Lubbock County	5/20/2019	55	0	0	$274,460	$0
City of Lubbock	6/5/2019	41	0	0	$1,098	$0
City of Lubbock	7/10/2019	68	0	0	$10,958	$0
City of Lubbock	7/9/2020	70	0	2	$0	$0
TOTALS		**(Max Extent)**	**2**	**17**	**$543,487,604**	**$8,364,5641**

Table 5-4. Summary of Historical Thunderstorm Wind Events, 1955-2021

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	288	91	2	14	$40,248,830	$333,409
Village of Buffalo Springs	0	N/A	0	0	$0	$0
City of Idalou	6	65	0	0	$453,538	$0
City of Lubbock	111	84	0	2	$485,073,436	$120,404
Town of New Deal	2	54	0	0	$6,573	$0
Town of Ransom Canyon	0	N/A	0	0	$0	$0
City of Shallowater	18	66	0	0	$194,457	$0
City of Slaton	16	66	0	1	$2,584	$0
City of Wolfforth	27	83	0	0	$17,508,186	$7,910,748
Abernathy ISD	0	N/A	0	0	$0	$0
Frenship ISD	0	N/A	0	0	$0	$0
Idalou ISD	0	N/A	0	0	$0	$0
Lubbock ISD	0	N/A	0	0	$0	$0
Lubbock-Copper ISD	0	N/A	0	0	$0	$0
New Deal ISD	0	N/A	0	0	$0	$0
Roosevelt ISD	0	N/A	0	0	$0	$0
Shallowater ISD	0	N/A	0	0	$0	$0
Slaton ISD	0	N/A	0	0	$0	$0
Betty M. Condra School of Education Innovation	0	N/A	0	0	$0	$0
South Plains College	0	N/A	0	0	$0	$0
Texas Tech University System	0	N/A	0	0	$0	$0
Texas Tech University Health Sciences Center	0	N/A	0	0	$0	$0
Lubbock County Hospital System	0	N/A	0	0	$0	$0

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County WCID #1	0	N/A	0	0	$0	$0
Lubbock Reese Redevelopment Authority	1	N/A	0	0	$214,960	$0
South Plains Association of Governments	0	N/A	0	0	$0	$0
TOTAL LOSSES	**469**	**(Max Extent)**	**2**	**17**	**$552,067,125**	

Based on the list of historical thunderstorm wind events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, 76 of the events have occurred since the 2015 Plan.

SIGNIFICANT EVENTS

July 9, 2020 – Lubbock County / City of Lubbock

A thunderstorm formed to the southwest of Lubbock Preston Smith International Airport and moved east bringing damaging winds gusts to the north part of the City of Lubbock. The winds toppled a brick wall of an old roofless structure, downed power poles, and caused considerable property damage at Joyland Amusement Park. In addition, two reported injuries related to falling trees occurred during the storm event.

April 10, 2019 – Lubbock County

A strong cycle moving across the central Plain into the Southern part of Texas resulted in maximum wind gusts per county are as follows per the Texas Tech University West Texas mesonet: 64 mph at Reese Center (Lubbock County). The event had no reported damages as a result, however one fatality reported due to resident being outside during storm event.

June 5, 2013 – City of Lubbock

A thunderstorm complex moved through southwest Texas producing winds from 72 mph up to 90 mph and hail up to the size of baseballs. Several dozen damage reports were received including downed numerous trees, snapped almost 100 power poles, shattered windows, and inflicted substantial damage to roofs, windows, vehicles, and structures. An electrical utility company stated that the number and severity of power outages in Lubbock alone reporting nearly 30,000 customers without power in the City of Lubbock. Total damages from this storm could exceed $500 million, With estimated crop damages to be $100,000. There were no serious injuries reported.

April 29, 2012 – City of Wolfforth

In the Wolfforth area, there were destructive wind gusts as high as 95 mph, as measured by a West Texas mesonet site, located at 6SSW Wolfforth. Trees were uprooted, and nearby roofs from a house and mobile homes were blown off. The total economic losses were estimated at $25 million.

August 11, 2011 – City of Lubbock
A slow-moving storm hit portions of the City of Lubbock with one to four inches of rainfall over a period of about one hour. Several thousand cloud-to-ground lightning strikes also affected the city causing numerous structure fires.

June 14, 2009 – Lubbock County
Damaging winds raced out ahead of a complex of severe thunderstorms and overspread the Lubbock vicinity. Winds, estimated near 60 mph, reportedly downed fences in a residential area northeast of Wolfforth, and the Automated Surface Observing System at Lubbock's Preston Smith International Airport recorded a peak gust of 66 mph. Across the city, at least twenty-six utility lines were downed by the winds and tree damage was reportedly widespread. One tree was blown onto a home and caused minor structural damage. Roofs were partially blown off of three homes, and at least two travel trailers and two center pivot irrigation systems were destroyed. Despite the damages, no injuries were reported.

PROBABILITY OF FUTURE EVENTS

Most thunderstorm winds occur during the months of March, April, May, and September. Based on available records of historic events, there have been 469 events in a 67-year reporting period, which provides a probability of one to two events every year. Even though the intensity of thunderstorm wind events is not always damaging for the Lubbock County planning area, the frequency of occurrence for a thunderstorm wind event is highly likely. This means that an event is probable within the next year for the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since thunderstorm wind events can occur at different strength levels, in random locations, and can create relatively narrow paths of destruction. Due to the randomness of these events, all existing and future structures and facilities in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, could potentially be impacted and remain vulnerable to possible injury and property loss from strong winds.

Trees, power lines and poles, signage, manufactured housing, radio towers, concrete block walls, storage barns, windows, garbage recepticles, brick facades, and vehicles, unless reinforced, are vulnerable to thunderstorm wind events. More severe damage involves windborne debris; in some instances, patio furniture and other lawn items have been reported to have been blown around by wind and, very commonly, debris from damaged structures in turn have caused damage to other buildings not directly impacted by the event. In numerous instances roofs have been reported as having been torn off of buildings. The portable buildings typically used at schools and construction sites would be more vulnerable to thunderstorm wind events than typical site-built structures and could potentially pose a greater risk for wind-blown debris.

The US Census data indicates a total of 6,080 manufactured homes located in the Lubbock County planning area (4.7%), including participating jurisdictions (Table 5-5). In addition, 48.4% (approximately 62,511 structures) of the single family residential (SFR) structures in the entire planning area were built before 1980. These structures would typically be built to lower or less

stringent construction standards than newer construction and may be more susceptible to damages during significant wind events.

Table 5-5. Structures at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Lubbock County[4]	6,080	62,511
Village of Buffalo Springs	3	310
City of Idalou	32	714
City of Lubbock	1,557	54,142
Town of New Deal	183	213
Town of Ransom Canyon	0	186
City of Shallowater	110	462
City of Slaton	341	1,989
City of Wolfforth	58	529
Abernathy ISD	0	0
Frenship ISD	0	0
Idalou ISD	0	0
Lubbock ISD	73	0
Lubbock-Copper ISD	0	0
New Deal ISD	4	0
Roosevelt ISD	1	0
Shallowater ISD	0	0
Slaton ISD	0	0
Betty M. Condra School of Education Innovation	0	0
South Plains College	0	0
Texas Tech University System	3	0
Texas Tech University Health Sciences Center	0	0

[4] County totals includes all jurisdictions and unincorporated areas within the county.

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Lubbock County Hospital System	6	0
Lubbock County WCID #1	0	0
Lubbock Reese Redevelopment Authority	0	0
South Plains Association of Governments	0	0

While all citizens are at risk to the impacts of thunderstorm wind, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 18.5% of the planning area population live below the poverty level (Table 5-6).

Table 5-6. Populations at Greatest Risk by Jurisdiction[5]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Lubbock County	57,053
Village of Buffalo Springs	4
City of Idalou	310
City of Lubbock	51,146
Town of New Deal	214
Town of Ransom Canyon	10
City of Shallowater	131
City of Slaton	1,161
City of Wolfforth	462

The following critical facilities would be vulnerable to thunderstorm wind events in each participating jurisdiction:

Table 5-7. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 9 Emergency Communication Towers, 1 County Annex Building, 1 Sheriff's Office, 1 Courthouse, 2 Detention Centers, 5 Evacuation Centers

[5] US Census Bureau 2020 data for Lubbock County

JURISDICTION	CRITICAL FACILITIES
Village of Buffalo Springs	1 EOC, 1 Dam, 1 Sewage Facility, 1 Water Facility
City of Idalou	1 EOC, 1 City Hall, 1 Fire Department, 1 Maintenance Facility, 1 Medical Facility, 1 Nursing Home, 4 Shelters, 2 Lift Stations, 1 Wastewater Treatment Plant, 2 Water Tower, 4 Wells
City of Lubbock	1 EOC, 1 Airport, 1 Civic Center, 1 Fire Administration Building, 19 Fire Stations, 1 Fire Marshall's Office, 1 Government Administration Tower, 1 Health Department, 1 Police Headquarters, 4 Police Stations, 5 Canadian River Authority Facilities, 2 Land Application Facilities, 38 Lift Stations, 46 Substations, 2 National Weather Service Facilities, 15 Pump Stations, 4 Radio Towers, 1 Reservoir, 2 Water Plants, 2 Water Reclamation Facilities, 4 Water Towers, 1 Well Field
Town of New Deal	1 Government Facility, 1 Fire Station, 4 Lift Stations, 2 Pump Stations, 2 Water Storage Facility, 1 Water Well, 1 Sewage Pond, 1 Wastewater Facility
Town of Ransom Canyon	1 Government Building, 1 Shelter, 1 Communications Facility, 3 Fire Stations, 1 Operations Building, 1 Dam, 4 Lift Stations, 2 Pump Stations, 1 Wastewater Plant, 1 Water Supply Facility, 3 Water Tank, 1 Water Tower
City of Shallowater	1 City Hall, 1 EMS Station, 1 Fire Station, 1 Police Station, 1 Water Treatment Plant
City of Slaton	1 City Hall, 2 City Department Buildings, 1 Airport, 1 EMS Station, 1 Fire Station, 1 Police Station, 4 Schools, 2 Medical Facilities, 4 Tornado Shelters, 6 Lift Stations, 2 Pump Stations, 2 Water Towers, 1 Sewage Pond
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Stations, 1 Assisted Living Facility, 2 Daycare Facility, 1 Maintenance Building, 2 Medical Clinics, 4 Schools, 1 School Administration Building, 1 Sewage Plant, 1 Water Treatment Plant
Abernathy ISD	1 Administration Building, 1 Elementary School, 1 High School, 1 Middle School
Frenship ISD	1 Administration Building, 9 Elementary Schools, 2 High Schools, 4 Middle Schools, 1 Grade Center, 1 Education Center, 1 Maintenance Facility, 1 Center Operations Facility, 1 Transportation Operations Facility, 1 Field House
Idalou ISD	1 Elementary School, 1 High School, 1 Middle School
Lubbock ISD	3 Emergency Operation Centers, 29 Elementary School, 5 High School, 7 Middle School, 3 Academies, 3 Specialized Schools, 1 Educational Support Center, 1 Technology Center, 1 Vocational Center, 1 Aquatic Center, 7 Fields, 1 Maintenance Facility, 2 Warehouses, 1 Transportation Center
Lubbock-Copper ISD	1 Administration Building, 5 Elementary School, 2 High School, 2 Middle School, 1 Academy, 1 Special Education Building

JURISDICTION	CRITICAL FACILITIES
New Deal ISD	1 Administration Building, 1 High School, 1 Middle School
Roosevelt ISD	1 Administration Building, 1 Elementary, 1 Secondary School, 3 Campus Buildings, 1 Community Center, 1 Daycare Facility, 1 Maintenance Facility, 6 Fields / Athletic Facilities, 1 Gymnasium, 7 School Houses, 2 Storage Facilities, 1 Transportation Facility, 1 Water Tower
Shallowater ISD	1 Elementary School, 1 High School, 1 Middle School, 1 Intermediate School
Slaton ISD	1 Administration Building, 2 Elementary School, 1 High School, 1 Middle School, 1 Campus Center, 1 Maintenance Facility, 1 Transportation Facility
Betty M. Condra School of Education Innovation	1 Main Campus Facility
South Plains College	1 Central Campus, 7 Classroom Buildings, 1 Technical Center, 1 Internet Building
Texas Tech University System	1 Emergency Operations, 2 Administration Building, 1 Administration Support Center, 6 Campus Buildings, 1 Evacuation Center, 1 Lab, 1 Library, 2 Heating / Cooling Plants, 1 Lift Station, 2 Plant Annex and Infrastructure
Texas Tech University Health Sciences Center	1 EOC, 1 Central Campus, 1 Medical Pavilion
Lubbock County Hospital System	1 Emergency Management Center, 1 Main Campus, 7 EMS Stations, 1 EMS Warehouse, 1 Hospital Warehouse, 38 Clinics, 7 Medical Offices, 5 Rehabilitation Centers
Lubbock County WCID #1	1 Administrative Building, 2 Sewage Infrastructures, 1 Water Infrastructure
Lubbock Reese Redevelopment Authority	1 EOC, 1 Communication Building, 1 Airfield Tower, 1 Data Center, 1 Evacuation Center, 1 Maintenance Operations Facility, 1 Water Treatment
South Plains Association of Governments	1 Central Office, 1 Law Enforcement Building

A thunderstorm wind event can also result in traffic disruptions, injuries and in rare cases, fatalities. Impact of thunderstorms winds experienced in the Lubbock County planning area has resulted in seventeen injuries and two fatalities. Impact of thunderstorm wind events experienced in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, would be considered “Limited,” with less than 10 percent of property expected to be destroyed and critical facilities shut down for less than 24-hours. However, with 17 injuries and 2 fatalities, the impact is considered “Substantial” with multiple deaths possible depending on the severity of the event. Overall, the average loss

estimate (in 2022 dollars) is $552,067,125, having an approximate annual loss estimate of $8,239,808 (Table 5-8).

Table 5-8. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock County	$40,582,239	$605,705
Village of Buffalo Springs	$0	$0
City of Idalou	$453,538	$6,769
City of Lubbock	$485,193,840	$7,241,699
Town of New Deal	$6,573	$98
Town of Ransom Canyon	$0	$0
City of Shallowater	$194,457	$2,902
City of Slaton	$2,584	$39
City of Wolfforth	$25,418,934	$379,387
Abernathy ISD	$0	$0
Frenship ISD	$0	$0
Idalou ISD	$0	$0
Lubbock ISD	$0	$0
Lubbock-Copper ISD	$0	$0
New Deal ISD	$0	$0
Roosevelt ISD	$0	$0
Shallowater ISD	$0	$0
Slaton ISD	$0	$0
Betty M. Condra School of Education Innovation	$0	$0
South Plains College	$0	$0
Texas Tech University System	$0	$0
Texas Tech University Health Sciences Center	$0	$0
Lubbock County Hospital System	$0	$0
Lubbock County WCID #1	$0	$0

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock Reese Redevelopment Authority	$214,960	$3,208
South Plains Association of Governments	$0	$0
Planning Area	**$552,067,125**	**$8,239,808**

ASSESSMENT OF IMPACTS

Thunderstorm wind events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. The impact of climate change could produce larger, more severe thunderstorm wind events, exacerbating the current thunderstorm wind impacts. Worsening thunderstorm wind conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- During exceptionally heavy wind events, first responders may be prevented from responding to calls, as the winds may reach a speed in which their vehicles and equipment are unsafe to operate.
- Thunderstorm wind events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning, as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.
- Critical staff may be unable to report for duty, limiting response capabilities.
- City or county departments may be damaged, delaying response and recovery efforts for the entire community.
- Private sector entities that the City and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.

- Some businesses not directly damaged by thunderstorm wind events may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to thunderstorm winds.
- Large scale wind events can have significant economic impact on the affected area, as it must now fund expenses such as infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.
- Recreational areas and parks may be damaged or inaccessible due to downed trees or debris, causing temporary impacts to area businesses.

The economic and financial impacts of thunderstorm winds on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any thunderstorm wind event.

SECTION 6: HAIL

HAZARD DESCRIPTION

Hailstorm events are a potentially damaging outgrowth of severe thunderstorms. During the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere, and the subsequent cooling of the air mass. Frozen droplets gradually accumulate into ice crystals until they fall as precipitation that is round or irregularly shaped masses of ice typically greater than 0.75 inches in diameter. The size of hailstones is a direct result of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a by-product of heating on the Earth's surface. Higher temperature gradients above Earth's surface result in increased suspension time and hailstone size.

LOCATION

Hailstorms are an extension of severe thunderstorms that could potentially cause severe damage. As a result, they are not confined to any specific geographic location and can vary greatly in size, location, intensity, and duration. Therefore, the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are equally at risk to the hazard of hail.

EXTENT

The National Weather Service (NWS) classifies a storm as "severe" if there is hail three-quarters of an inch in diameter (approximately the size of a penny) or greater, based on radar intensity or as seen by observers. The intensity category of a hailstorm depends on hail size and the potential damage it could cause, as depicted in the National Centers for Environmental Information (NCEI) Intensity Scale in Table 6-1.

Table 6-1. Hail Intensity and Magnitude[1]

SIZE CODE	INTENSITY CATEGORY	SIZE (Diameter Inches)	DESCRIPTIVE TERM	TYPICAL DAMAGE
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Marble	Slight damage to plants and crops
H2	Potentially Damaging	0.60 – 0.80	Dime	Significant damage to plants and crops
H3	Severe	0.80 – 1.20	Nickel	Severe damage to plants and crops
H4	Severe	1.2 – 1.6	Quarter	Widespread glass and auto damage
H5	Destructive	1.6 – 2.0	Half Dollar	Widespread destruction of glass, roofs, and risk of injuries
H6	Destructive	2.0 – 2.4	Ping Pong Ball	Aircraft bodywork dented and brick walls pitted
H7	Very Destructive	2.4 – 3.0	Golf Ball	Severe roof damage and risk of serious injuries
H8	Very Destructive	3.0 – 3.5	Hen Egg	Severe damage to all structures
H9	Super Hailstorms	3.5 – 4.0	Tennis Ball	Extensive structural damage, could cause fatal injuries
H10	Super Hailstorms	4.0 +	Baseball	Extensive structural damage, could cause fatal injuries

The intensity scale in Table 6-1 ranges from H0 to H10, with increments of intensity or damage potential in relation to hail size (distribution and maximum), texture, fall speed, speed of storm translation, and strength of the accompanying wind. Based on available data regarding the previous occurrences for the area, the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, may experience hailstorms ranging from an H0 to an H10. The County can mitigate a storm from low risk or hard hail to a super hailstorm with baseball size hail that leads to extensive structural damage and could cause fatal injuries. The largest hail event in the Lubbock County planning area resulted in hail measuring 4.5 inches in diameter, or a H10, which is considered a super hailstorm that can cause fatal injuries. This is the worst extent the planning area can anticipate in the future.

[1] NCEI Intensity Scale, based on the TORRO Hailstorm Intensity Scale.

HISTORICAL OCCURRENCES

Historical evidence shown in Figure 6-1 demonstrates that the planning area is vulnerable to hail events overall, which typically result from severe thunderstorm activity. Historical events with reported damages, injuries, or fatalities are shown in Table 6-2. A total of 625 reported historical hail events impacted the Lubbock County planning area between 1956 through 2021 (Summary Table 6-3); these events were reported to NCEI and NOAA databases and may not represent all hail events to have occurred during the past 66 years. Only those events for the Lubbock County planning area with latitude and longitude available were plotted (Figure 6-1). School districts and special jurisdictions reported six additional historical occurrences.

Historical hail data for the Lubbock ISD and Lubbock-Copper ISD are provided within the County/City of Lubbock events per the NCEI database as they do not have events reported separate and apart from the reported County/City of Lubbock events. There has been one reported loss as a result of hail for the Lubbock-Copper ISD.

Historical hail data for the New Deal ISD are provided within the County/Town of New Deal events per the NCEI database as they do not have events reported separate and apart from the reported County/Town of New Deal events. There has been one reported loss as a result of hail for the New Deal ISD.

Historical hail data for the Roosevelt ISD are provided within the County/City of Lubbock events per the NCEI database as they do not have events reported separate and apart from the reported County/City of Lubbock events. There has been one reported loss as a result of hail for the Roosevelt ISD.

Historical hail data for the Shallowater ISD are provided within the County/City of Shallowater events per the NCEI database as they do not have events reported separate and apart from the reported County/City of Shallowater events. There has been one reported loss as a result of hail for the Shallowater ISD.

Historical hail data for the Slaton ISD are provided within the County/City of Slaton and Village of Buffalo Springs events per the NCEI database as they do not have events reported separate and apart from the reported County/City of Slaton and Village of Buffalo springs events. There have been no reported losses for Slaton ISD.

Historical hail data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Lubbock Reese Redevelopment Authority has reported $355,181 in structural damages due to two hail events. These damages have been included in the total damages reported to the NCEI due to hail events. There have been no reported losses as a result of hail events for all other special districts participating within the Plan Update.

Figure 6-1. Spatial Historical Hail Events, 1956-2021

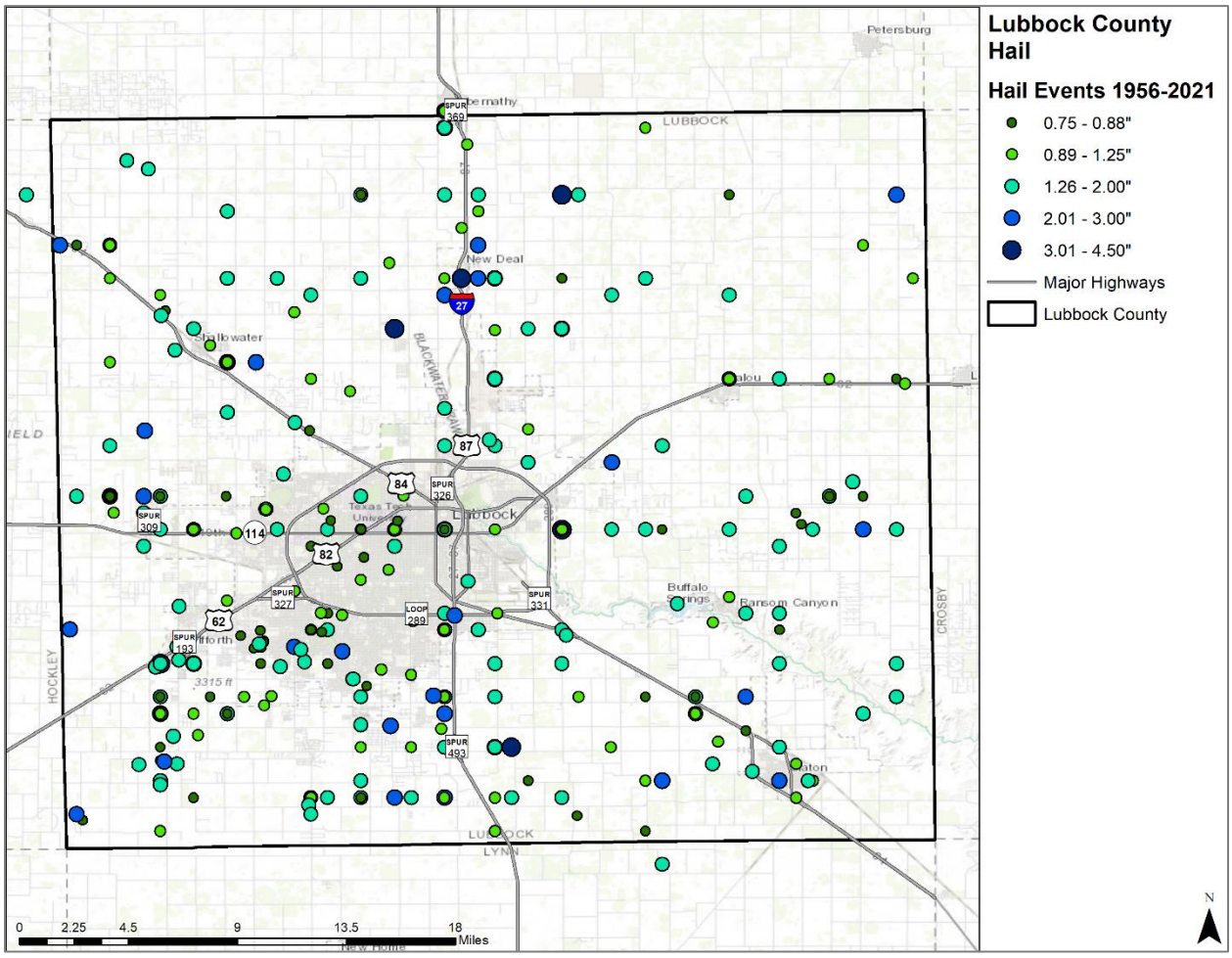


Table 6-2. Historical Hail Events, 1956-2021[2]

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	3/29/1993	1.75	0	0	$979	$0
Town of New Deal	3/29/1993	1.75	0	0	$9,789	$0
City of Slaton	5/8/1993	1.75	0	0	$975	$0
City of Lubbock	5/16/1993	2	0	0	$97,485	$0
City of Lubbock	5/16/1993	2.75	0	0	$9,749	$0
Town of New Deal	5/17/1993	1.75	0	0	$975	$0
Lubbock County	5/25/1994	1.25	0	0	$953	$0

[2] Only recorded events with fatalities, injuries, and/or damages are listed.

SECTION 6: HAIL

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	5/25/1994	1.75	0	0	$9,530	$0
City of Lubbock	6/11/1994	1.75	0	0	$94,982	$0
City of Lubbock	5/31/1995	1.75	0	0	$9,236	$0
Lubbock County	6/2/1995	2	0	0	$36,872	$0
Lubbock County	6/4/1995	4.5	0	0	$18,436	$73,744
Lubbock County	6/4/1995	2.75	0	0	$92,180	$0
City of Lubbock	5/25/1996	1.75	0	0	$538,598	$179,533
City of Lubbock	5/25/1996	1.75	0	0	$1,795,326	$0
City of Lubbock	5/25/1996	1.75	0	0	$179,533	$0
City of Shallowater	5/25/1996	1.75	0	0	$89,766	$0
City of Idalou	6/2/1996	1.75	0	0	$17,942	$44,854
City of Lubbock	6/2/1996	1.5	0	0	$17,942	$0
Town of New Deal	6/11/1996	1.75	0	0	$17,942	$17,942
City of Lubbock	4/10/1997	1.75	0	0	$21,059,775	$0
City of Lubbock	4/10/1997	1.75	0	0	$175,498	$0
City of Lubbock	4/10/1997	1.75	0	0	$31,589,663	$0
City of Slaton	5/8/1997	1.75	0	0	$1,027,305	$0
City of Lubbock	5/26/1999	2.5	0	0	$507,487	$0
City of Wolfforth	5/26/1999	2.75	0	0	$169,162	$422,906
City of Wolfforth	5/26/1999	4	0	0	$338,325	$0
City of Slaton	6/10/1999	1.5	0	0	$50,749	$0
City of Lubbock	3/21/2000	1.75	0	0	$24,633	$0
City of Lubbock	3/21/2000	1.75	0	0	$73,900	$0
City of Wolfforth	3/22/2000	1.75	0	0	$16,422	$0
City of Wolfforth	3/22/2000	2	0	0	$41,055	$0
City of Shallowater	6/11/2000	1.75	0	0	$81,539	$2,446,183
City of Lubbock	4/21/2001	1.75	0	0	$238,396	$0

SECTION 6: HAIL

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	4/21/2001	2	0	0	$158,930	$0
Town of New Deal	5/17/2001	4.5	0	0	$47,464	$237,322
Town of New Deal	5/17/2001	2.75	0	0	$158,215	$158,215
City of Lubbock	5/30/2001	1	0	0	$31,642,994	$7,910,748
City of Lubbock	5/30/2001	1	0	0	$23,732,245	$0
City of Lubbock	5/30/2001	0.75	0	0	$15,821,497	$0
City of Lubbock	5/30/2001	1	0	0	$39,553,742	$0
City of Lubbock	5/30/2001	1	0	0	$39,553,742	$0
City of Slaton	5/30/2001	1.75	0	0	$158,215	$0
Lubbock County	5/4/2002	0.75	0	0	$15,637	$0
City of Lubbock	5/29/2002	1.5	0	0	$78,184	$0
City of Lubbock	5/29/2002	1.75	0	0	$234,551	$0
City of Lubbock	5/29/2002	1.75	0	0	$234,551	$0
Lubbock County	6/4/2002	1.5	0	0	$39,070	$0
City of Lubbock	6/4/2002	1.75	0	0	$78,140	$0
City of Lubbock	6/4/2002	1.75	0	0	$78,140	$0
City of Lubbock	6/4/2002	2	0	0	$312,560	$0
Lubbock County	4/29/2003	1.75	0	0	$4,589	$0
City of Lubbock	6/3/2003	2.75	0	0	$76,524	$153,047
City of Lubbock	5/10/2004	1.25	0	0	$37,169	$0
City of Lubbock	8/20/2004	1.75	0	0	$111,272	$0
Lubbock County	5/6/2008	2	0	0	$19,467	$0
City of Lubbock	5/6/2008	2.75	0	0	$19,467	$0
City of Lubbock	6/19/2008	1.5	0	0	$12,849	$0
Lubbock County	4/16/2009	2	0	0	$19,776,871	$0
Lubbock County	4/16/2009	1.75	0	0	$6,592,290	$0
Lubbock County	4/16/2009	2.5	0	3	$26,369,162	$0

SECTION 6: HAIL

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	6/4/2009	1.75	0	0	$2,607	$0
City of Wolfforth	6/14/2009	1.75	0	0	$391,039	$0
City of Lubbock	9/2/2010	1.25	0	0	$12,871	$0
City of Shallowater	3/19/2011	1.75	0	0	$62,906	$0
City of Shallowater	3/19/2011	2.75	0	0	$37,744	$0
City of Lubbock	5/11/2011	1	0	0	$24,884	$0
City of Wolfforth	4/14/2012	1	0	1	$0	$0
Lubbock County	4/29/2012	2.75	0	0	$24,438,621	$0
Town of New Deal	6/17/2013	4.5	0	0	$60,202	$16,856,551
Lubbock County	8/28/2014	1.25	0	0	$2,364,058	$0
City of Wolfforth	5/5/2015	1.75	0	0	$59,113	$0
Lubbock County	5/8/2015	4.5	0	0	$236,452,556	$118,226,278
Lubbock County	5/28/2015	1.5	0	0	$118,226	$0
City of Shallowater	5/28/2015	1.5	0	0	$118,226	$591,131
City of Wolfforth	5/30/2016	1.25	0	0	$351,100	$0
City of Wolfforth	7/5/2016	1	0	0	$29,210	$0
City of Shallowater	6/30/2017	2.5	0	0	$6,886,522	$11,477,537
Lubbock County	5/19/2018	3	0	0	$33,524,810	$0
City of Slaton	5/19/2018	2.75	0	0	$11,175	$0
City of Wolfforth	5/5/2019	1.75	0	0	$1,646,760	$0
City of Wolfforth	5/8/2019	1.75	0	0	$13,174	$0
Lubbock County	5/20/2020	3	0	0	$109,654,672	$0
TOTALS		**(Max Extent)**	**0**	**4**	**$873,823,894**	

Table 6-3. Historical Hail Events Summary, 1956-2021

JURISDICTION	NUMBER of EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	275	4.5	0	3	$459,531,586	$129,638,700
Village of Buffalo Springs	0	N/A	0	0	$0	$0
City of Idalou	18	1.75	0	0	$17,942	$2,047,442
City of Lubbock	165	2.75	0	0	$208,186,515	$10,281,028
Town of New Deal	29	4.5	0	0	$294,587	$18,700,737
Town of Ransom Canyon	1	1	0	0	$0	$0
City of Shallowater	50	2.75	0	0	$7,276,703	$27,036,300
City of Slaton	37	2.75	0	0	$1,248,419	$1,165,943
City of Wolfforth	50	4	0	1	$3,055,360	$5,342,632
Abernathy ISD	0	N/A	0	0	$0	$0
Frenship ISD	0	N/A	0	0	$0	$0
Idalou ISD	0	N/A	0	0	$0	$0
Lubbock ISD	0	N/A	0	0	$0	$0
Lubbock-Copper ISD	1	Unknown	0	0	$2,766.41	$0
New Deal ISD	1	Unknown	0	0	$4,391,359.36	$0
Roosevelt ISD	1	Unknown	0	0	$1,609,898.74	$0
Shallowater ISD	1	N/A	0	0	$0	$0
Slaton ISD	0	N/A	0	0	$0	$0
Betty M. Condra School of Education Innovation	0	N/A	0	0	$0	$0
South Plains College	0	N/A	0	0	$0	$0
Texas Tech University System	0	N/A	0	0	$0	$0
Texas Tech University Health Science Center	0	N/A	0	0	$0	$0

JURISDICTION	NUMBER of EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County Hospital System	0	N/A	0	0	$0	$0
Lubbock County WCID #1	0	N/A	0	0	$0	$0
Lubbock Reese Redevelopment Authority	2	Unknown	0	0	$355,181.41	$0
South Plains Association of Governments	0	N/A	0	0	$0	$0
TOTAL LOSSES	**631**	**(Max Extent)**	**0**	**0**	**$880,183,099.92**	

Based on the list of historical hail events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, 74 of the events have occurred since the 2015 Plan according to NCEI, with an additional 6 reported by special districts.

SIGNIFICANT EVENTS

May 5, 2020 – Lubbock County

A thunderstorm event moved northward toward the City of Lubbock moving quickly towards the southern portion of the County. Reported indicated hail ranging up to three inches in diameter and continuing to the north and central part where reports noted hail the size of tennis balls. While this initial storm was affecting the central portion of the city, a second severe thunderstorm developed over Wolfforth and moved to the northeast. This storm produced hail up to two inches in diameter from just east of Wolfforth. Numerous vehicles and roofs on homes were damaged, primarily from the initial thunderstorm that moved through the central part of Lubbock. Total losses were estimated at over $100 million.

May 19, 2018 – Lubbock County

Scattered thunderstorms developed effecting South Lubbock in which large hail, reports of quarter size to golf ball size, falling for up to 15 minutes in some locales. Preliminary insurance data indicated approximately 4000 auto claims were filed, with an estimated 1200 homes potentially in need of new roofs. Total losses to homes and vehicles in Lubbock alone could exceed $30 million.

April 29, 2012 – Lubbock County

Moist upslope flow along a retreating east-west oriented surface boundary focused scattered thunderstorms across the western South Plains in the early evening of April 29. Ample wind shear and instability allowed several of these storms to quickly become supercellular, producing very large hail, some giant, accompanied by destructive straight-line winds as they drifted east-southeast. The most prolific supercell developed west-northwest of Levelland around 1800 CST and moved eastward near Highway 114 before merging with another supercell near the Hockley-Lubbock County line. At this point, the supercell intensified further and turned southeast moving across southwest and south-central Lubbock County as a significant high precipitation supercell. Destructive winds and very large hail (up to softball size in a few locations) accompanied this storm as it tracked from near Smyer southeast to Woodrow creating extensive damage to

structures and vehicles in its path. A NWS storm survey revealed the most significant damage occurred from wind-driven hail along FM 41, just west of Highway 87, and also between FM 179 and Woodrow Road. In some instances, the west-facing exterior of homes in these areas were completely shredded. This damage was compounded by the supercell's slow motion which resulted in up to a 15-minute period of destructive wind gusts as high as 95 mph, as measured by a West Texas mesonet site located 6SSW Wolfforth. Later this evening, the low-level jet intensified and ignited additional severe storms over portions of the central and southern South Plains. One of these storms was a slow-moving elevated supercell that moved over areas of southeast Hockley and southwest Lubbock Counties previously impacted by the earlier supercell. This storm created additional instances of large hail; however, excessive rainfall in a short time span over already wet soils lead to large areas of mostly rural flooding. Many roads, especially between Levelland and Wolfforth, became impassable. Damage to vehicles and homes in this hail's path was severe with many windshields, windows and skylights completely destroyed. Several hundred homes likely required new roofs.

October 21, 2010 – Lubbock County
Severe thunderstorms impacted the West Texas South Plains during the afternoon and evening of October 21. Initial reports from the broadcast media indicated that quarter size hail fell near 73rd Street and Slide Road in southwest Lubbock at 1659 CST. By 1705 CST, golf ball size hail was reported near 55th Street and Utica. Additional reports of quarter size hail were received near 17th Street and Chicago Avenue at 1710 CST.

This severe weather event brought the region's most monetarily significant weather-related impacts of 2010 and dealt an extensive loss to South Plain's cotton crops - the staple of the local economy. As storms increased in number and intensity, swaths of large hail devastated cotton crops. The most significant damages occurred in Terry, Lynn, and Lubbock Counties. At the time, South Plains crops were at maturity and farmers had just begun harvests, and cotton markets were trading at a historic high of $1.26 per pound. Post-storm surveys indicated that an estimated 100,000 acres of cotton were severely degraded or destroyed. Total economic damages were estimated by state officials to approach $50 million. Newspaper articles across the region contained interviews from individual farmers who claimed losses in excess of $50,000. Losses were not fully recouped from insurance since pay-outs were based upon decade-long earning histories, and not reflective of record high cotton prices that would have been realized by a healthy harvest. Further, local agricultural officials stated that the devastating storms struck at a time when producers had the maximum investment in crops, so the true impact on the local economy may be immeasurable.

April 16, 2009 – Lubbock County
A severe weather outbreak occurred over West Texas during the afternoon and evening hours of April 16, resulting in significant public impacts. Despite the occurrence of thirteen tornadoes across the South Plains region, most of the damage resulted from destructive hail and heavy rainfall. Thunderstorms first developed over the northern South Plains around 1300 CST. These early afternoon storms initiated as supercells but transitioned into a small-scale convective complex that produced extensive amounts of large hail and heavy rainfall. Two supercell thunderstorms impacted Lubbock County. One of these storms produced a destructive hail swath through the City of Lubbock damaging some 3,000 homes and more than 1,100 vehicles, resulting in an estimated $40 million in damages. Meanwhile, a second supercell storm over eastern Lubbock County produced a family of weak tornadoes along U.S. Highway 82, east of Idalou.

Giant two-and-a-half-inch hail stones fell over the South Haven, Sun Ridge, and Lake Ridge subdivisions of southwest Lubbock, between Slide Road and Quaker Avenue, around 1540 CST. The hailstones damaged roofs and skylights on over a thousand homes in the mentioned subdivisions, and three people sought medical treatment at local hospitals for minor injuries related to the hail. Hail stones also reportedly killed a number of birds. Well over 600 vehicles were damaged in these subdivisions and adjacent areas of the city. Damages in the mentioned subdivisions were estimated at $20 million, with hail damage across the City of Lubbock estimated to total $40 million.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, 631 events in a 66-year reporting period for Lubbock County provides a probability of one to two events per year. This frequency supports a highly likely probability of future events for the Lubbock County planning area including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

VULNERABILITY AND IMPACT

Damage from hail approaches 1 billion dollars in the U.S. each year. Much of the damage inflicted by hail is to crops. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are most commonly damaged by hail.

Utility systems on roofs at school districts and critical facilities would be vulnerable and could be damaged. Hail could cause a significant threat to people as they could be struck by hail and falling trees and branches. Outdoor activities and events may elevate the risk to residents and visitors when a hailstorm strikes with little warning. Portable buildings typically utilized by schools and commercial sites such as construction areas would be more vulnerable to hail events than the typical site-built structures.

The Lubbock County planning area features mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to hail events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area including all participating jurisdictions which would also be more vulnerable. The US Census data indicates a total of 6,080 manufactured homes located in the Lubbock County planning area (4.7%), including participating jurisdictions (Table 6-4). In addition, 48.4% (approximately 62,511 structures) of the single family residential (SFR) structures in the entire planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant wind events.

Table 6-4. Structures at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Lubbock County[3]	6,080	62,511
Village of Buffalo Springs	3	310

[3] County totals includes all jurisdictions and unincorporated areas within the county.

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
City of Idalou	32	714
City of Lubbock	1,557	54,142
Town of New Deal	183	213
Town of Ransom Canyon	0	186
City of Shallowater	110	462
City of Slaton	341	1,989
City of Wolfforth	58	529
Abernathy ISD	0	0
Frenship ISD	0	0
Idalou ISD	0	0
Lubbock ISD	73	0
Lubbock-Copper ISD	0	0
New Deal ISD	4	0
Roosevelt ISD	1	0
Shallowater ISD	0	0
Slaton ISD	0	0
Betty M. Condra School of Education Innovation	0	0
South Plains College	0	0
Texas Tech University System	3	0
Texas Tech University Health Sciences Center	0	0
Lubbock County Hospital System	6	0
Lubbock County WCID #1	0	0
Lubbock Reese Redevelopment Authority	0	0
South Plains Association of Governments	0	0

While all citizens are at risk to the impacts of hail, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term

stay away from home, and to rebuild or repair their homes. An estimated 18.5% of the planning area population live below the poverty level (Table 6-5).

Table 6-5. Populations at Greatest Risk by Jurisdiction[4]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Lubbock County	57,053
Village of Buffalo Springs	4
City of Idalou	310
City of Lubbock	51,146
Town of New Deal	214
Town of Ransom Canyon	10
City of Shallowater	131
City of Slaton	1,161
City of Wolfforth	462

The following critical facilities would be vulnerable to hail events in each participating jurisdiction:

Table 6-6. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 9 Emergency Communication Towers, 1 County Annex Building, 1 Sheriff's Office, 1 Courthouse, 2 Detention Centers, 5 Evacuation Centers
Village of Buffalo Springs	1 EOC, 1 Dam, 1 Sewage Facility, 1 Water Facility
City of Idalou	1 EOC, 1 City Hall, 1 Fire Department, 1 Maintenance Facility, 1 Medical Facility, 1 Nursing Home, 4 Shelters, 2 Lift Stations, 1 Wastewater Treatment Plant, 2 Water Tower, 4 Wells
City of Lubbock	1 EOC, 1 Airport, 1 Civic Center, 1 Fire Administration Building, 19 Fire Stations, 1 Fire Marshall's Office, 1 Government Administration Tower, 1 Health Department, 1 Police Headquarters, 4 Police Stations, 5 Canadian River Authority Facilities, 2 Land Application Facilities, 38 Lift Stations, 46 Substations, 2 National Weather Service Facilities, 15 Pump Stations, 4 Radio Towers, 1 Reservoir, 2 Water Plants, 2 Water Reclamation Facilities, 4 Water Towers, 1 Well Field
Town of New Deal	1 Government Facility, 1 Fire Station, 4 Lift Stations, 2 Pump Stations, 2 Water Storage Facility, 1 Water Well, 1 Sewage Pond, 1 Wastewater Facility

[4] US Census Bureau 2020 data for Lubbock County

JURISDICTION	CRITICAL FACILITIES
Town of Ransom Canyon	1 Government Building, 1 Shelter, 1 Communications Facility, 3 Fire Stations, 1 Operations Building, 1 Dam, 4 Lift Stations, 2 Pump Stations, 1 Wastewater Plant, 1 Water Supply Facility, 3 Water Tank, 1 Water Tower
City of Shallowater	1 City Hall, 1 EMS Station, 1 Fire Station, 1 Police Station, 1 Water Treatment Plant
City of Slaton	1 City Hall, 2 City Department Buildings, 1 Airport, 1 EMS Station, 1 Fire Station, 1 Police Station, 4 Schools, 2 Medical Facilities, 4 Tornado Shelters, 6 Lift Stations, 2 Pump Stations, 2 Water Towers, 1 Sewage Pond
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Stations, 1 Assisted Living Facility, 2 Daycare Facility, 1 Maintenance Building, 2 Medical Clinics, 4 Schools, 1 School Administration Building, 1 Sewage Plant, 1 Water Treatment Plant
Abernathy ISD	1 Administration Building, 1 Elementary School, 1 High School, 1 Middle School
Frenship ISD	1 Administration Building, 9 Elementary Schools, 2 High Schools, 4 Middle Schools, 1 Grade Center, 1 Education Center, 1 Maintenance Facility, 1 Center Operations Facility, 1 Transportation Operations Facility, 1 Field House
Idalou ISD	1 Elementary School, 1 High School, 1 Middle School
Lubbock ISD	3 Emergency Operation Centers, 29 Elementary School, 5 High School, 7 Middle School, 3 Academies, 3 Specialized Schools, 1 Educational Support Center, 1 Technology Center, 1 Vocational Center, 1 Aquatic Center, 7 Fields, 1 Maintenance Facility, 2 Warehouses, 1 Transportation Center
Lubbock-Copper ISD	1 Administration Building, 5 Elementary School, 2 High School, 2 Middle School, 1 Academy, 1 Special Education Building
New Deal ISD	1 Administration Building, 1 High School, 1 Middle School
Roosevelt ISD	1 Administration Building, 1 Elementary, 1 Secondary School, 3 Campus Buildings, 1 Community Center, 1 Daycare Facility, 1 Maintenance Facility, 6 Fields / Athletic Facilities, 1 Gymnasium, 7 School Houses, 2 Storage Facilities, 1 Transportation Facility, 1 Water Tower
Shallowater ISD	1 Elementary School, 1 High School, 1 Middle School, 1 Intermediate School
Slaton ISD	1 Administration Building, 2 Elementary School, 1 High School, 1 Middle School, 1 Campus Center, 1 Maintenance Facility, 1 Transportation Facility
Betty M. Condra School of Education Innovation	1 Main Campus Facility

JURISDICTION	CRITICAL FACILITIES
South Plains College	1 Central Campus, 7 Classroom Buildings, 1 Technical Center, 1 Internet Building
Texas Tech University System	1 Emergency Operations, 2 Administration Building, 1 Administration Support Center, 6 Campus Buildings, 1 Evacuation Center, 1 Lab, 1 Library, 2 Heating / Cooling Plants, 1 Lift Station, 2 Plant Annex and Infrastructure
Texas Tech University Health Sciences Center	1 EOC, 1 Central Campus, 1 Medical Pavilion
Lubbock County Hospital System	1 Emergency Management Center, 1 Main Campus, 7 EMS Stations, 1 EMS Warehouse, 1 Hospital Warehouse, 38 Clinics, 7 Medical Offices, 5 Rehabilitation Centers
Lubbock County WCID #1	1 Administrative Building, 2 Sewage Infrastructures, 1 Water Infrastructure
Lubbock Reese Redevelopment Authority	1 EOC, 1 Communication Building, 1 Airfield Tower, 1 Data Center, 1 Evacuation Center, 1 Maintenance Operations Facility, 1 Water Treatment
South Plains Association of Governments	1 Central Office, 1 Law Enforcement Building

Hail has been known to cause injury to humans and occasionally has been fatal. Overall, the average loss estimate of property and crops in the planning area is considered $880,183,100 with an average annualized loss of $13,336,108. Based on historic loss and damages, the impact of hail damages on the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, can be considered “Minor” severity of impact meaning injuries and illness do not result in permanent disability, community critical facilities are shut down for one week, and more than ten percent of property destroyed or with major damage.

Table 6-7. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Lubbock County	$589,170,286	$8,926,823
Village of Buffalo Springs	$0	$0
City of Idalou	$2,065,384	$31,294
City of Lubbock	$218,467,543	$3,310,114
Town of New Deal	$18,995,324	$287,808
Town of Ransom Canyon	$0	$0
City of Shallowater	$34,313,003	$519,894

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
City of Slaton	$2,414,362	$36,581
City of Wolfforth	$8,397,992	$127,242
Abernathy ISD	$0	$0
Frenship ISD	$0	$0
Idalou ISD	$0	$0
Lubbock ISD	$0	$0
Lubbock-Copper ISD	$2,766	$42
New Deal ISD	$4,391,359	$66,536
Roosevelt ISD	$1,609,899	$24,392
Shallowater ISD	$0	$0
Slaton ISD	$0	$0
Betty M. Condra School of Education Innovation	$0	$0
South Plains College	$0	$0
Texas Tech University System	$0	$0
Texas Tech University Health Sciences Center	$0	$0
Lubbock County Hospital System	$0	$0
Lubbock County WCID #1	$0	$0
Lubbock Reese Redevelopment Authority	$355,181	$5,382
South Plains Association of Governments	$0	$0
Planning Area	**$880,183,100**	**$13,336,108**

ASSESSMENT OF IMPACTS

Hail events have the potential to pose a significant risk to people and can create dangerous situations. The impact of climate change could produce larger, more severe hail events, exacerbating the current hail impacts. Worsening hail conditions can be frequently associated with a variety of impacts, including:

- Hail may create hazardous road conditions during and immediately following an event, delaying first responders from providing for or preserving public health and safety.
- Individuals and first responders who are exposed to the storm may be struck by hail, falling branches, or downed trees resulting in injuries or possible fatalities.

- Residential structures can be damaged by falling trees, which can result in physical harm to occupants.
- Large hail events will likely cause extensive roof damage to residential structures along with siding damage and broken windows, creating a spike in insurance claims and a rise in premiums.
- Automobile damage may be extensive depending on the size of the hail and length of the storm.
- Hail events can result in power outages over widespread areas increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning, as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, damaged structures, hazardous spills, and debris that often accompany hail events, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Downed power lines and large debris, such as downed trees, can result in the inability of emergency response vehicles to access areas of the community.
- Hazardous road conditions may prevent critical staff from reporting for duty, limiting response capabilities.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by the hail event may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by large hail events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A significant hail event could significantly damage agricultural crops, resulting in extensive economic losses for the community and surrounding area.
- Hail events may injure or kill livestock and wildlife.
- A large hail event could impact the accessibility of recreational areas and parks due to extended power outages or debris clogged access roads.

The economic and financial impacts of hail will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning conducted by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of any hail event.

SECTION 7: WINTER STORM

HAZARD DESCRIPTION

A severe winter storm event is identified as a storm with snow, ice, or freezing rain. This type of storm can cause significant problems for area residents. Winter storms are associated with freezing or frozen precipitation such as freezing rain, sleet, snow, and the combined effects of winter precipitation and strong winds. Wind chill is a function of temperature and wind. Low wind chill is a product of high winds and freezing temperatures.

Winter storms that threaten Lubbock County planning area usually begin as powerful cold fronts that push south from central Canada. Although the county is at risk to ice hazards, extremely cold temperatures, and snow, the effects and frequencies of winter storm events are generally mild and short-lived.

As indicated in Figure 7-1, the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, is located in USDA Hardiness Zone 7a, with annual minimum temperatures between 0° and 5°. During times of ice and snow accumulation, response times will increase until public works road crews are able to make major roads passable. Table 7-1 describes the types of winter storms possible to occur in the Lubbock County planning area including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

Figure 7-1. Annual Minimum Temperature

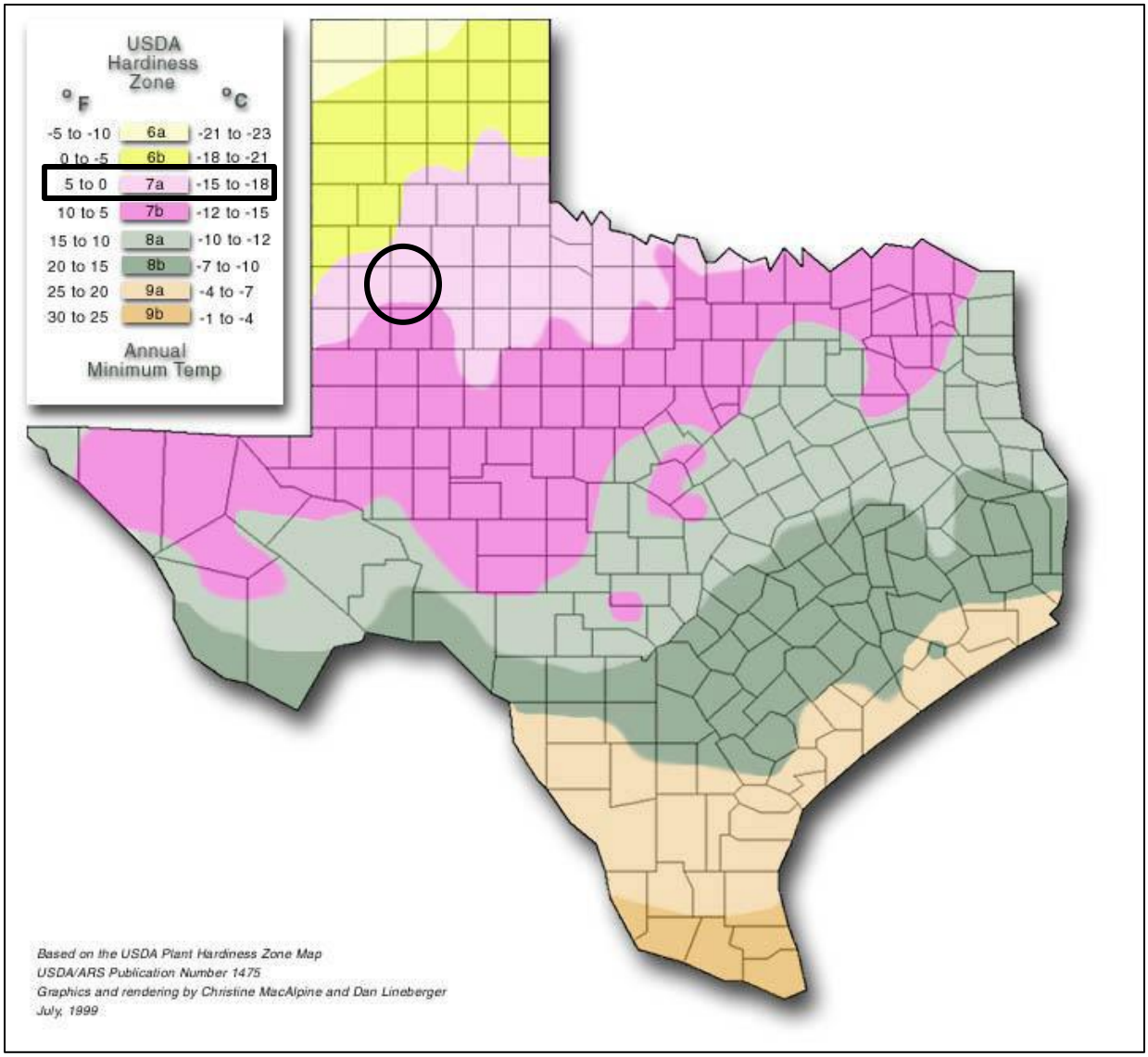


Table 7-1. Types of Winter Storms

TYPE OF WINTER STORM	DESCRIPTION
Winter Weather Advisory	This alert may be issued for a variety of severe conditions. Weather advisories may be announced for snow, blowing or drifting snow, freezing drizzle, freezing rain, or a combination of weather events.
Winter Storm Watch	Severe winter weather conditions may affect your area (freezing rain, sleet, or heavy snow may occur separately or in combination).
Winter Storm Warning	Severe winter weather conditions are imminent.

TYPE OF WINTER STORM	DESCRIPTION
Freezing Rain or Freezing Drizzle	Rain or drizzle is likely to freeze upon impact, resulting in a coating of ice glaze on roads and all other exposed objects.
Sleet	Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it makes travel hazardous.
Blizzard Warning	Sustained wind speeds of at least 35 mph are accompanied by considerable falling or blowing snow. This alert is the most perilous winter storm with visibility dangerously restricted.
Frost/Freeze Warning	Below freezing temperatures are expected and may cause significant damage to plants, crops, and fruit trees.
Wind Chill	A strong wind combined with a temperature slightly below freezing can have the same chilling effect as a temperature nearly 50 degrees lower in a calm atmosphere. The combined cooling power of the wind and temperature on exposed flesh is called the wind-chill factor.

LOCATION

Winter storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are considered to be exposed to a winter storm hazard and could potentially be impacted.

EXTENT

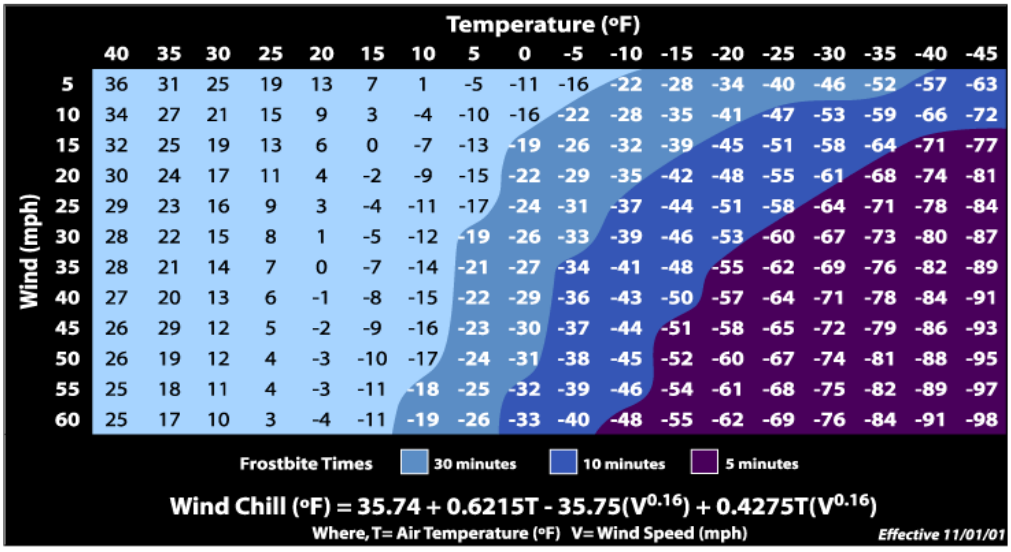
The extent or magnitude of a severe winter storm is measured in intensity based on the temperature and level of accumulations as shown in Table 7-2. Table 7-2 should be read in conjunction with the wind-chill factor described in Figure 7-2 to determine the intensity of a winter storm. The chart is not applicable when temperatures are over 50°F or winds are calm. This is an index developed by the National Weather Service.

Table 7-2. Magnitude of Severe Winter Storms

INTENSITY	TEMPERATURE RANGE (Fahrenheit)	EXTENT DESCRIPTION
Mild	40° – 50°	Winds less than 10 mph and freezing rain or light snow falling for short durations with little or no accumulations
Moderate	30° – 40°	Winds 10 – 15 mph and sleet and/or snow up to 4 inches
Significant	25° – 30°	Intense snow showers accompanied with strong gusty winds between 15 and 20 mph with significant accumulation
Extreme	20° – 25°	Wind driven snow that reduces visibility, heavy winds (between 20 to 30 mph), and sleet or ice up to 5 millimeters in diameter

INTENSITY	TEMPERATURE RANGE (Fahrenheit)	EXTENT DESCRIPTION
Severe	Below 20°	Winds of 35 mph or more and snow and sleet greater than 4 inches

Figure 7-2. Wind Chill Chart



Wind chill temperature is 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°F day would feel just as cold as a calm day with 0°F temperatures. The Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, has 80 previous occurrences recorded from 1996 through December 2021, it has been subject to blizzards, winter storm watches, warnings, freezing rain, sleet, and snow.

The average number of cold days is similar for the entire planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts. Therefore, the intensity or extent of a winter storm event to be mitigated for the area ranges from mild to significant according to the definitions at Table 7-2. Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, can expect anywhere from 4.0 inches or more of ice and snow during a winter storm event and temperatures between below 20 degrees with winds ranging 35 mph or more. This is the worst that can be anticipated to mitigate against in the future for all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

HISTORICAL OCCURRENCES

Table 7-3 shows historical occurrences for Lubbock County from 1996 through December 2021 provided by the NCEI database. Based upon NCEI records, there have been 80 recorded winter storm events within the Lubbock County planning area including the participating jurisdictions.

SECTION 7: WINTER STORM

School districts and special jurisdictions provided damage estimates and injury incidents on winter storms already reported in the NCEI, which have been added in the table below. Historical winter storm information, as provided by the NCEI, identifies winter storm activity across a multi-county forecast area for each event. The appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event, when appropriate. Historical winter storm data for the county and all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts are provided on a County-wide basis per the NCEI database. The NCEI does not provide winter storm damages at the city, district or ISD level. Participating special districts, ISDs, universities, planning authorities and hospital districts provide event and damage estimates when available. Table 7-3 shows historical incident information for the planning area.

Table 7-3. Historical Winter Storm Events, 1996-2021[1]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	11/29/2006	0	0	$1,395,275	$0
Lubbock County	11/30/2006	0	0	$558,110	$0
Lubbock County	12/19/2006	0	0	$20,898	$0
Lubbock County	2/14/2007	0	0	$345,392	$0
Lubbock County	1/19/2007	0	0	$208,344	$0
Lubbock County	4/7/2007	0	0	$408,080	$0
Lubbock County	1/12/2007	0	0	$173,620	$0
Lubbock County	12/8/2008	0	0	$13,373	$0
Lubbock County	1/31/2008	0	0	$1,065,560	$0
Lubbock County	3/2/2008	0	0	$98,751	$0
Lubbock County	12/29/2009	0	0	$26,038	$0
Lubbock County	12/1/2009	0	0	$260,384	$0
Lubbock County	12/7/2009	0	0	$1,301,919	$0
Lubbock County	1/5/2009	0	0	$199,733	$0
Lubbock County	12/23/2009	0	0	$325,480	$0
Lubbock County	1/26/2009	0	0	$3,994,658	$0
Lubbock County	1/28/2010	0	0	$1,816,478	$0
Lubbock County	2/22/2010	0	0	$259,432	$0

[1] Values are in 2022 dollars.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	5/3/2011	0	0	$0	$12,442
Lubbock County	12/2/2011	0	0	$622,913	$0
Lubbock County	12/5/2011	0	0	$934,369	$0
Lubbock County	2/12/2012	0	0	$926,198	$0
Lubbock County	3/8/2012	0	0	$12,256	$0
Lubbock County	1/4/2013	0	0	$61,045	$0
Lubbock County	4/10/2013	0	0	$604,539	$0
Lubbock County	2/21/2013	0	0	$90,823	$0
Lubbock County	3/2/2014	0	0	$59,491	$0
Lubbock County	2/22/2015	0	0	$598,896	$0
Lubbock County	11/27/2015	0	0	$769,989	$0
Lubbock County	12/31/2015	0	0	$237,732	$0
Lubbock County	12/26/2015	2	0	$14,263,930	$0
Lubbock County[2]	1/6/2017	0	1	$289,439	$0
Lubbock County[3]	12/10/2018	0	8	$0	$0
Lubbock County[4]	2/12/2020	0	1	$0	$0
Lubbock County[5]	1/11/2021	0	1	$0	$0
Lubbock County[6]	02/2021	0	17	$309,019	$0
TOTALS		**2**	**28**	**$32,264,606**	

Based on the list of historical winter storm events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, 19 of the events have occurred since the 2015 Plan.

[2] Injury reported by Lubbock County Hospital District.
[3] Injuries reported by Lubbock County Hospital District.
[4] Injury reported by Lubbock County Hospital District.
[5] Injury reported by Lubbock County Hospital District.
[6] Damage total includes reported estimates from Lubbock ISD, Roosevelt ISD, Slaton ISD, Reese Center, Lubbock Hospital District, and WCID #1. Injuries were reported for Lubbock-Cooper ISD, TTU, and Lubbock Hospital District.

SECTION 7: WINTER STORM

SIGNIFICANT EVENTS

February 14, 2021 – Lubbock County

For a few days in mid-February, the South Plains saw some of the coldest air it had observed in a decade. Cold wind chills across the entire region along with heavy snow began early in the morning of the 14th lasting until early on the 15th. Reported snowfall accumulations from NWS cooperative weather observers were approximately 5.0 inches at Slaton. Temperatures rose with reported wind chills above -15°F. Sub-zero temperatures (°F) and wind chill values below the -15 degrees (°F) were recorded by the Texas Tech University West Texas mesonet and National Weather Service cooperative observers at -1 at Wolfforth and -18°F at Lubbock, respectively. The intense and long-duration cold resulted in significant impacts locally. In addition to keeping roads hazardous, cold weather caused numerous pipes to freeze and burst causing significant property damage. The power grids were also stretched beyond their limit, with blackouts localized around Lubbock. Numerous daily record minimum temperatures and record minimum highs were set during this period. The coldest temperature recorded in Lubbock was 0°F, which was the lowest temperature recorded in Lubbock since December 1989.

January 16, 2017- Lubbock County

Light snowfall accumulations occurred through the Texas Panhandles and spread to the South and Rolling Plains. As a result the highest snowfall accumulation was two through three inches, with several car accidents reported in the City of Lubbock. There were no direct injuries or fatalities reported as a result of this storm event. Estimated damages totaled $250,000.

December 26, 2015 – Lubbock County

A strong cold front promoted temperatures falling to freezing within wind gusts between 50 – 60 mph along with freezing rain, sleet, and snow fall later that evening. Blizzard conditions were seen in the City of Lubbock with 2.7 inches of sleets and snow. Residents were alerts that a second and more potent round of snow was to be expected later that day as the storm moved across central Texas. Officially at Lubbock Airport, this storm ranked third for the greatest snow ever with 11.2 inches. Unfortunately, there were two fatalities from this blizzard. A homeless man in Lubbock succumbed to hypothermia late in the night on the 27th. He was found wearing only a light jacket, jeans and a thin blanket. No information was known on the second fatality.

In addition, tall snow drifts blocked roads and driveways. In Lubbock alone, it was estimated that about 1,400 motorists became stuck in snow drift and rescue operations were conducted for up to 32 consecutive hours to free stranded motorists. Fortunately, there were very few vehicle accidents as most people became stuck in snow instead of sliding into obstacles or other vehicles. The lack of snow removal resources, particularly in the City of Lubbock which only owned two snowplows at the time, impacted a total of 98 emergency vehicles which were immobilized in snow and were unable to respond to Lubbock residents in a timely manner. Lubbock Mayor Glen Robertson declared a state of disaster for Lubbock during the height of the blizzard which opened the door to additional state aid and resources.

Losses as a result of the storm event included economic losses from businesses being closed for up to four days and regional commerce impacts due to impassable roads may approach $200 million. Direct losses from the storm were most significant to area ranchers and dairy farmers who suffered combined losses of at least $20 million. The USDA estimated 15,000 head of dairy cattle alone died from snow suffocation in the western South Plains and far southwest Panhandle noting that this region accounts for 40 percent of Texas' milk supply. Regional commercial power utilities

were left to deal with hundreds of miles of downed power lines and toppled some power poles due to prolonged high winds, leaving residents, especially those in rural areas, without power for up to two days. Structural damages to roofing and shingles, utility sheds, pole barns, gas station overhangs, and countless garage ports were reported, while some reported sections of roofs failing from heavy snow. Total estimates as a result were approximately 12 million dollars.

February 22, 2010 – Lubbock County
A winter storm brought heavy snow and deadly travel conditions to the South Plains of West Texas during February 22 and 23. By the pre-dawn hours of February 23, at least three distinct east-west oriented bands of heavy snow had developed over the western and central South Plains and the southern Rolling Plains. These bands resulted in localized four-to-eight-inch accumulations. Sub-freezing daytime temperatures that preceded the snowfall contributed to rapid changes in driving conditions immediately following the onset of precipitation. Area roadways quickly became treacherous, and 65 weather-related accidents were reported in Lubbock. In one such incident, a Lubbock police officer suffered a broken arm when her cruiser collided with a pickup truck near the intersection of 6th Street and Frankford. A dozen vehicles reportedly slid off of U.S. Highway 84 between Lubbock and Slaton in Lubbock County, and many flights from Lubbock Preston Smith International Airport were canceled or delayed. Total economic damages were estimated at $350,000. A list of reported snow accumulations follows: four inches in Lubbock and two inches in Shallowater.

January 19, 2007 – Lubbock County
Snow accumulations totaled a foot in portions of the extreme southwestern Texas Panhandle. Heavy snowfalls were common over the northwestern half of the region, while lighter snow accumulations combined with a coating of ice over the southeastern South Plains and the Rolling Plains. Local officials across the region reported at least eighty-five vehicular accidents, including a ten-car pile-up on Loop 289 in Lubbock. No serious injuries were reported. Approximately 400 residences were estimated to have lost power during an electrical outage caused by ice accumulations from the storm south of Lubbock. Total damages were estimated at $250,000. A reported four inches of snow accumulations fell at Abernathy and Lubbock.

November 30, 2006 – Lubbock County
A winter storm produced widespread heavy snowfalls over the West Texas South Plains region during the early morning and daytime hours of November 30. Snow began to spread east over the extreme southwestern Texas Panhandle and the western South Plains the night before, on November 29. By mid-morning, on November 30, wintry precipitation began to impact the entire South Plains region. Snow accumulations up to seven inches occurred over the extreme southwestern Texas Panhandle and the northern South Plains, where drifts up to four feet deep were reported. Hazardous road conditions greeted Lubbock motorists during the morning rush hour, resulting in more than 120 reported accidents. By sunset, a sheet of ice developed over the snowpack. Reported snow accumulations across Lubbock County meeting or exceeding local Winter Storm criteria are as follows: six inches at Reese Center, four inches at Shallowater, and three inches at Lubbock, meeting Winter Weather criteria.

PROBABILITY OF FUTURE EVENTS

According to historical records, the planning area experiences approximately three winter storm events each year. Hence, the probability of a future winter storm event affecting the Lubbock

County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, is highly likely, with a winter storm likely to occur within the next year.

VULNERABILITY AND IMPACT

During periods of extreme cold and freezing temperatures, water pipes can freeze and crack, and ice can build up on power lines, causing them to break under the weight or causing tree limbs to fall on the lines. These events can disrupt electric service for long periods.

An economic impact may occur due to increased consumption of heating fuel, which can lead to energy shortages and higher prices. House fires and resulting deaths tend to occur more frequently from increased and improper use of alternate heating sources. Fires during winter storms also present a greater danger because water supplies may freeze and impede firefighting efforts.

All populations, buildings, critical facilities, and infrastructure in the entire Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are vulnerable to severe winter events.

The following critical facilities would be vulnerable to Winter Storm events in each participating jurisdiction:

Table 7-4. Critical Facilities by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 9 Emergency Communication Towers, 1 County Annex Building, 1 Sheriff's Office, 1 Courthouse, 2 Detention Centers, 5 Evacuation Centers
Village of Buffalo Springs	1 EOC, 1 Dam, 1 Sewage Facility, 1 Water Facility
City of Idalou	1 EOC, 1 City Hall, 1 Fire Department, 1 Maintenance Facility, 1 Medical Facility, 1 Nursing Home, 4 Shelters, 2 Lift Stations, 1 Wastewater Treatment Plant, 2 Water Tower, 4 Wells
City of Lubbock	1 EOC, 1 Airport, 1 Civic Center, 1 Fire Administration Building, 19 Fire Stations, 1 Fire Marshall's Office, 1 Government Administration Tower, 1 Health Department, 1 Police Headquarters, 4 Police Stations, 5 Canadian River Authority Facilities, 2 Land Application Facilities, 38 Lift Stations, 46 Substations, 2 National Weather Service Facilities, 15 Pump Stations, 4 Radio Towers, 1 Reservoir, 2 Water Plants, 2 Water Reclamation Facilities, 4 Water Towers, 1 Well Field
Town of New Deal	1 Government Facility, 1 Fire Station, 4 Lift Stations, 2 Pump Stations, 2 Water Storage Facility, 1 Water Well, 1 Sewage Pond, 1 Wastewater Facility
Town of Ransom Canyon	1 Government Building, 1 Shelter, 1 Communications Facility, 3 Fire Stations, 1 Operations Building, 1 Dam, 4 Lift Stations, 2 Pump Stations, 1 Wastewater Plant, 1 Water Supply Facility, 3 Water Tank, 1 Water Tower

JURISDICTION	CRITICAL FACILITIES
City of Shallowater	1 City Hall, 1 EMS Station, 1 Fire Station, 1 Police Station, 1 Water Treatment Plant
City of Slaton	1 City Hall, 2 City Department Buildings, 1 Airport, 1 EMS Station, 1 Fire Station, 1 Police Station, 4 Schools, 2 Medical Facilities, 4 Tornado Shelters, 6 Lift Stations, 2 Pump Stations, 2 Water Towers, 1 Sewage Pond
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Stations, 1 Assisted Living Facility, 2 Daycare Facility, 1 Maintenance Building, 2 Medical Clinics, 4 Schools, 1 School Administration Building, 1 Sewage Plant, 1 Water Treatment Plant
Abernathy ISD	1 Administration Building, 1 Elementary School, 1 High School, 1 Middle School
Frenship ISD	1 Administration Building, 9 Elementary Schools, 2 High Schools, 4 Middle Schools, 1 Grade Center, 1 Education Center, 1 Maintenance Facility, 1 Center Operations Facility, 1 Transportation Operations Facility, 1 Field House
Idalou ISD	1 Elementary School, 1 High School, 1 Middle School
Lubbock ISD	3 Emergency Operation Centers, 29 Elementary School, 5 High School, 7 Middle School, 3 Academies, 3 Specialized Schools, 1 Educational Support Center, 1 Technology Center, 1 Vocational Center, 1 Aquatic Center, 7 Fields, 1 Maintenance Facility, 2 Warehouses, 1 Transportation Center
Lubbock-Copper ISD	1 Administration Building, 5 Elementary School, 2 High School, 2 Middle School, 1 Academy, 1 Special Education Building
New Deal ISD	1 Administration Building, 1 High School, 1 Middle School
Roosevelt ISD	1 Administration Building, 1 Elementary, 1 Secondary School, 3 Campus Buildings, 1 Community Center, 1 Daycare Facility, 1 Maintenance Facility, 6 Fields / Athletic Facilities, 1 Gymnasium, 7 School Houses, 2 Storage Facilities, 1 Transportation Facility, 1 Water Tower
Shallowater ISD	1 Elementary School, 1 High School, 1 Middle School, 1 Intermediate School
Slaton ISD	1 Administration Building, 2 Elementary School, 1 High School, 1 Middle School, 1 Campus Center, 1 Maintenance Facility, 1 Transportation Facility
Betty M. Condra School of Education Innovation	1 Main Campus Facility
South Plains College	1 Central Campus, 7 Classroom Buildings, 1 Technical Center, 1 Internet Building
Texas Tech University System	1 Emergency Operations, 2 Administration Building, 1 Administration Support Center, 6 Campus Buildings, 1 Evacuation Center, 1 Lab, 1

JURISDICTION	CRITICAL FACILITIES
	Library, 2 Heating / Cooling Plants, 1 Lift Station, 2 Plant Annex and Infrastructure
Texas Tech University Health Sciences Center	1 EOC, 1 Central Campus, 1 Medical Pavilion
Lubbock County Hospital System	1 Emergency Management Center, 1 Main Campus, 7 EMS Stations, 1 EMS Warehouse, 1 Hospital Warehouse, 38 Clinics, 7 Medical Offices, 5 Rehabilitation Centers
Lubbock County WCID #1	1 Administrative Building, 2 Sewage Infrastructures, 1 Water Infrastructure
Lubbock Reese Redevelopment Authority	1 EOC, 1 Communication Building, 1 Airfield Tower, 1 Data Center, 1 Evacuation Center, 1 Maintenance Operations Facility, 1 Water Treatment
South Plains Association of Governments	1 Central Office, 1 Law Enforcement Building

People and animals are subject to health risks from extended exposure to cold air. Elderly people are at greater risk of death from hypothermia during these events, especially in the rural areas of the county where populations are sparse, icy roads may impede travel, and there are fewer neighbors to check in on the elderly. According to the U.S. Center for Disease Control, every year hypothermia kills about 600 Americans, half of whom are 65 years of age or older. In addition, populations living below the poverty level may not be able to afford to run heat on a regular basis

Population over 65 in the entire Lubbock County planning area is estimated at 12.4% of the total population or an estimated total of 38,331[7] potentially vulnerable residents in the planning area based on age. An estimated 18.50% of the planning area population live below the poverty level (Table 7-5).

Table 7-5. Population at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION BELOW POVERTY LEVEL
Lubbock County	38,331	57,053
Village of Buffalo Springs	109	4
City of Idalou	377	310
City of Lubbock	31,496	51,146
Town of New Deal	159	214
Town of Ransom Canyon	233	10

[7] US Census Bureau 2020 data for Lubbock County.

JURISDICTION	POPULATION 65 AND OLDER	POPULATION BELOW POVERTY LEVEL
City of Shallowater	413	131
City of Slaton	830	1,161
City of Wolfforth	355	462

Historic loss, in 2022 dollars, is estimated at $32,264,606 in damages over the 26-year recording period giving an approximate loss of $1,240,946 in damages annually (Table 7-6). The potential severity of impact for the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts in property damages is considered “Limited” with critical facilities shutdown for 24-hours or less, and less than 10% of property destroyed or with major damage. However, with 2 fatalities and 28 injuries (as reported by participating entities below) indicates an impact of “Substantial” with multiple fatalities possible depending on the severity and duration of the event.

Table 7-6. Potential Annualized Losses for Lubbock County

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock County	$32,264,606	$1,240,946

Historical winter storm event data for Frenship ISD are provided within the County events per the NCEI database as they do not have events reported separate and apart from the reported County events. There has been one reported loss as a result of winter storm for Frenship ISD totaling $53,471 in damages and no reported injuries.

Historical winter storm event data for Lubbock ISD are provided within the County events per the NCEI database as they do not have events reported separate and apart from the reported County events. There has been one reported loss as a result of winter storm for Lubbock ISD totaling $95,107 in damages and no reported injuries.

Historical winter storm event data for Lubbock-Copper ISD are provided within the County events per the NCEI database as they do not have events reported separate and apart from the reported County events. There has been one reported injury as a result of winter storm for Lubbock-Copper ISD with no reports in property damages.

Historical winter storm event data for Roosevelt ISD are provided within the County events per the NCEI database as they do not have events reported separate and apart from the reported County events. There has been one reported loss as a result of winter storm for Roosevelt ISD totaling $4,932 in damages and no reported injuries.

Historical winter storm event data for Slaton ISD are provided within the County events per the NCEI database as they do not have events reported separate and apart from the reported County events. There has been one reported loss as a result of winter storm for Slaton ISD totaling $61,330 in damages and no reported injuries.

SECTION 7: WINTER STORM

Historical winter storm event data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Lubbock County Hospital System, UMC, has reported $117,379 in damages, and 12 injuries due to winter storm events.

Historical winter storm event data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Lubbock County WCID#1 has reported $3,547 in forced labor due necessary labor hours required to ensure continuity of critical services during and after winter storm events.

Historical winter storm event data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Lubbock Reese Redevelopment Authority has reported $26,724 in damages due to winter storm events.

Historical winter storm event data for the special districts are provided within the Lubbock County events per the NCEI database as they do not have events reported separate and apart from the reported county events. The Texas Tech University System has reported property damages and 0 injuries due to winter storm events. Damage estimates were not available during the drafting of this plan.

All damages and injuries reported by participating ISDs, universities, planning authorities and hospital or special districts has been added to the events reported to the NCEI for winter storms.

ASSESSMENT OF IMPACTS

The greatest risk from a winter storm hazard is to public health and safety. The impact of climate change could produce longer, more intense winter storm events, exacerbating the current winter storm impacts. Worsening winter storm conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly and children under 5, can face serious or life-threatening health problems from exposure to extreme cold including hypothermia and frostbite.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires or generators to stay warm.
- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from exposure to extreme cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents and potential contact with downed power lines.
- Operations or service delivery may experience impacts from electricity blackouts due to winter storms.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts.

- Critical facilities without emergency backup power may not be operational during power outages.
- Emergency response and service operations may be impacted by limitations on access and mobility if roadways are closed, unsafe, or obstructed.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by ice and snow events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A winter storm event could lead to tree, shrub, and plant damage or death.
- Severe cold and ice could significantly damage agricultural crops.
- Schools may be forced to shut early due to treacherous driving conditions.
- Exposed water pipes may be damaged by severe or late season winter storms at both residential and commercial structures, causing significant damages.

The economic and financial impacts of winter weather on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by businesses and citizens will also contribute to the overall economic and financial conditions in the aftermath of a winter storm event.

SECTION 8: LIGHTNING

HAZARD DESCRIPTION

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning often strikes outside of heavy rain and might occur as far as 10 miles away from any rainfall.

According to FEMA, an average of 300 people are injured and 80 people are killed in the United States each year by lightning. Direct lightning strikes also have the ability to cause significant damage to buildings, critical facilities, and infrastructure. Lightning is also responsible for igniting wildfires that can result in widespread damages to property before firefighters have the ability to contain and suppress the resultant fire.

LOCATION

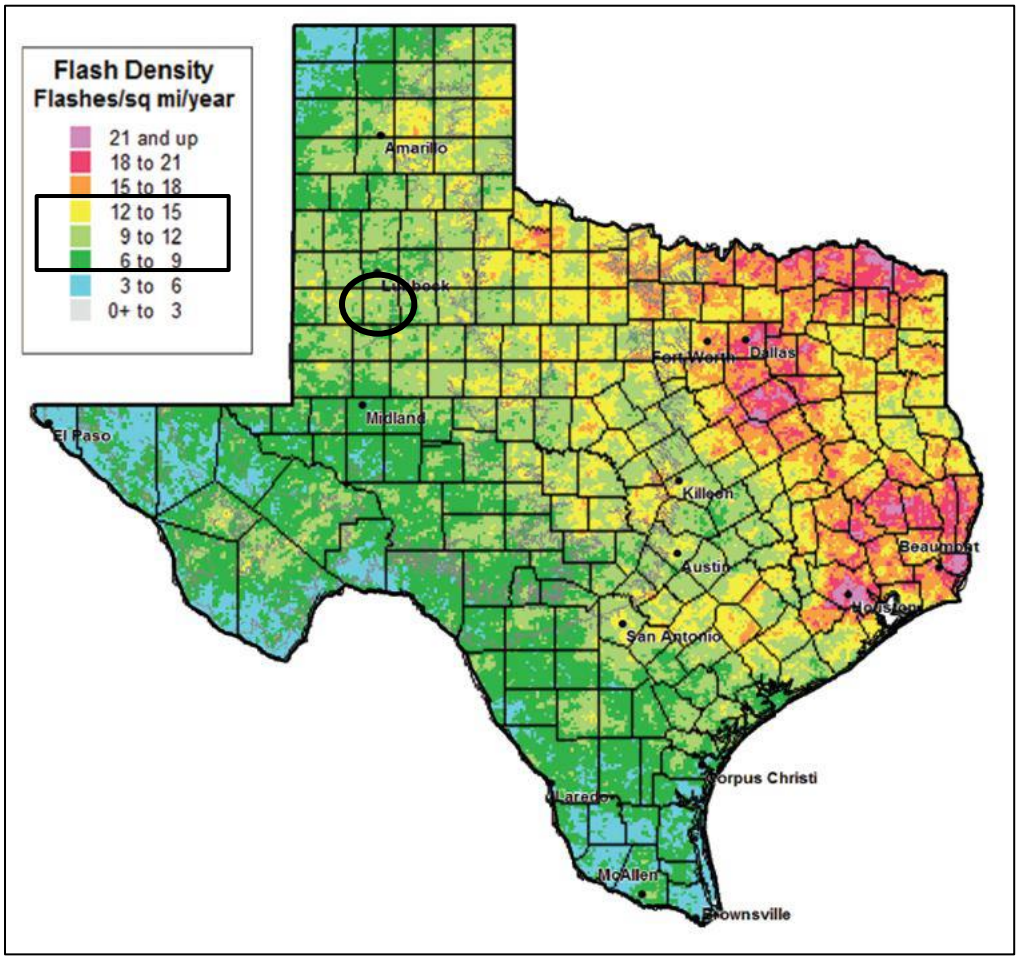
Lightning can strike in any geographic location and is considered a common occurrence in Texas. The Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, is in a region of the country that is moderately susceptible to a lightning strike. Therefore, lightning could occur at any location within the entire planning area. It is assumed that the entire Lubbock County planning area is uniformly exposed to the threat of lightning.

EXTENT

According to the NOAA, the average number of cloud-to-ground flashes for the State of Texas between 2006 and 2016 was 11.3 flashes per square mile. Vaisala's U.S. National Lightning Detection Network lightning flash density map (Figure 8-1) shows a range of six to fifteen cloud-to-ground lightning flashes per square mile per year for the entire Lubbock County planning area. This rate equates to approximately 5,374 to 13,434 flashes per year for the entire planning area.

SECTION 8: LIGHTNING

Figure 8-1. Lightning Flash Density, 2006-2016



The extent for lightning can be expressed in terms of the number of strikes in an interval. NOAA utilizes lightning activity levels (LALs) on a scale from 1-6. LAL rankings reflect the frequency of cloud-to-ground lightning either forecast or observed (Table 8-1).

Table 8-1. NOAA Lightning Activity Levels (LAL)

LAL	CLOUD & STORM DEVELOPMENT	LIGHTNING STRIKES/ 15 MIN
1	No thunderstorms.	-
2	Cumulus clouds are common but only a few reach the towering cumulus stage. A single thunderstorm must be confirmed in the observation area. The clouds produce mainly virga, but light rain will occasionally reach the ground. Lightning is very infrequent.	1-8
3	Towering cumulus covers less than two-tenths of the sky. Thunderstorms are few, but two to three must occur within the observation area. Light to moderate rain will reach the ground, and lightning is infrequent.	9-15

LAL	CLOUD & STORM DEVELOPMENT	LIGHTNING STRIKES/ 15 MIN
4	Towering cumulus covers two to three-tenths of the sky. Thunderstorms are scattered and more than three must occur within the observation area. Moderate rain is common and lightning is frequent.	16-25
5	Towering cumulus and thunderstorms are numerous. They cover more than three-tenths and occasionally obscure the sky. Rain is moderate to heavy, and lightning is frequent and intense.	>25
6	Similar to LAL 3 except thunderstorms are dry.	

The NCEI does not include the LAL for historical lightning events, therefore in order to determine the extent of lightning strikes, the yearly average range of estimated number of lightning strikes within the planning area (5,374 to 13,434 flashes) and a cloud-to-ground flash density of six to fifteen per square mile were divided by the number[1] of thunderstorm events that occur annually in the planning area. Lubbock County, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, should expect an average range of four to eleven lightning strikes within 15 minutes at any given time during a lightning or combined lightning and thunderstorm event, indicating lightning strikes have an average LAL range of 1 to 3. The highest being a 3 on the LAL for all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

HISTORICAL OCCURRENCES

Since January 1996, there has only been twenty-two recorded events for the Lubbock County planning area, based upon NCEI records. Five additional events were reported by participants of this plan and are described below. It is highly likely multiple lightning occurrences have gone unreported before and during the recording period. The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration and considered a reliable resource for hazards. However, lightning events are typically under reported. The flash density for the planning area along with input from local team members indicates regular lightning occurrences that simply have not been reported.

Historical lightning data for the Roosevelt ISD are provided within the County/City of Lubbock events per the NCEI database. Roosevelt ISD also reported an additional lightning event not included in the NCEI which caused damages of $169,072 to ISD facilities. This event has been added to the historical event table (Table 8-2) along with damages. There have been no reported losses as a result of lightning events for any of the remaining ISDs participating in this Plan.

Historical lightning data for the Texas Tech University System are provided within the County/City of Lubbock events per the NCEI database. Texas Tech also reported three additional lightning

[1] Analysis includes the highest number of events recorded in a given year during the reporting period in order to account for typical under reporting of thunderstorm and lightning events.

events not included in the NCEI database. These events have been added to the historical event table (Table 8-2). Damage estimates from the events were not available.

Historical lightning data for the participating special districts are provided within the Lubbock County events per the NCEI database as most do not have events reported separate and apart from the reported county events. The Lubbock Reese Redevelopment Authority has reported $11,451 in structural damages due to a lightning event that was not included in the NCEI database. This event has been added to the historical event table (Table 8-2) along with damages. There have been no reported losses as a result of lightning events for any of the remaining participating special districts.

Table 8-2 Historical Lightning Events, 1996- 2021[2]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	5/23/1997	0	0	$8,780	$0
City of Lubbock	4/28/1999	0	0	$795,064	$0
Lubbock County	5/26/1999	0	0	$76,123	$0
City of Lubbock	8/23/1999	0	0	$3,365	$0
City of Lubbock	5/19/2001	0	0	$63,286	$0
City of Lubbock	5/8/2004	0	0	$74,338	$0
City of Lubbock	5/27/2008	0	0	$32,445	$0
City of Lubbock	6/19/2008	0	0	$160,608	$0
City of Lubbock	8/11/2008	0	0	$128,328	$0
City of Lubbock	8/13/2008	0	0	$192,492	$0
Lubbock County	7/18/2009	0	0	$13,055	$0
City of Lubbock	7/29/2009	0	0	$130,553	$0
Lubbock County	8/1/2009	0	0	$13,026	$0
City of Lubbock	3/15/2010	0	0	$645,928	$0
Lubbock County	5/11/2011	0	0	$154,283	$0
City of Lubbock	8/11/2011	0	0	$310,256	$0
City of Lubbock	8/24/2012	0	0	$36,611	$0
City of Lubbock	9/24/2014	0	0	$1,181	$0
Texas Tech Univ	04/20/2015	0	0	$0	$0

[2] Damages are reported in 2022 dollars.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Texas Tech Univ	07/20/2016	0	0	$0	$0
City of Slaton	8/28/2016	1	0	$0	$0
Lubbock County	8/31/2016	0	0	$3,502	$0
Lubbock County	6/30/2017	0	0	$57,388	$0
City of Lubbock	7/1/2017	0	0	$51,684	$0
Reese Center	8/20/2017	0	0	$11,451	$0
Roosevelt ISD	2019	0	0	$169,072	$0
Texas Tech Univ	7/30/2020	0	0	$0	$0
TOTALS		**1**	**0**	**$3,132,819**	**$0**

Based on the list of historical lightning events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, nine events have occurred since the 2015 Plan.

SIGNIFICANT EVENTS

June 6, 2017 – Lubbock County

An intense heat spell with highs of 102°F to 108°F promoted isolated thunderstorms with some of these storms producing hail of 3 to 4 inches in diameter causing severe damage to crops, buildings and vehicles. Lightning struck a two-story single-family residence and proceeded to cause several small fires within the electrical wiring in the upstairs of the house. The family of four was uninjured but displaced as first responders tended to hot spots above the ceiling. Total damage estimates during event were approximately $50,000.

August 28, 2016 – City of Slaton

During a lightning event, a man walking near a playa lake in northwest Slaton was struck by lightning. The individual was transported to Lubbock UMC Hospital with critical injuries and died as a result of their injuries.

March 15, 2010- Lubbock County

A round of thunderstorms initially developed over the central South Plains during the morning hours. These storms produced heavy rainfall and damaging lightning in the Lubbock vicinity. Rain transitioned to snow during the afternoon hours with reported snow accumulations of 1 inch in Slaton. Lightning sparked a house fire in a subdivision of south Lubbock with reports indicating that the home was a total loss. No injuries were reported. Total damage estimates during event were approximately $500,000.

April 28, 1999 – Lubbock County

Lightning struck a house in the Lakeridge subdivision of Lubbock County which results in a fire that resulted in extensive damage totaling $470,000.

PROBABILITY OF FUTURE EVENTS

Based on historical records and input from the planning team the probability of occurrence for future lightning events in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, is considered highly likely, or an event probable in the next year. The planning team stated that lightning occurs regularly in the area. According to NOAA, the Lubbock County planning area is located in an area of the country that experiences six to fifteen lightning flashes per square mile per year (approximately 5,374 to 13,434 flashes per year). Given this estimated probability of events, it can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since lightning events can occur at different strength levels, in random locations, and can create a broad range of damages depending on the strike location. Due to the randomness of these events, all existing and future structures and facilities in the Lubbock County planning area could potentially be impacted and remain vulnerable to possible injury and property loss from lightning strikes. The Lubbock County planning area has 22 reported lightning events per the NCEI, however the county, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are vulnerable and could be impacted by lightning.

The direct and indirect losses associated with these events include injury and loss of life, damage to structures and infrastructure, agricultural losses, utility failure (power outages), and stress on community resources. The entire population of Lubbock County, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are considered exposed to the lightning hazard. The peak lightning season in the State of Texas is from June to August; however, the most fatalities occur in July. Fatalities occur most often when people are outdoors and/or participating in some form of recreation. Population located outdoors is considered at risk and more vulnerable to a lightning strike compared to being inside a structure. Moving to a lower risk location will decrease a person's vulnerability.

The entire general building stock and all infrastructure of the Lubbock County planning area are considered exposed to the lightning hazard. Lightning can be responsible for damages to buildings, cause electrical, forest and/or wildfires, and damage infrastructure such as power transmission lines and communication towers. Agricultural losses can be extensive due to lightning and resulting fires.

While all citizens are at risk to the impacts of lightning, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 18.5% of the planning area population live below the poverty level (Table 8-3).

Table 8-3. Populations at Greatest Risk by Jurisdiction[3]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Lubbock County	57,053
Village of Buffalo Springs	4
City of Idalou	310
City of Lubbock	51,146
Town of New Deal	214
Town of Ransom Canyon	10
City of Shallowater	131
City of Slaton	1,161
City of Wolfforth	462

The following critical facilities would be vulnerable to lightning events in each participating jurisdiction:

Table 8-4. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 9 Emergency Communication Towers, 1 County Annex Building, 1 Sheriff's Office, 1 Courthouse, 2 Detention Centers, 5 Evacuation Centers
Village of Buffalo Springs	1 EOC, 1 Dam, 1 Sewage Facility, 1 Water Facility
City of Idalou	1 EOC, 1 City Hall, 1 Fire Department, 1 Maintenance Facility, 1 Medical Facility, 1 Nursing Home, 4 Shelters, 2 Lift Stations, 1 Wastewater Treatment Plant, 2 Water Tower, 4 Wells
City of Lubbock	1 EOC, 1 Airport, 1 Civic Center, 1 Fire Administration Building, 19 Fire Stations, 1 Fire Marshall's Office, 1 Government Administration Tower, 1 Health Department, 1 Police Headquarters, 4 Police Stations, 5 Canadian River Authority Facilities, 2 Land Application Facilities, 38 Lift Stations, 46 Substations, 2 National Weather Service Facilities, 15 Pump Stations, 4 Radio Towers, 1 Reservoir, 2 Water Plants, 2 Water Reclamation Facilities, 4 Water Towers, 1 Well Field
Town of New Deal	1 Government Facility, 1 Fire Station, 4 Lift Stations, 2 Pump Stations, 2 Water Storage Facility, 1 Water Well, 1 Sewage Pond, 1 Wastewater Facility

[3] US Census Bureau 2020 data for Lubbock County.

JURISDICTION	CRITICAL FACILITIES
Town of Ransom Canyon	1 Government Building, 1 Shelter, 1 Communications Facility, 3 Fire Stations, 1 Operations Building, 1 Dam, 4 Lift Stations, 2 Pump Stations, 1 Wastewater Plant, 1 Water Supply Facility, 3 Water Tank, 1 Water Tower
City of Shallowater	1 City Hall, 1 EMS Station, 1 Fire Station, 1 Police Station, 1 Water Treatment Plant
City of Slaton	1 City Hall, 2 City Department Buildings, 1 Airport, 1 EMS Station, 1 Fire Station, 1 Police Station, 4 Schools, 2 Medical Facilities, 4 Tornado Shelters, 6 Lift Stations, 2 Pump Stations, 2 Water Towers, 1 Sewage Pond
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Stations, 1 Assisted Living Facility, 2 Daycare Facility, 1 Maintenance Building, 2 Medical Clinics, 4 Schools, 1 School Administration Building, 1 Sewage Plant, 1 Water Treatment Plant
Abernathy ISD	1 Administration Building, 1 Elementary School, 1 High School, 1 Middle School
Frenship ISD	1 Administration Building, 9 Elementary Schools, 2 High Schools, 4 Middle Schools, 1 Grade Center, 1 Education Center, 1 Maintenance Facility, 1 Center Operations Facility, 1 Transportation Operations Facility, 1 Field House
Idalou ISD	1 Elementary School, 1 High School, 1 Middle School
Lubbock ISD	3 Emergency Operation Centers, 29 Elementary School, 5 High School, 7 Middle School, 3 Academies, 3 Specialized Schools, 1 Educational Support Center, 1 Technology Center, 1 Vocational Center, 1 Aquatic Center, 7 Fields, 1 Maintenance Facility, 2 Warehouses, 1 Transportation Center
Lubbock-Copper ISD	1 Administration Building, 5 Elementary School, 2 High School, 2 Middle School, 1 Academy, 1 Special Education Building
New Deal ISD	1 Administration Building, 1 High School, 1 Middle School
Roosevelt ISD	1 Administration Building, 1 Elementary, 1 Secondary School, 3 Campus Buildings, 1 Community Center, 1 Daycare Facility, 1 Maintenance Facility, 6 Fields / Athletic Facilities, 1 Gymnasium, 7 School Houses, 2 Storage Facilities, 1 Transportation Facility, 1 Water Tower
Shallowater ISD	1 Elementary School, 1 High School, 1 Middle School, 1 Intermediate School
Slaton ISD	1 Administration Building, 2 Elementary School, 1 High School, 1 Middle School, 1 Campus Center, 1 Maintenance Facility, 1 Transportation Facility
Betty M. Condra School of Education Innovation	1 Main Campus Facility

JURISDICTION	CRITICAL FACILITIES
South Plains College	1 Central Campus, 7 Classroom Buildings, 1 Technical Center, 1 Internet Building
Texas Tech University System	1 Emergency Operations, 2 Administration Building, 1 Administration Support Center, 6 Campus Buildings, 1 Evacuation Center, 1 Lab, 1 Library, 2 Heating / Cooling Plants, 1 Lift Station, 2 Plant Annex and Infrastructure
Texas Tech University Health Sciences Center	1 EOC, 1 Central Campus, 1 Medical Pavilion
Lubbock County Hospital System	1 Emergency Management Center, 1 Main Campus, 7 EMS Stations, 1 EMS Warehouse, 1 Hospital Warehouse, 38 Clinics, 7 Medical Offices, 5 Rehabilitation Centers
Lubbock County WCID #1	1 Administrative Building, 2 Sewage Infrastructures, 1 Water Infrastructure
Lubbock Reese Redevelopment Authority	1 EOC, 1 Communication Building, 1 Airfield Tower, 1 Data Center, 1 Evacuation Center, 1 Maintenance Operations Facility, 1 Water Treatment
South Plains Association of Governments	1 Central Office, 1 Law Enforcement Building

Impact of lightning experienced in the Lubbock County planning area has resulted in no injury and one fatality. The damages created by lightning events experienced in the planning area indicate a “Limited” impact, with minimal quality of life lost and facilities shut down for 24 hours or less. However, the historical fatality indicates a “Substantial” impact with multiple fatalities possible depending on the severity of the event. Overall, the average loss estimate for Lubbock County, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, (in 2022 dollars) is $3,132,819 having an approximate annual loss estimate of $120,493 (Table 8-5).

Table 8-5. Potential Annualized Losses by Jurisdiction[4]

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Lubbock County	$317,377	$12,207
Village of Buffalo Springs	$0	$0
City of Idalou	$0	$0
City of Lubbock	$2,634,919	$101,343
Town of New Deal	$0	$0

[4] Damage values are in 2022 dollars.

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Town of Ransom Canyon	$0	$0
City of Shallowater	$0	$0
City of Slaton	$0	$0
City of Wolfforth	$0	$0
Abernathy ISD	$0	$0
Frenship ISD	$0	$0
Idalou ISD	$0	$0
Lubbock ISD	$0	$0
Lubbock-Copper ISD	$0	$0
New Deal ISD	$0	$0
Roosevelt ISD	$169,072	$6,503
Shallowater ISD	$0	$0
Slaton ISD	$0	$0
Betty M. Condra School of Education Innovation	$0	$0
South Plains College	$0	$0
Texas Tech University System	$0	$0
Texas Tech University Health Sciences Center	$0	$0
Lubbock County Hospital System	$0	$0
Lubbock County WCID #1	$0	$0
Lubbock Reese Redevelopment Authority	$11,451	$440
South Plains Association of Governments	$0	$0
PLANNING AREA	**$3,132,819**	**$120,493**

ASSESSMENT OF IMPACTS

Lightning events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. The impact of climate change could produce more frequent and severe lightning events, exacerbating the current lightning impacts. Additional impacts to the planning area can include:

- Individuals exposed to the storm can be directly struck, posing significant health risks and potential death.
- Structures can be damaged or crushed by falling trees damaged by lightning, which can result in physical harm to the occupants.
- Lightning strikes can result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Lightning strikes can be associated with structure fires and wildfires, creating additional risk to residents and first responders.
- Emergency operations and services may be significantly impacted due to power outages and/or loss of communications.
- City or county departments may be damaged, delaying response and recovery efforts for the entire community.
- Economic disruption due to power outages and fires negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by lightning events may be negatively impacted while utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.

The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the county, communities, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any lightning event.

SECTION 9: DROUGHT

HAZARD DESCRIPTION

Drought is a period of time without substantial rainfall that persists from one year to the next. Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of anticipated natural precipitation reduction over an extended period of time, usually a season or more in length. Droughts can be classified as meteorological, hydrologic, agricultural, and socioeconomic. Table 9-1 presents definitions for these different types of droughts.

Droughts are one of the most complex of all natural hazards as it is difficult to determine their precise beginning or end. In addition, droughts can lead to other hazards such as extreme heat and wildfires. Their impact on wildlife and area farming is enormous, often killing crops, grazing land, edible plants, and even in severe cases, trees. A secondary hazard to drought is wildfire because dying vegetation serves as a prime ignition source. Therefore, a heat wave combined with a drought is a very dangerous situation.

Table 9-1. Drought Classification Definitions[1]

METEOROLOGICAL DROUGHT	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
HYDROLOGIC DROUGHT	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
AGRICULTURAL DROUGHT	Soil moisture deficiencies relative to water demands of plant life, usually crops.
SOCIOECONOMIC DROUGHT	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

[1] Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

LOCATION

Droughts occur regularly throughout Texas and the Lubbock County planning area are considered exceptional. However, they can vary greatly in their intensity and duration. The Drought Monitor shows the planning area is currently experiencing exceptional drought conditions throughout most of the county (Figure 9-1). However, the planning area has experienced a range of conditions from abnormally dry (Figure 9-2) to exceptional drought conditions over the last decade. There is no distinct geographic boundary to drought; therefore, it can occur throughout the Lubbock County planning area equally, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

Figure 9-1. U.S. Drought Monitor, May 2022

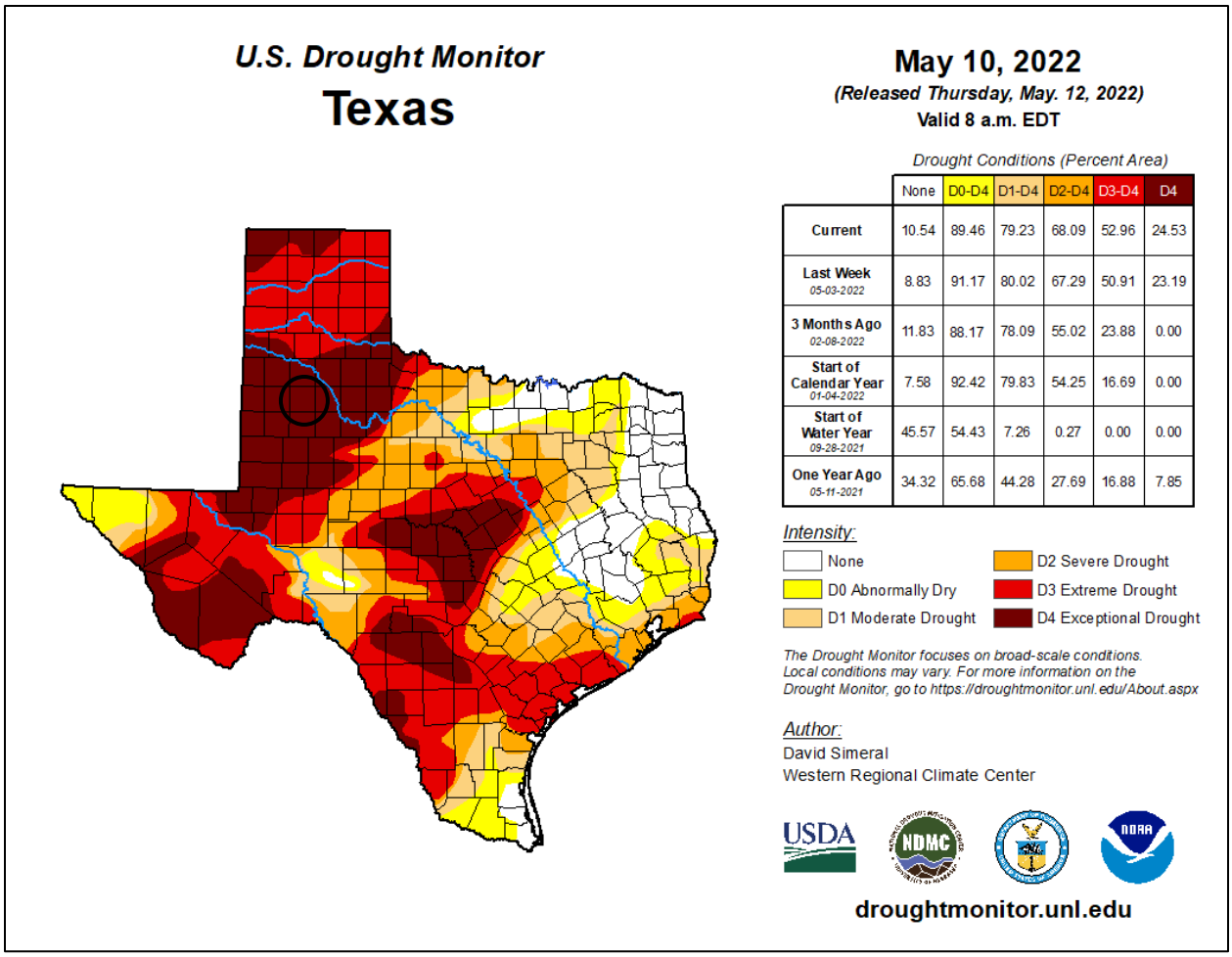
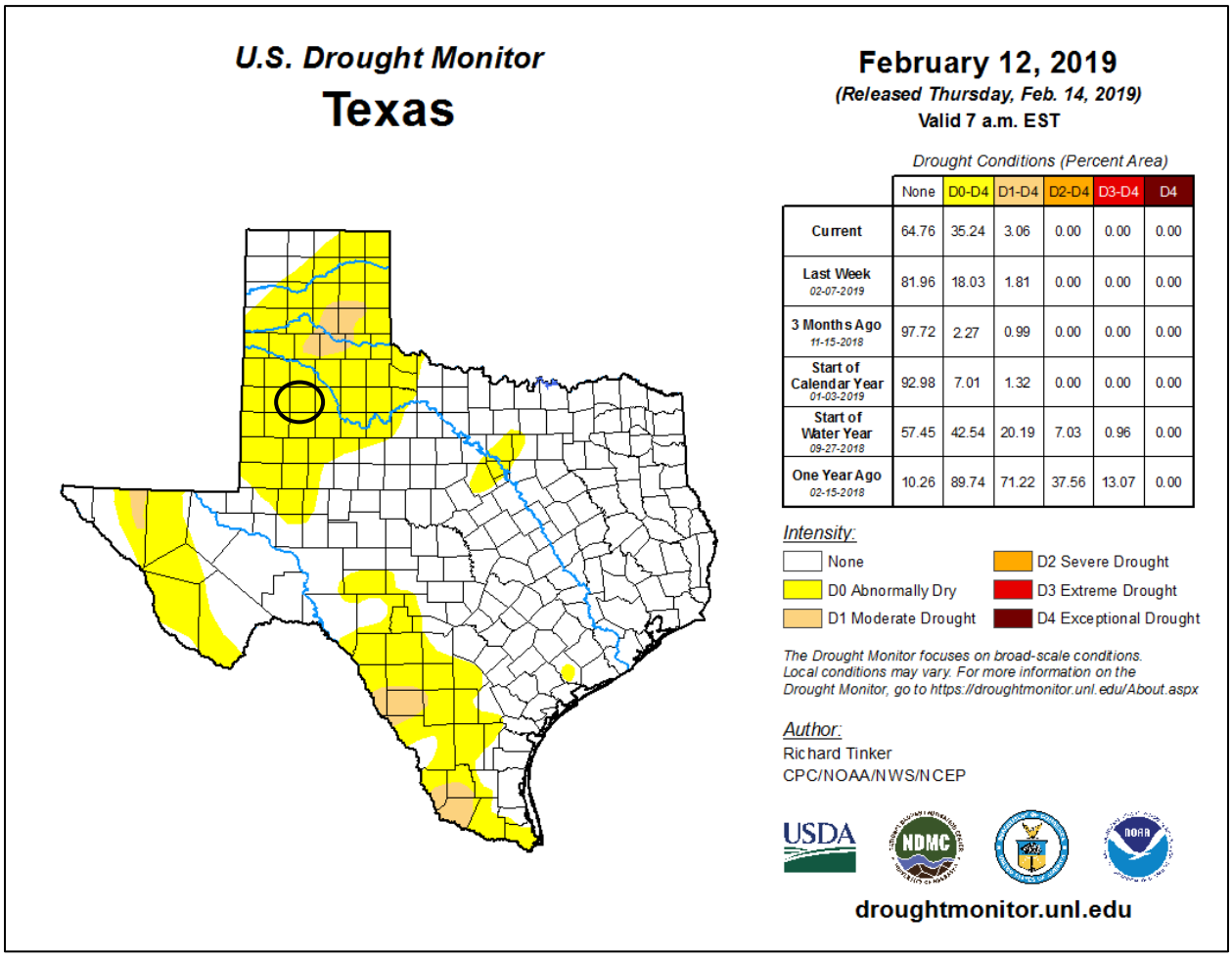


Figure 9-2. U.S. Drought Monitor, February 2019



EXTENT

The Palmer Drought Index is used to measure the extent of drought by measuring the duration and intensity of long-term drought-inducing circulation patterns. Long-term drought is cumulative, with the intensity of drought during the current month dependent upon the current weather patterns plus the cumulative patterns of previous months. The hydrological impacts of drought (e.g., reservoir levels, groundwater levels, etc.) take longer to develop. Table 9-2 depicts magnitude of drought, while Table 9-3 describes the classification descriptions.

Table 9-2. Palmer Drought Index

DROUGHT INDEX	DROUGHT CONDITION CLASSIFICATIONS						
	Extreme	Severe	Moderate	Normal	Moderately Moist	Very Moist	Extremely Moist
Z Index	-2.75 and below	-2.00 to -2.74	-1.25 to -1.99	-1.24 to +.99	+1.00 to +2.49	+2.50 to +3.49	n/a
Meteorological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above
Hydrological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above

Table 9-3. Palmer Drought Category Descriptions[2]

CATEGORY	DESCRIPTION	POSSIBLE IMPACTS	PALMER DROUGHT INDEX
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-3.0 to -3.9
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions.	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.	-5.0 or less

Drought is monitored nationwide by the National Drought Mitigation Center (NDMC). Indicators are used to describe broad scale drought conditions across the U.S. and correspond to the intensity of drought.

Based on the historical occurrences for drought and the location of the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, the area can anticipate a range of drought from abnormally dry to exceptional, or D0 to D4, based on the Palmer Drought Category. The entire planning area has

[2] Source: National Drought Mitigation Center

experienced exceptional drought conditions. This is the most extreme drought conditions the planning area can anticipate in the future.

HISTORICAL OCCURRENCES

The Lubbock County planning area may typically experience a severe drought. Table 9-4 lists historical events that have occurred in the Lubbock County planning area as reported in the National Centers for Environmental Information (NCEI). Historical events are shown in Table 9-5. A total of 51 reported historical drought events, with 13 unique drought periods that have impacted the Lubbock County planning area between 1996 through December 2021 (Summary Table 9-6).

Historical drought information shows drought activity across a multi-county forecast area for each event, the appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event. Historical drought data for all participating jurisdictions, including ISDs, universities, planning authorities and hospital/special districts in the Lubbock County planning area are provided on a county-wide basis per the NCEI database.

Table 9-4. Historical Drought Years, 1996-2021[3]

DROUGHT YEAR
1996
1998
2000
2001
2003
2006
2011
2012
2013
2014
2018
2020
2021
13 unique events

[3] Historical data is reported from January 1996 through December 2021.

Table 9-5. Historical Drought Events, 1996-2021

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	5/1/1996	0	0	$179,533	$897,663
Lubbock County	6/1/1996	0	0	$179,418	$897,090
Lubbock County	4/5/2011	0	0	$0	$6,250,345
Lubbock County	5/1/2011	0	0	$62,210,795	$242,622,099
Lubbock County	6/1/2011	0	0	$249,109,967	$0
Lubbock County	7/1/2011	0	0	$311,111,800	$311,111,800
Lubbock County	8/1/2011	0	0	$117,897,371	$6,205,125
Lubbock County	9/1/2011	0	0	$117,718,620	$6,195,717
Lubbock County	10/1/2011	0	0	$117,961,938	$6,208,523
Lubbock County	11/1/2011	0	0	$24,855,059	$6,213,765
Lubbock County	12/1/2011	0	0	$6,229,129	$6,229,129
Lubbock County	1/1/2012	0	0	$6,201,840	$24,807,359
Lubbock County	2/1/2012	0	0	$3,087,326	$3,087,326
Lubbock County	3/1/2012	0	0	$3,064,056	$3,064,056
Lubbock County	4/1/2012	0	0	$0	$61,096,551
Lubbock County	5/1/2012	0	0	$0	$6,116,833
Lubbock County	9/1/2012	0	0	$0	$6,074,751
Lubbock County	10/1/2012	0	0	$0	$60,771,150
Lubbock County	11/1/2012	0	0	$0	$61,060,459
Lubbock County	12/1/2012	0	0	$0	$61,225,343
Lubbock County	1/1/2013	0	0	$12,208,963	$12,208,963
Lubbock County	2/1/2013	0	0	$6,054,892	$6,054,892
Lubbock County	3/1/2013	0	0	$0	$6,039,102
Lubbock County	4/1/2013	0	0	$0	$6,045,387
Lubbock County	5/1/2013	0	0	$0	$60,346,434
Lubbock County	6/1/2013	0	0	$0	$12,403,933
Lubbock County	7/1/2013	0	0	$0	$12,035,651

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	8/1/2013	0	0	$0	$6,010,595
Lubbock County	11/1/2013	0	0	$0	$12,035,651
Lubbock County	12/1/2013	0	0	$0	$6,010,595
Lubbock County	3/1/2014	0	0	$5,949,139	$5,949,139
Lubbock County	4/1/2014	0	0	$5,929,591	$5,929,591
Lubbock County	9/1/2014	0	0	$0	$3,543,421
TOTALS		**0**	**0**	**$1,049,949,437**	**$1,263,991,452**

Table 9-6. Historical Drought Events Summary, 1996-2021

JURISDICTION	NUMBER of EVENTS	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	51	0	0	$1,049,949,437	$1,263,991,452

Based on the historical drought events for the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, 18 reported drought events have occurred since the 2015 Plan.

SIGNIFICANT EVENTS

April 30, 2014 – Lubbock County

Exceptional drought (D4) conditions have expanded over a majority of the South Plains, Rolling Plains, and the extreme southern Texas Panhandle. Elsewhere, extreme drought (D3) conditions were present with only a few severe drought (D2) conditions remaining over the southern South Plains. Rainfall events in April were scarce for nearly the entire region. Through the end of April, Lubbock had received only 0.90 of rainfall on the year. Most areas have received only about 25% of normal rainfall to date. Temperatures went through wild swings again in April. By the end of the month, average temperatures were near normal. Keetch-Byram Drought Index values were also indicative of a worsening drought. Values between 500 and 600 were observed area wide.

Despite an exceptional drought with little rainfall and several high wind events, there were no large wildfires. Agricultural activities were pronounced with drought conditions further worsening farming and ranching. Not only did the lack of rainfall harm crops but high winds also damaged crops. Economic losses due to drought through April since the drought began were estimated near $3 billion.

April 1, 2012 – Lubbock County

Extreme (D4) drought conditions were reduced over the western South Plains and southern Rolling Plains during the month of April. Extreme (D4) and exceptional (D3) drought conditions remained largely unchanged elsewhere across the area. April was characterized by very warm temperatures, but also many days of beneficial rainfall. April typically marks the end of the dry season and a transition to increasing precipitation. Warmer than seasonal average temperatures were observed throughout the month. The warmer than normal temperatures were especially

noticeable with the observed minimum temperatures. Many areas saw the earliest last freeze dates on record. Additionally, the all-time record for maximum temperature in April was broken at Lubbock and Childress on April 25 when Lubbock reached 104 degrees and Childress reached 106 degrees. The average temperature of 67.1 for the month at Lubbock tied a record, while 68.7 at Childress broke the previous April record. Despite the record warmth, several instances of beneficial rainfall occurred during the month and especially during the final week of April. Some selected rainfall totals include 3.82 inches at Lake Alan Henry, 2.76 inches at Jayton, 2.42 inches at Post and 2.38 inches at Wolfforth. Even though widespread rainfall was observed, most areas remained below normal for annual precipitation values. Meteorologically, the drought continues to ease, but significant impacts are still possible in terms of water supply and agriculture. April, which is typically the end of the fire weather season, saw almost no wildfire activity. However, many counties have kept burns bans intact. During the month, the City of Lubbock instituted Stage 2 water restrictions which range from Stage 1 (mild water shortage conditions) to Stage 4 (emergency water shortage conditions). Winter wheat was considered almost a total loss due to the drought and was being harvested for use as hay and silage. Additional rains were still needed to sustain pasture and rangelands for much of the area. The final work was being performed in preparation of May planting with observed increases in soil moisture. Economic losses due to drought through April since the drought began were estimated near $2.4 billion.

June 1, 2011 – Lubbock County

Exceptional (D4) drought conditions continued to persist across the entire South Plains, Rolling Plains, and southern Texas Panhandle regions. June, on average, is among the wettest periods of the year for the Southern Plains. However, June 2011 saw deepening rainfall deficits with a spring thunderstorm season failing to develop. Zero percent of normal rainfall was observed over a large part of the region. Only a few stations recorded over two inches of rainfall on the year with Paducah the only site recording over three inches of rainfall. No measurable rainfall fell at Lubbock International Airport which is only the second time in 100 years of record when that has occurred. Most of the area measured between 10 and 25 percent of normal annual rainfall. The historic drought was made worse by a June heat wave. A very strong upper-level high settled over the region in early June resulting in record heat. Many cities around the region recorded the warmest month on record. Temperatures throughout the month of June averaged between 8 to 11 degrees above normal. The City of Paducah had a maximum temperature of 118 degrees on June 26, tying its all-time record high, which was two degrees behind the all-time record high for the state of Texas. Childress also tied their all-time record high temperature of 117 degrees on June 26. Strong winds with afternoon relative humidity often below 10 percent lead to many days with extreme fire weather concerns. The drought's impact on wildfire activity continued into June with several wildfires initiated by dry high-based thunderstorms. This wildfire activity extended beyond the region's climatological wildfire season which typically subsides with seasonal green-up in April and May. Nearly 60,000 acres of land were burned by wildfires within the Lubbock County Warning Area (CWA) during the month of June. Agricultural impacts accelerated across the region as farmers struggled to irrigate dry fields. All crops were becoming a major loss by the end of June and were severely impacting the local economy. Local farmers were able to begin the insurance claims process for failed crops during the month, and livestock losses continued with the growing shortages of water and feed. Economic losses for the year due to drought through June 2011 were estimated near $1.5 billion.

May 1, 2011 – Lubbock County
Abnormally dry conditions that began over West Texas during the fall of 2010 persisted through May further adding to agricultural losses in the hundreds of millions of dollars. At the beginning of May, the South Plains, Rolling Plains, and southern Texas Panhandle saw additional amplification of Extreme (D3) and Exceptional (D4) drought. Moisture typically increases through May, but May 2011 saw continued insignificant rainfall for the region. Most locations received only 10 to 25 percent of normal annual rainfall. Some locations over the southwestern South Plains received less than five percent of normal annual rainfall. In addition, temperatures throughout the month of May ranged from five to eight degrees above normal. The drought's impact on wildfire activity was evident during May with several large wildfires, but this activity actually decreased from previous months. This wildfire activity has extended beyond the region's climatological wildfire season which typically subsides with seasonal green-up in late April and early May. Over 100,000 acres of land were burned by wildfires within the Lubbock County Warning Area (CWA) during the month of May. Agricultural losses were also becoming substantial during this time. By the end of the month, dry land fields had failed due to very dry soil conditions. Cotton crop planting continued to be delayed and was beginning to create major negative impacts across the region. Additionally, area ranchers faced livestock losses due to the worsening drought. These losses were attributed to difficulty in trucking in water and feed which resulted in the selloff of some livestock. Economic losses due to drought through May were estimated near $250 million.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, there have been 51 extended time periods of drought (ranging in length from approximately 30 days to over 90 days) within a 26-year reporting period, which provides a probability of one to two events every year. This frequency supports an “Highly Likely” probability of future events.

VULNERABILITY AND IMPACT

Loss estimates were based on 26 years of statistical data from the NCEI. A drought event frequency-impact was then developed to determine an impact profile on agriculture products and estimate potential losses due to drought in the area. Table 9-7 shows annualized exposure.

Table 9-7. Potential Annualized Losses for Lubbock County

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock County	$2,313,940,889	$88,997,727

Drought impacts large areas and crosses jurisdictional boundaries. All existing and future buildings, facilities, and populations are exposed to this hazard and could potentially be impacted. However, drought impacts are mostly experienced in water shortages and crop/livestock losses on agricultural lands and typically have no impact on buildings.

In terms of vulnerability, population, agriculture, property, socioeconomics, and environment are all vulnerable to drought in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts. Typical demand can deplete water resources during extreme drought conditions. As resources are depleted, potable water is in short supply and overall water quality can suffer, elevating health concerns for

all residents but especially vulnerable populations – typically children, the elderly, the ill, and those living below the poverty level. In addition, potable water is used for drinking, sanitation, patient care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities.

The average person will survive only a few days without potable water, and this timeframe can be drastically shortened for those people with more fragile health – typically children, the elderly, and the ill. Population over 65 in the Lubbock County planning area is estimated at 12.4% of the total population, and children under the age of 5 are estimated at 6.6% or an estimated total of 20,415 potentially vulnerable residents in the planning area based on age. In addition, an estimated 18.5% of the planning area population live below the poverty level (Table 9-8) which may contribute to overall health impacts of a drought.

Table 9-8. Populations at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Lubbock County	38,331	20,415	57,053
Village of Buffalo Springs	109	8	4
City of Idalou	377	96	310
City of Lubbock	31,496	17,082	51,146
Town of New Deal	159	21	214
Town of Ransom Canyon	233	35	10
City of Shallowater	413	104	131
City of Slaton	830	540	1,161
City of Wolfforth	355	612	462

The population is also vulnerable to food shortages when drought conditions exist, and potable water is in short supply. Potable water is used for drinking, sanitation, patient care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities. All residents in the Lubbock County planning area could be adversely affected by drought conditions, which could limit water supplies and present health threats. During summer drought, or hot and dry conditions, elderly persons, small children, infants and the chronically ill who do not have adequate cooling units in their homes may become more vulnerable to injury and/or death.

The economic impact of droughts can be significant as they produce a complex web of impacts that spans many sectors of the economy and reach well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. If droughts extend over a number of years, the direct and indirect economic impact can be significant.

Habitat damage is a vulnerability of the environment during periods of drought for both aquatic and terrestrial species. The environment also becomes vulnerable during periods of extreme or prolonged drought due to severe erosion and land degradation.

Impact of droughts experienced in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, has resulted in no injuries or fatalities supporting a " Minor" severity of impact meaning injuries and/or illnesses do not result in permanent disability, shutdown of facilities and services for more than one week, and more than 10% of property is destroyed or with major damage. Annualized estimated loss over the 26-year reporting period in Lubbock County is $88,997,727.

ASSESSMENT OF IMPACTS

The Drought Impact Reporter was developed in 2005 by the University of Nebraska-Lincoln to provide a national database of drought impacts. Droughts can have an impact on the agriculture; business and industry; energy; fire; plants and wildlife; relief, response, and restrictions; society and public health; tourism and recreation; and water supply and quality. The reports are submitted from individuals from Federal, State, and local agencies, as well as the general public. Table 9-9 lists the drought impacts to Lubbock County from 2005 to 2021 based on reports received by the Drought Impact Reporter.

Table 9-9. Drought Impacts, 2005-2021

DROUGHT IMPACTS 2005-2021	
Agriculture	94
Business & Industry	3
Energy	1
Fire	16
Plants & Wildlife	44
Relief, Response & Restrictions	21
Society & Public Health	14
Tourism & Recreation	2
Water Supply & Quality	8

Drought has the potential to impact people in the Lubbock County planning area. While it is rare that drought, in and of itself, leads to a direct risk to the health and safety of people in the U.S., severe water shortages could result in inadequate supply for human needs. The impact of climate change could produce longer, more severe droughts, exacerbating the current drought impacts. Worsening drought conditions can be frequently associated with a variety of impacts, including:

- The number of health-related low-flow issues (e.g., diminished sewage flows, increased pollution concentrations, reduced firefighting capacity, and cross-connection contamination) will increase as the drought intensifies.

- Public safety from forest/range/wildfires will increase as water availability and/or pressure decreases.
- Respiratory ailments may increase as the air quality decreases.
- There may be an increase in disease due to wildlife concentrations (e.g., rabies, Rocky Mountain spotted fever, Lyme disease).
- Jurisdictions and residents may disagree over water use/water rights, creating conflict.
- Political conflicts may increase between municipalities, counties, states, and regions.
- Water management conflicts may arise between competing interests.
- Increased law enforcement activities may be required to enforce water restrictions.
- Severe water shortages could result in inadequate supply for human needs as well as lower quality of water for consumption.
- Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property.
- During drought there is an increased risk for wildfires and dust storms.
- The community may need increased operational costs to enforce water restriction or rationing.
- Prolonged drought can lead to increases in illness and disease related to drought.
- Utility providers can see decreases in revenue as water supplies diminish.
- Utilities providers may cut back energy generation and service to their customers to prioritize critical service needs.
- Hydroelectric power generation facilities and infrastructure would have significantly diminished generation capability. Dams simply cannot produce as much electricity from low water levels as they can from high water levels.
- Fish and wildlife food and habitat will be reduced or degraded over time during a drought and disease will increase, especially for aquatic life.
- Wildlife will move to more sustainable locations creating higher concentrations of wildlife in smaller areas, increasing vulnerability, and further depleting limited natural resources.
- Severe and prolonged drought can result in the reduction of a species or cause the extinction of a species altogether.
- Plant life will suffer from long-term drought. Wind and erosion will also pose a threat to plant life as soil quality will decline.
- Dry and dead vegetation will increase the risk of wildfire.
- Drought poses a significant risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Drought related declines in production may lead to an increase in unemployment.
- Drought may limit livestock grazing resulting in decreased livestock weight, potential increased livestock mortality, and increased cost for feed.
- Negatively impacted water suppliers may face increased costs resulting from the transport water or develop supplemental water resources.
- Long term drought may negatively impact future economic development.

The overall extent of damages caused by periods of drought is dependent on its extent and duration. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a drought event.

SECTION 10: TORNADO

HAZARD DESCRIPTION

Tornadoes are among the most violent storms on the planet. A tornado is a rapidly rotating column of air extending between, and in contact with, a cloud and the surface of the earth. The most violent tornadoes are capable of tremendous destruction and have wind speeds of 250 miles per hour or more. In extreme cases, winds may approach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long.

The most powerful tornadoes are produced by "Supercell Thunderstorms." These thunderstorms are created when horizontal wind shears (winds moving in different directions at different altitudes) begin to rotate the storm. This horizontal rotation can be tilted vertically by violent updrafts, and the rotation radius can shrink, forming a vertical column of very quickly swirling air. This rotating air can eventually reach the ground, forming a tornado**.**

Table 10-1. Variations among Tornadoes

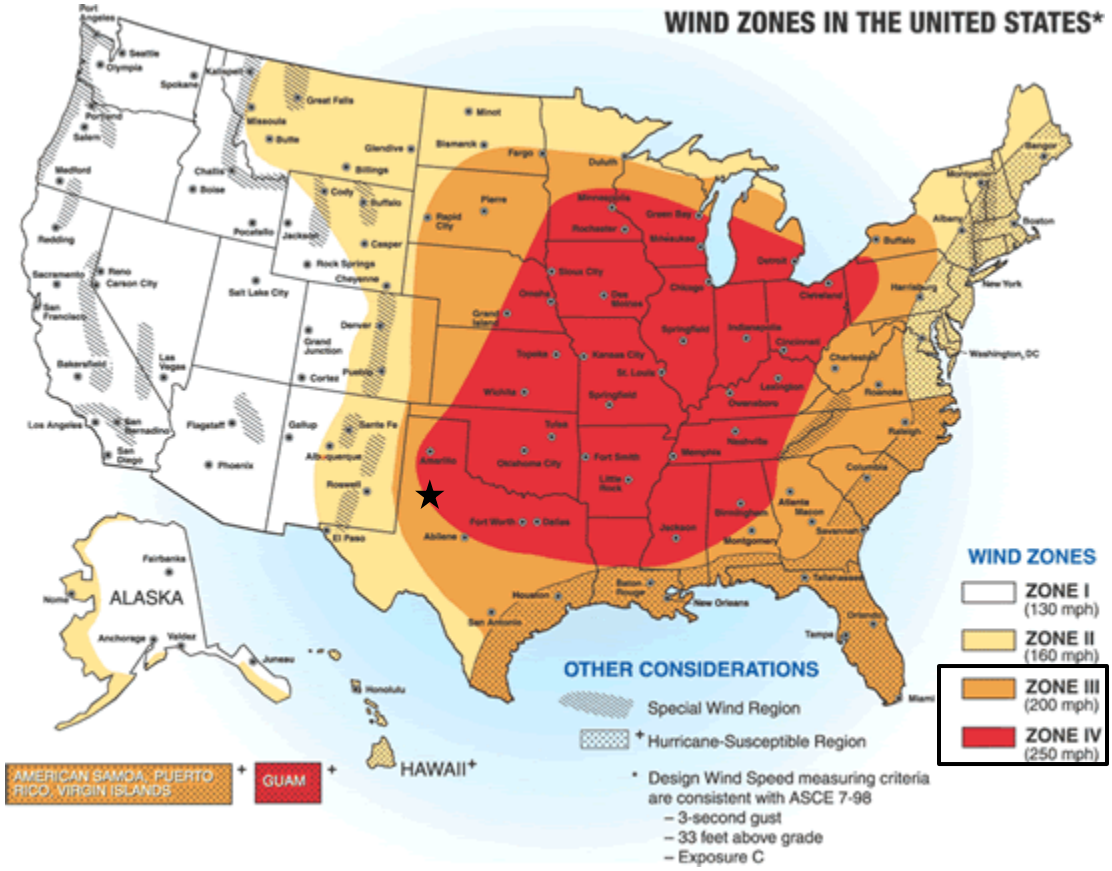
WEAK TORNADOES	STRONG TORNADOES	VIOLENT TORNADOES
• 69% of all tornadoes • Less than 5% of tornado deaths • Lifetime 1-10+ minutes • Winds less than 110 mph	• 29% of all tornadoes • Nearly 30% of all tornado deaths • May last 20 minutes or longer • Winds 110 – 205 mph	• 2% of all tornadoes • 70% of all tornado deaths • Lifetime can exceed one hour • Winds greater than 205 mph

LOCATION

Tornadoes do not have any specific geographic boundary and can occur throughout the County uniformly. It is assumed that the entire Lubbock County planning area, including all participating

jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are uniformly exposed to tornado activity. The entire Lubbock County planning area is located in Wind Zone III and Zone VI (Figure 10-1), where tornado winds can be as high as 250 mph.

Figure 10-1. FEMA Wind Zones in the United States[1]



EXTENT

The destruction caused by tornadoes ranges from light to inconceivable, depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, such as residential homes (particularly mobile homes).

[1] Lubbock County is indicated by the star.

Table 10-2. The Fujita Tornado Scale[2]

F-SCALE NUMBER	INTENSITY	WIND SPEED (MPH)	TYPE OF DAMAGE DONE	PERCENT OF APPRAISED STRUCTURE VALUE LOST DUE TO DAMAGE
F0	Gale Tornado	40 – 72	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.	None Estimated
F1	Moderate Tornado	73 – 112	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads; attached garages may be destroyed.	0% – 20%
F2	Significant Tornado	113 – 157	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	50% – 100%
F3	Severe Tornado	158 – 206	Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	100%
F4	Devastating Tornado	207 – 260	Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	100%
F5	Incredible Tornado	261 – 318	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles flying through the air in excess of 330 yards; trees debarked; steel reinforced concrete badly damaged.	100%

[2] Source: http://www.tornadoproject.com/fscale/fscale.htm

SECTION 10: TORNADO

Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale (Table 10-2). Since February 2007, the Fujita Scale has been replaced by the Enhanced Fujita Scale (Table 10-3), which retains the same basic design and six strength categories as the previous scale. The newer scale reflects more refined assessments of tornado damage surveys, standardization, and damage consideration to a wider range of structures.

Table 10-3. Enhanced Fujita Scale for Tornadoes

STORM CATEGORY	DAMAGE LEVEL	3 SECOND GUST (MPH)	DESCRIPTION OF DAMAGES	PHOTO EXAMPLE
EF0	Gale	65 – 85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.	
EF1	Weak	86 – 110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads; attached garages may be destroyed.	
EF2	Strong	111 – 135	Considerable damage; roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	
EF3	Severe	136 – 165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	
EF4	Devastating	166 – 200	Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	
EF5	Incredible	200+	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles flying through the air in excess of 330 yards; trees debarked; steel reinforced concrete badly damaged.	

Both the Fujita Scale and Enhanced Fujita Scale should be referenced in reviewing previous occurrences since tornado events prior to 2007 will follow the original Fujita Scale. The largest

magnitude reported within the planning area is an F5 (EF5 on the enhanced scale) on the Fujita Scale, a “Incredible Tornado.” Based on the planning area’s location in Wind Zone IV, the planning area could experience anywhere from an EF0 to EF5 depending on the wind speed.

The events in Lubbock County (converted from the Fujita Scale) have been between EF0 and EF5 (Table 10-4). Therefore, the range of intensity that the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts would be expected to mitigate is a tornado event that would be a low to severe risk, an EF0 to EF5. Historically, the strongest tornado to strike the planning area was a F5, which would be an EF5 on the Enhanced Fujita Scale with the highest wind speed. This is the strongest event the planning area can anticipate in the future.

HISTORICAL OCCURRENCES

Only reported tornadoes were factored into the Risk Assessment. It is likely that a high number of occurrences have gone unreported over the past 67 years. Historical tornado data for the county and participating jurisdictions is provided within a jurisdiction-wide basis per the NCEI database.

Historical tornado data for the participating ISDs and special districts do not have events reported separate and apart from the reported county events. At this time there has been no reported losses as a result of tornados for all ISDs, universities, planning authorities and hospital/special districts participating within the Plan Update.

Figure 10-2 identifies the locations of previous occurrences in the Lubbock County planning area from 1955 through December 2021. A total of 102 events have been recorded by the Storm Prediction Center (NOAA) and NCEI databases for the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

Figure 10-2. Spatial Historical Tornado Events, 1955-2021[3]

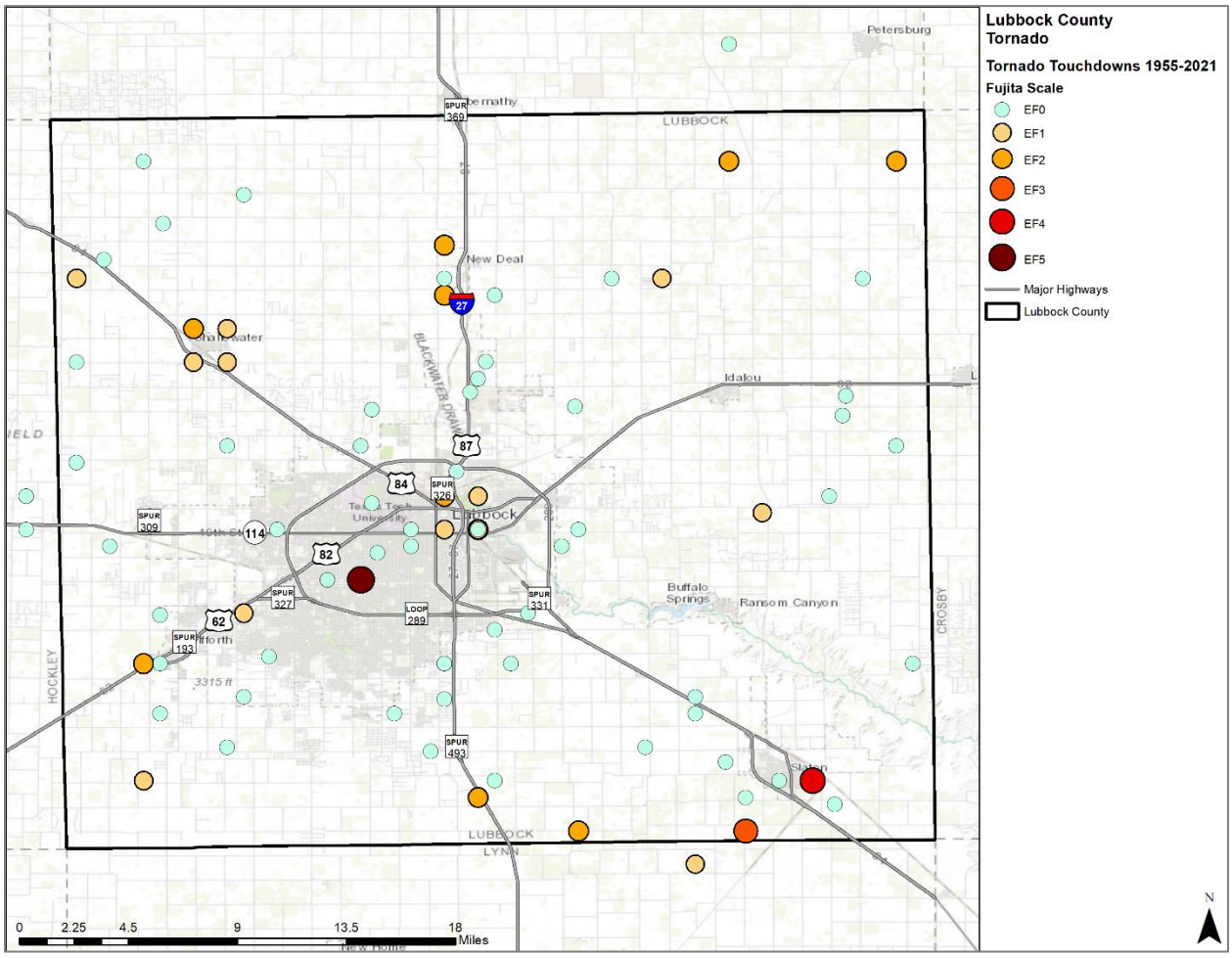


Table 10-4. Historical Tornado Events, 1955-2021[4]

JURISDICTION	DATE	TIME	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	5/10/1955	6:00 PM	Unknown	0	0	$316	$0
Lubbock County	6/17/1956	3:30 PM	F1	0	0	$25,841	$0
Lubbock County	4/21/1957	6:00 PM	F4	0	6	$25,192,473	$0
Lubbock County	4/21/1957	6:45 PM	F2	0	0	$25,192,473	$0
Lubbock County	4/21/1957	6:00 PM	F2	0	0	$25,192,473	$0

[3] Source: NOAA Records
[4] Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Damage values are in 2022 dollars.

SECTION 10: TORNADO

JURISDICTION	DATE	TIME	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	4/21/1957	6:00 PM	F2	0	0	$25,192,473	$0
Lubbock County	5/24/1957	2:00 PM	F3	0	0	$2,510,250	$0
Lubbock County	5/27/1958	2:36 PM	F1	0	0	$292	$0
Lubbock County	3/19/1967	6:00 PM	F1	0	0	$21,299	$0
Lubbock County	6/1/1967	8:30 PM	F2	0	0	$21,107	$0
Lubbock County	6/1/1967	6:30 AM	F2	0	1	$0	$0
Lubbock County	5/11/1970	8:35 PM	F5	26	500	$1,820,906,736	$0
Lubbock County	5/8/1971	5:00 PM	F2	0	0	$174,409	$0
Lubbock County	4/15/1976	2:05 PM	F0	0	0	$1,253	$0
Lubbock County	4/8/1978	5:37 PM	F2	0	0	$1,099,953	$0
Lubbock County	5/25/1978	6:20 PM	F0	0	0	$1,089,721	$0
Lubbock County	3/18/1979	12:09 AM	F1	0	0	$10,069,771	$0
Lubbock County	6/8/1979	4:45 PM	F0	0	0	$117	$0
Lubbock County	11/8/1979	1:47 PM	F0	0	0	$111	$0
Lubbock County	5/27/1980	5:30 PM	F1	0	0	$103	$0
Lubbock County	3/3/1981	2:50 PM	F0	0	0	$79,420	$0
Lubbock County	3/3/1981	3:27 PM	F0	0	0	$95	$0
Lubbock County	5/21/1982	7:03 PM	F0	0	0	$734	$0
Lubbock County	6/4/1983	3:45 PM	F0	0	0	$706	$0
Lubbock County	5/29/1987	5:25 PM	F2	0	3	$621,459	$0
Lubbock County	6/2/1989	3:00 PM	F1	0	0	$566,374	$0
Lubbock County	5/7/1991	7:38 PM	F0	0	0	$518	$0
Lubbock County	5/7/1991	4:04 PM	F0	0	0	$62	$0
City of Lubbock	3/29/1993	1:32 PM	F1	0	0	$97,893	$0

JURISDICTION	DATE	TIME	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	3/29/1993	1:40 PM	F0	0	0	$9,789	$0
City of Lubbock	4/19/1995	1:51 PM	F0	0	0	$1,851	$0
City of Lubbock	6/11/1999	6:10 PM	F1	0	0	$16,916	$169,162
City of Lubbock	3/25/2007	11:32 AM	EF0	0	0	$13,691	$0
City of Lubbock	4/17/2007	1:00 PM	EF0	0	0	$102,020	$0
City of Lubbock	5/14/2008	3:02 PM	EF0	0	0	$129,781	$0
Lubbock County	4/16/2009	9:14 PM	EF1	0	0	$32,961	$0
City of Idalou	4/16/2009	4:03 PM	EF0	0	0	$1,318	$0
City of Shallowater	4/16/2009	7:56 PM	EF1	0	0	$105,477	$0
TOTALS			**(Max Extent)**	**26**	**510**	**$1,938,472,236**	**$169,162**

Table 10-5. Summary of Historical Events, 1955-2021[5]

JURISDICTION	Number of Events	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	70	F5	26	510	$1,937,993,500	$0
Village of Buffalo Springs	0	N/A	0	0	$0	$0
City of Idalou	2	F0	0	0	$1,318	$0
City of Lubbock	16	F1	0	0	$371,941	$169,162
Town of New Deal	2	F0	0	0	$0	$0
Town of Ransom Canyon	0	N/A	0	0	$0	$0
City of Shallowater	4	EF1	0	0	$105,477	$0
City of Slaton	3	EF0	0	0	$0	$0
City of Wolfforth	6	EF0	0	0	$0	$0
TOTAL LOSSES	**102**	**(Max Extent)**	**26**	**510**	**$1,938,641,398**	

[5] Damages reported in 2021 dollars.

Based on the list of historical tornado events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, there has been five recorded events since the 2015 Plan.

SIGNIFICANT EVENTS

March 3, 2021 – Lubbock County/City of Shallowater

A slow-moving upper-level low was located over southern California moving into Arizona. Ample moisture surged northward east of a dryline leading to mixed layer instability values on the order of 1000-1500 J/kg underneath very steep mid-level lapse rates. This strong buoyancy led to extremely tall storms which produced large hail up to tennis ball size. Very strong shear near an intersection of the dryline and a quasi-stationary front led to two tornadoes during the evening. The first was in Lubbock County just north of Shallowater. The second tornado occurred in rural southwestern Cottle County. No damage was known to be caused by the tornadoes.

April 20, 2013 – Lubbock County

Isolated very high-based showers and thunderstorms developed over the southern and central South Plains. One of these storms intensified across southwest Lubbock County and western Lynn County before collapsing a short while later near downtown Lubbock. A second storm developed across western Floyd County. A series of microbursts produced winds estimated as high as 65 mph at times. These winds inflicted sporadic damage to trees, windows, power poles, and caused a few incidents of minor structural damage mainly in central and eastern sections of Lubbock. Scattered power outages were common. In the wake of this storm, lightning triggered a grass fire near the KCBD-TV news station prompting an evacuation of the building during a live newscast. The fire was estimated to be five acres and caused no known damage or injuries. Additionally, a landspout tornado formed along one of the outflow boundaries of southern Lubbock County, near Lubbock-Cooper High School. The landspout remained in an open field for the duration of the event. This EF0 landspout remained in an open field and caused no damage

April 16, 2009 – Lubbock County

A relatively long-lived, weak (EF1), tornado developed rapidly within a convective complex over northwestern Lubbock County and tracked north-northeastward into southwestern Hale County. The tornado developed just south of U.S. Highway 84, and quickly crossed U.S. Highway 84 five miles northwest of Shallowater, where a National Weather Service damage survey team found tumble weeds suspended within utility wires. The tornado downed utility poles, damaged four structures, a livestock trailer, and uprooted a large tree before crossing the Lubbock and Hale County line, one mile west of the County Line community. Two mobile homes west of Farm to Market 179 sustained minor damage from the tornado; skirting was removed from one home, with mud splatters evident on the structure, and a large roof panel was removed from the second mobile home. A well-built permanent house sustained minor damage near the Lubbock and Hale County line; a carport and outbuilding were destroyed at the residence and minor roof damage occurred from debris loaded wind. In addition, a large metal garage structure on the property was partially collapsed when tornadic winds caused the door to fail. A large boat stored within the structure was subsequently damaged when it was pushed by wind-loaded debris through a portion of the structure's back wall. Damages to the two mobile homes, a single-family residence and metal garage, trees, and to wooden utility poles support an EF1 rating, with estimated wind speeds between 85 and 95 mph. The tornado traveled nearly eight miles between 1956 CST and 2020 CST in Lubbock and Hale counties, accounting $130,000 in damages. No injuries were reported.

April 17, 2007 – Lubbock County
A potent middle and upper atmospheric storm system moved eastward over the West Texas South Plains on April 17, resulting in the development of numerous thunderstorms across the region. With abundant sunshine and heating that occurred early in the day beneath very cold mid-level temperatures aloft, steep vertical temperature lapse rates developed. With strong instability in place, thunderstorms developed rapidly around midday in the vicinity of a stalled frontal boundary that stretched from northwest to southeast across the region. Thunderstorm updrafts were enhanced by the cold mid-level temperatures, making them efficient for stretching small circulations along the frontal boundary. This process, combined with complex storm interactions and multi-cell storm mergers, resulted in the development of at least six tornadoes across the South Plains region. All of the tornadoes were weak, but some damage did occur in Hale and Lubbock counties, including within the City of Lubbock. The storms also produced large hail up to the size of ping pong balls. A brief tornado was observed to cause damage in the west part of Lubbock; an automotive business sustained damage as the tornadic circulation broke tree limbs and ripped sheet medal from a few structures near the intersections of U.S. Highway 84 and Quaker Avenue, and University and Kent. No injuries were reported.

May 29, 2006 – Lubbock County
During the midafternoon hours of May 29, isolated to scattered thunderstorms erupted east of a southwest-to-northwest oriented frontal boundary that was stationary over the central South Plains of west Texas. Although the storms were initially non-severe, several outflow boundaries surged west from the convection and intersected the frontal boundary over Lubbock and Lynn counties. As instability increased during the late afternoon hours, strongly towering cumulus clouds stretched pre-existing spin in the low levels of the atmosphere near the boundary interactions, resulting in at least three non-supercellular tornadoes. One tornado was highly visible in southeastern Lubbock. The tornadoes were weak (F0), and no damage was reported by local authorities. The thunderstorms continued to intensify over the eastern South Plains during the late afternoon and early evening hours. Several storms eventually became severe with quarter sized hail and wind gusts up to 64 mph. A landspout tornado developed along a boundary intersection as it progressed northwestward across the city. This tornado was observed by storm spotters with the City of Lubbock and a Federal Aviation Administration contract weather observer as it developed near Interstate 27, just west of Lubbock International Airport. No damage was reported as the short-lived tornado moved northwestward over open farmland.

PROBABILITY OF FUTURE EVENTS

Tornadic storms can occur at any time of year and at any time of day, but they are typically more common in the spring months during the late afternoon and evening hours. A smaller, high frequency period can emerge in the fall during the brief transition between the warm and cold seasons. According to historical records, Lubbock County, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, can experience a tornado touchdown approximately once every year. This frequency supports a “Highly Likely” probability of future events for Lubbock County, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, or an event probable in the next year.

VULNERABILITY AND IMPACT

Because tornadoes often cross jurisdictional boundaries, all existing and future buildings, facilities, and populations in the entire Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, are considered to be exposed to this hazard and could potentially be impacted. The damage caused by a tornado is typically a result of high wind velocity, wind-blown debris, lightning, and large hail.

The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction. Consequently, vulnerability of humans and property is difficult to evaluate since tornadoes form at different strengths, in random locations, and create relatively narrow paths of destruction. Although tornadoes strike at random, making all buildings vulnerable, three types of structures are more likely to suffer damage:

- Manufactured Homes;
- Homes on crawlspaces (more susceptible to lift); and
- Buildings with large spans, such as shopping malls, gymnasiums, and factories.

Tornadoes can cause a significant threat to people as they could be struck by flying debris, falling trees/branches, utility lines, and poles. Blocked roads could prevent first responders to respond to calls. Tornadoes commonly cause power outages which could cause health and safety risks to residents and visitors, as well as to patients in hospitals.

The Lubbock County planning area features multiple mobile or manufactured home parks throughout the planning area, including all participation jurisdictions. These parks are typically more vulnerable to tornado events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area including all participating jurisdictions and unincorporated areas of the county which would also be more vulnerable. The US Census data indicates a total of 6,080 manufactured homes located in the Lubbock County planning area (4.7%), including participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts (Table 10-6). In addition, 48.4% (approximately 62,511 structures) of the single family residential (SFR) structures in the entire planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant wind events.

Table 10-6. Structures at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Lubbock County	6,080	62,511
Village of Buffalo Springs	3	310
City of Idalou	32	714
City of Lubbock	1,557	54,142
Town of New Deal	183	213
Town of Ransom Canyon	0	186

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
City of Shallowater	110	462
City of Slaton	341	1,989
City of Wolfforth	58	529
Abernathy ISD	0	0
Frenship ISD	0	0
Idalou ISD	0	0
Lubbock ISD	73	0
Lubbock-Copper ISD	0	0
New Deal ISD	4	0
Roosevelt ISD	1	0
Shallowater ISD	0	0
Slaton ISD	0	0
Betty M. Condra School of Education Innovation	0	0
South Plains College	0	0
Texas Tech University System	3	0
Texas Tech University Health Sciences Center	0	0
Lubbock County Hospital System	6	0
Lubbock County WCID #1	0	0
Lubbock Reese Redevelopment Authority	0	0
South Plains Association of Governments	0	0

While all citizens are at risk to the impacts of a tornado, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 18.5% of the planning area population live below the poverty level (Table 10-7).

Table 10-7. Populations at Greatest Risk by Jurisdiction[6]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Lubbock County	57,053
Village of Buffalo Springs	4
City of Idalou	310
City of Lubbock	51,146
Town of New Deal	214
Town of Ransom Canyon	10
City of Shallowater	131
City of Slaton	1,161
City of Wolfforth	462

The following critical facilities would be vulnerable to tornado events in each participating jurisdiction:

Table 10-8. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 9 Emergency Communication Towers, 1 County Annex Building, 1 Sheriff's Office, 1 Courthouse, 2 Detention Centers, 5 Evacuation Centers
Village of Buffalo Springs	1 EOC, 1 Dam, 1 Sewage Facility, 1 Water Facility
City of Idalou	1 EOC, 1 City Hall, 1 Fire Department, 1 Maintenance Facility, 1 Medical Facility, 1 Nursing Home, 4 Shelters, 2 Lift Stations, 1 Wastewater Treatment Plant, 2 Water Tower, 4 Wells
City of Lubbock	1 EOC, 1 Airport, 1 Civic Center, 1 Fire Administration Building, 19 Fire Stations, 1 Fire Marshall's Office, 1 Government Administration Tower, 1 Health Department, 1 Police Headquarters, 4 Police Stations, 5 Canadian River Authority Facilities, 2 Land Application Facilities, 38 Lift Stations, 46 Substations, 2 National Weather Service Facilities, 15 Pump Stations, 4 Radio Towers, 1 Reservoir, 2 Water Plants, 2 Water Reclamation Facilities, 4 Water Towers, 1 Well Field
Town of New Deal	1 Government Facility, 1 Fire Station, 4 Lift Stations, 2 Pump Stations, 2 Water Storage Facility, 1 Water Well, 1 Sewage Pond, 1 Wastewater Facility

[6] US Census Bureau 2020 data for Lubbock County

JURISDICTION	CRITICAL FACILITIES
Town of Ransom Canyon	1 Government Building, 1 Shelter, 1 Communications Facility, 3 Fire Stations, 1 Operations Building, 1 Dam, 4 Lift Stations, 2 Pump Stations, 1 Wastewater Plant, 1 Water Supply Facility, 3 Water Tank, 1 Water Tower
City of Shallowater	1 City Hall, 1 EMS Station, 1 Fire Station, 1 Police Station, 1 Water Treatment Plant
City of Slaton	1 City Hall, 2 City Department Buildings, 1 Airport, 1 EMS Station, 1 Fire Station, 1 Police Station, 4 Schools, 2 Medical Facilities, 4 Tornado Shelters, 6 Lift Stations, 2 Pump Stations, 2 Water Towers, 1 Sewage Pond
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Stations, 1 Assisted Living Facility, 2 Daycare Facility, 1 Maintenance Building, 2 Medical Clinics, 4 Schools, 1 School Administration Building, 1 Sewage Plant, 1 Water Treatment Plant
Abernathy ISD	1 Administration Building, 1 Elementary School, 1 High School, 1 Middle School
Frenship ISD	1 Administration Building, 9 Elementary Schools, 2 High Schools, 4 Middle Schools, 1 Grade Center, 1 Education Center, 1 Maintenance Facility, 1 Center Operations Facility, 1 Transportation Operations Facility, 1 Field House
Idalou ISD	1 Elementary School, 1 High School, 1 Middle School
Lubbock ISD	3 Emergency Operation Centers, 29 Elementary School, 5 High School, 7 Middle School, 3 Academies, 3 Specialized Schools, 1 Educational Support Center, 1 Technology Center, 1 Vocational Center, 1 Aquatic Center, 7 Fields, 1 Maintenance Facility, 2 Warehouses, 1 Transportation Center
Lubbock-Copper ISD	1 Administration Building, 5 Elementary School, 2 High School, 2 Middle School, 1 Academy, 1 Special Education Building
New Deal ISD	1 Administration Building, 1 High School, 1 Middle School
Roosevelt ISD	1 Administration Building, 1 Elementary, 1 Secondary School, 3 Campus Buildings, 1 Community Center, 1 Daycare Facility, 1 Maintenance Facility, 6 Fields / Athletic Facilities, 1 Gymnasium, 7 School Houses, 2 Storage Facilities, 1 Transportation Facility, 1 Water Tower
Shallowater ISD	1 Elementary School, 1 High School, 1 Middle School, 1 Intermediate School
Slaton ISD	1 Administration Building, 2 Elementary School, 1 High School, 1 Middle School, 1 Campus Center, 1 Maintenance Facility, 1 Transportation Facility
Betty M. Condra School of Education Innovation	1 Main Campus Facility

JURISDICTION	CRITICAL FACILITIES
South Plains College	1 Central Campus, 7 Classroom Buildings, 1 Technical Center, 1 Internet Building
Texas Tech University System	1 Emergency Operations, 2 Administration Building, 1 Administration Support Center, 6 Campus Buildings, 1 Evacuation Center, 1 Lab, 1 Library, 2 Heating / Cooling Plants, 1 Lift Station, 2 Plant Annex and Infrastructure
Texas Tech University Health Sciences Center	1 EOC, 1 Central Campus, 1 Medical Pavilion
Lubbock County Hospital System	1 Emergency Management Center, 1 Main Campus, 7 EMS Stations, 1 EMS Warehouse, 1 Hospital Warehouse, 38 Clinics, 7 Medical Offices, 5 Rehabilitation Centers
Lubbock County WCID #1	1 Administrative Building, 2 Sewage Infrastructures, 1 Water Infrastructure
Lubbock Reese Redevelopment Authority	1 EOC, 1 Communication Building, 1 Airfield Tower, 1 Data Center, 1 Evacuation Center, 1 Maintenance Operations Facility, 1 Water Treatment
South Plains Association of Governments	1 Central Office, 1 Law Enforcement Building

The average loss estimate of property and crop is $1,938,641,398 (in 2022 dollars), having an approximate annual loss estimate of $28,934,946 (Table 10-9). Based on historic loss and damages, the impact of tornado on the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, can be considered “Limited” with less than 10 percent of property expected to be destroyed, injuries that can be treated with first aid, and critical facilities shut down for 24-hours or less. However, with 510 injuries and 26 fatalities from historical events, the impact for the planning area is considered “Substantial” with multiple fatalities possible depending on the severity of the event.

Table 10-9. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock County	$1,937,993,500	$28,925,276
Village of Buffalo Springs	$0	$0
City of Idalou	$1,318	$20
City of Lubbock	$541,103	$8,076
Town of New Deal	$0	$0
Town of Ransom Canyon	$0	$0
City of Shallowater	$105,477	$1,574

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
City of Slaton	$0	$0
City of Wolfforth	$0	$0
Planning Area	**$1,938,641,398**	**$28,934,946**

ASSESSMENT OF IMPACTS

Tornadoes have the potential to pose a significant risk to the population and can create dangerous situations. Often times, providing and preserving public health and safety is difficult. The impact of climate change could produce larger, more severe tornado events, exacerbating the current tornado impacts. More destructive tornado conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Manufactured homes may suffer substantial damage as they would be more vulnerable than typical site-built structures.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- Tornadoes often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outages can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Tornadoes can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders must enter the damage area shortly after the tornado passes to begin rescue operations and to organize cleanup and assessments efforts, therefore they are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities, loss of communications, and damaged emergency vehicles and equipment.
- City or county departments may be damaged or destroyed, delaying response and recovery efforts for the entire community.
- Private sector entities that the City and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.

- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the tornado may be negatively impacted while roads and utilities are being restored, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures destroyed by a tornado may not be rebuilt for years, reducing the tax base for the community.
- Large or intense tornadoes may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Recreation activities may be unavailable and tourism can be unappealing for years following a large tornado, devastating directly related local businesses.

The economic and financial impacts of a tornado event on the community will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a tornado event.

SECTION 11: WILDFIRE

HAZARD DESCRIPTION

A wildfire event can rapidly spread out of control and occurs most often in the summer when the brush is dry and flames can move unchecked through a highly vegetative area. Wildfires can start as a slow burning fire along the forest floor, killing and damaging trees. The fires often spread more rapidly as they reach the tops of trees with wind carrying the flames from tree to tree. Usually, dense smoke is the first indication of a wildfire.

A wildfire event often begins unnoticed and spreads quickly, lighting brush, trees, and homes on fire. For example, a wildfire may be started by a campfire that was not doused properly, a tossed cigarette, burning debris, or arson.

Texas has seen a significant increase in the number of wildfires in the past 30 years, which included wildland, interface, or intermix fires. Wildland fires are fueled almost exclusively by natural vegetation, while interface or intermix fires are urban/wildland fires in which vegetation and the built environment provide the fuel.

LOCATION

A wildfire event can be a potentially damaging consequence of drought. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely to occur in open grasslands. The threat to people and property from a wildfire event is greater in the fringe areas where developed areas meet open grass lands, such as the WUI. (Figures 11-1 through 11-26). It is estimated that 6 percent of the total population in Lubbock County live within the WUI. However, the entire Lubbock County planning area is at some risk for wildfires.

Figure 11-1. Wildland Urban Interface Map – Lubbock County

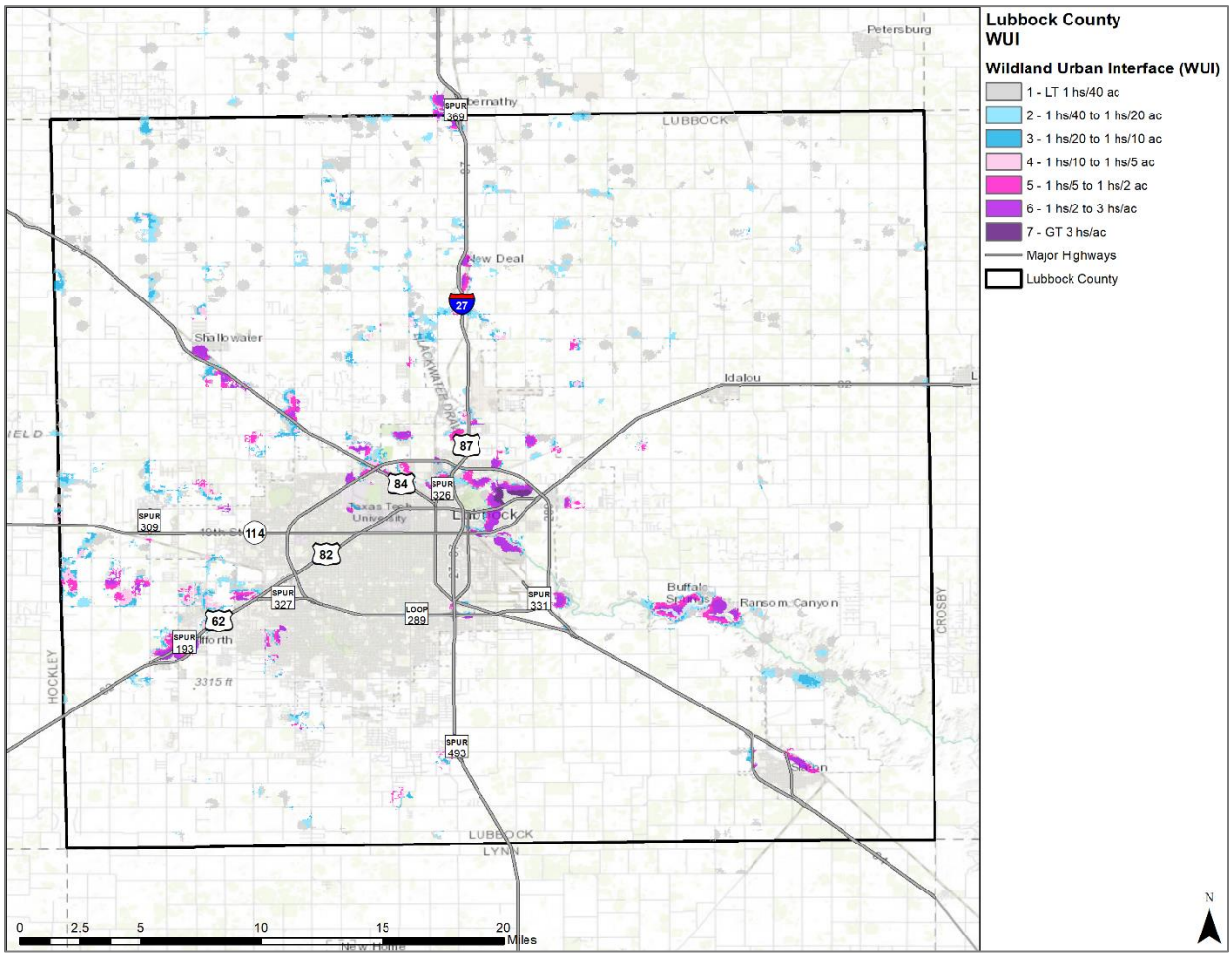
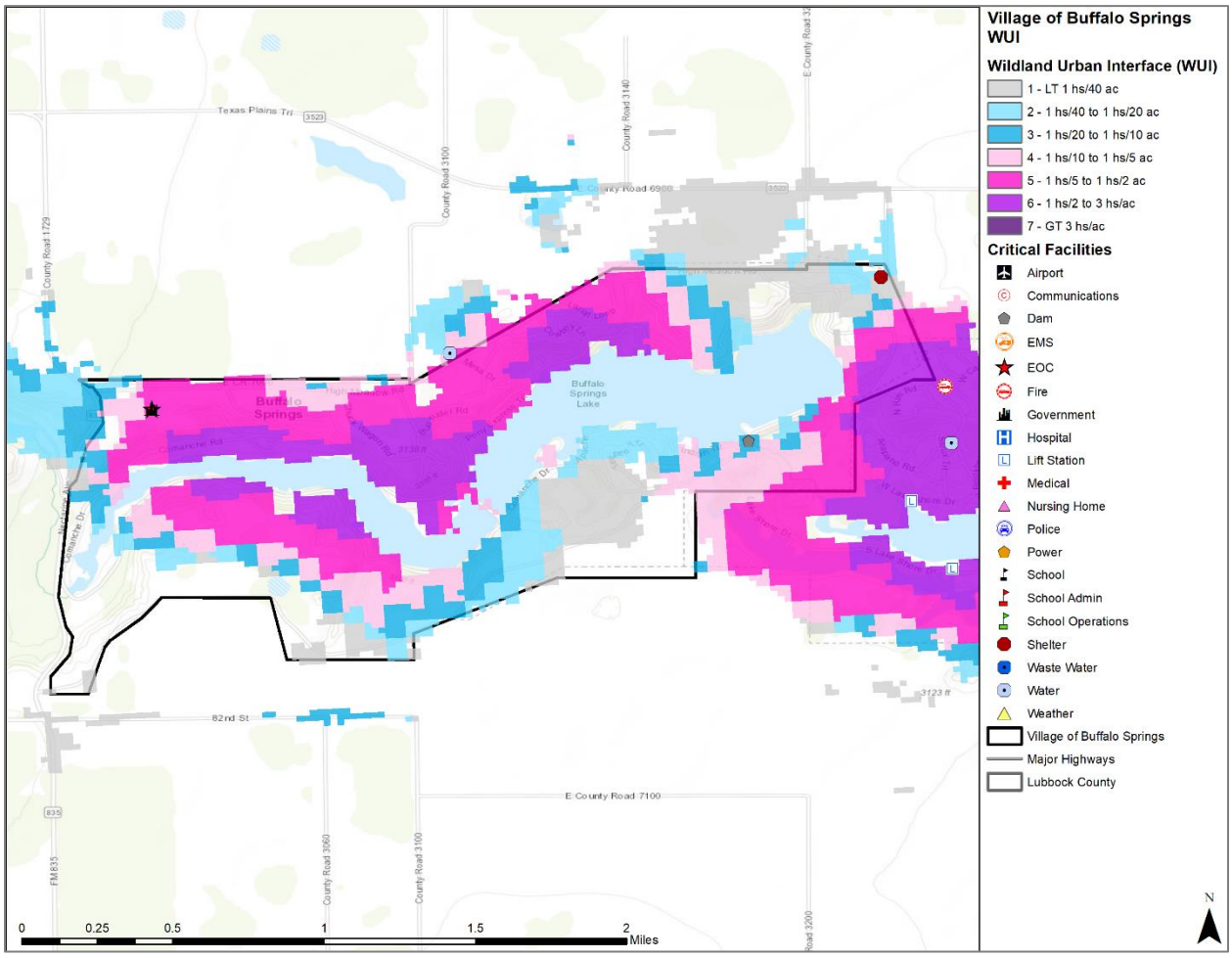
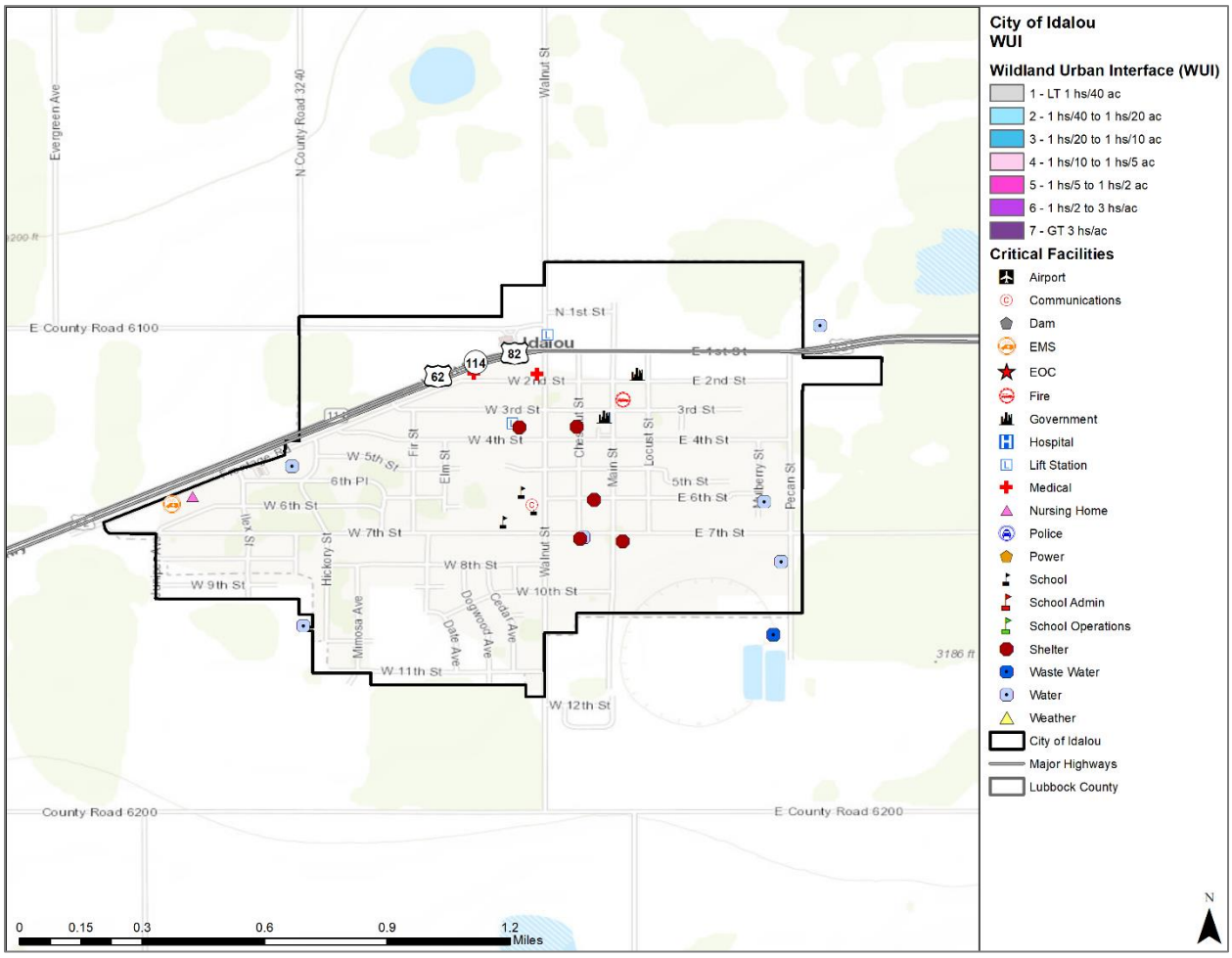


Figure 11-2. Wildland Urban Interface Map – Village of Buffalo Springs



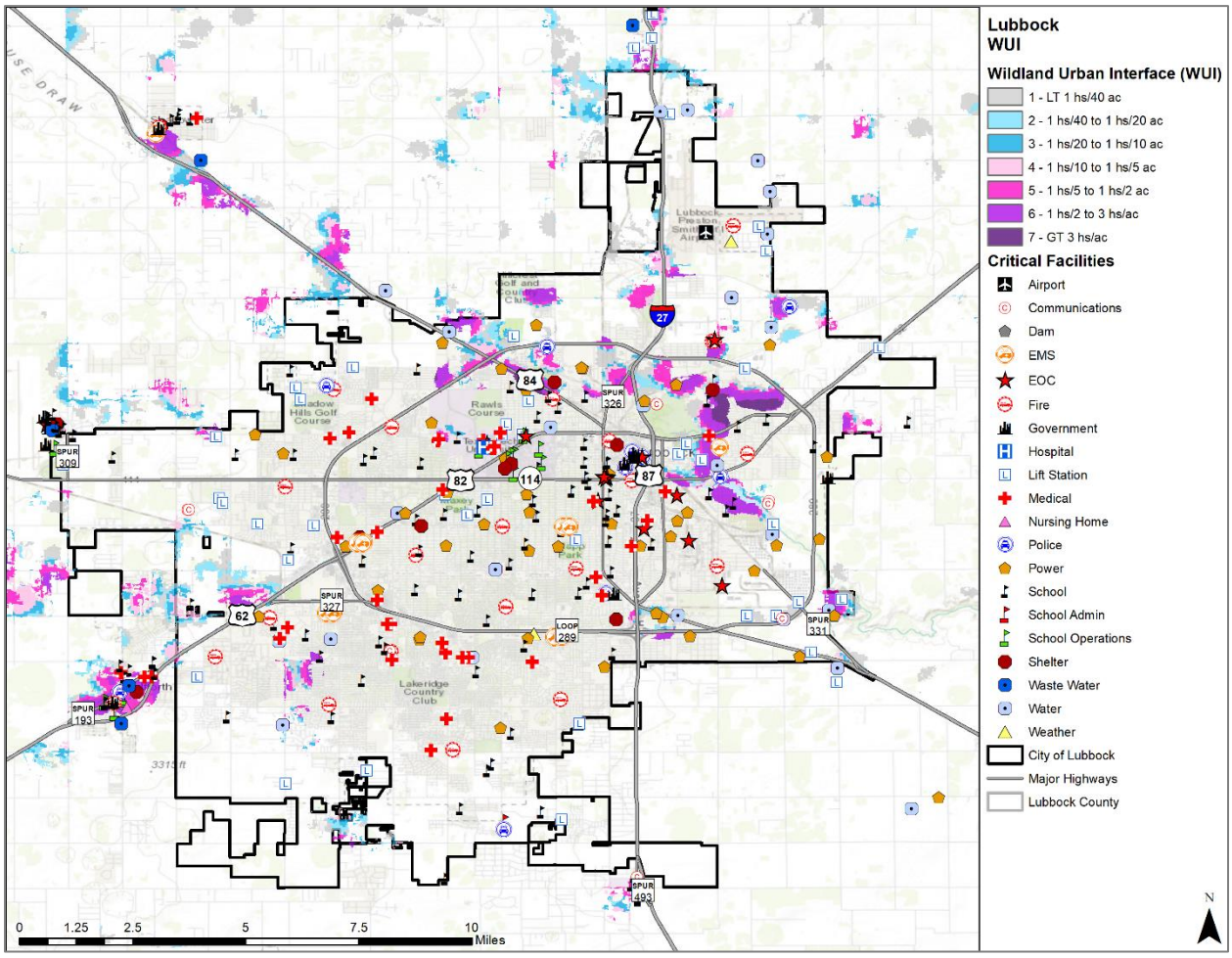
It is estimated that 90.9 percent of the total population in the Village of Buffalo Springs live within the WUI. However, the entire Village is at some risk for wildfires.

Figure 11-3. Wildland Urban Interface Map – City of Idalou



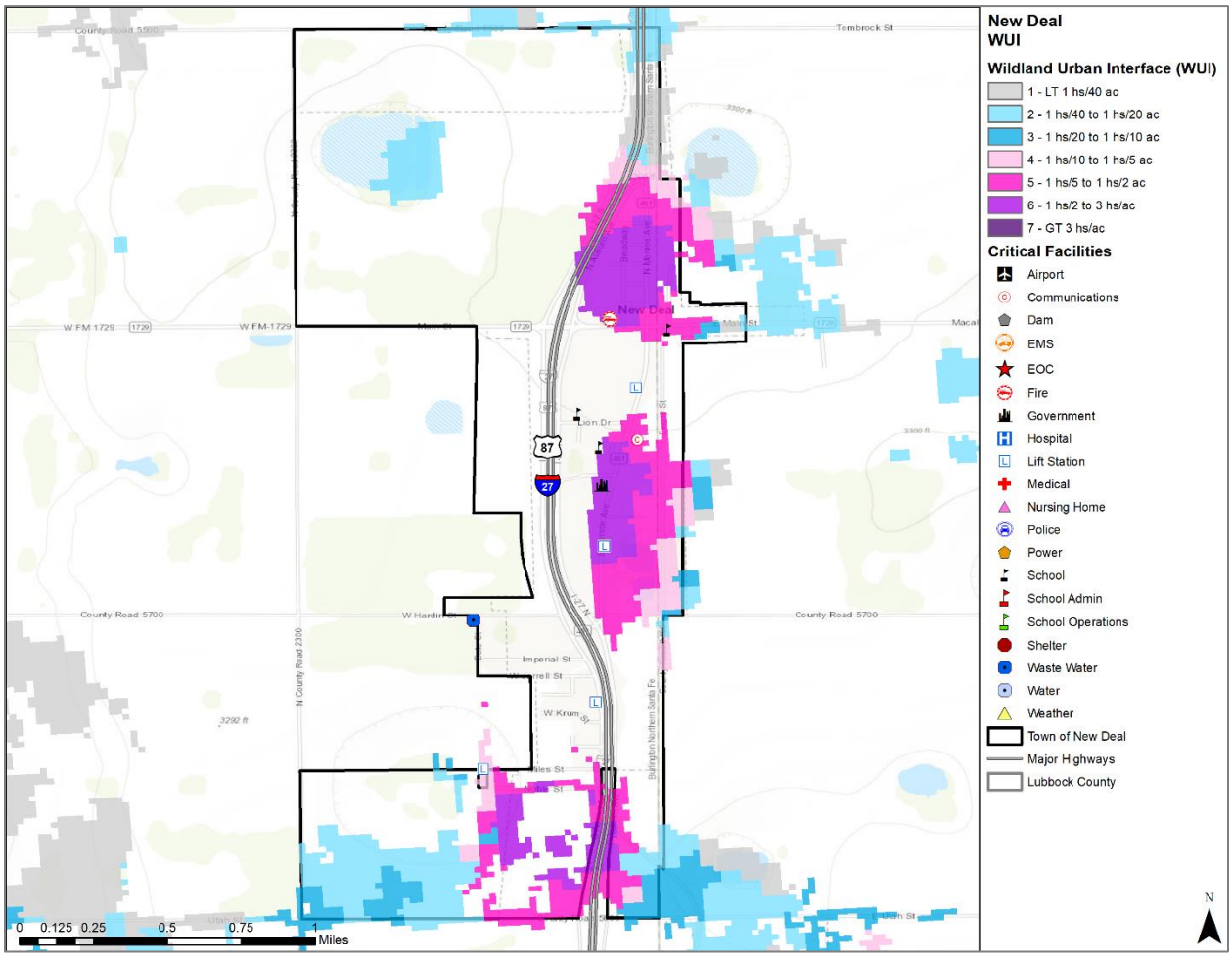
It is estimated that 0.0 percent of the total population in the City of Idalou live within the WUI. However, the entire City is at some limited risk for wildfires.

Figure 11-4. Wildland Urban Interface Map – City of Lubbock



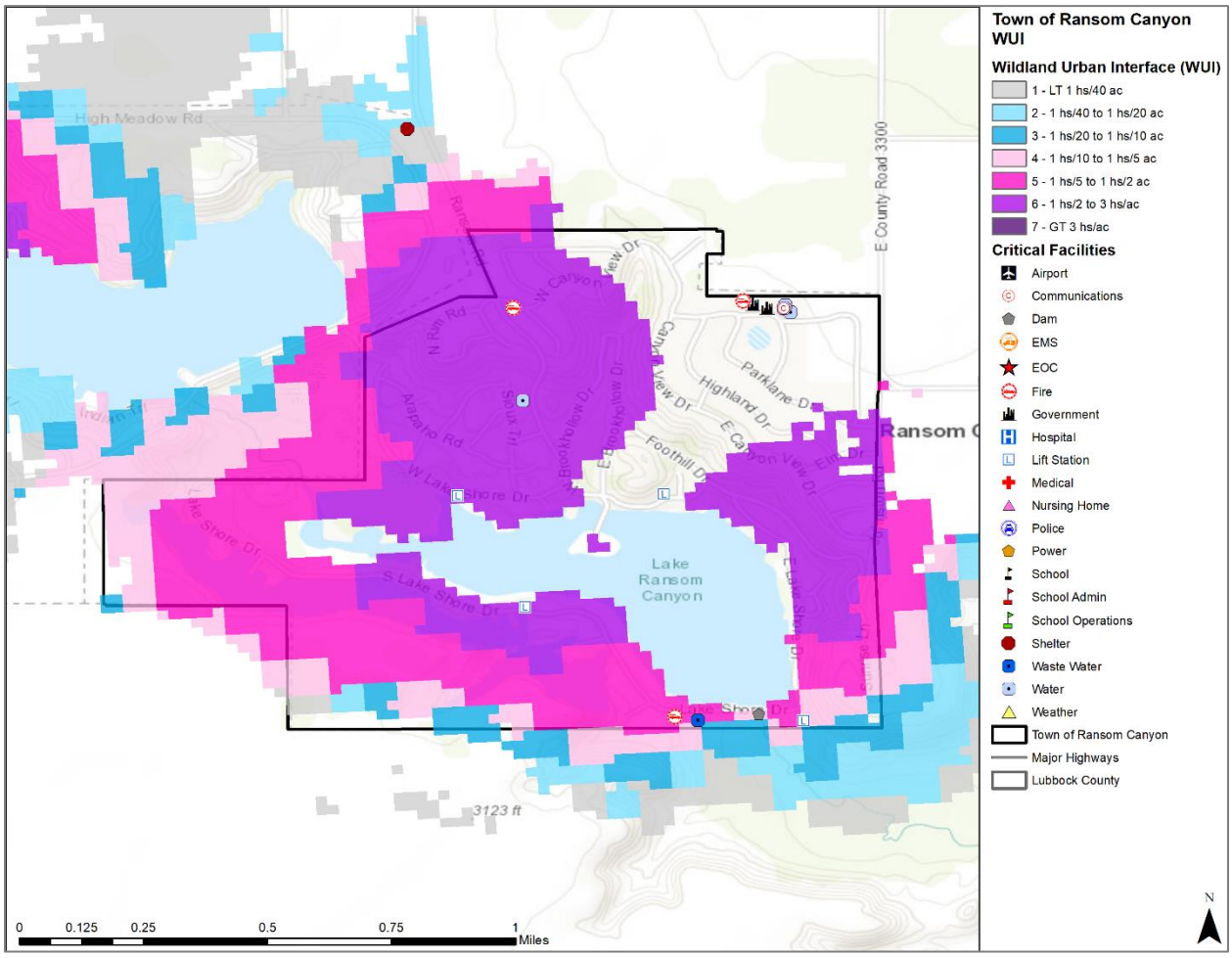
It is estimated that 4.1 percent of the total population in the City of Lubbock live within the WUI. However, the entire City is at some limited risk for wildfires.

Figure 11-5. Wildland Urban Interface Map – Town of New Deal



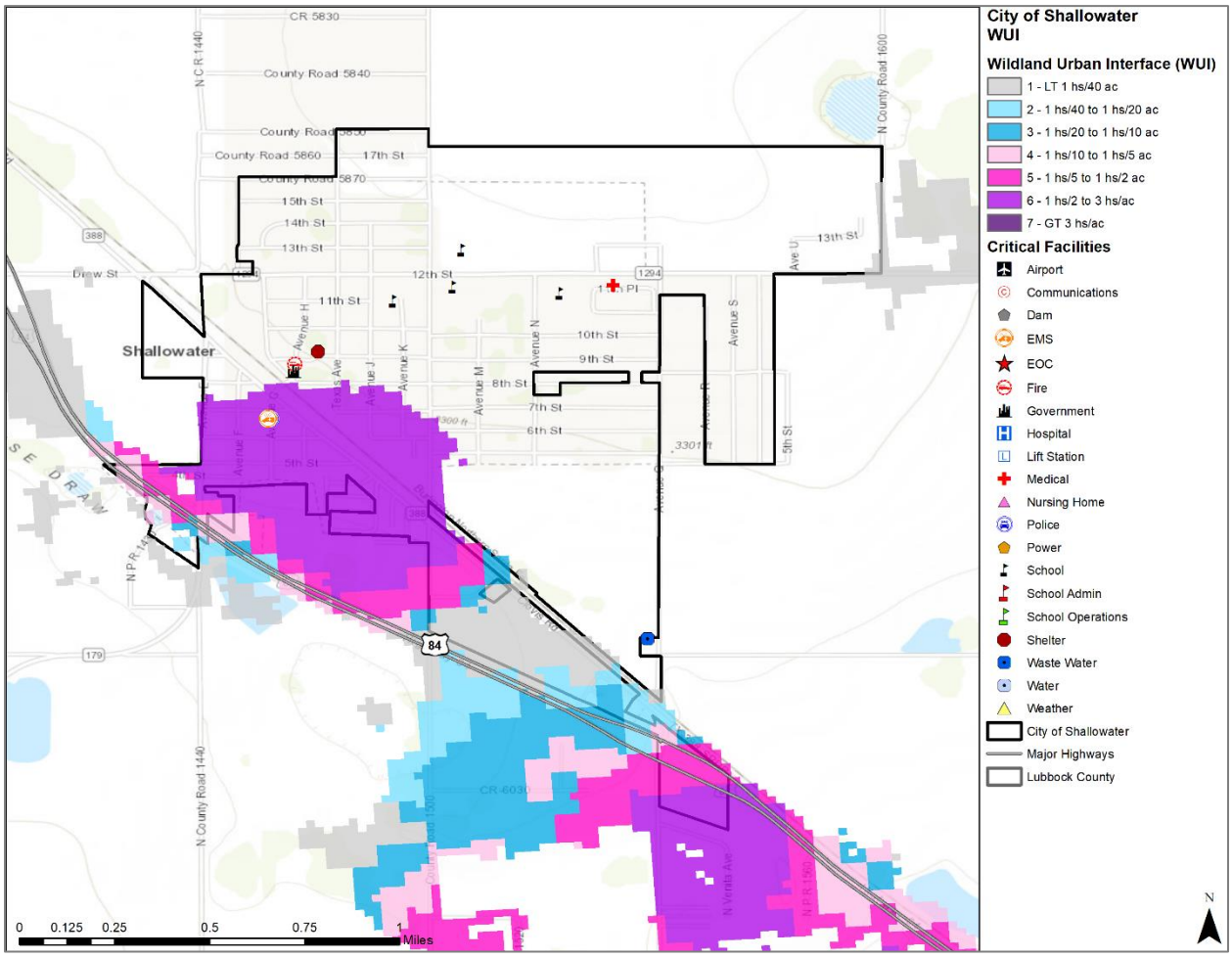
It is estimated that 60 percent of the total population in the Town of New Deal live within the WUI. However, the entire Town is at some risk for wildfires.

Figure 11-6. Wildland Urban Interface Map – Town of Ransom Canyon



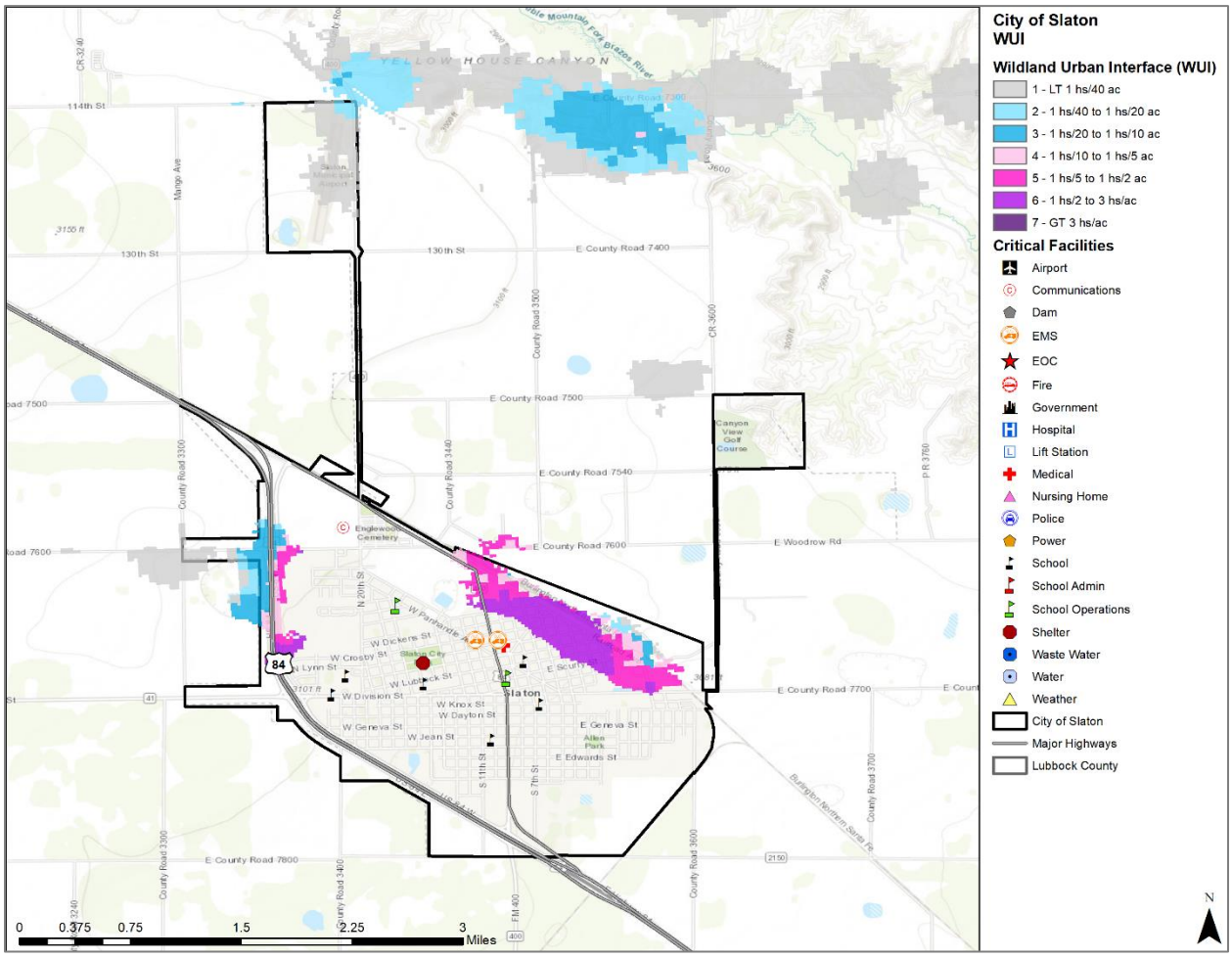
It is estimated that 65.5 percent of the total population in the Town of Ransom Canyon live within the WUI. However, the entire Town is at some risk for wildfires.

Figure 11-7. Wildland Urban Interface Map – City of Shallowater



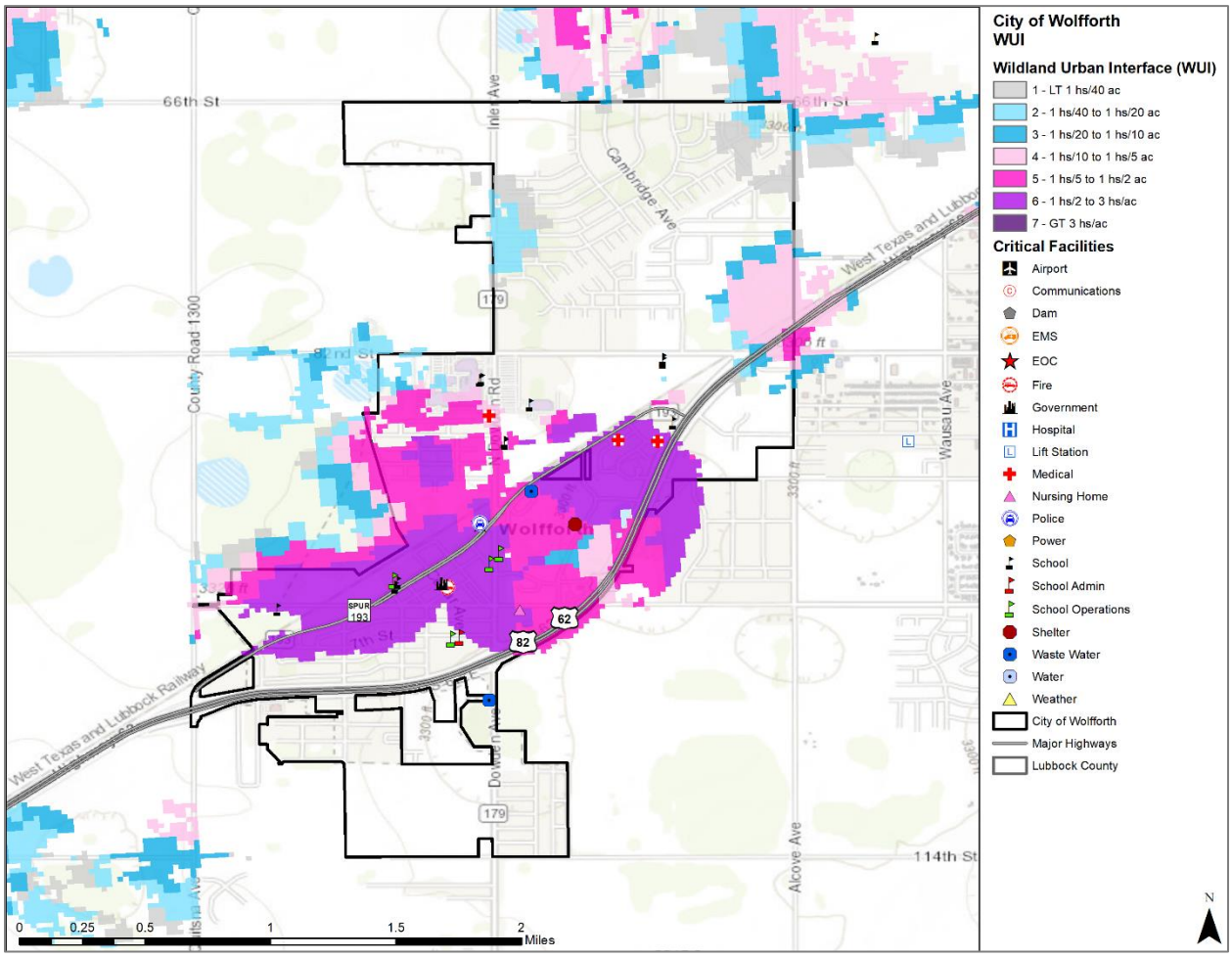
It is estimated that 19.9 percent of the total population in the City of Shallowater live within the WUI. However, the entire city is at some limited risk for wildfires.

Figure 11-8. Wildland Urban Interface Map – City of Slaton



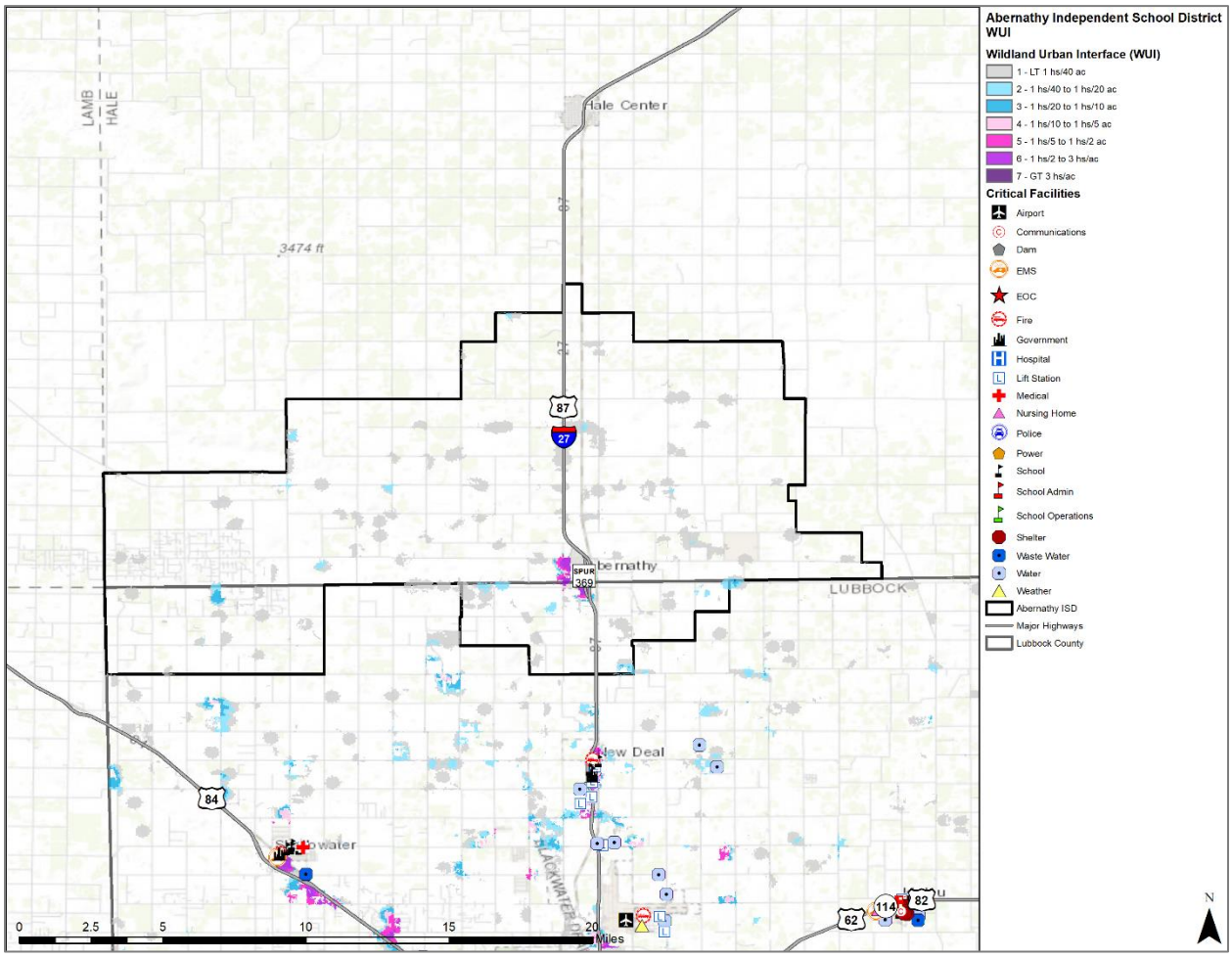
It is estimated that 7.1 percent of the total population in the City of Slaton live within the WUI. However, the entire city is at some limited risk for wildfires.

Figure 11-9. Wildland Urban Interface Map – City of Wolfforth



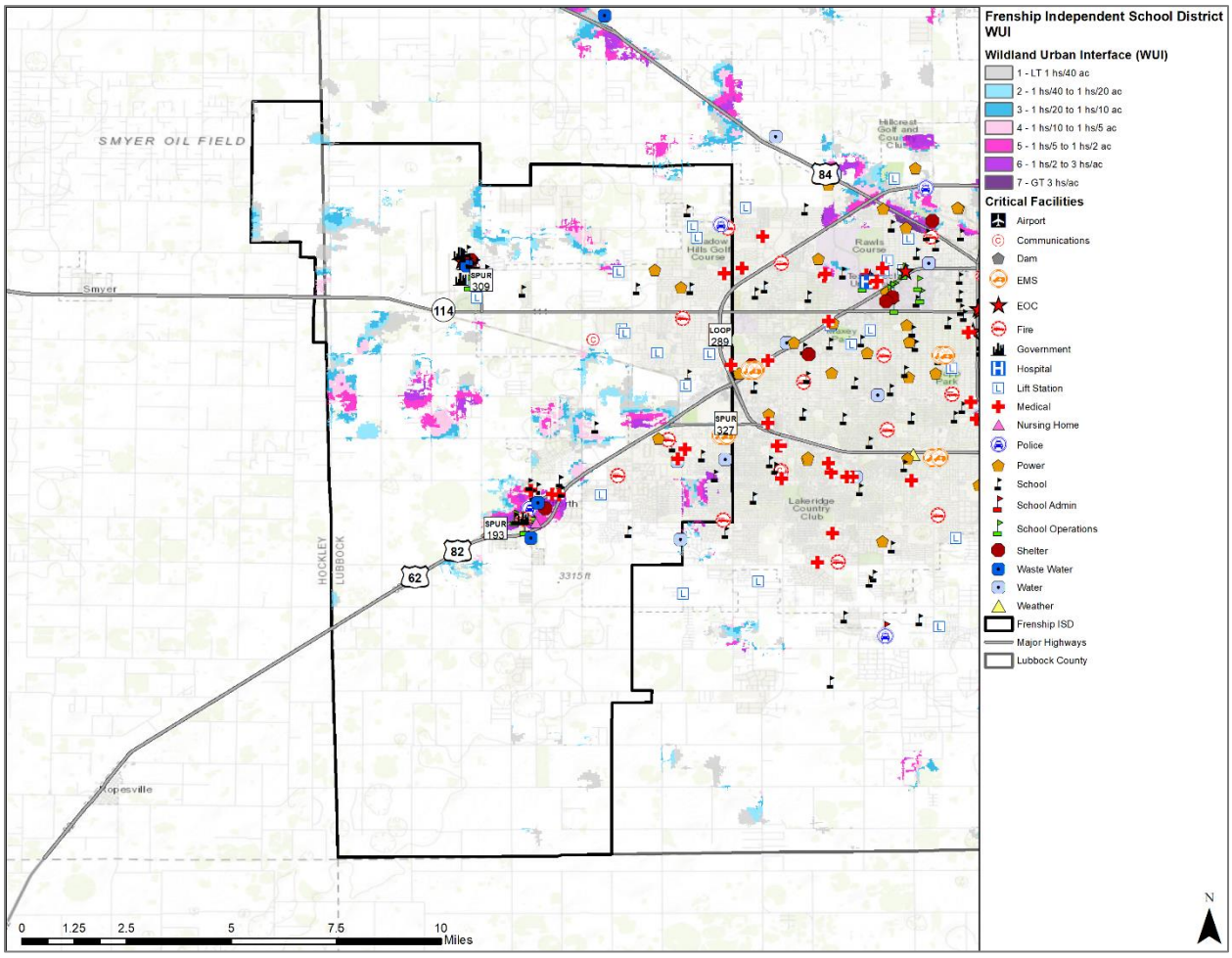
It is estimated that 49.1 percent of the total population in the City of Wolfforth live within the WUI. However, the entire City is at some risk for wildfires.

Figure 11-10. Wildland Urban Interface Map – Abernathy ISD



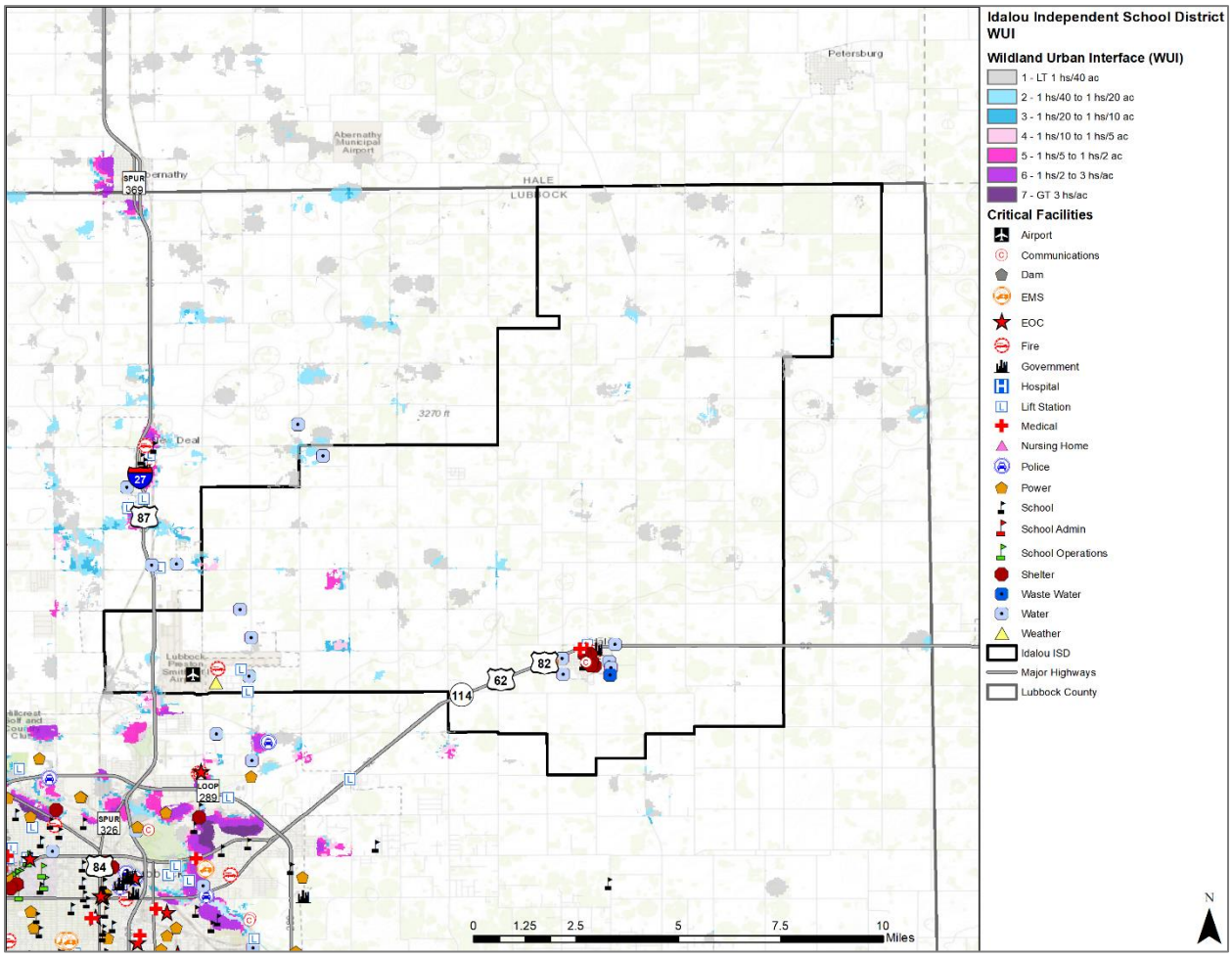
None of the Abernathy ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-11. Wildland Urban Interface Map – Frenship ISD



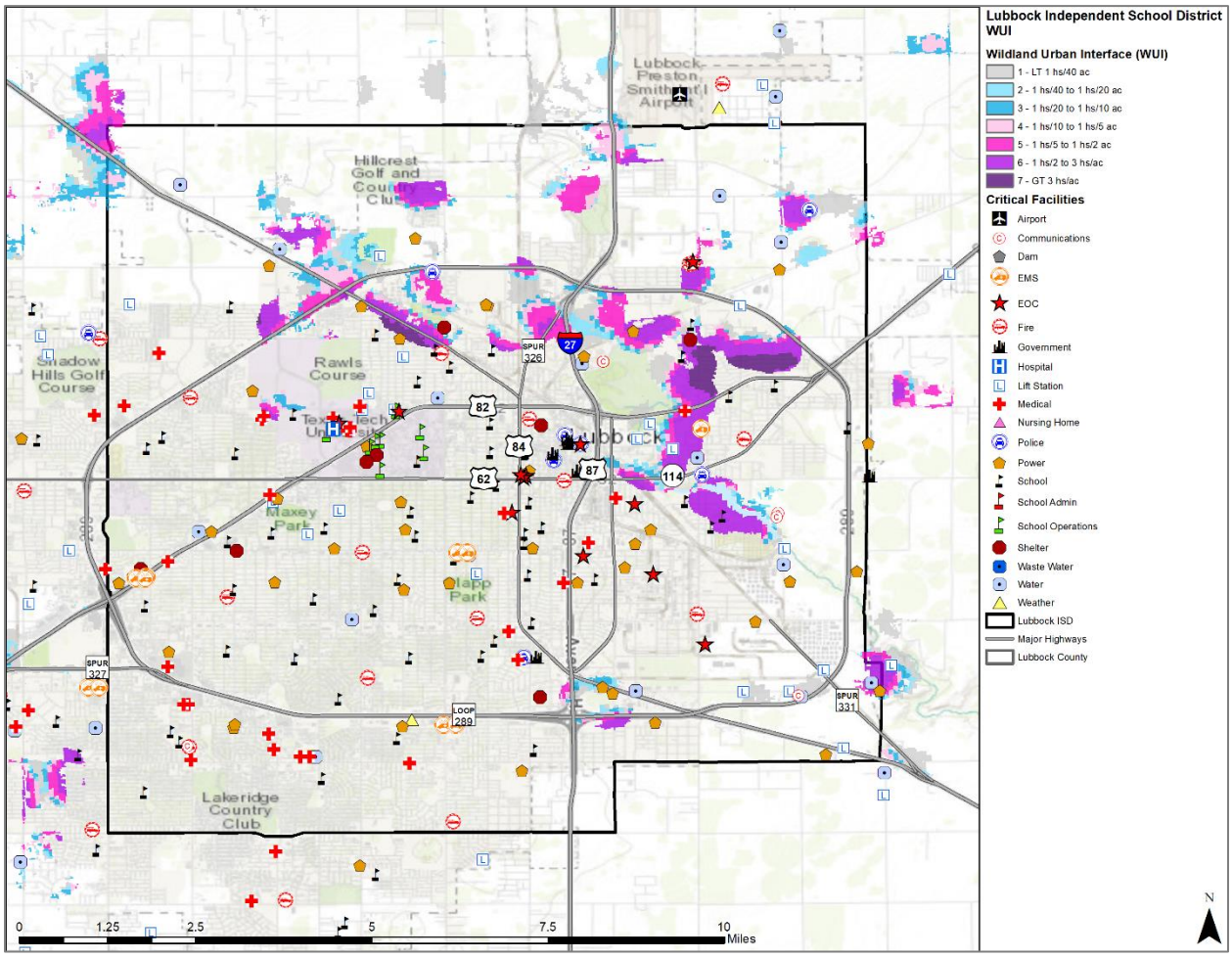
Five of the Frenship ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-12. Wildland Urban Interface Map – Idalou ISD



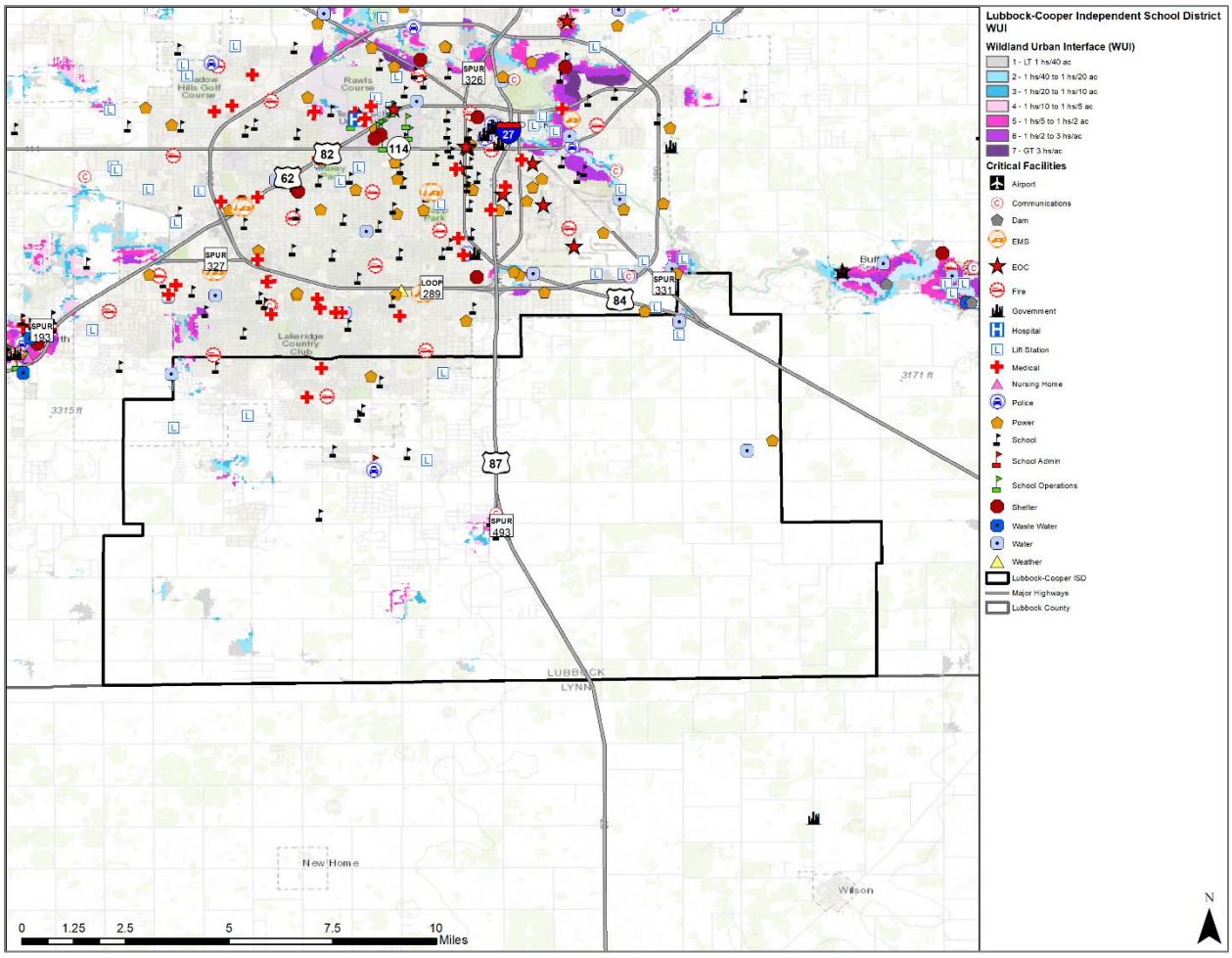
None of the Idalou ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-13. Wildland Urban Interface Map – Lubbock ISD



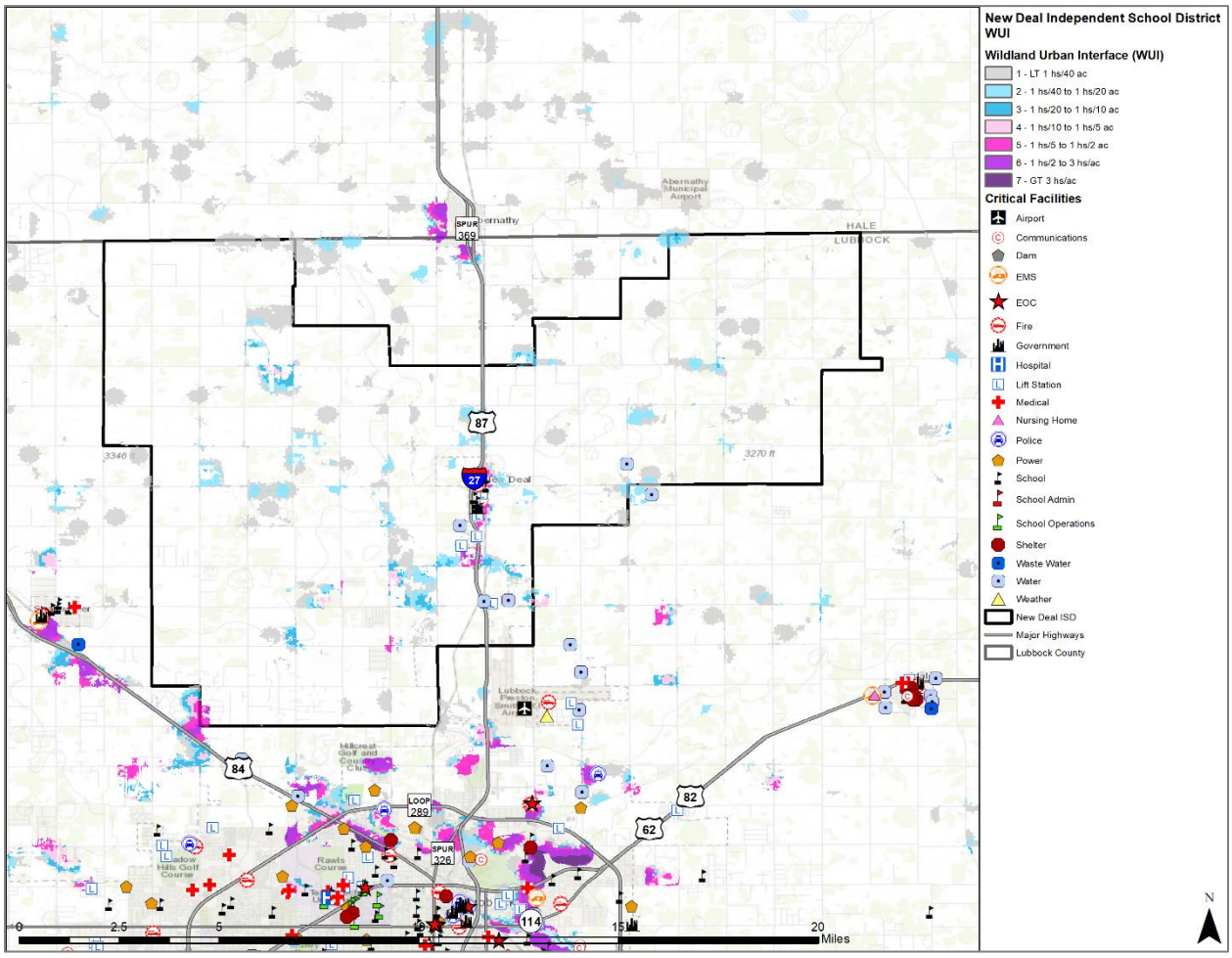
Three of the Lubbock ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-14. Wildland Urban Interface Map – Lubbock-Copper ISD



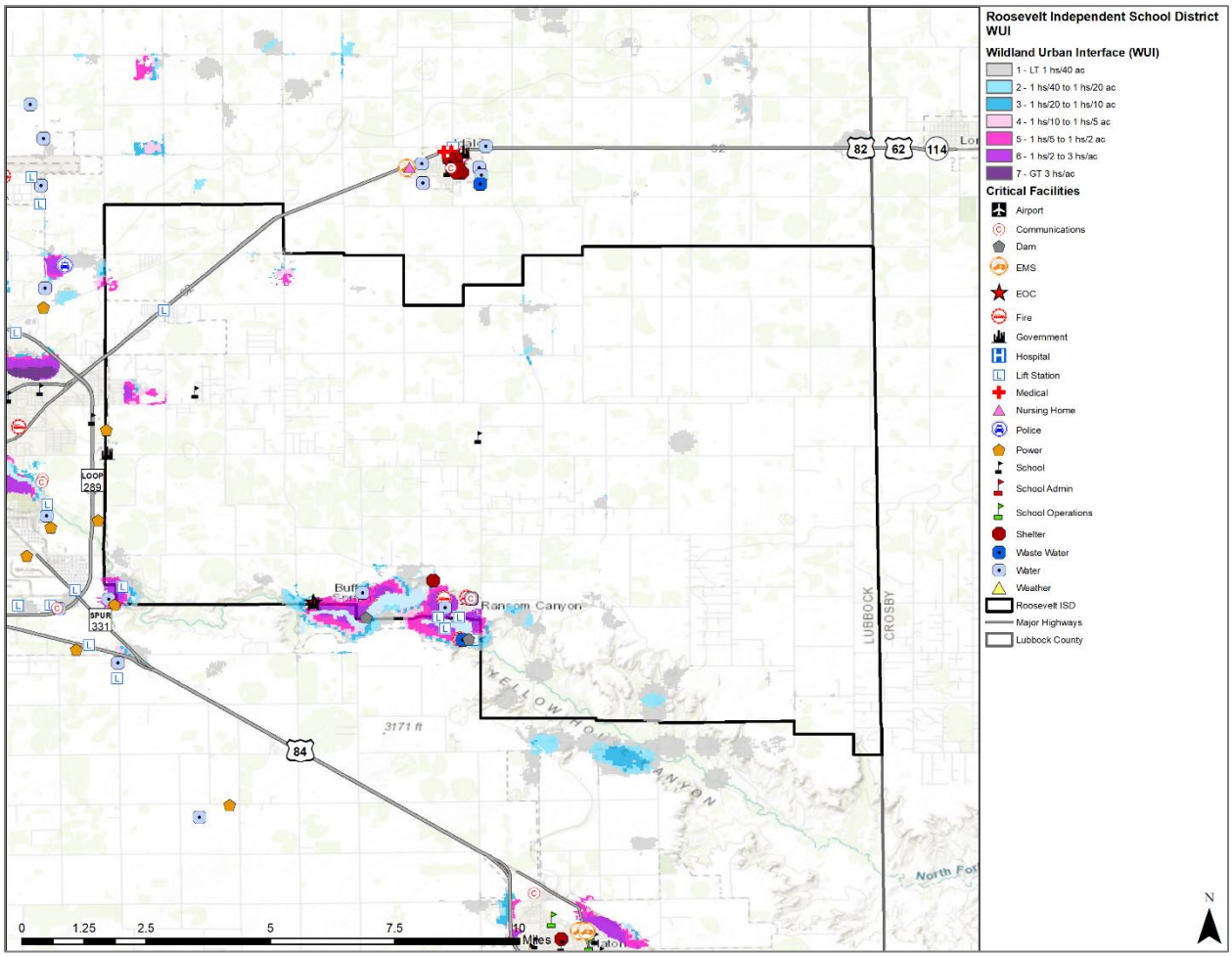
Three of the Lubbock-Copper ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-15. Wildland Urban Interface Map – New Deal ISD



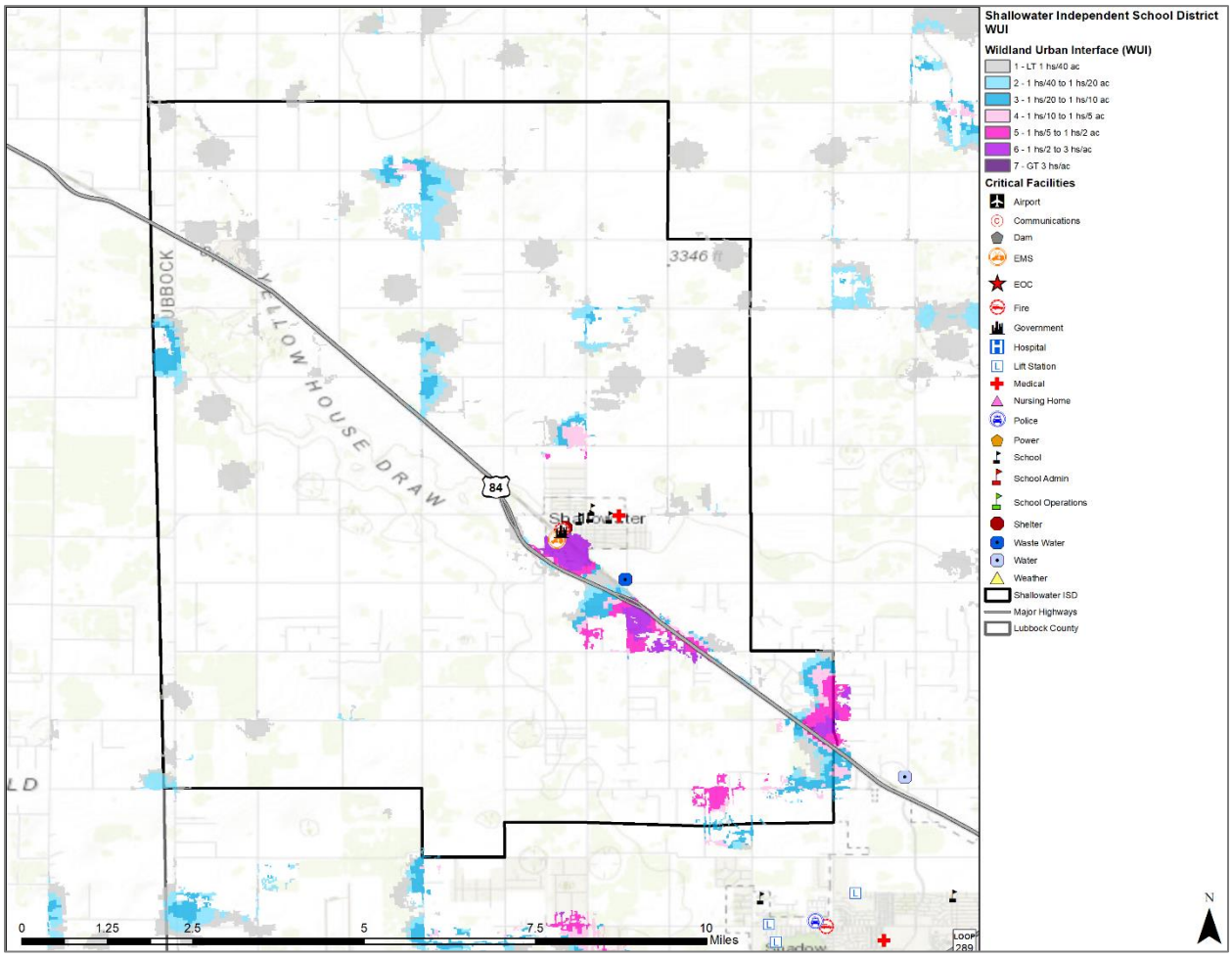
None of the New Deal ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-16. Wildland Urban Interface Map – Roosevelt ISD



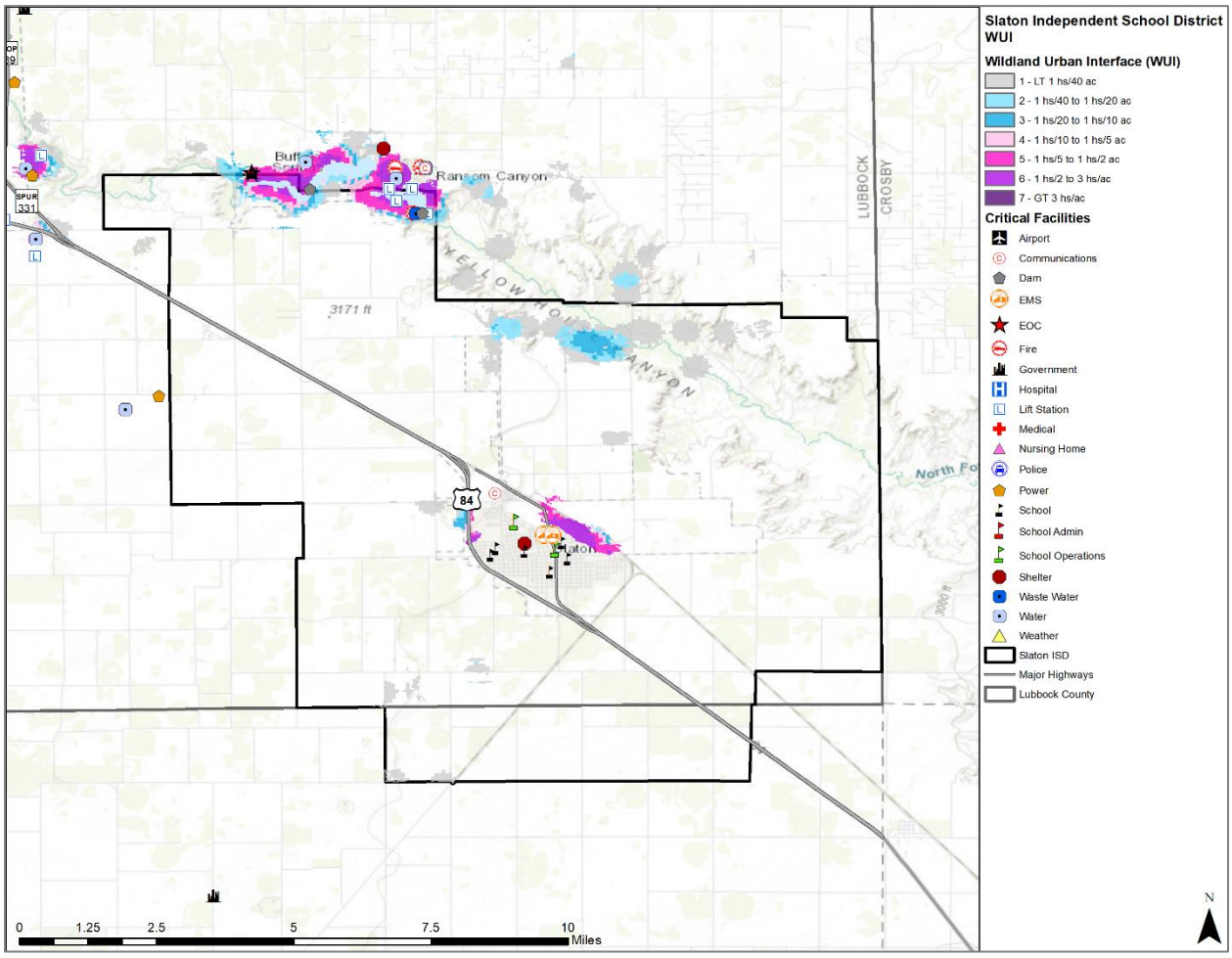
None of the Roosevelt ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-17. Wildland Urban Interface Map – Shallowater ISD



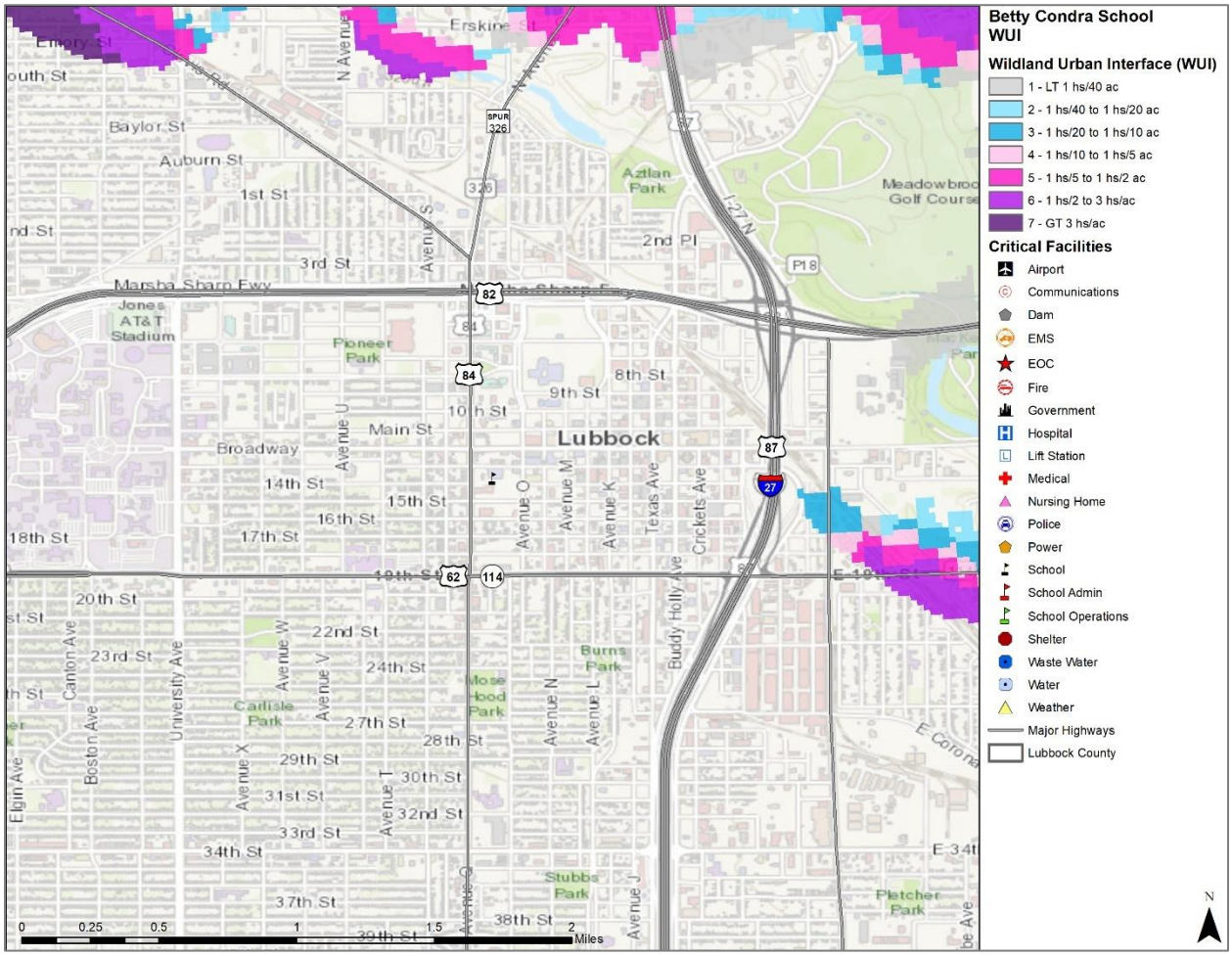
None of the Shallowater ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-18. Wildland Urban Interface Map – Slaton ISD



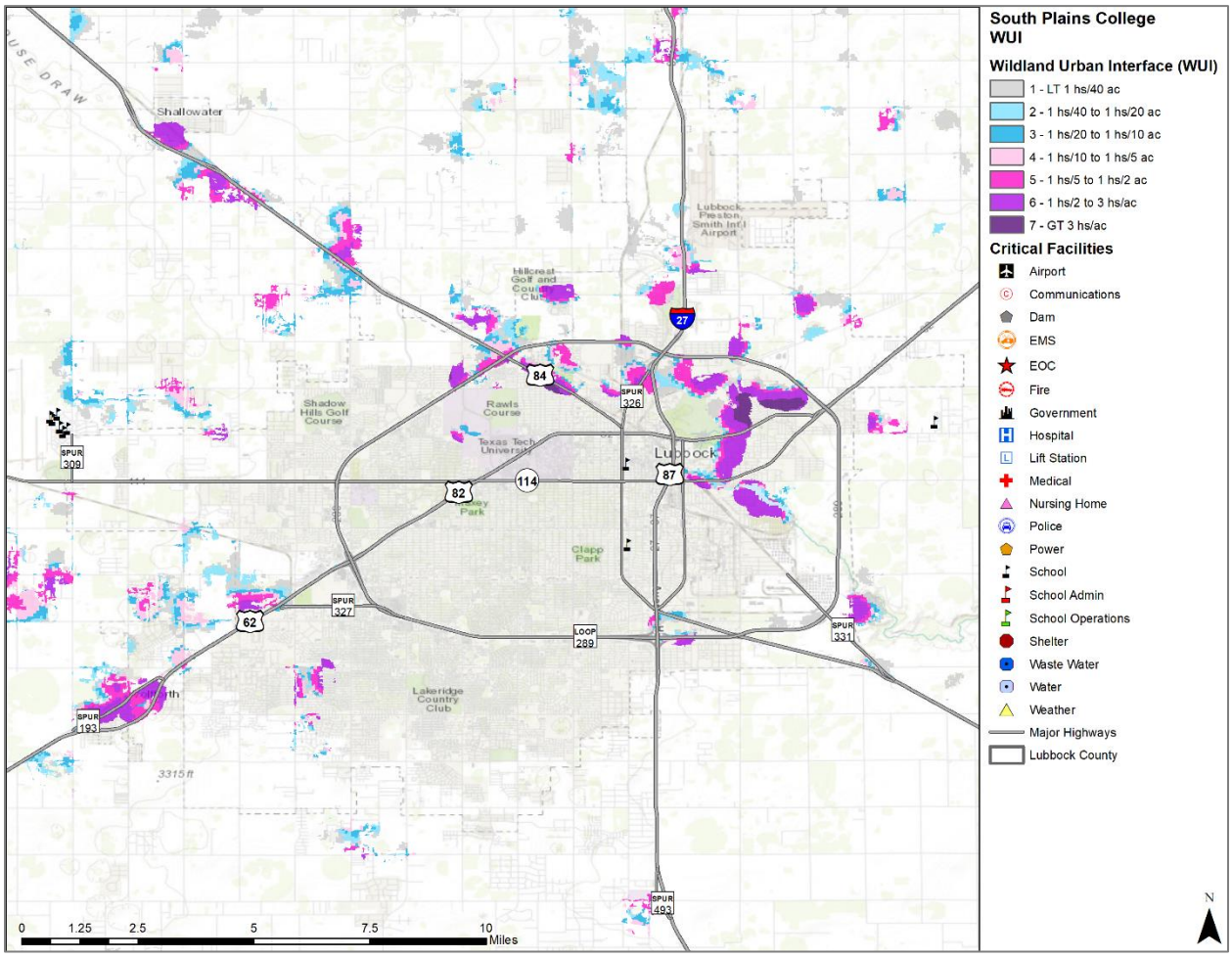
None of the Slaton ISD facilities are located within the WUI. However, the entire ISD is at some risk for wildfires.

Figure 11-19. Wildland Urban Interface Map – Betty M. Condra School of Education Innovation



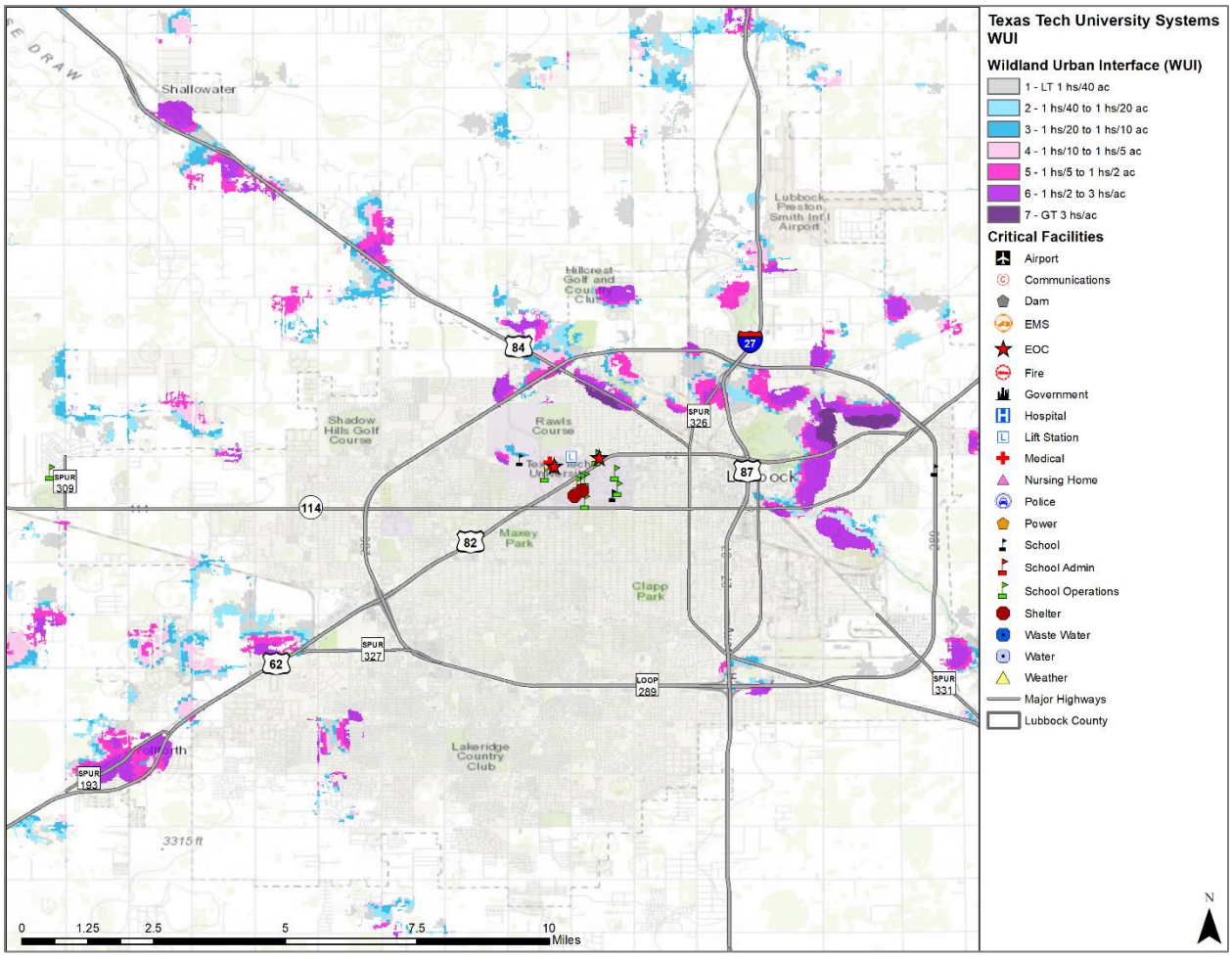
None of the Betty M. Condra School of Education Innovation facilities are located within the WUI. However, the entire campus is at some risk for wildfires.

Figure 11-20. Wildland Urban Interface Map – South Plains College



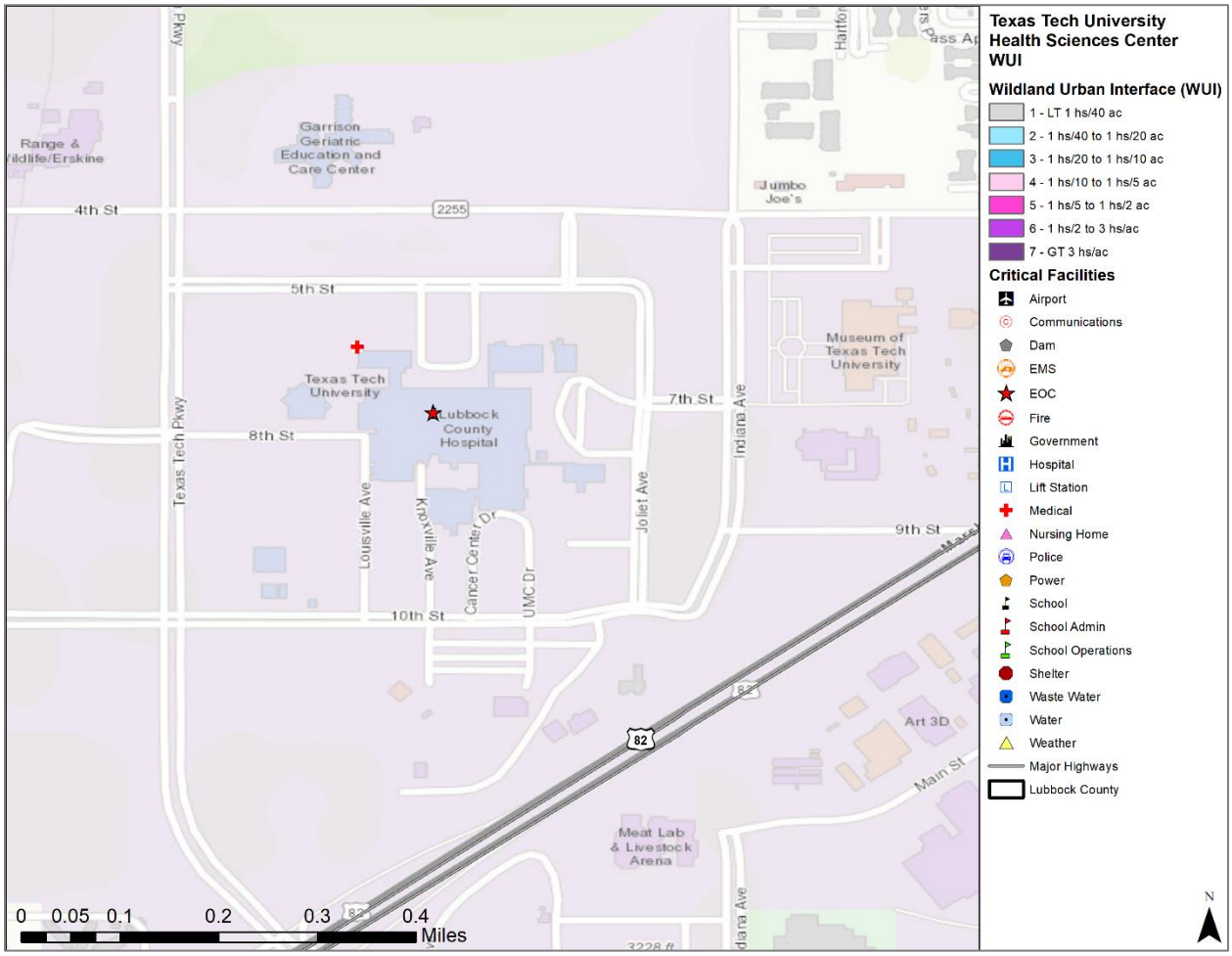
None of the South Plains College facilities are located within the WUI. However, the entire college campus is at some risk for wildfires.

Figure 11-21. Wildland Urban Interface Map – Texas Tech University System



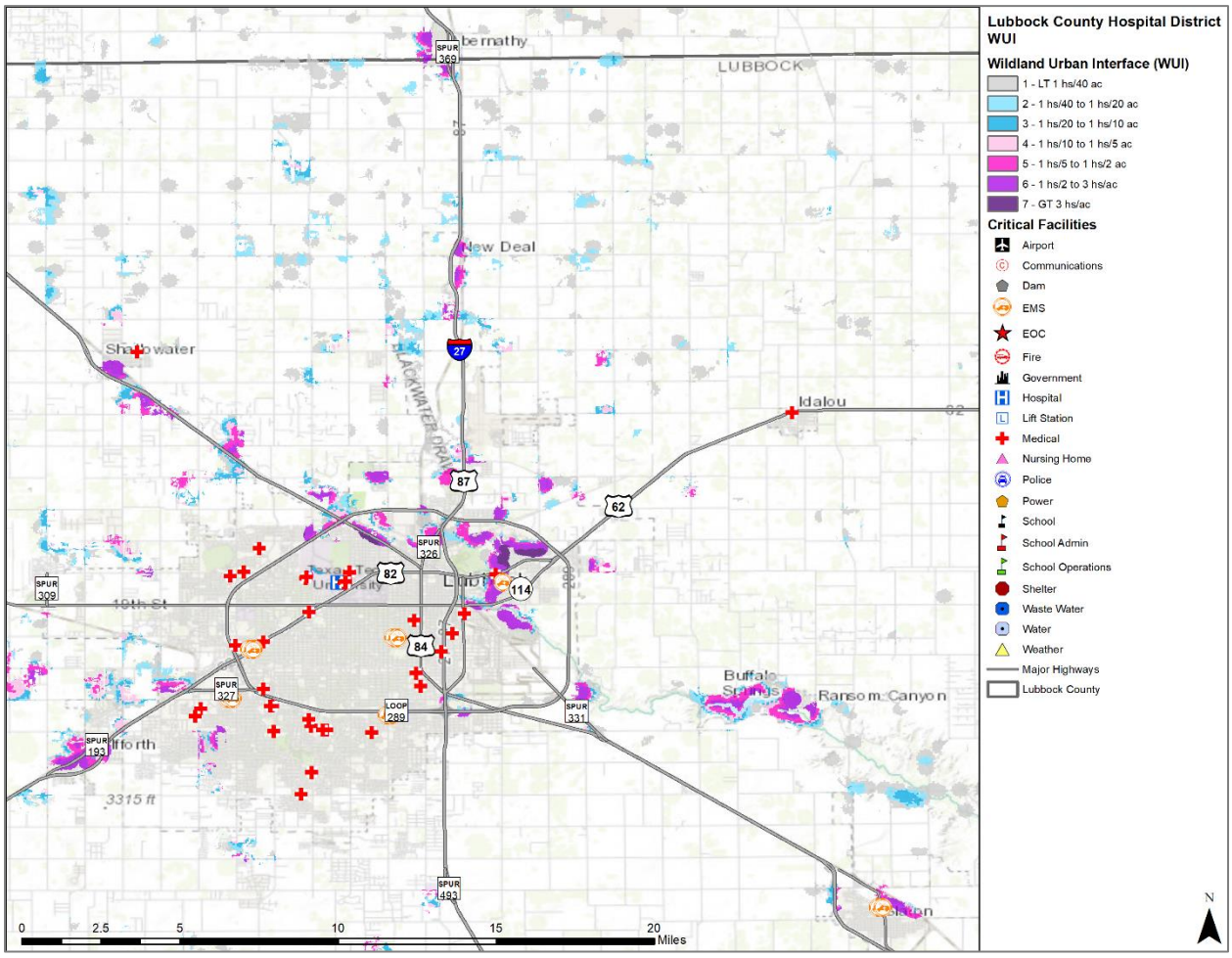
None of the Texas Tech University System facilities are located within the WUI. However, all facilities in the system are at some risk for wildfires.

Figure 11-22. Wildland Urban Interface Map – Texas Tech University Health Sciences Center



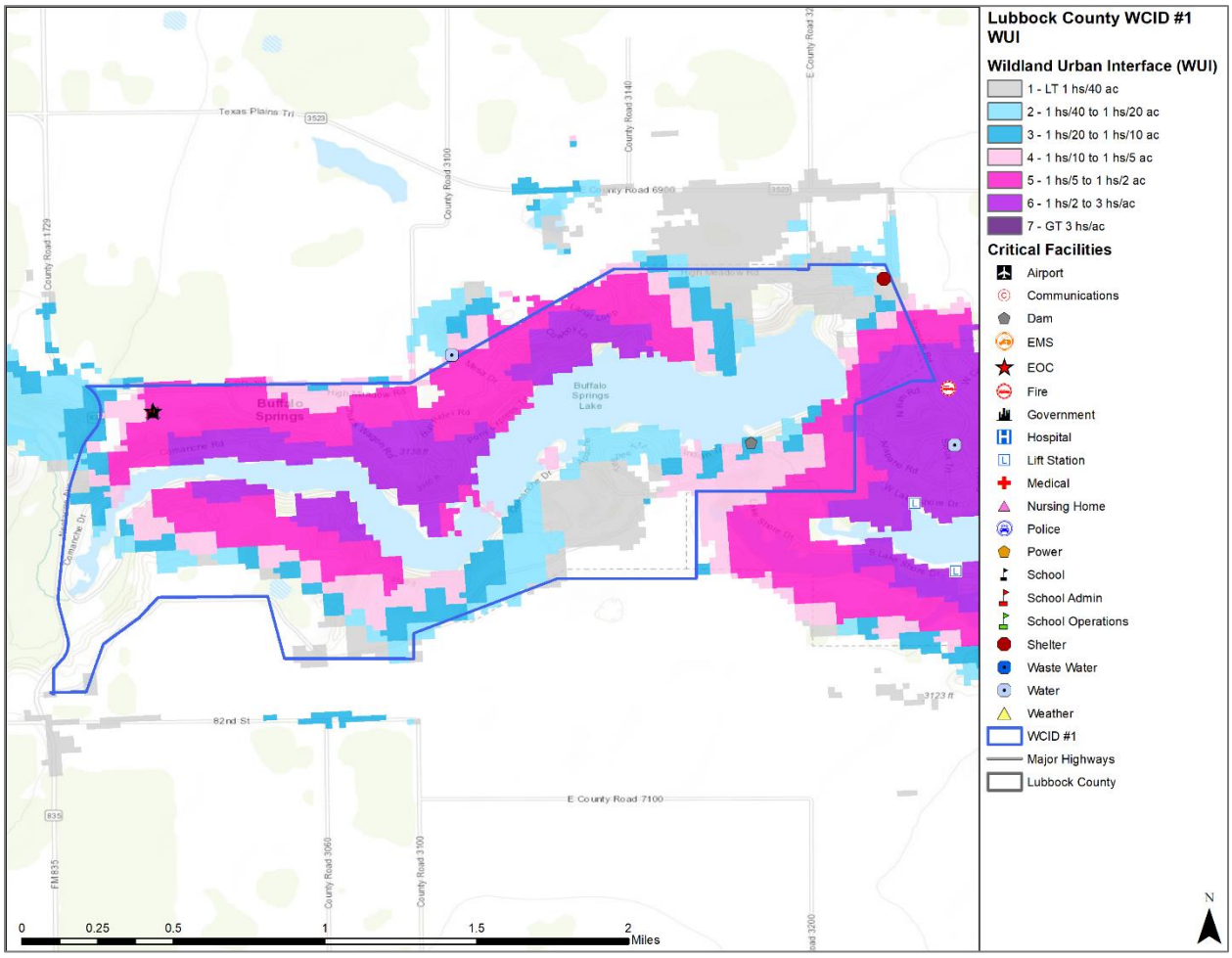
None of the Texas Tech University Health Sciences Center facilities are located within the WUI. However, the entire sciences center campus is at some risk for wildfires.

Figure 11-23. Wildland Urban Interface Map – Lubbock County Hospital System



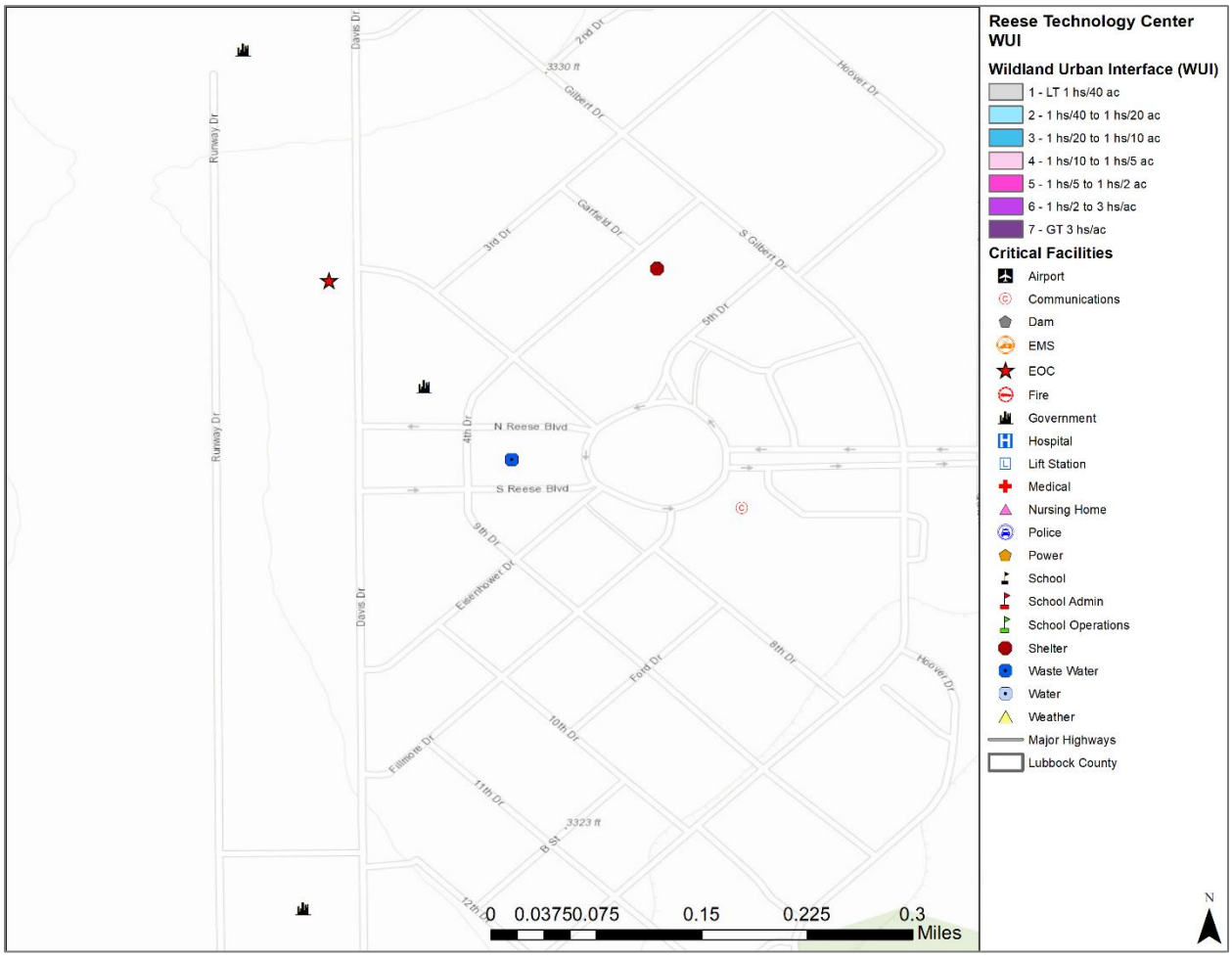
Four of the Lubbock County Hospital System facilities are located within the WUI. However, all hospital system facilities are at some risk for wildfires.

Figure 11-24. Wildland Urban Interface Map – Lubbock County WCID #1



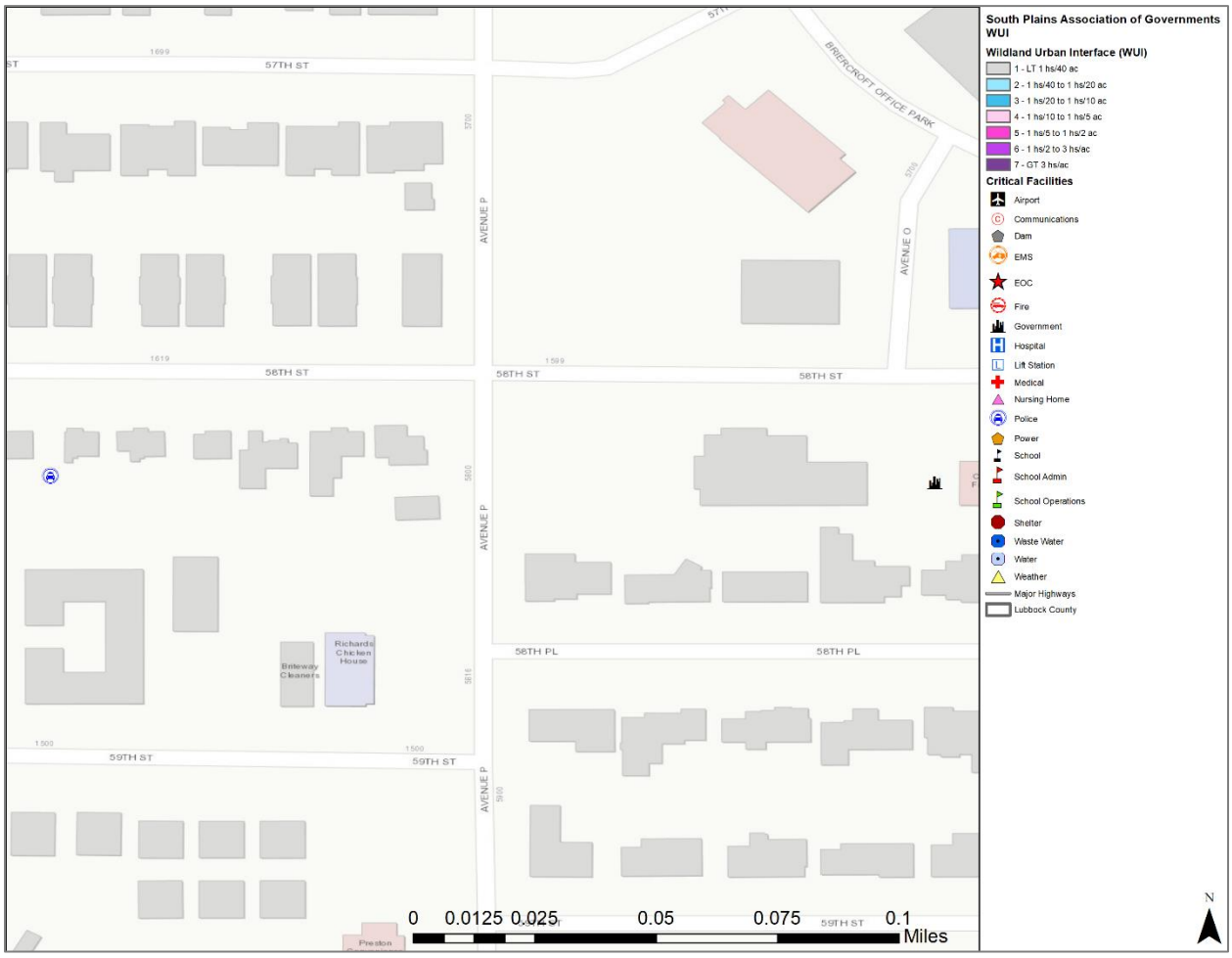
One of the Lubbock County WCID #1 facilities is located within the WUI. However, all of the district facilities are at some risk for wildfires.

Figure 11-25. Wildland Urban Interface Map – Lubbock Reese Redevelopment Authority



The Lubbock Reese Redevelopment Authority facility is not located in the WUI but is at some limited risk for wildfires.

Figure 11-26. Wildland Urban Interface Map – South Plains Association of Governments

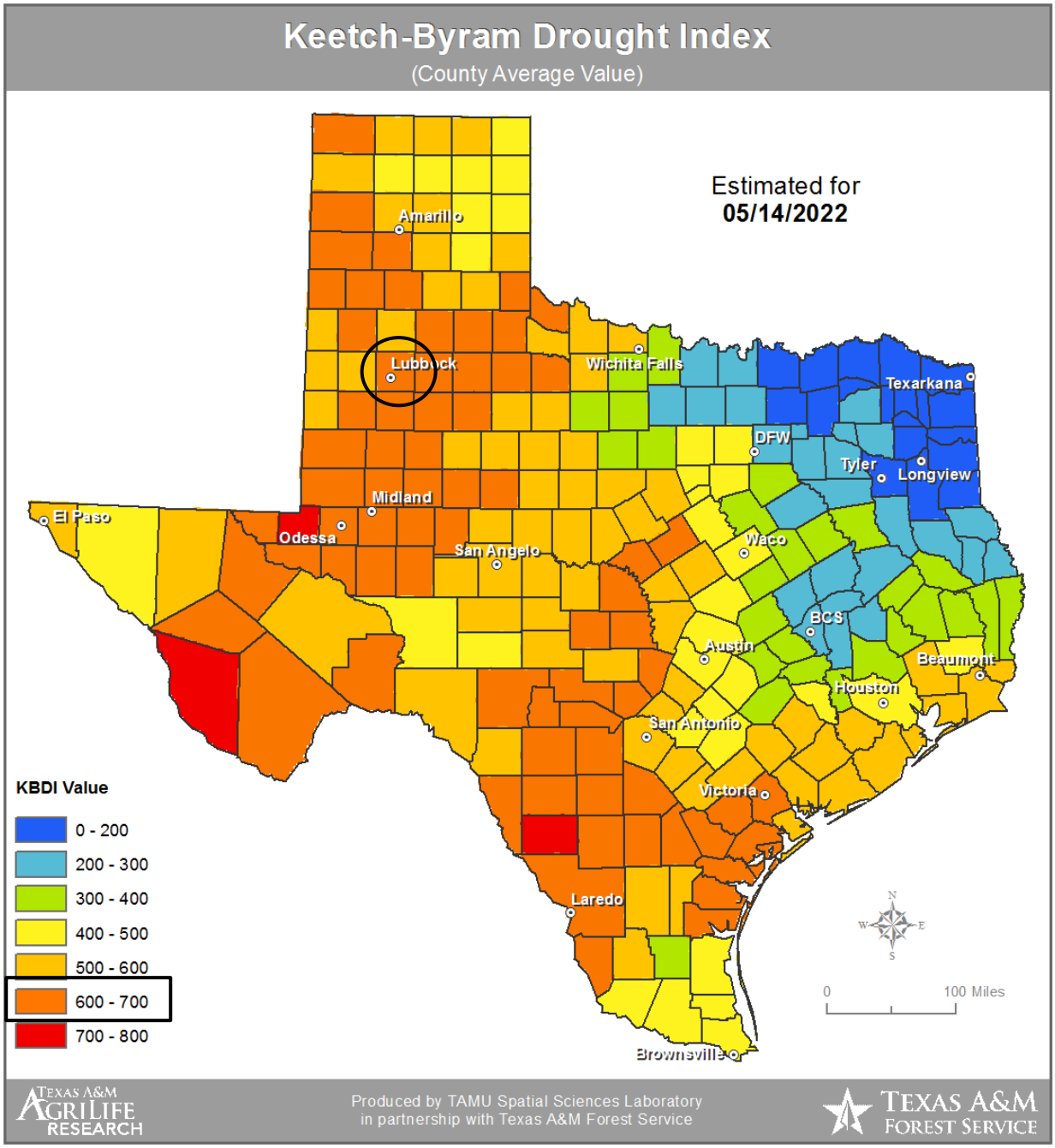


The South Plains Association of Governments facility is not located in the WUI but is at some limited risk for wildfires.

EXTENT

Risk for a wildfire event is measured in terms of magnitude and intensity using the Keetch Byram Drought Index (KBDI), a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI determines forest fire potential based on a daily water balance, derived by balancing a drought factor with precipitation and soil moisture (assumed to have a maximum storage capacity of eight inches), and is expressed in hundredths of an inch of soil moisture depletion.

Figure 11-27. Keetch-Byram Drought Index (KBDI) for the State of Texas, 2022[1]



Fire behavior can be categorized at four distinct levels on the KBDI:

- **0 -200:** Soil and fuel moisture are 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.

[1] Lubbock County is located within the black circle.

- **200 -400:** Fires more readily burn and will carry across an area with no gaps. Heavier fuels will not readily ignite and burn. Expect smoldering and the resulting smoke to carry into and possibly through the night.
- **400 -600:** Fires 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:** Fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

The KBDI is a good measure of the readiness of fuels for a wildfire event. It should be referenced as the area experiences changes in precipitation and soil moisture, while caution should be exercised in dryer, hotter conditions.

The range of intensity for the Lubbock County planning area in a wildfire event is within 150 through 780. The average extent to be mitigated for the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts is a KBDI of 441. At this level fires intensity begins to significantly increase. Fire will readily burn in all directions exposing mineral soils in some locations. The worst the planning area can anticipate based on historical occurrences and readily available fuel is 600 to 800 as 780 falls within this range. At this level fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

The Texas Forest Service's Fire Intensity Scale identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on weighted average of four percentile weather categories. Lubbock County is between a potential limited to moderate wildfire intensities. Figures 11-28 through 11-53 identify the wildfire intensity for the Lubbock County planning area.

Figure 11-28. Fire Intensity Scale Map – Lubbock County

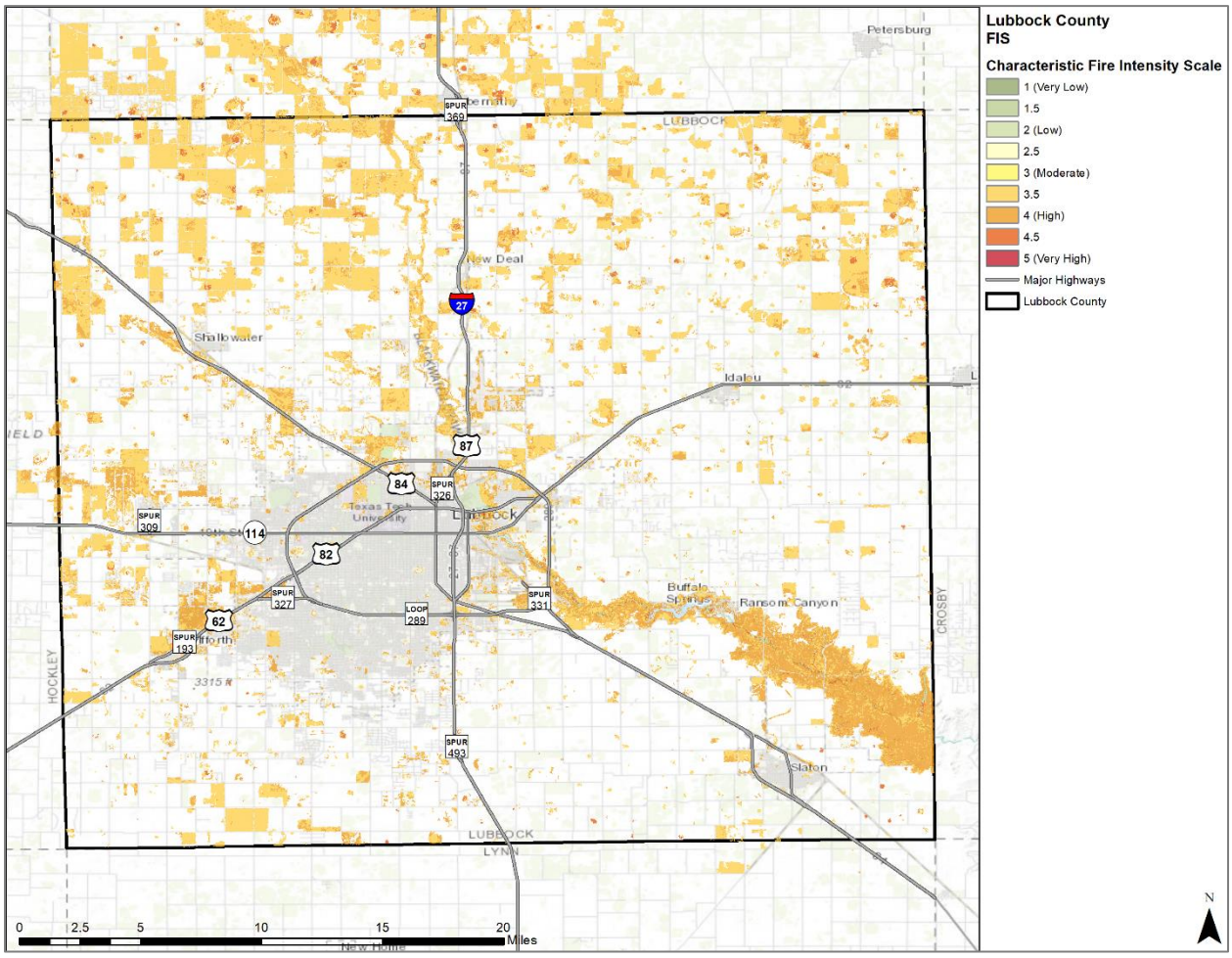


Figure 11-29. Fire Intensity Scale Map – Village of Buffalo Springs

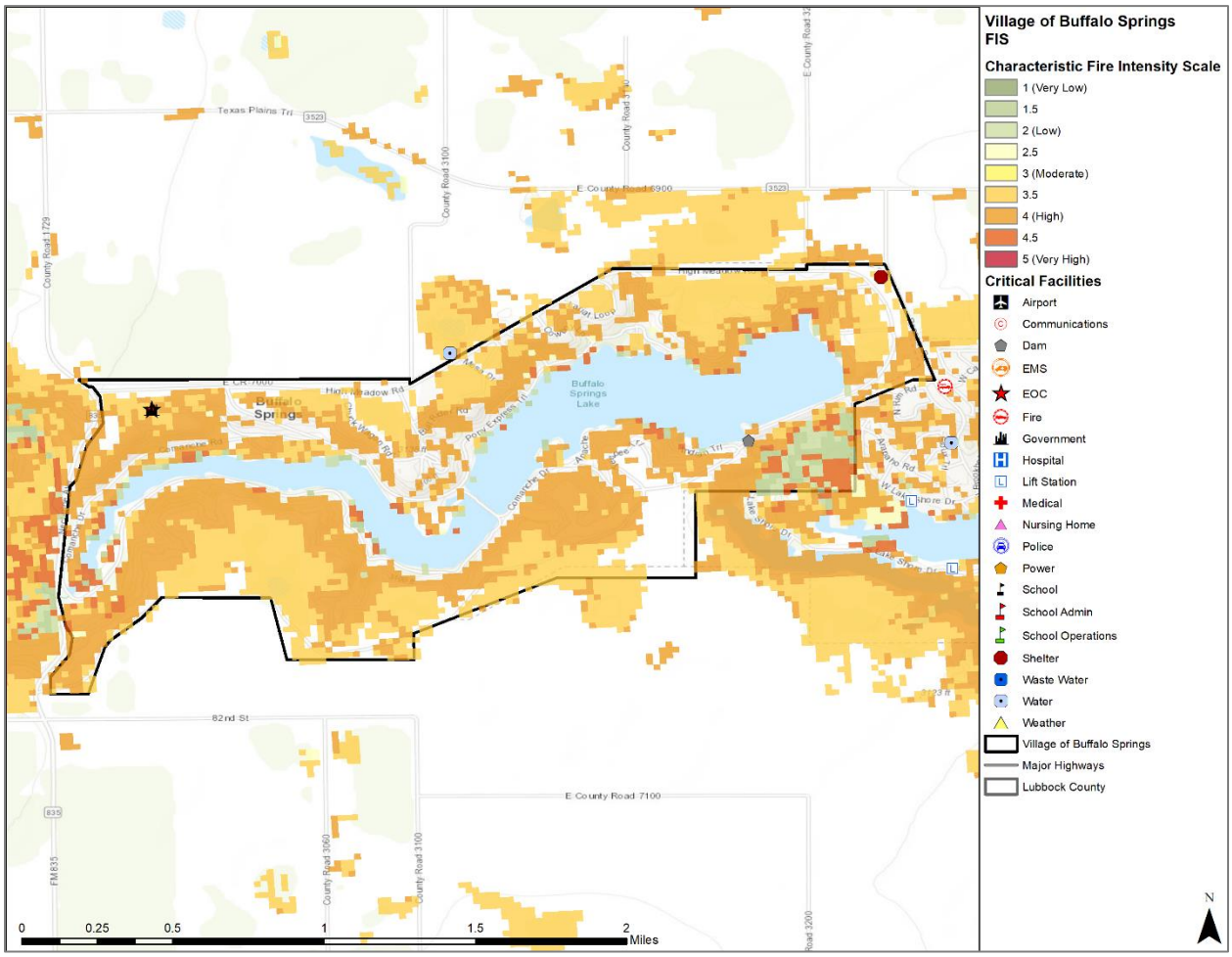


Figure 11-30. Fire Intensity Scale Map – City of Idalou

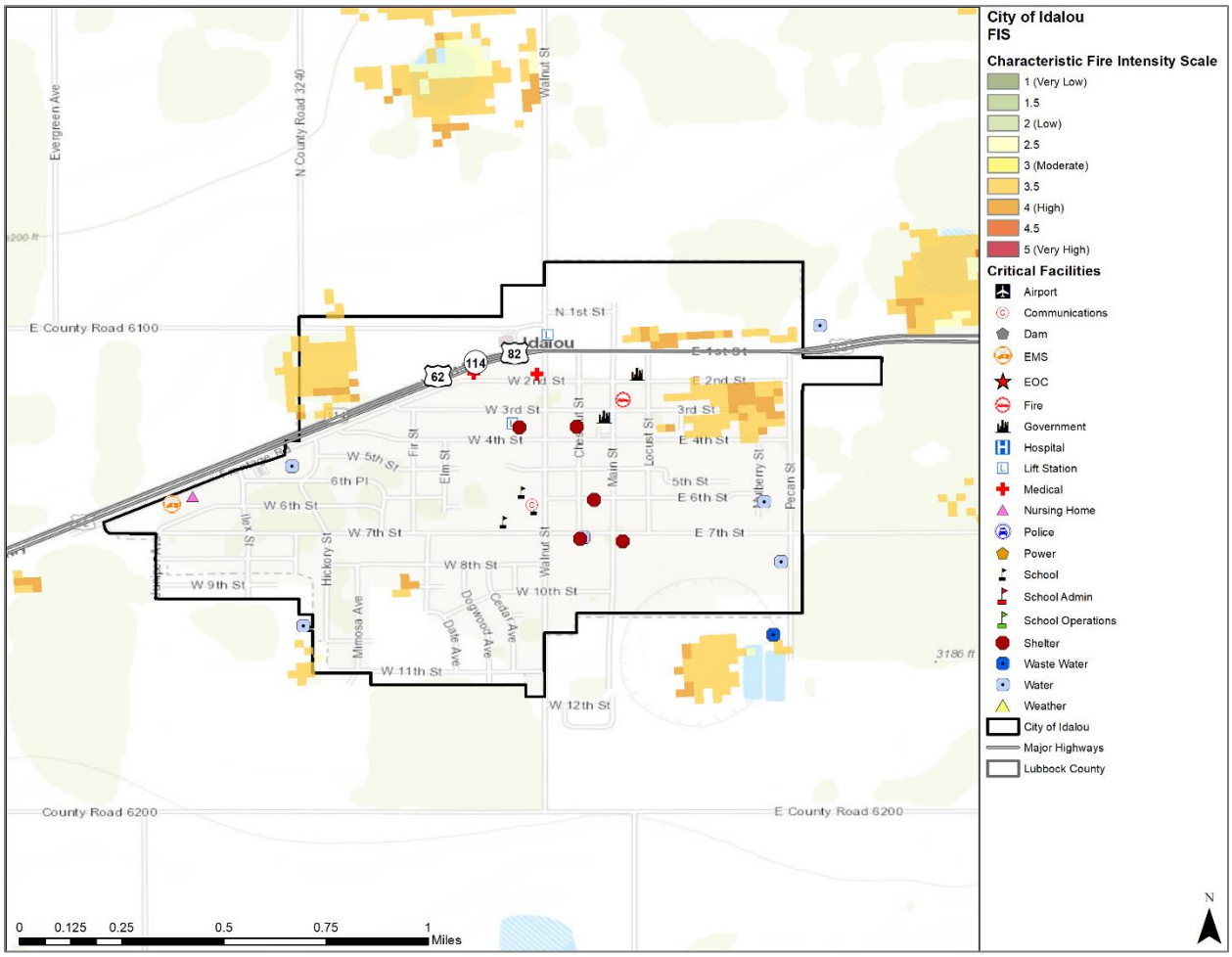


Figure 11-31. Fire Intensity Scale Map – City of Lubbock

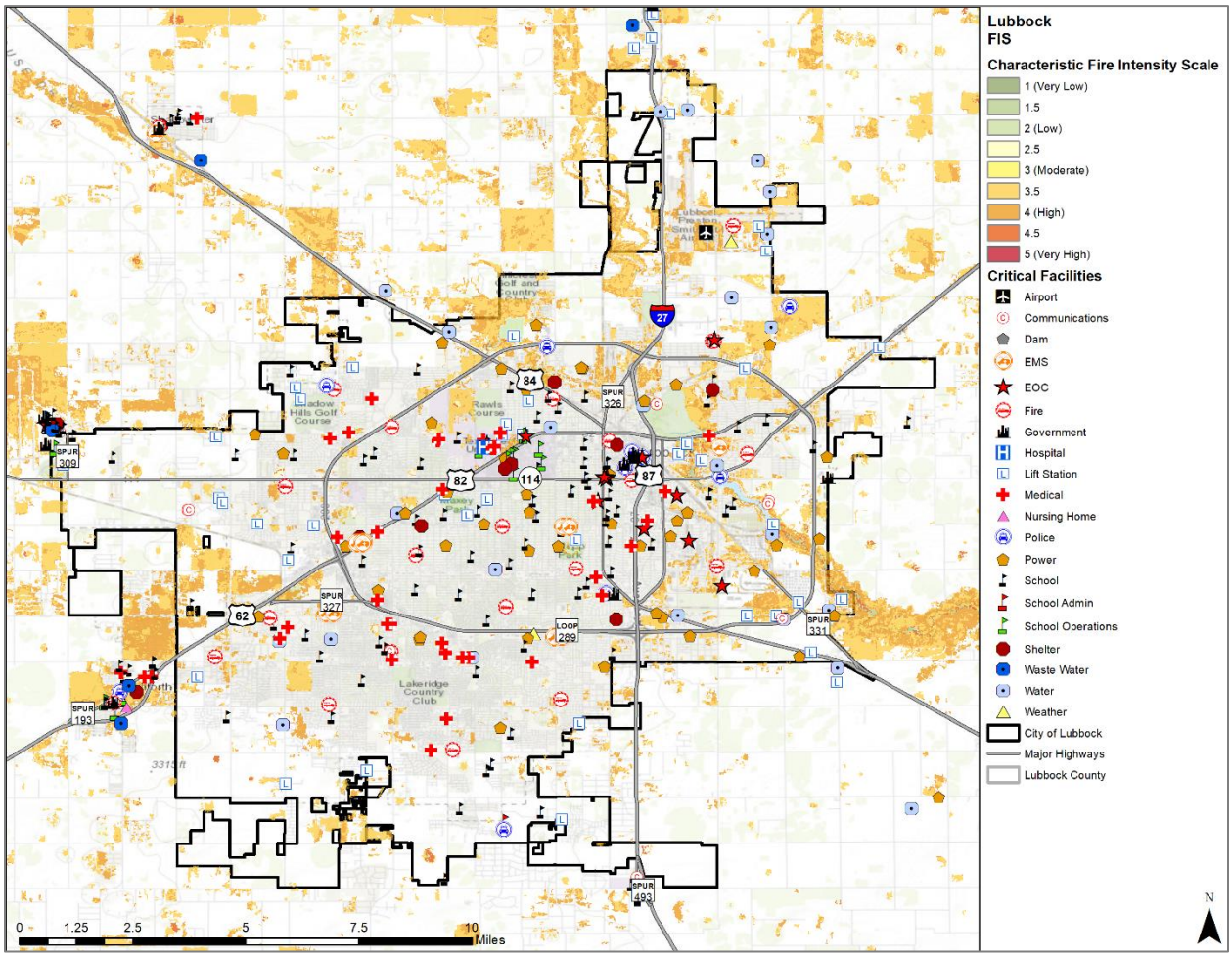


Figure 11-32. Fire Intensity Scale Map – Town of New Deal

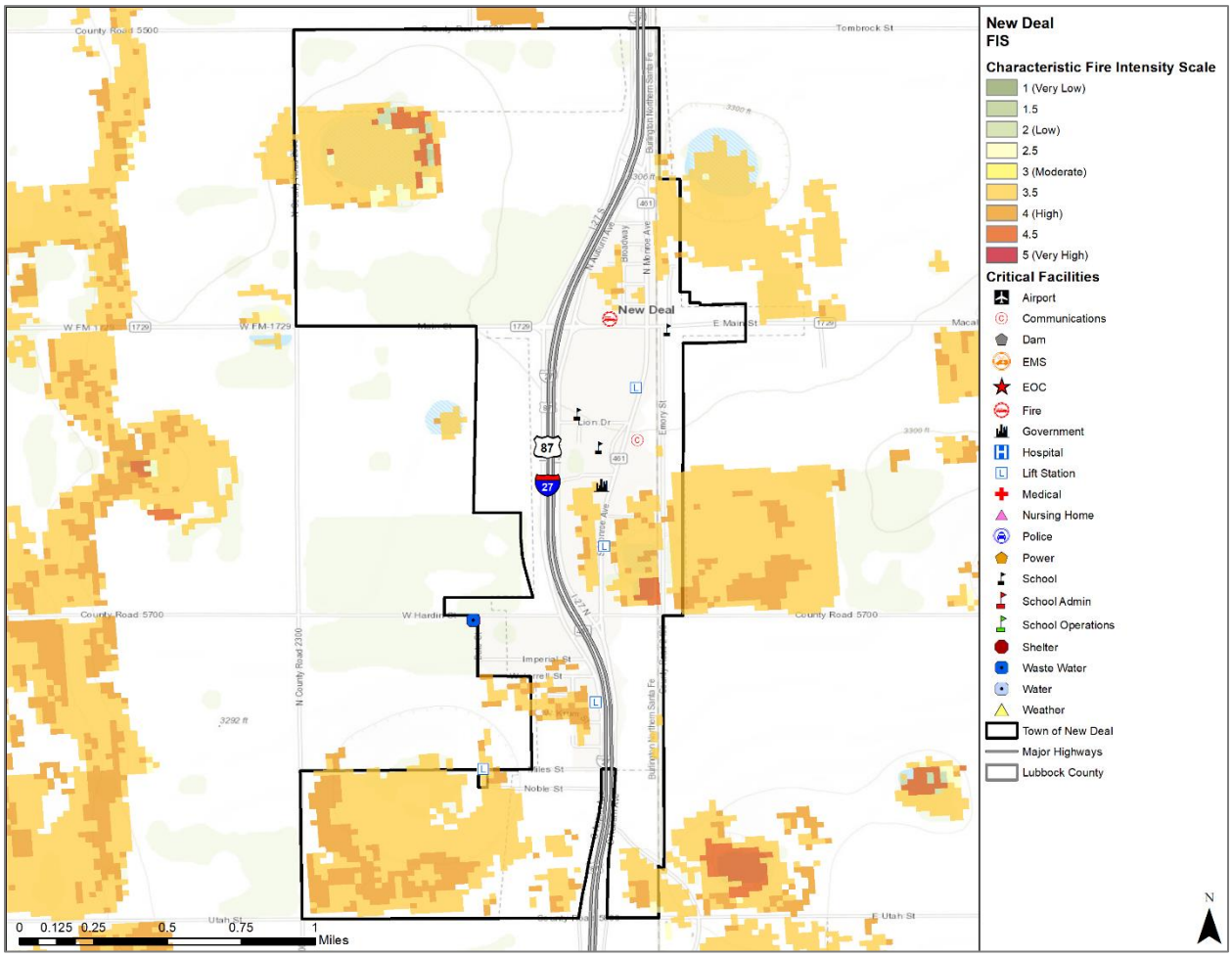


Figure 11-33. Fire Intensity Scale Map – Town of Ransom Canyon

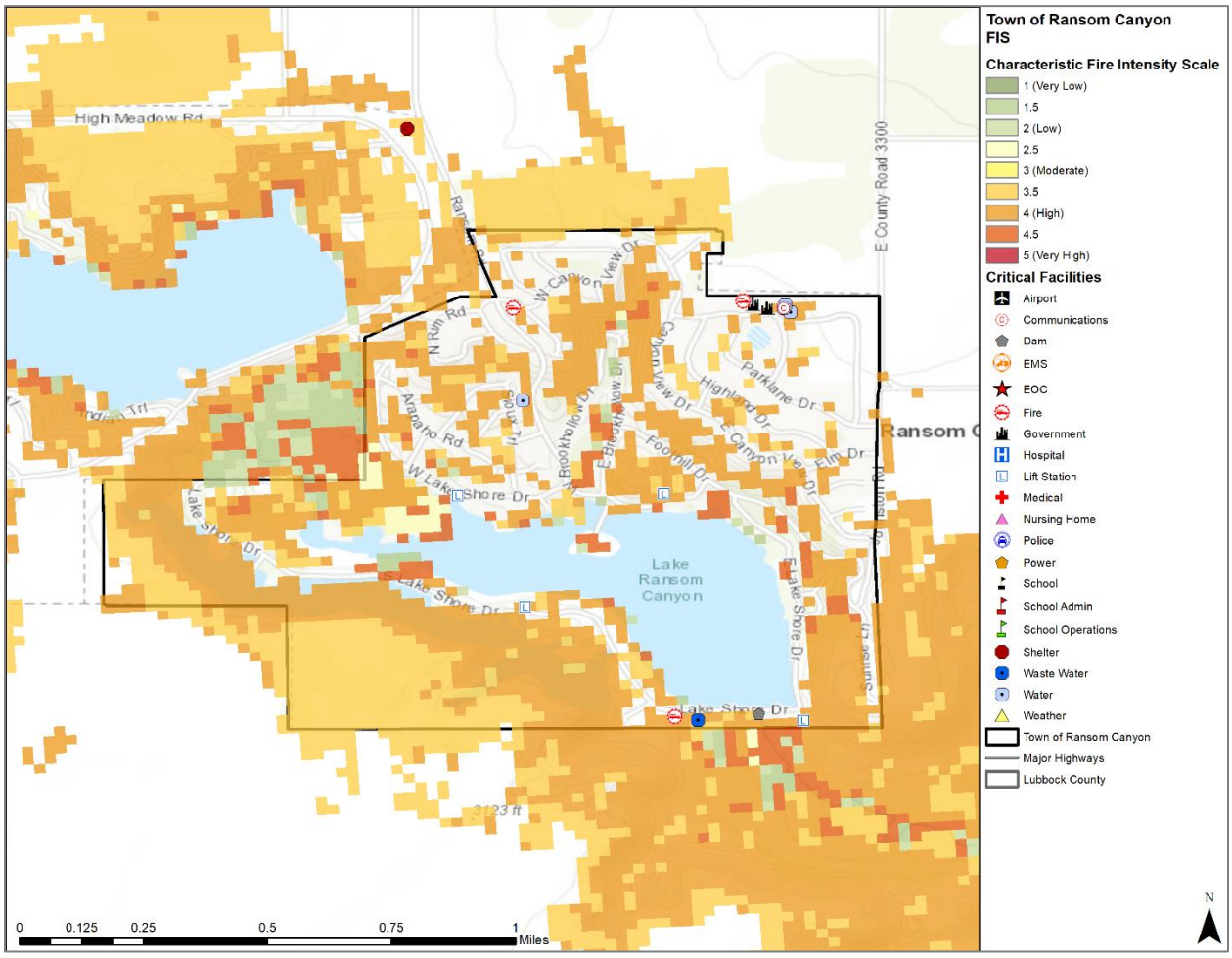


Figure 11-34. Fire Intensity Scale Map – City of Shallowater

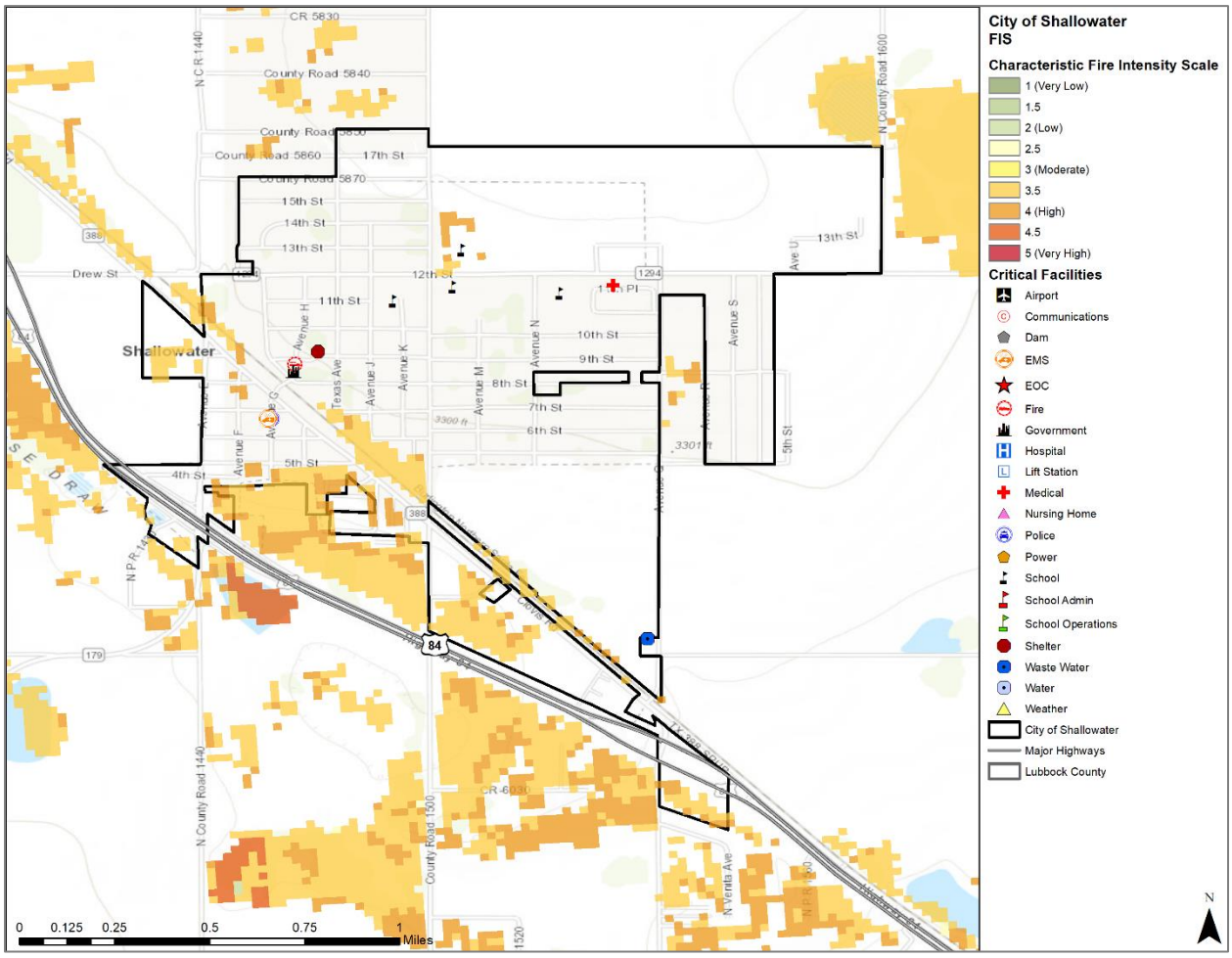


Figure 11-35. Fire Intensity Scale Map – City of Slaton

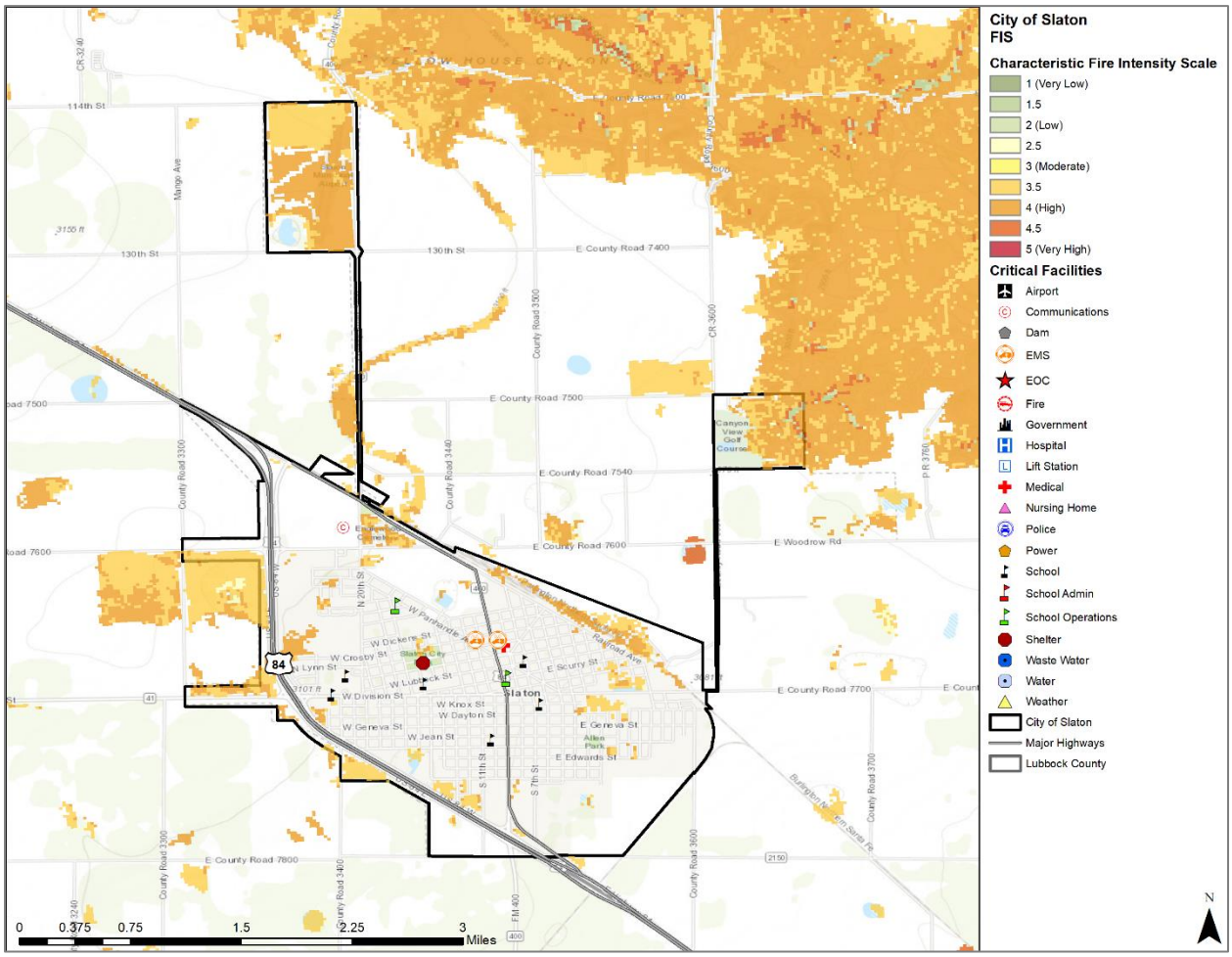


Figure 11-36. Fire Intensity Scale Map – City of Wolfforth

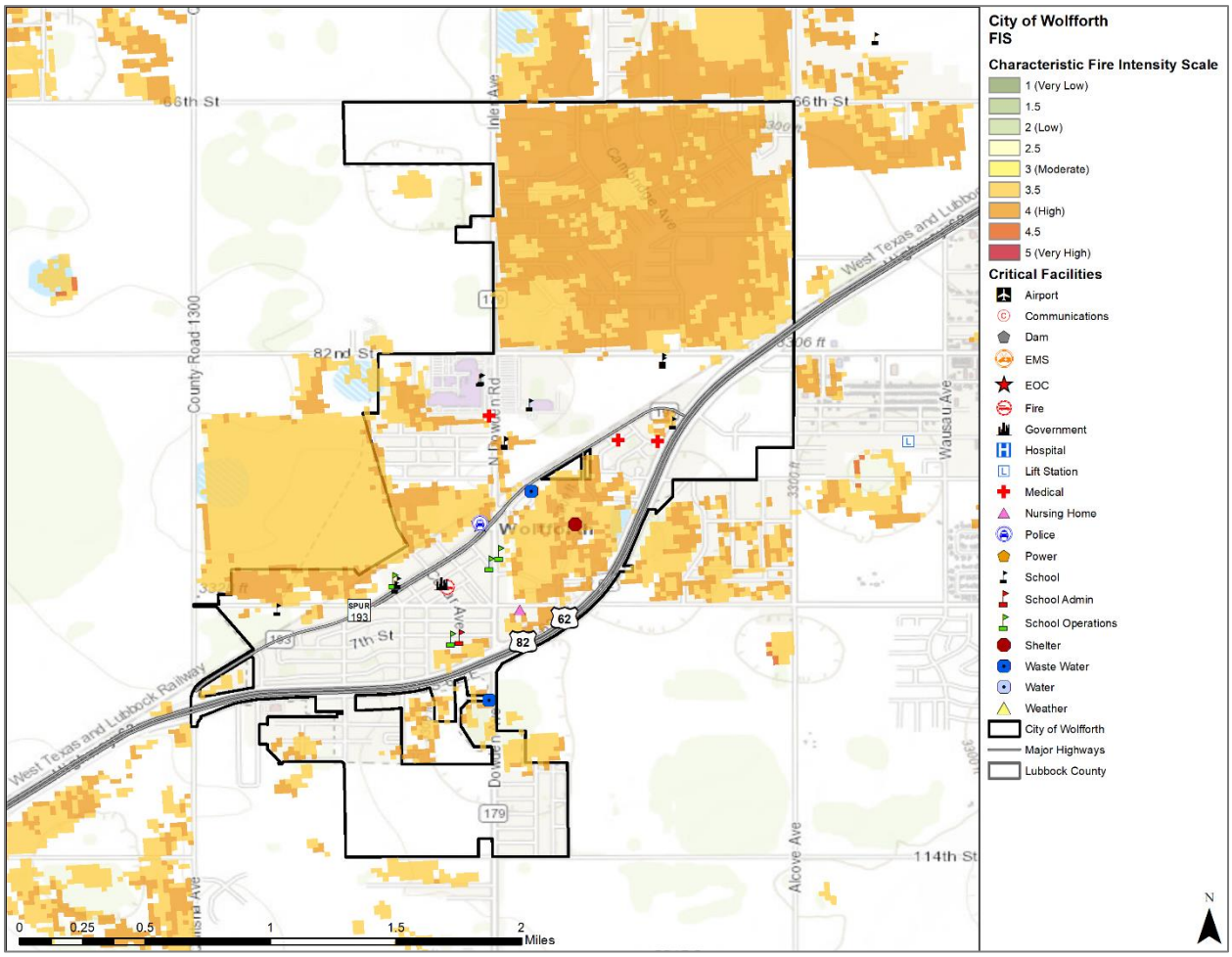


Figure 11-37. Fire Intensity Scale Map – Abernathy ISD

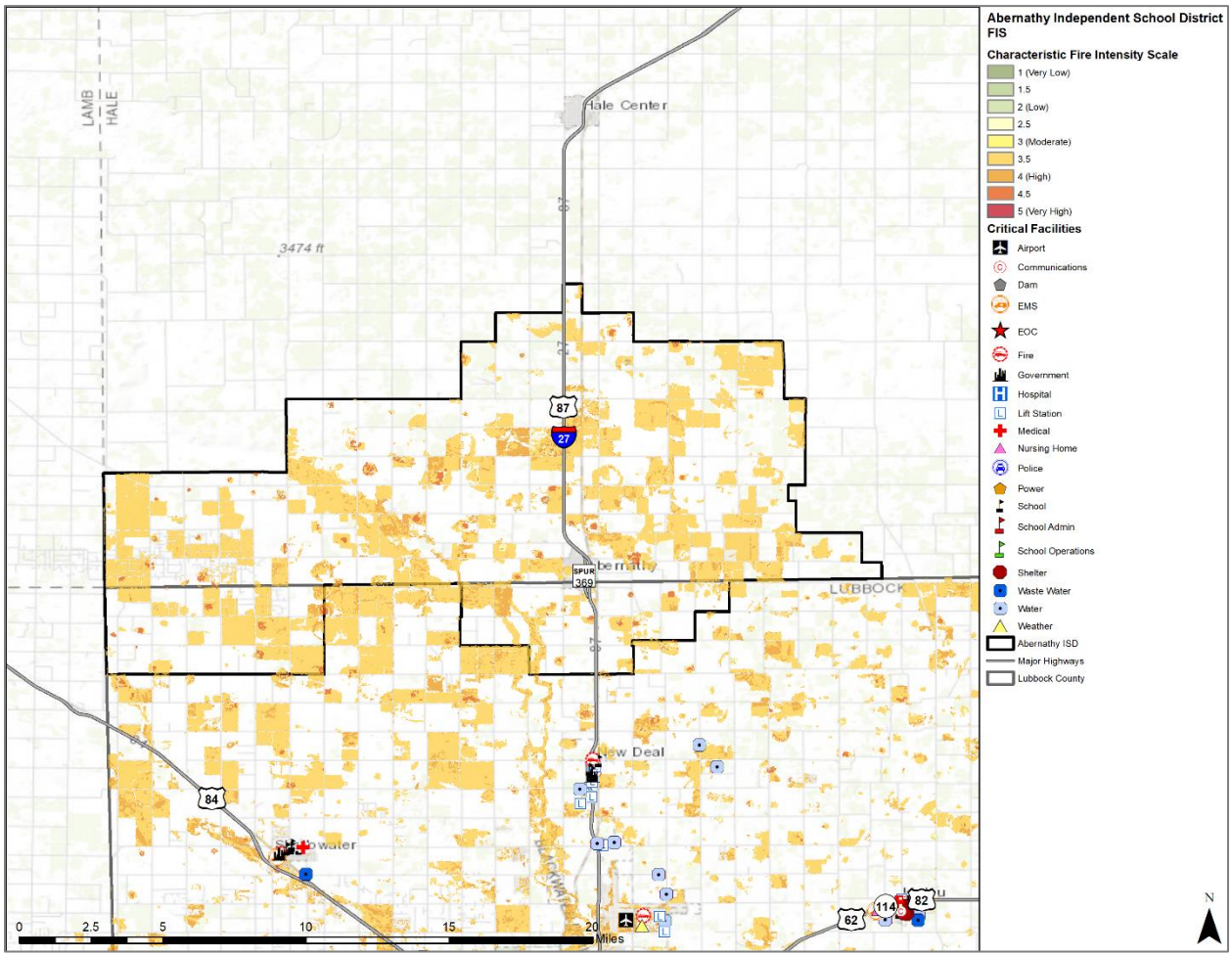


Figure 11-38. Fire Intensity Scale Map – Frenship ISD

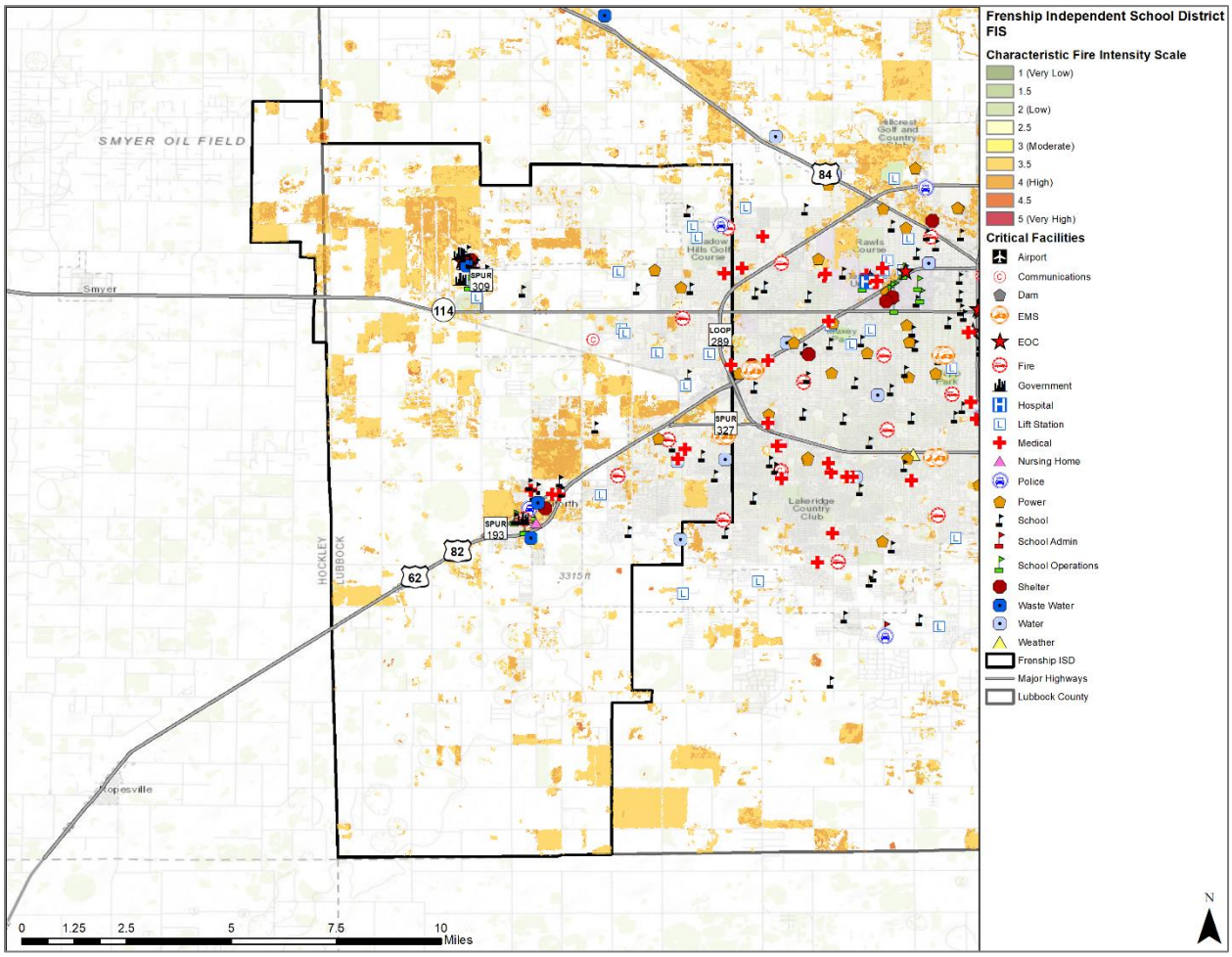


Figure 11-39. Fire Intensity Scale Map – Idalou ISD

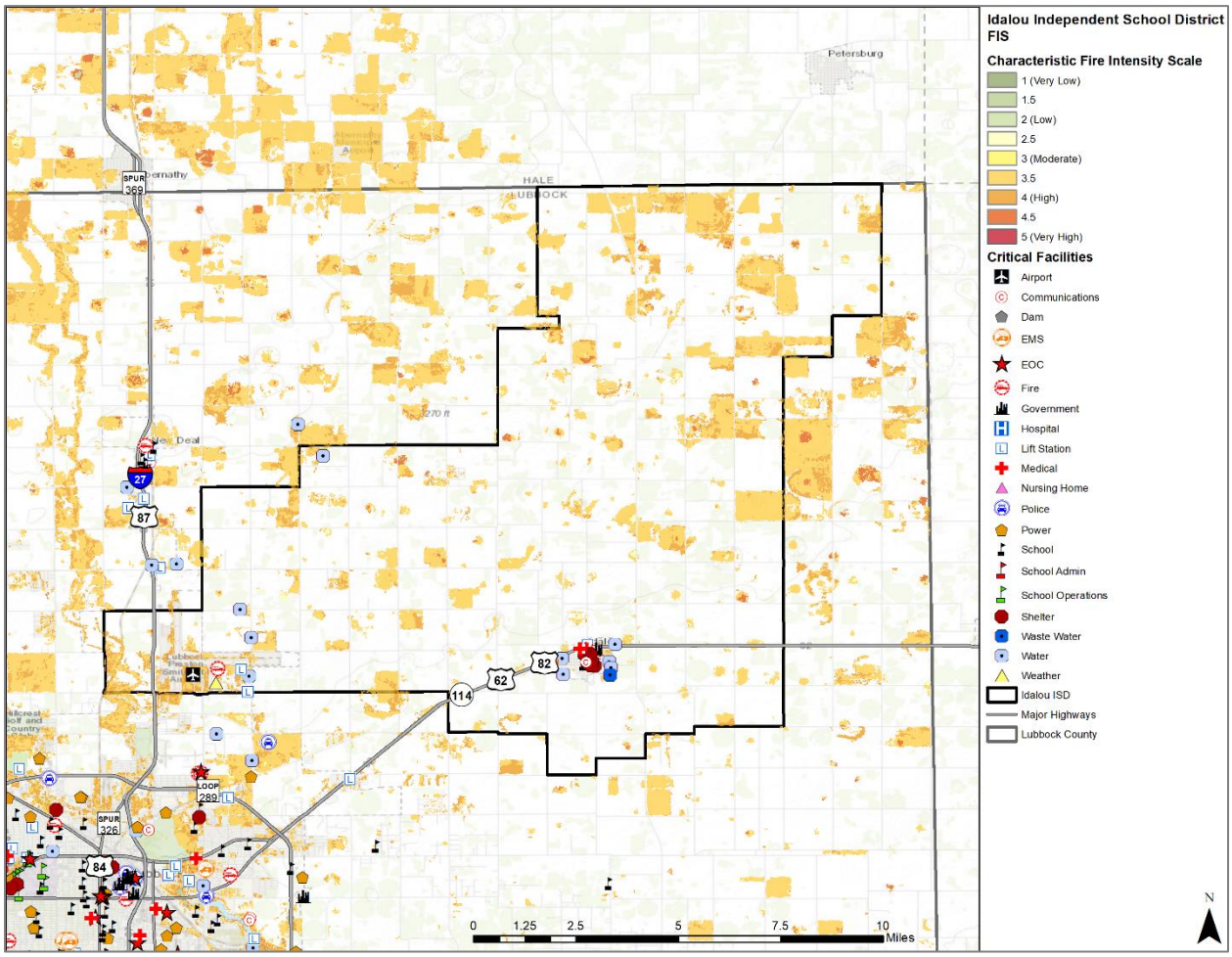


Figure 11-40. Fire Intensity Scale Map – Lubbock ISD

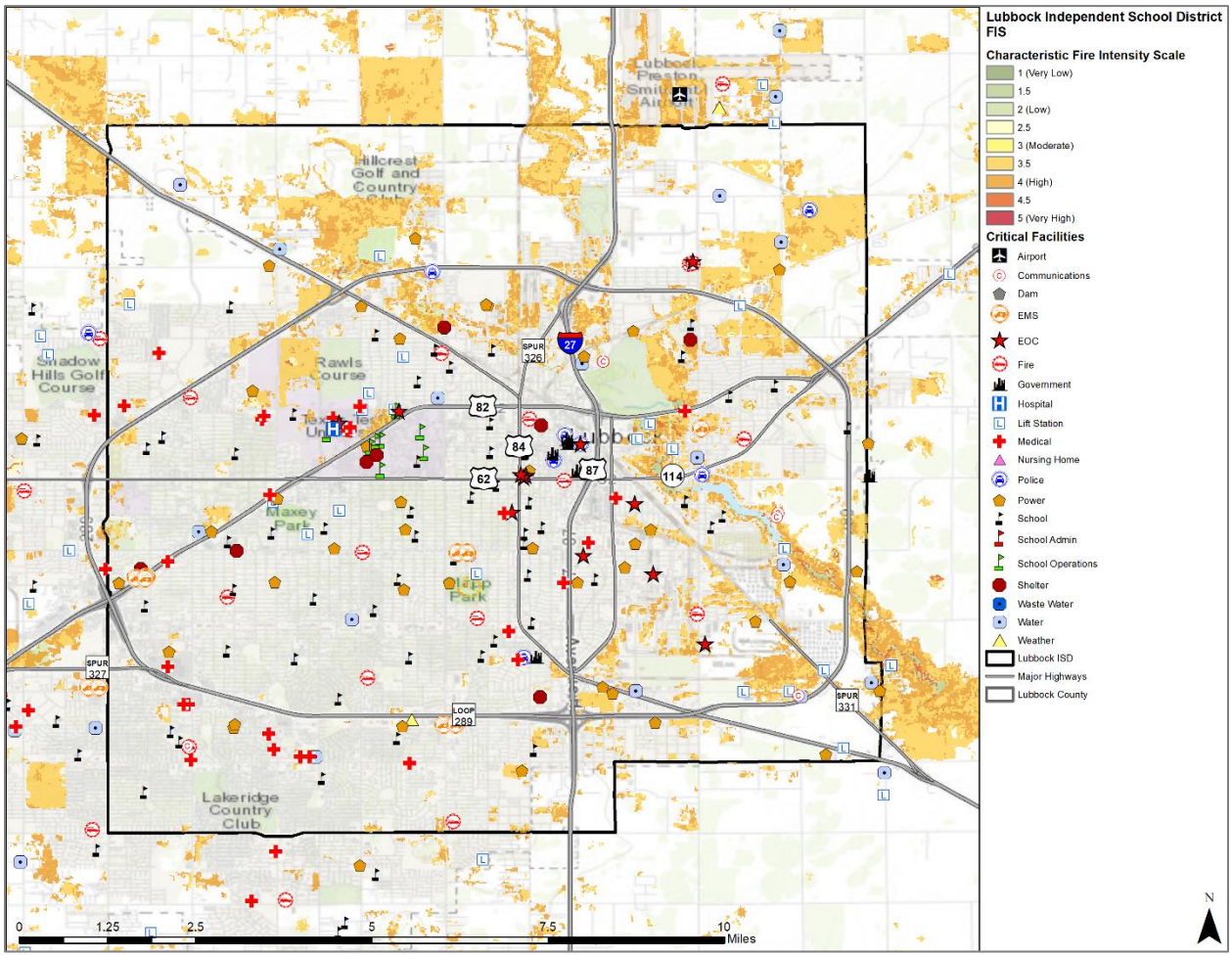


Figure 11-41. Fire Intensity Scale Map – Lubbock-Copper ISD

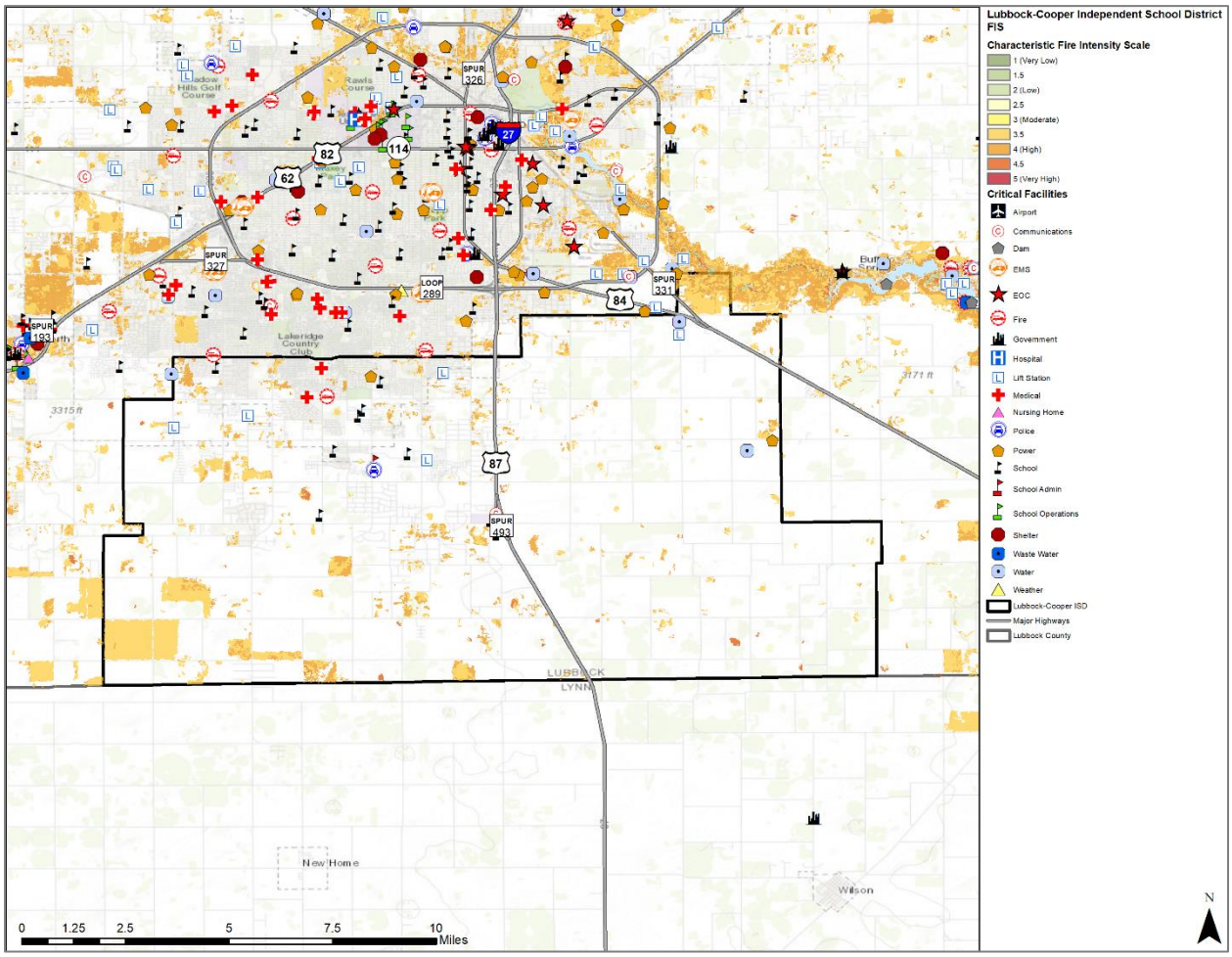


Figure 11-42. Fire Intensity Scale Map – New Deal ISD

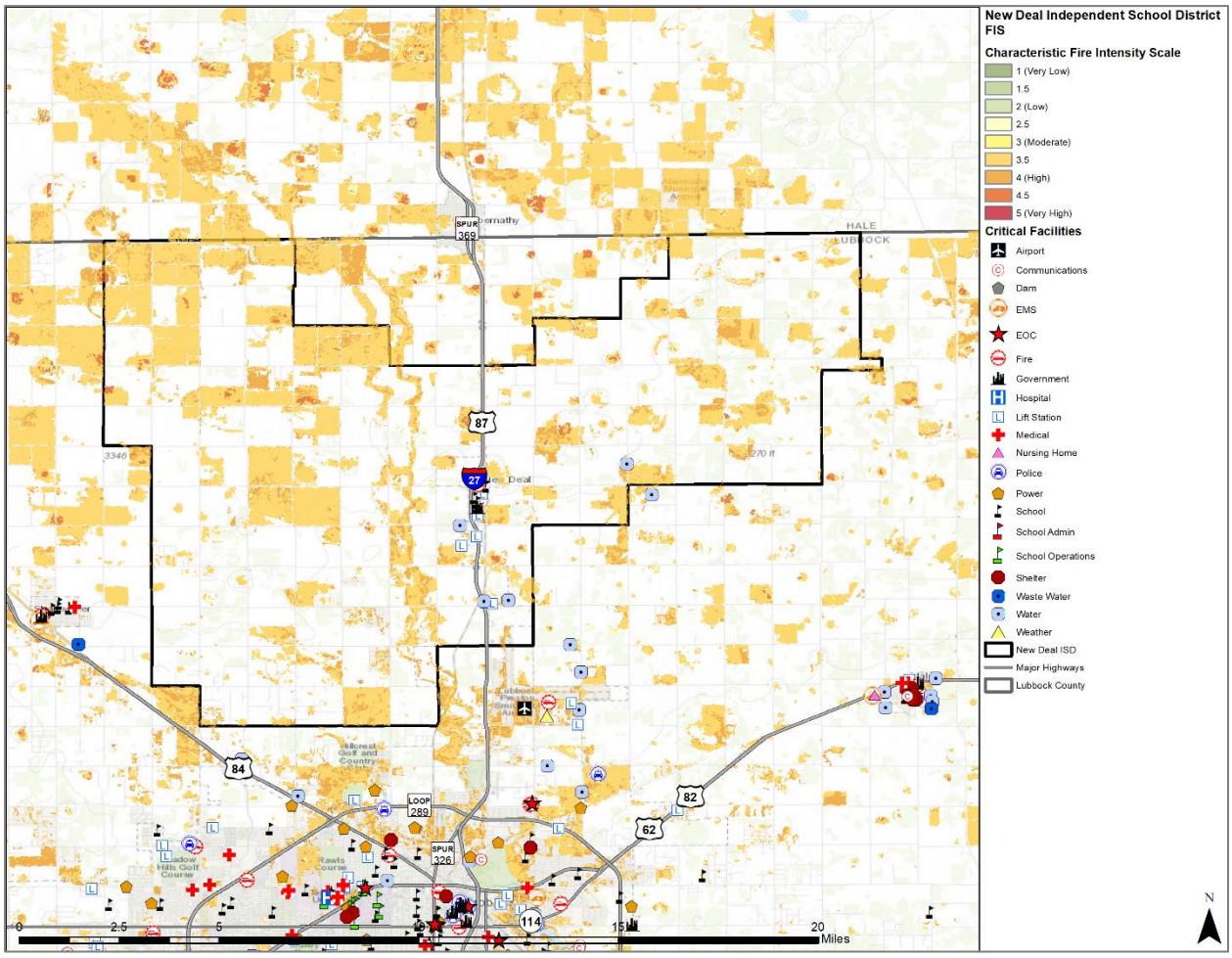


Figure 11-43. Fire Intensity Scale Map – Roosevelt ISD

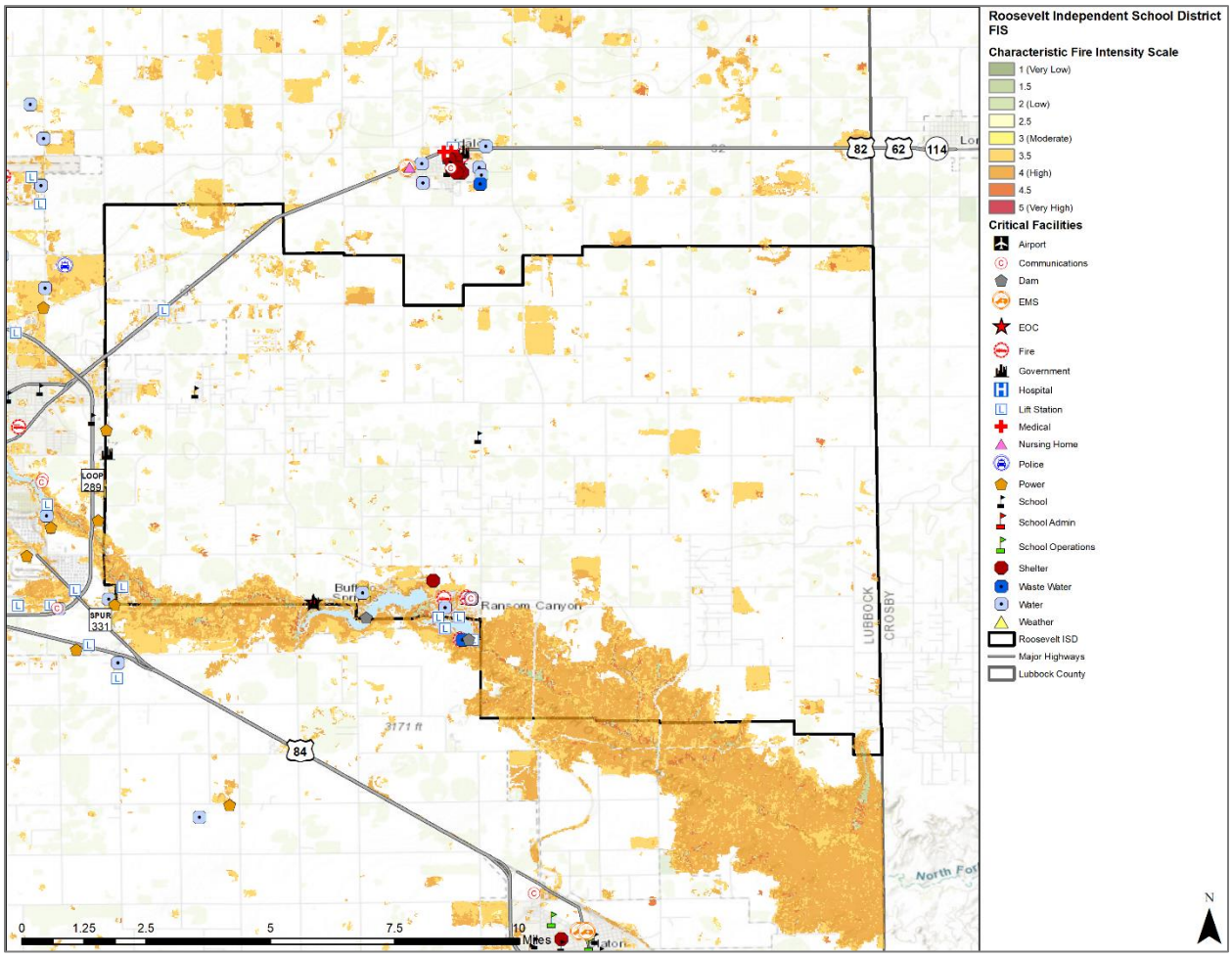


Figure 11-44. Fire Intensity Scale Map – Shallowater ISD

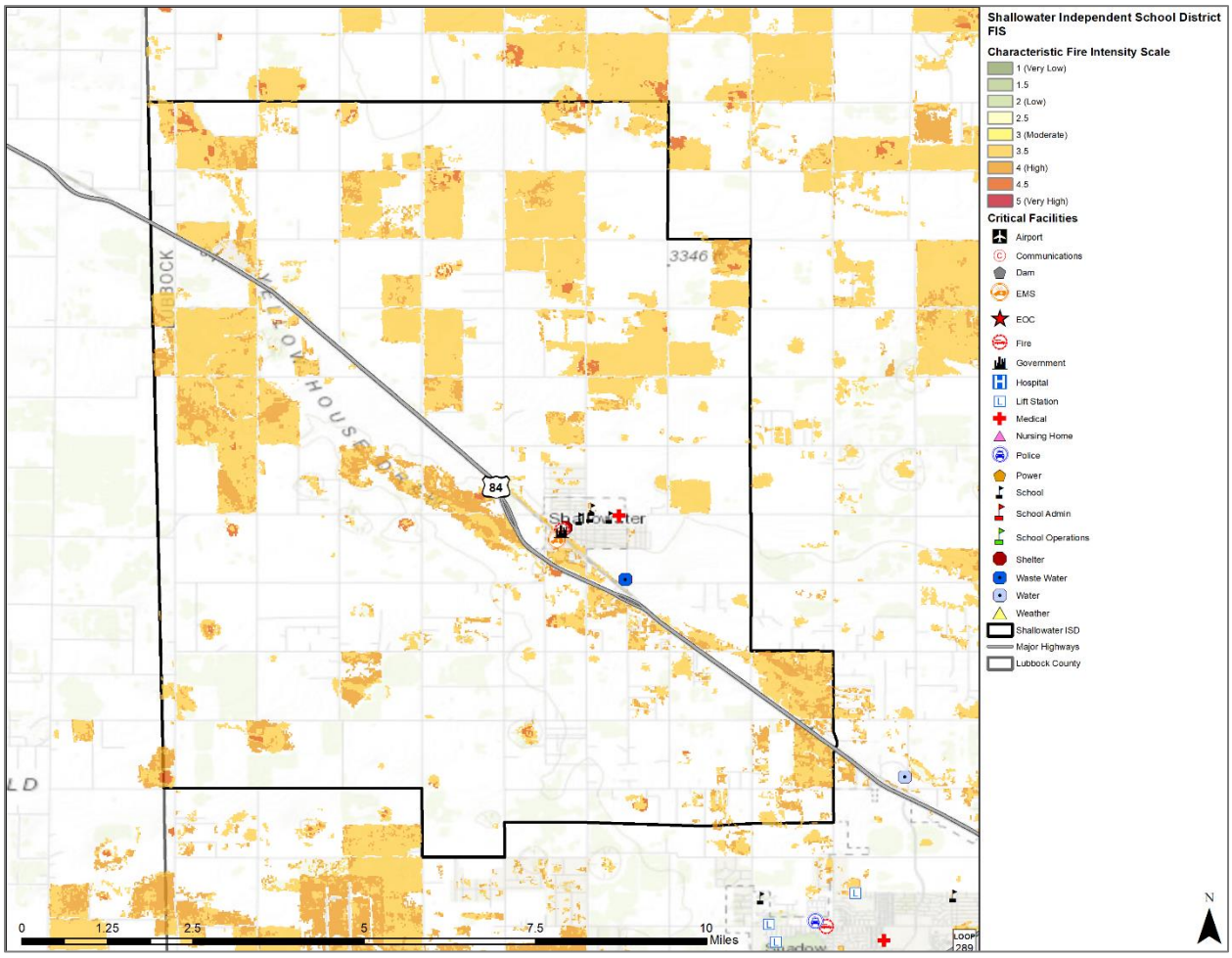


Figure 11-45. Fire Intensity Scale Map – Slaton ISD

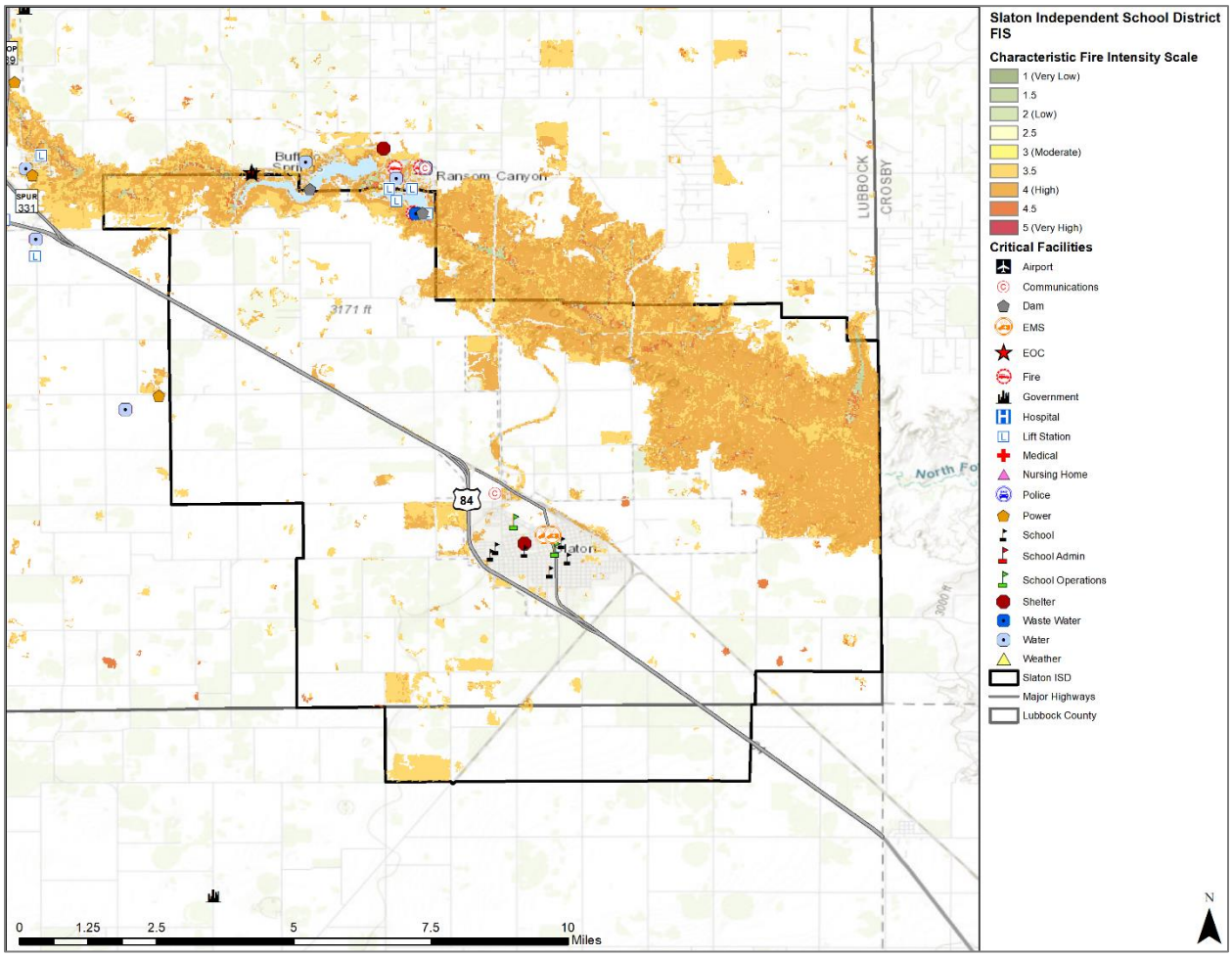


Figure 11-46. Fire Intensity Scale Map – Betty M. Condra School of Education Innovation

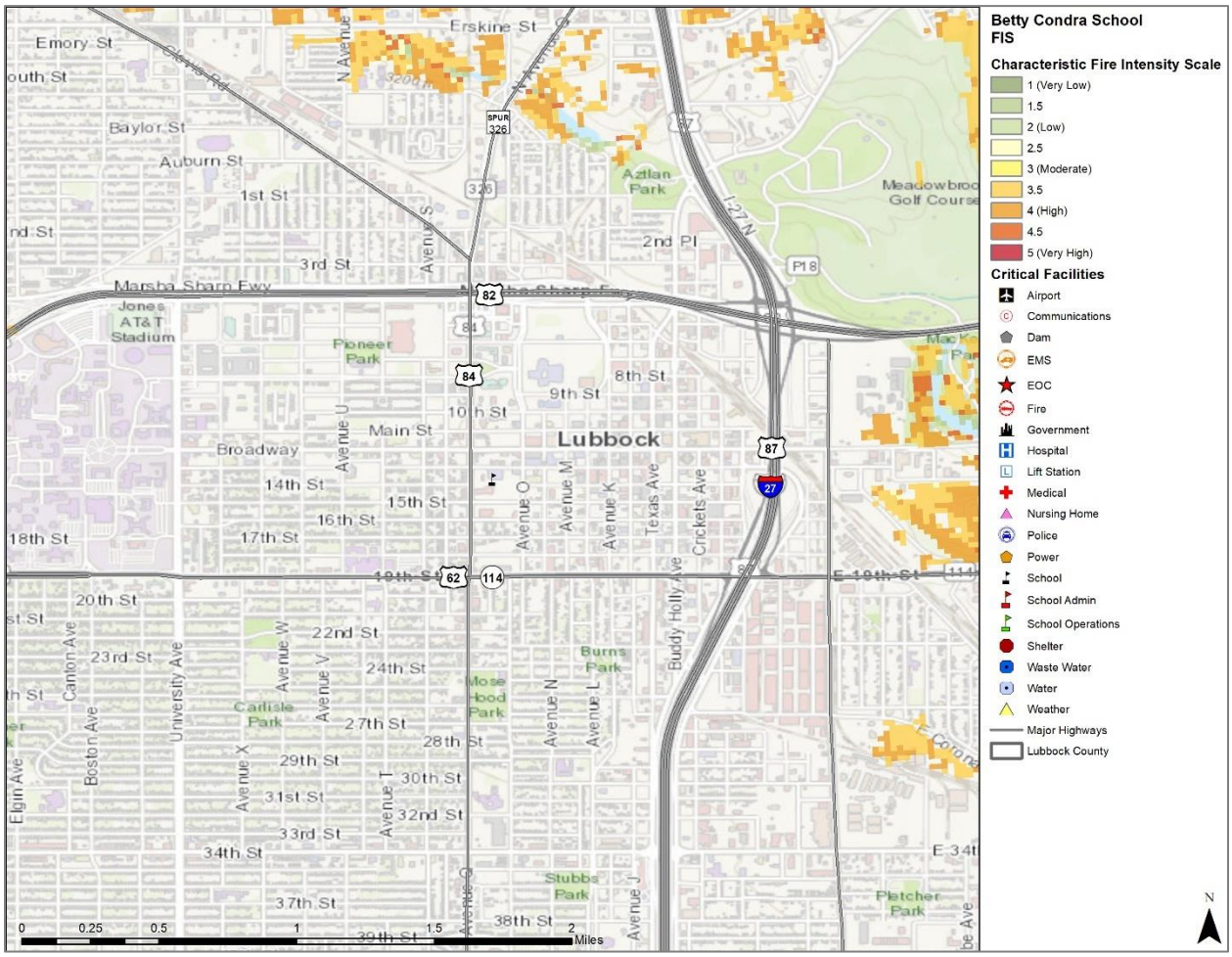


Figure 11-47. Fire Intensity Scale Map – South Plains College

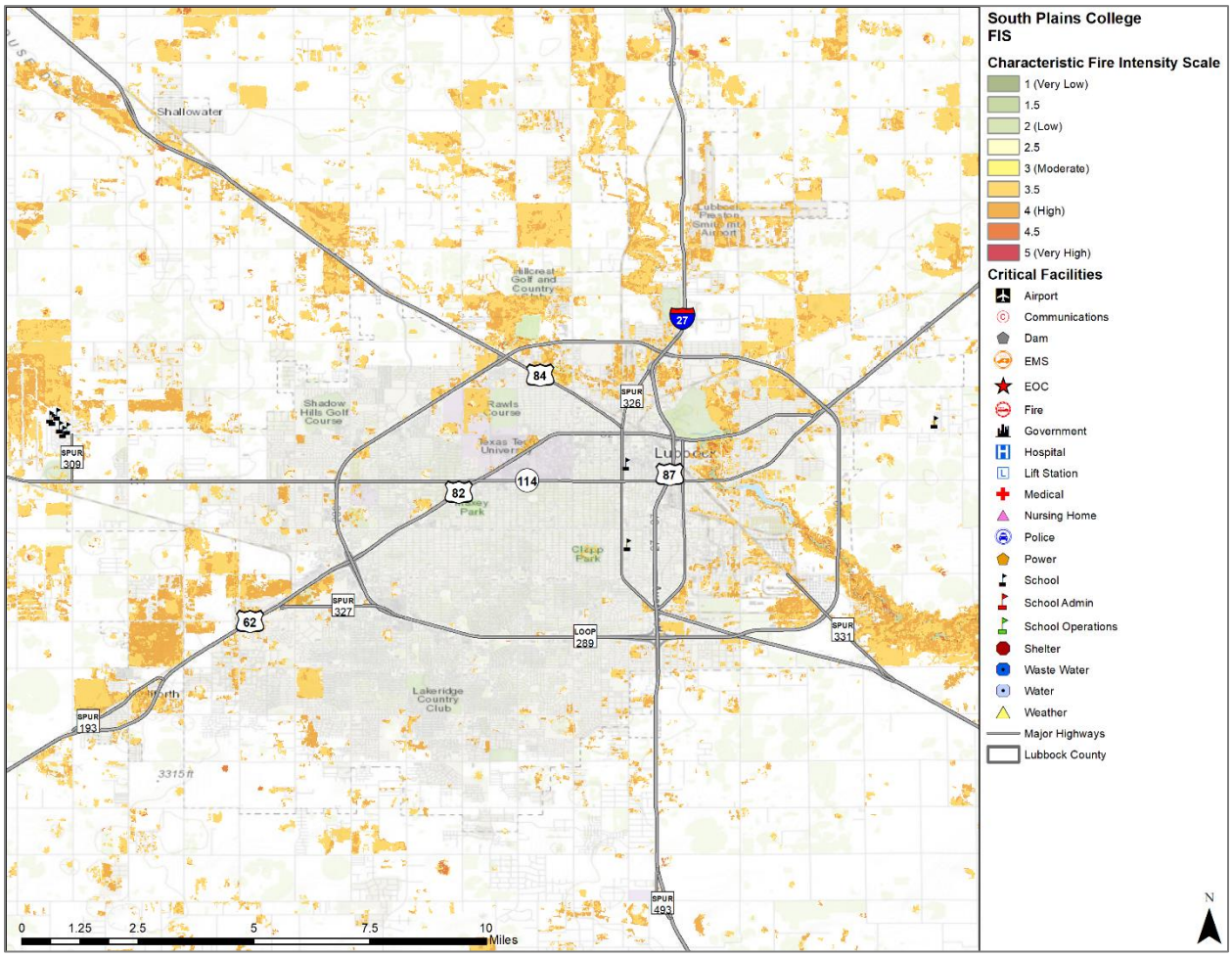


Figure 11-48. Fire Intensity Scale Map – Texas Tech University System

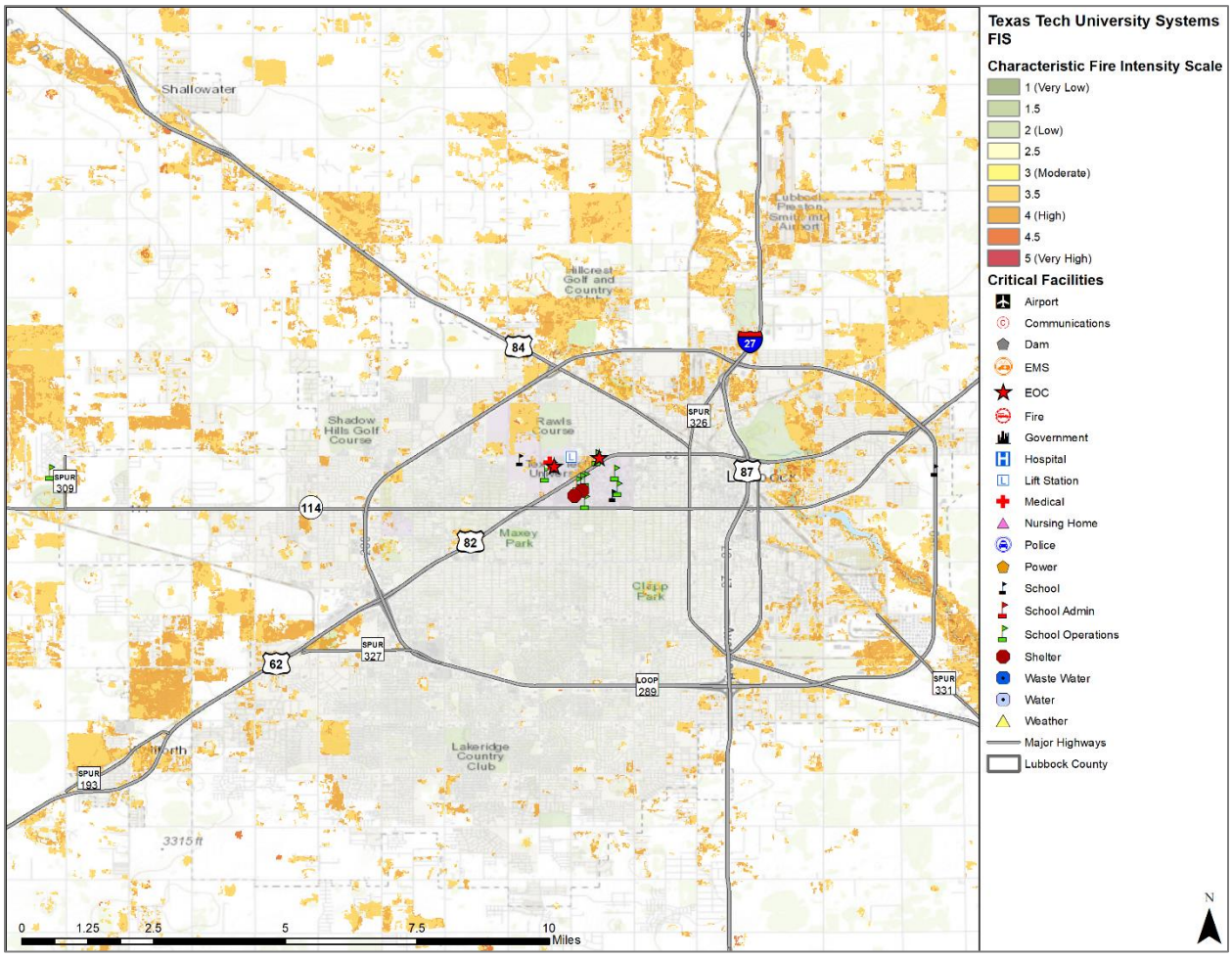


Figure 11-49. Fire Intensity Scale Map – Texas Tech Health Sciences Center

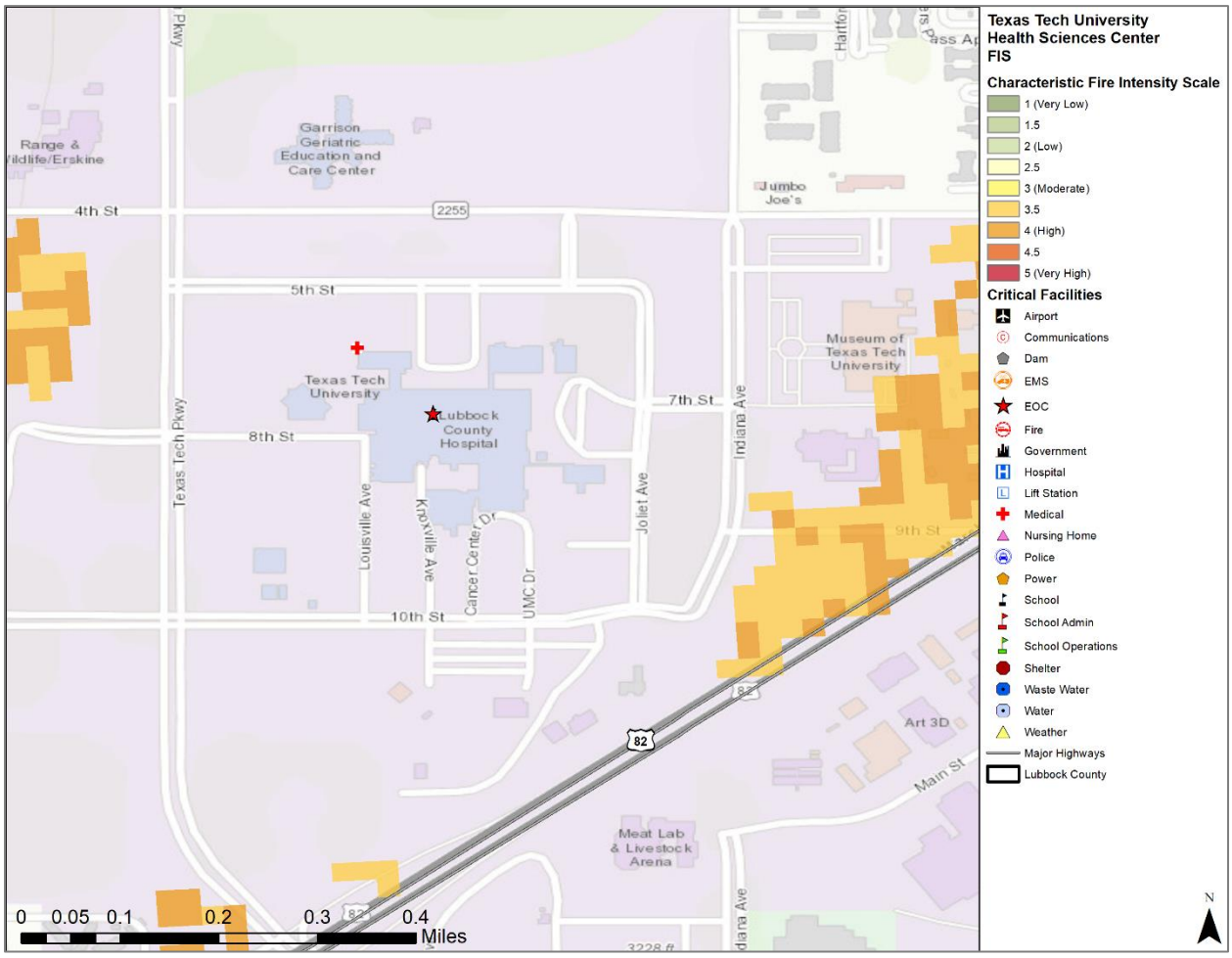


Figure 11-50. Fire Intensity Scale Map – Lubbock County Hospital System

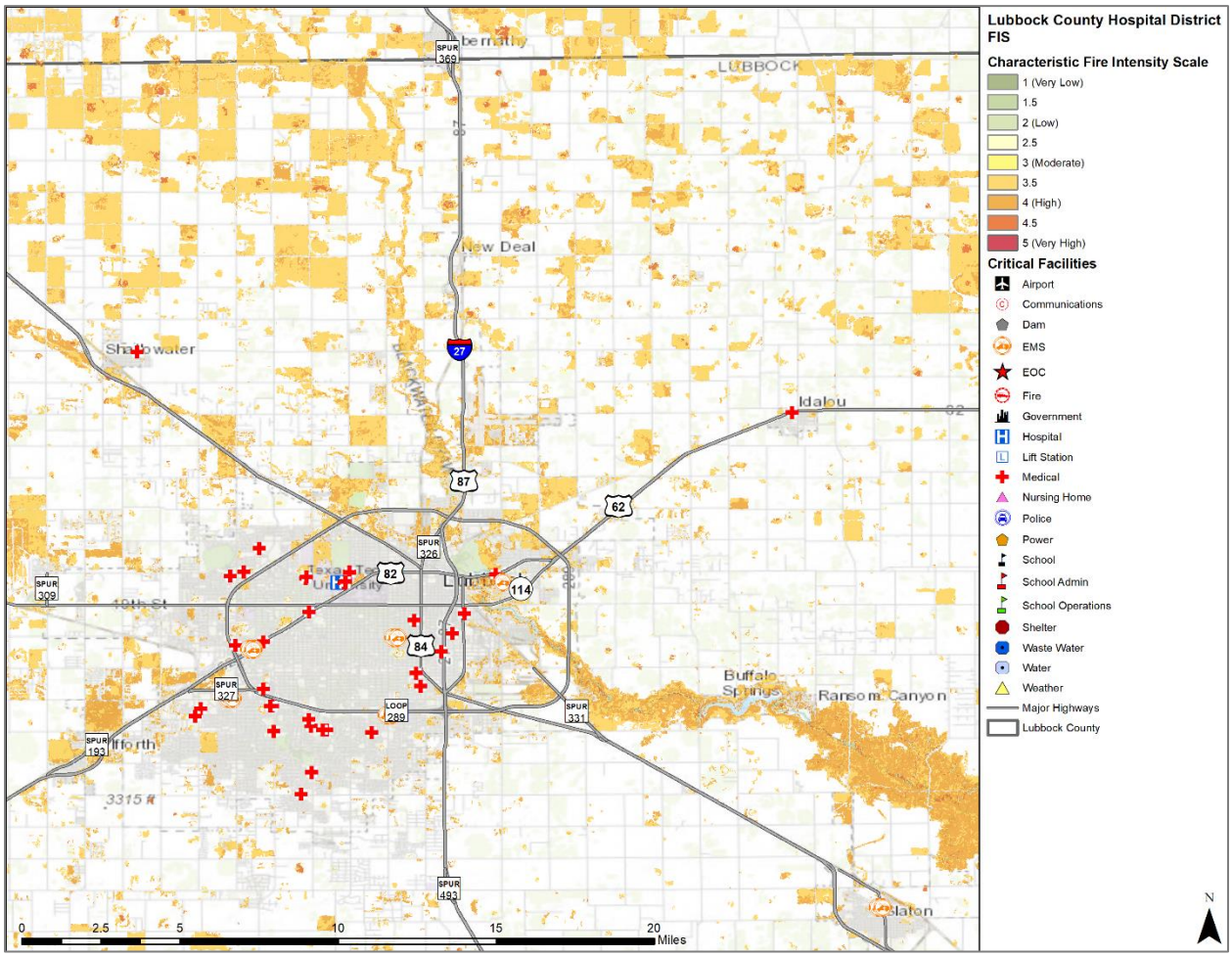


Figure 11-51. Fire Intensity Scale Map – Lubbock County WCID #1

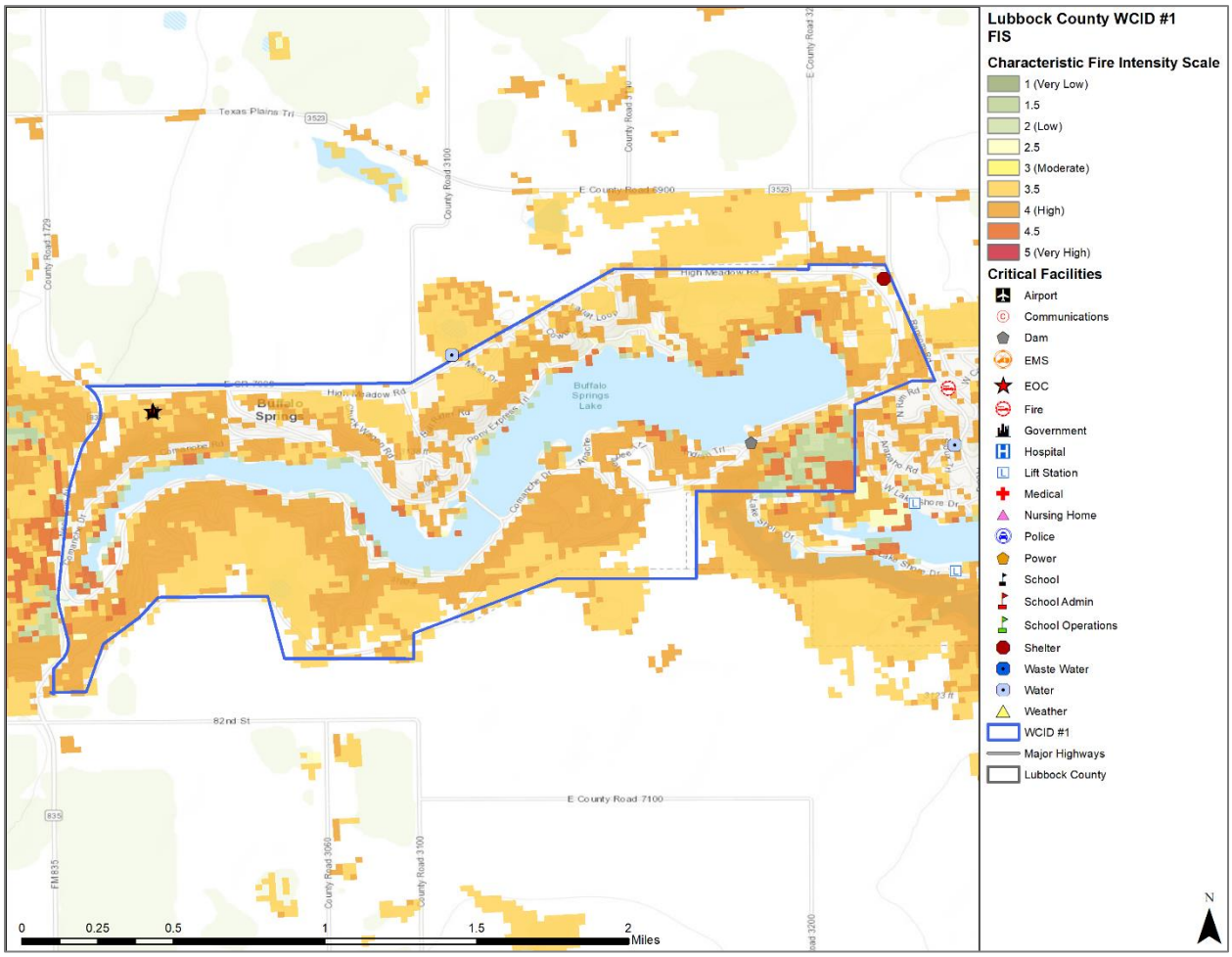


Figure 11-52. Fire Intensity Scale Map – Lubbock Reese Redevelopment Authority

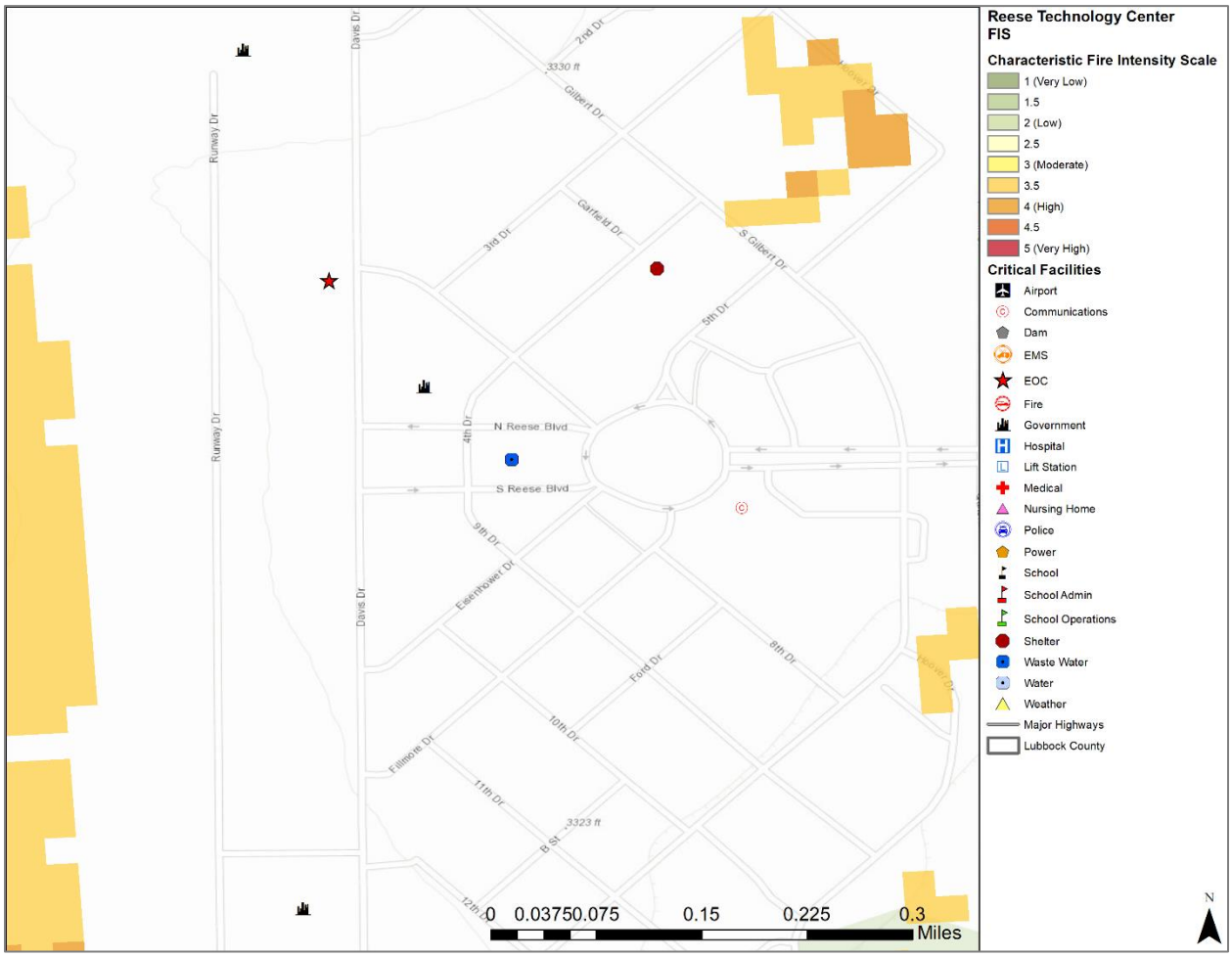
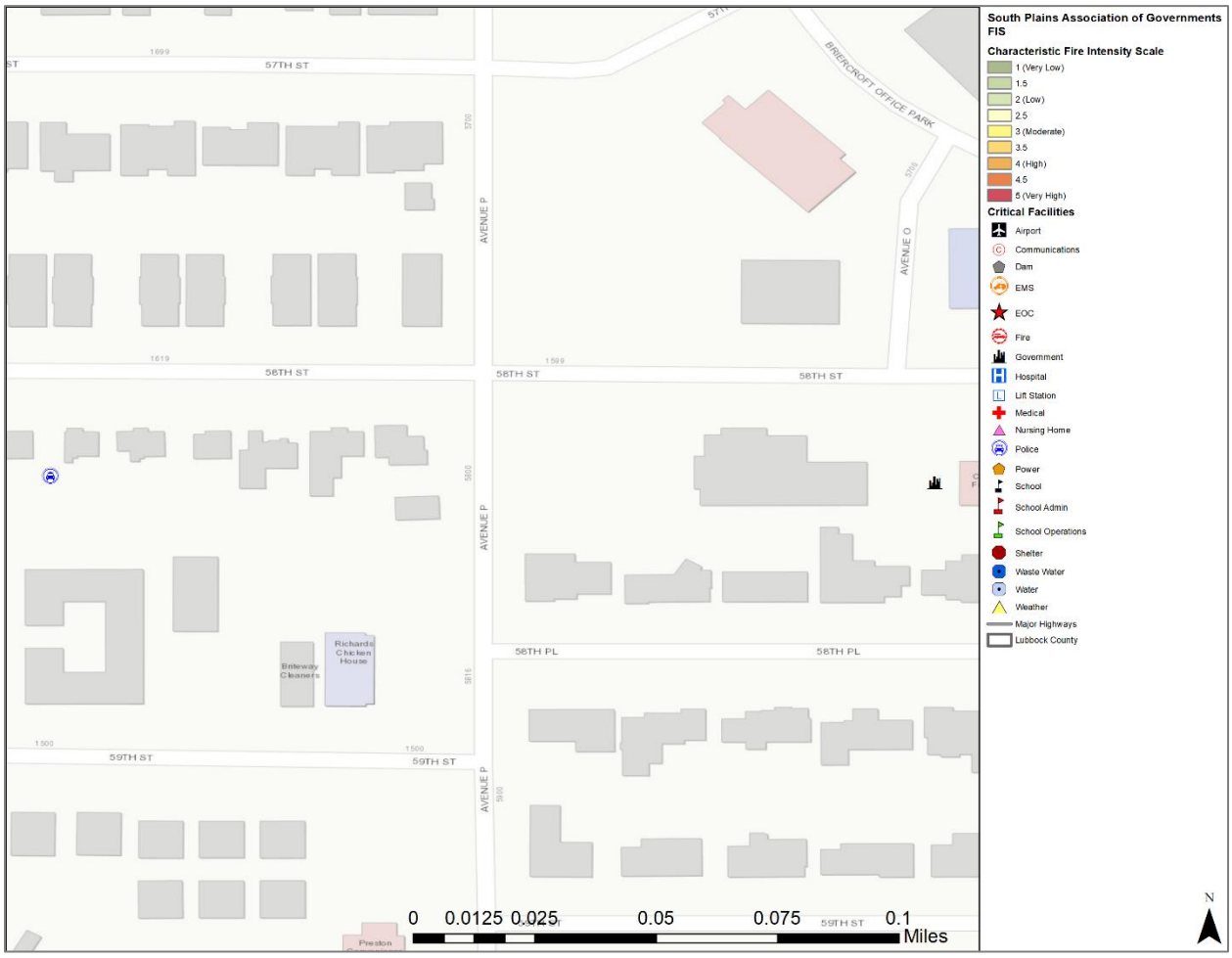


Figure 11-53. Fire Intensity Scale Map – South Plains Association of Governments



HISTORICAL OCCURRENCES

The Texas Forest Service (TFS) reported 1,351 wildfire events between 2005 and 2020. The National Centers for Environmental Information (NCEI) only reported five events from 1996 through December 2021. Due to a lack of recorded data for wildfire events prior to 2005 and after 2020[2], frequency calculations are based on a sixteen-year period using only data from recorded years. The map below shows approximate locations of wildfires, which can be grass or brushfires of any size (Figure 11-54). Table 11-1 identifies the number of wildfires by jurisdiction and total acreage burned.

Historical wildfire data for the participating ISDs and all special entities are provided within the reported county or city in which they are located as they do not have events reported separate and apart from the county and city events reported to the TFS. There have been no reported losses as a result of wildfire events for any of the participating ISDs, universities, planning authorities and hospital/special districts within the Plan Update.

[2] The Texas Forest Service data is currently only available through 2020.

Figure 11-54. Location and Historic Wildfire Events for Lubbock County Planning Area

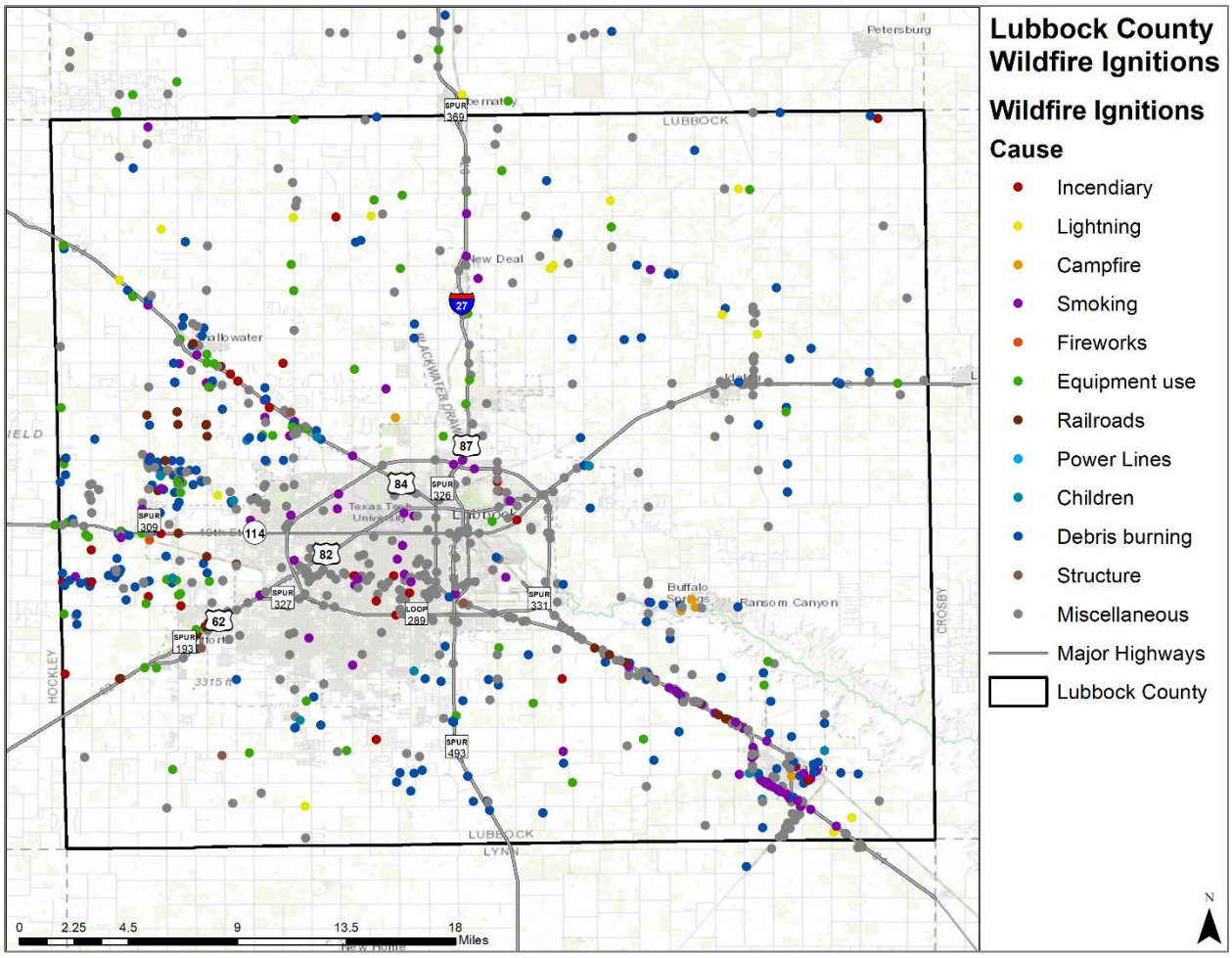


Table 11-1. Historical Wildfire Events Summary

JURISDICTION	NUMBER OF EVENTS	ACRES BURNED
Lubbock County	964	15,812
Village of Buffalo Springs	10	15
City of Idalou	21	43
City of Lubbock	276	5,574
Town of New Deal	5	13
Town of Ransom Canyon	0	0
City of Shallowater	7	16
City of Slaton	63	39

JURISDICTION	NUMBER OF EVENTS	ACRES BURNED
City of Wolfforth	5	6

Table 11-2. Acreage of Suppressed Wildfire by Year

YEAR	Lubbock County	Village of Buffalo Springs	City of Idalou	City of Lubbock	Town of New Deal	Town of Ransom Canyon	City of Shallowater	City of Slaton	City of Wolfforth
2005	790	0	0	340	0	0	0	0	0
2006	915	0	0	76	1	0	3	4	0
2007	23	0	12	0	0	0	0	0	0
2008	822	5	19	2	0	0	0	0	0
2009	921	0	1	7	1	0	0	31	3
2010	722	0	2	1	0	0	0	0	0
2011	10,215	10	9	5,094	1	0	5	3	1
2012	31	0	0	4	0	0	0	0	0
2013	236	0	0	0	0	0	0	0	0
2014	265	0	0	6	0	0	5	0	0
2015	49	0	0	5	0	0	0	0	0
2016	428	0	0	2	0	0	0	0	0
2017	84	0	0	0	0	0	0	0	0
2018	301	0	0	33	10	0	3	1	2
2019	6	0	0	0	0	0	0	0	0
2020	4	0	0	4	0	0	0	0	0
Total	**15,812**	**15**	**43**	**5,574**	**13**	**0**	**16**	**39**	**6**

Based on the list of historical wildfire events for the Lubbock County planning area (listed above), including all participating jurisdictions, 156 events have occurred since the 2015 Plan.

PROBABILITY OF FUTURE EVENTS

Wildfires can occur at any time of the year. As the jurisdictions within the county move into wildland, the potential area of occurrence of wildfire increases. With 1,351 events in a 16-year period, an event within Lubbock County, including all participating jurisdictions, ISDs, universities,

planning authorities and hospital/special districts is highly likely, meaning an event is probable within the next year.

VULNERABILITY AND IMPACT

Periods of drought, dry conditions, high temperatures, and low humidity are factors that contribute to the occurrence of a wildfire event. Areas along railroads and people whose homes are in woodland settings have an increased risk of being affected by wildfire.

The heavily populated, urban areas of Lubbock County are not likely to experience large, sweeping fires. Areas in the unincorporated areas of Lubbock County are vulnerable, including rural areas. Unoccupied buildings and open spaces that have not been maintained have the greatest vulnerability to wildfire. The overall level of concern for wildfires is located mostly along the perimeter of the study area where wildland and urban areas interface. Areas along railroads and people with homes in wooded, rural areas have an increased risk of wildfire. The sparsely populated participating jurisdictions and rural areas of Buffalo Springs, New Deal, Ransom Canyon, and Wolfforth are capable of experiencing large sweeping fires, especially where areas of vegetation are not maintained. There are no critical facilities at risk in Buffalo Springs, but the Lubbock County Water Control and Improvement District #1 covers all of Buffalo Springs, so if a severe wildfire event were to occur, their utilities and roads would be at risk. In New Deal, Ransom Canyon, and Wolfforth, their police stations, volunteer fire departments and schools would be at risk. Also at risk is Wolfforth Community Health Center in Wolfforth.

Areas along major highways in Shallowater and Slaton have an increased vulnerability where empty lots and unoccupied areas are located. Shallowater Police Department, Woodard Academy, residences, commercial buildings, and the railroad in Shallowater have a moderate vulnerability, due to the wildland urban interface at these critical facilities, compared to a lower risk in Slaton where the Library of Legacies is located.

The populous areas of the City of Lubbock, where most critical facilities are located in Lubbock County, experience a lower vulnerability to wildfire due to the low level of wildland urban interface. The northern and eastern portions of the city, however, have a higher risk corresponding to the increase of interface and unmaintained grasslands and vegetation. This includes Lubbock Fire Marshal's Office, schools, and residences. The City of Idalou has a very low vulnerability to wildfire due to the low level of wildland urban interface. There are a few commercial buildings that have a low threat to wildfire.

Figures 11-1 through 11-26 illustrate the areas that are the most vulnerable to wildfire throughout the planning area.

The following critical facilities are located in the WUI and are more susceptible to wildfire in each participating jurisdiction:

Table 11-3. Critical Facilities Located in WUI by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	2 Evacuation Centers, County Jail, 1 Radio Tower
Village of Buffalo Springs	EOC, 1 Dam

JURISDICTION	CRITICAL FACILITIES
City of Idalou	None Reported
City of Lubbock	Fire Administration Building, 1 Fire Station, 1 Pump Station, 3 Lift Stations, 3 Substations, Canadian River Authority (Valve Structure to COL Pump Station to Tahoka, Lamesa, & O'Donnell.)
Town of New Deal	1 City Hall, 1 Fire Station, 2 Lift Stations
Town of Ransom Canyon	1 EOC, 1 Fire Station, 1 Evacuation Center/Church, 1 Wastewater Plant, 3 Lift Stations, 1 Pump Station, 1 Water Pressure Value, 1 Dam
City of Shallowater	1 EMS Station, 1 Police Station
City of Slaton	None Reported
City of Wolfforth	1 City Hall, 1 Fire Station, 1 Police Station, 1 Maintenance Building, 1 Water Treatment Plant, 2 Medical Clinics, 1 Middle School, 1 Daycare Facility, 1 Assisted Living Facility
Abernathy ISD	None Reported
Frenship ISD	1 Elementary School, 1 Middle School, 1 Transportation Operations, 1 Central Distribution Operations, 1 Maintenance Headquarters
Idalou ISD	None Reported
Lubbock ISD	2 Schools (Dunbar College Preparatory Academy and Margaret Talkington School for Young Women Leaders), 1 Field (Estacado Athletic Field)
Lubbock-Copper ISD	1 Elementary School, 1 High School, 1 Middle School
New Deal ISD	Aramark ISD
Roosevelt ISD	None Reported
Shallowater ISD	None Reported
Slaton ISD	None Reported
Betty M. Condra School of Education Innovation	None Reported
South Plains College	None Reported
Texas Tech University System	None Reported
Texas Tech University Health Sciences Center	None Reported
Lubbock County Hospital System	2 Clinics, EMS Headquarters, and 1 EMS Station

JURISDICTION	CRITICAL FACILITIES
Lubbock County WCID #1	1 Administration Building
Lubbock Reese Redevelopment Authority	None Reported
South Plains Association of Governments	None Reported

Within Lubbock County, a total of 1,351 fire events were reported from 2005 to 2020. All of these events were suspected wildfires. Historic loss and annualized estimates due to wildfires are presented in Table 11-4 below. The frequency is approximately 84 events every year.

Table 11-4. Potential Annualized Losses by Jurisdiction[3]

JURISDICTION	ACRES BURNED	ANNUAL ACRE LOSSES
Lubbock County	15,812	988.3
Village of Buffalo Springs	15	0.9
City of Idalou	43	2.7
City of Lubbock	5,574	348.4
Town of New Deal	13	0.8
Town of Ransom Canyon	0	0
City of Shallowater	16	1.0
City of Slaton	39	2.4
City of Wolfforth	6	0.4
Planning Area	**21,518**	**1,344.9**

Figures 11-55 through 11-80 show Lubbock County and the threat of wildfire to the County and all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

[3] Events divided by 16 years of data.

Figure 11-55. Wildfire Ignition Density – Lubbock County

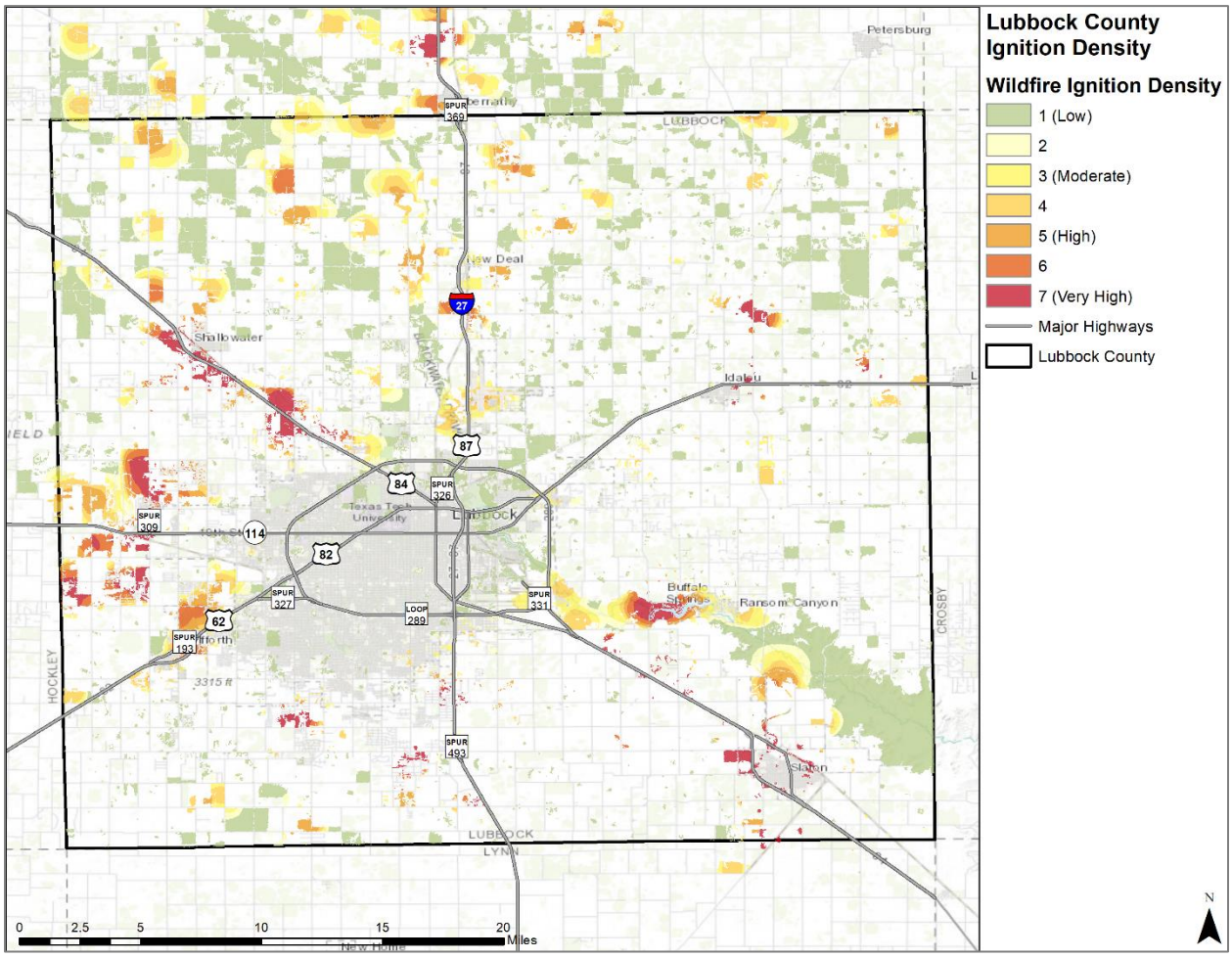


Figure 11-56. Wildfire Ignition Density – Village of Buffalo Springs

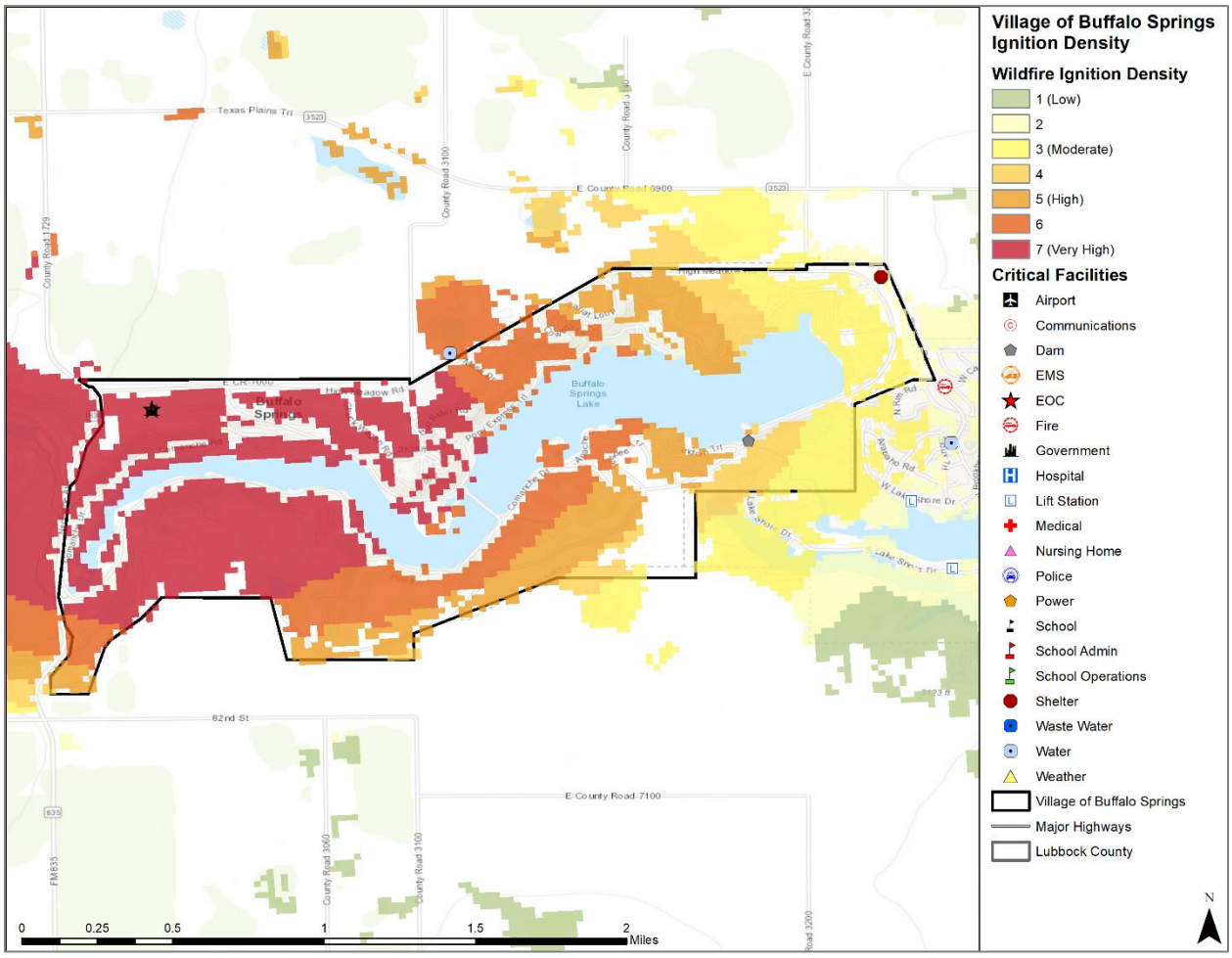


Figure 11-57. Wildfire Ignition Density – City of Idalou

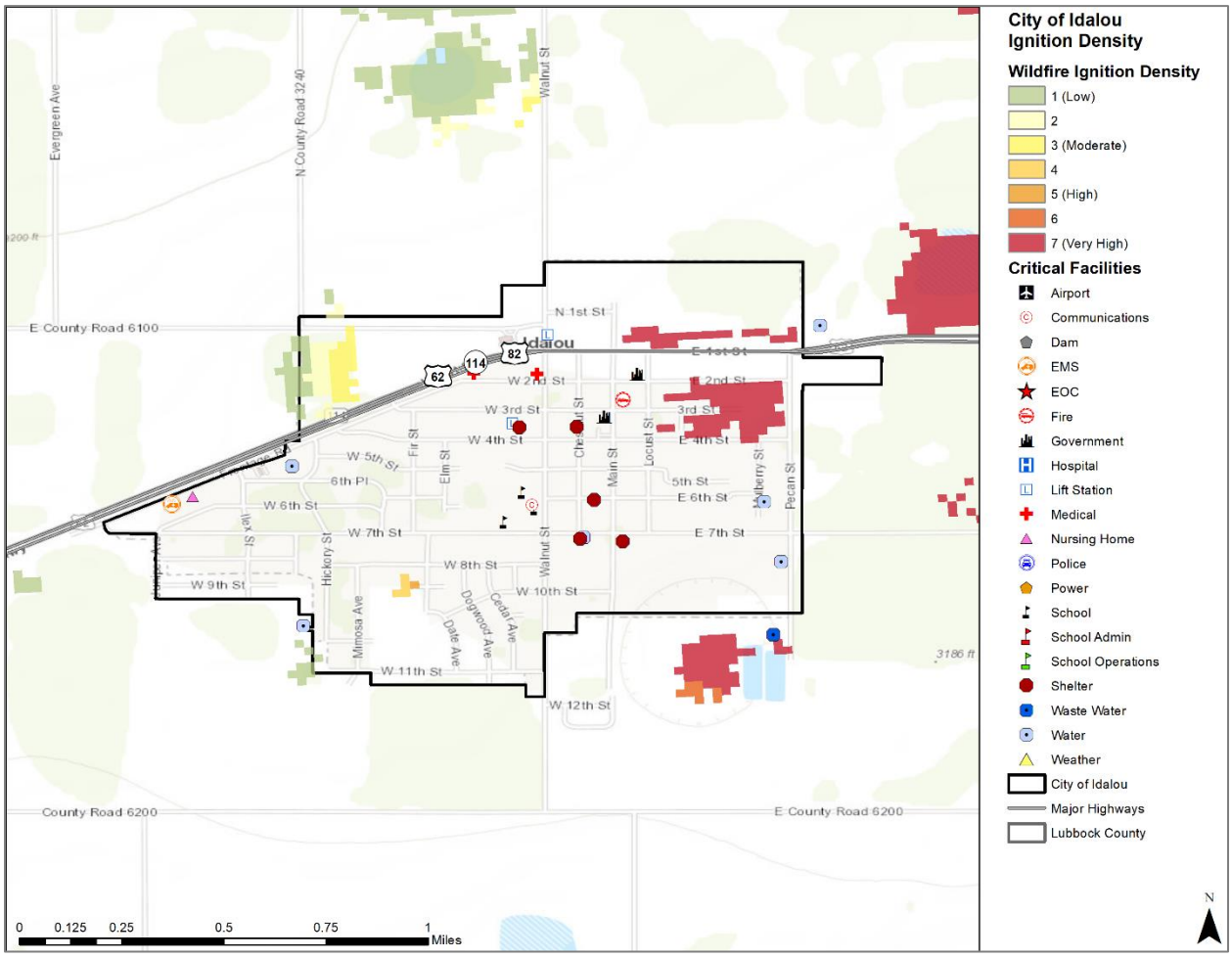


Figure 11-58. Wildfire Ignition Density – City of Lubbock

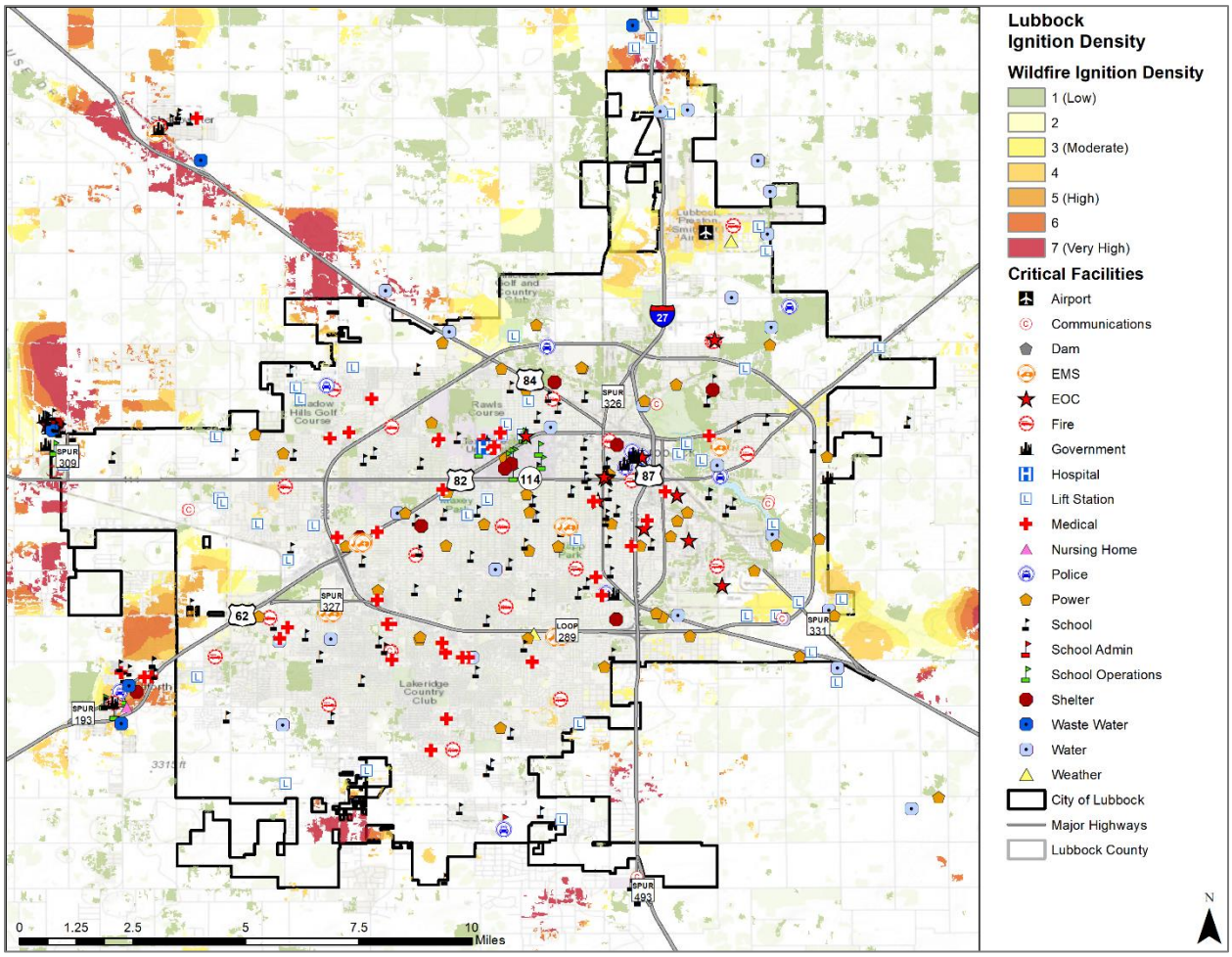


Figure 11-59. Wildfire Ignition Density – Town of New Deal

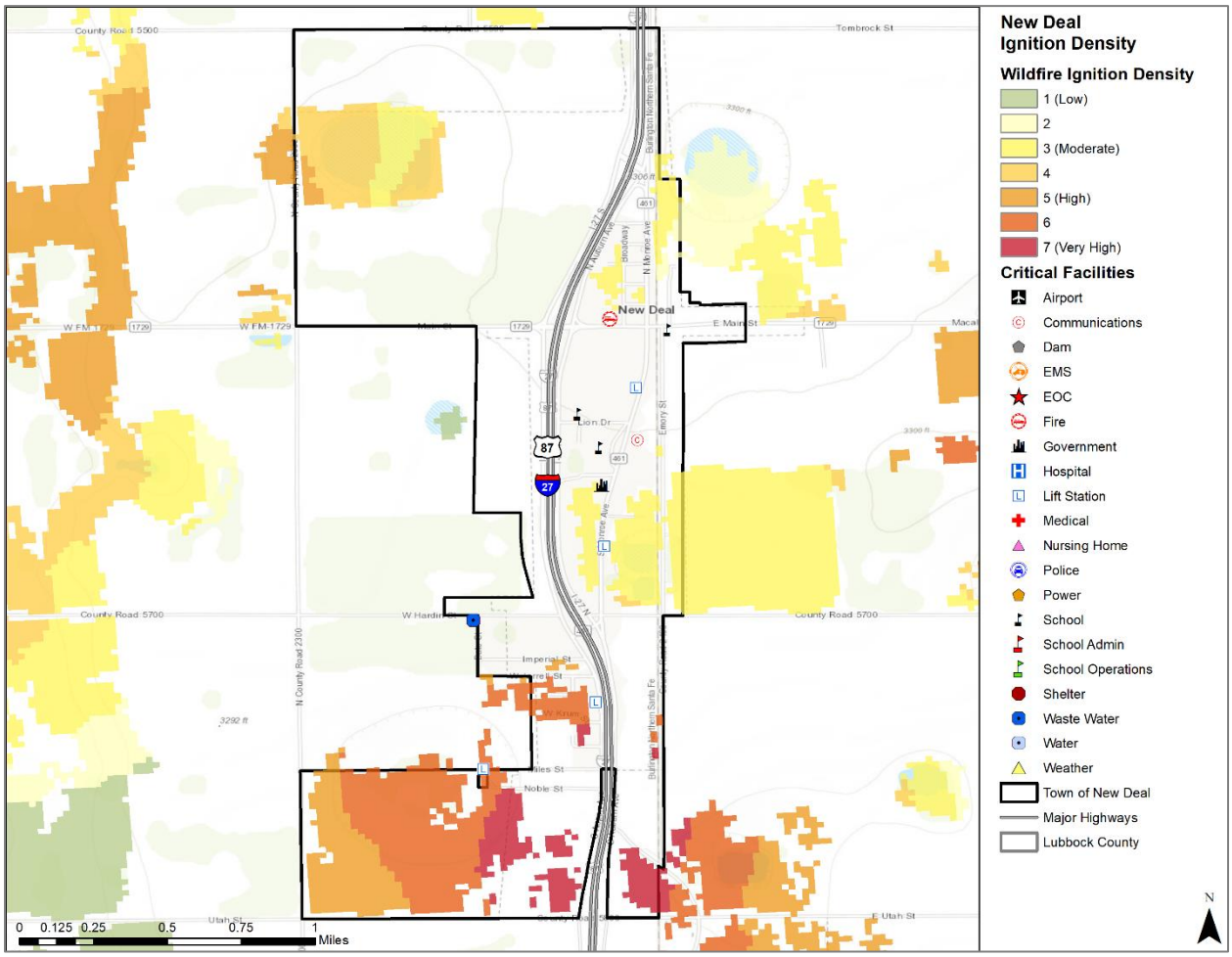


Figure 11-60. Wildfire Ignition Density – Town of Ransom Canyon

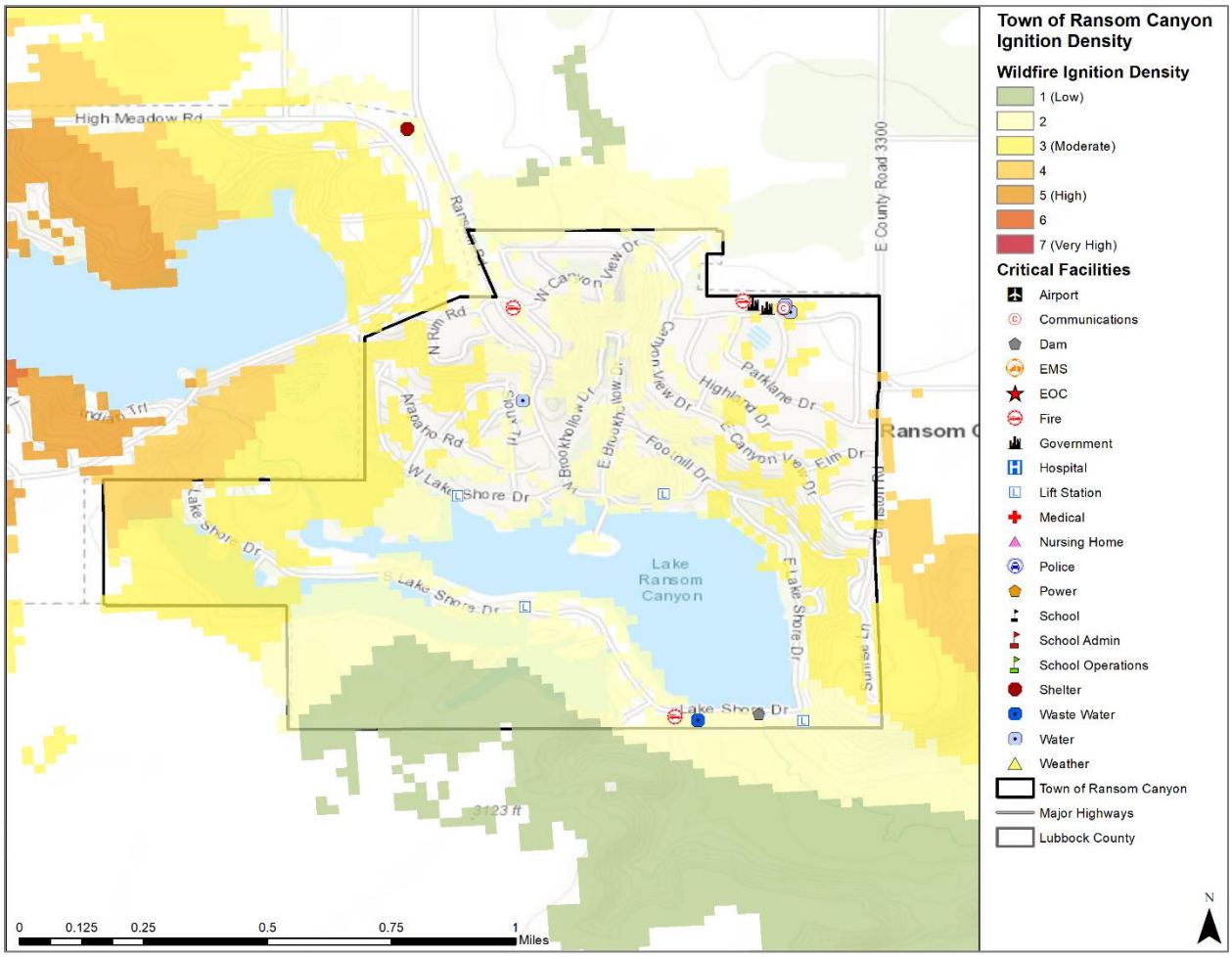


Figure 11-61. Wildfire Ignition Density – City of Shallowater

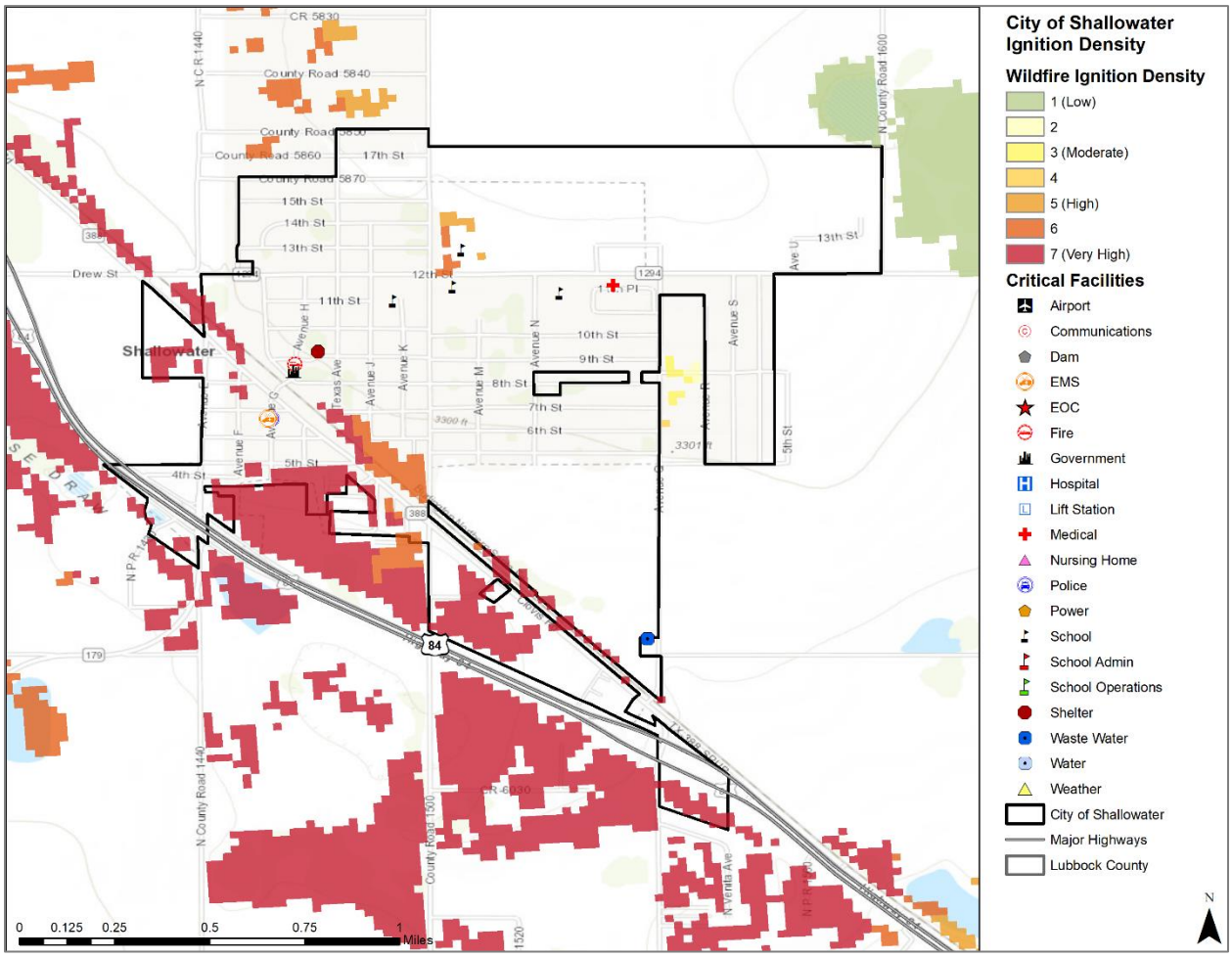


Figure 11-62. Wildfire Ignition Density – City of Slaton

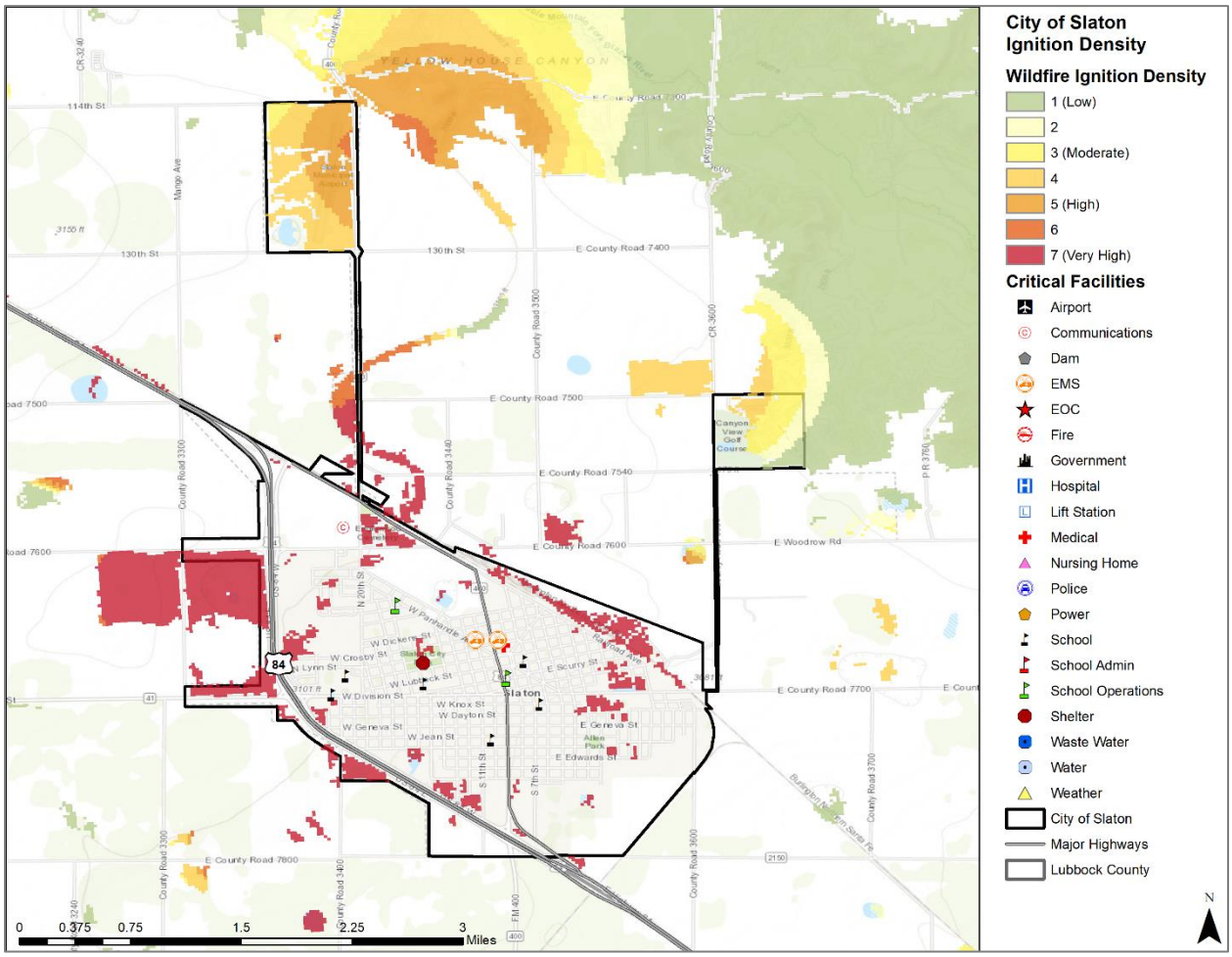


Figure 11-63. Wildfire Ignition Density – City of Wolfforth

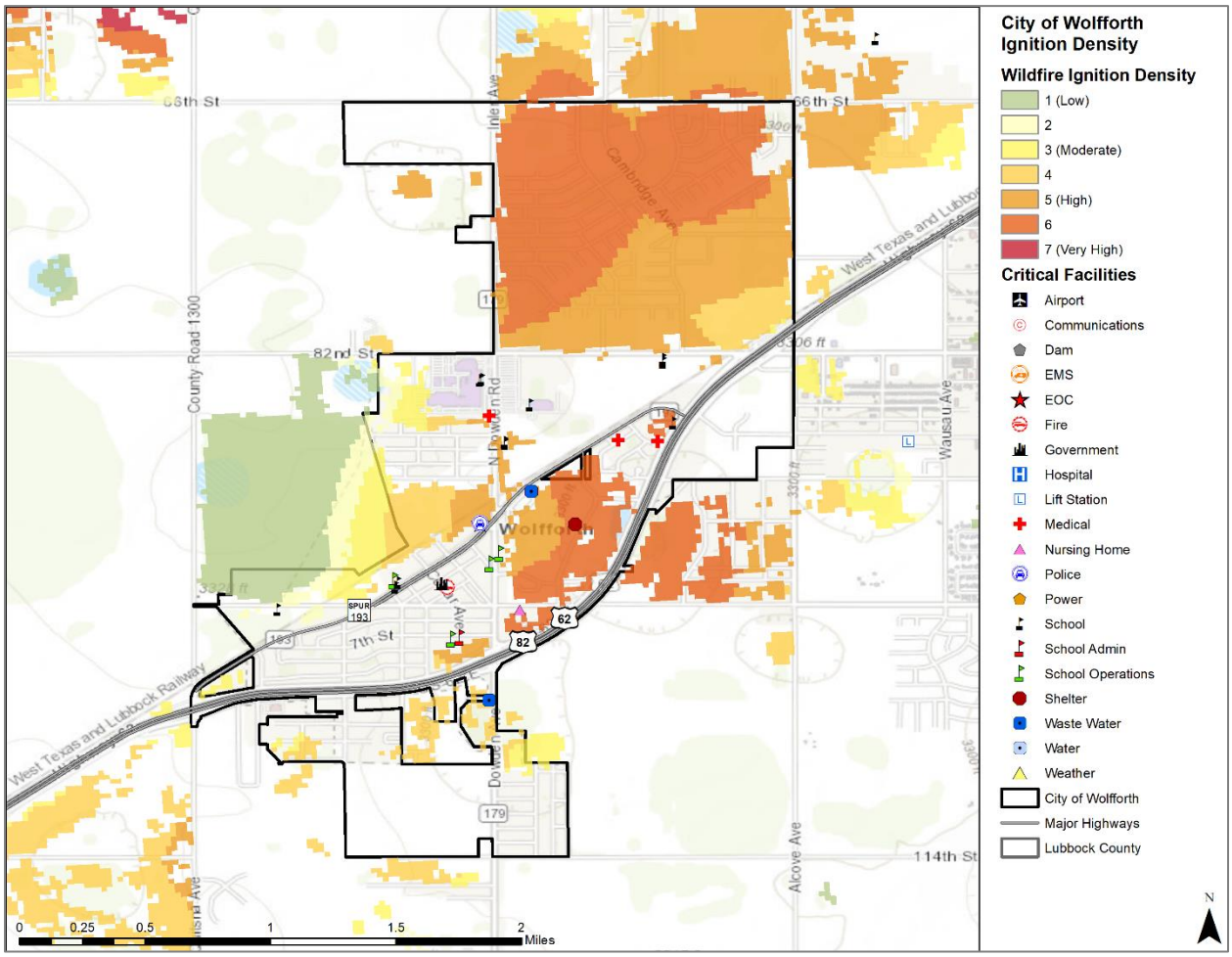


Figure 11-64. Wildfire Ignition Density – Abernathy ISD

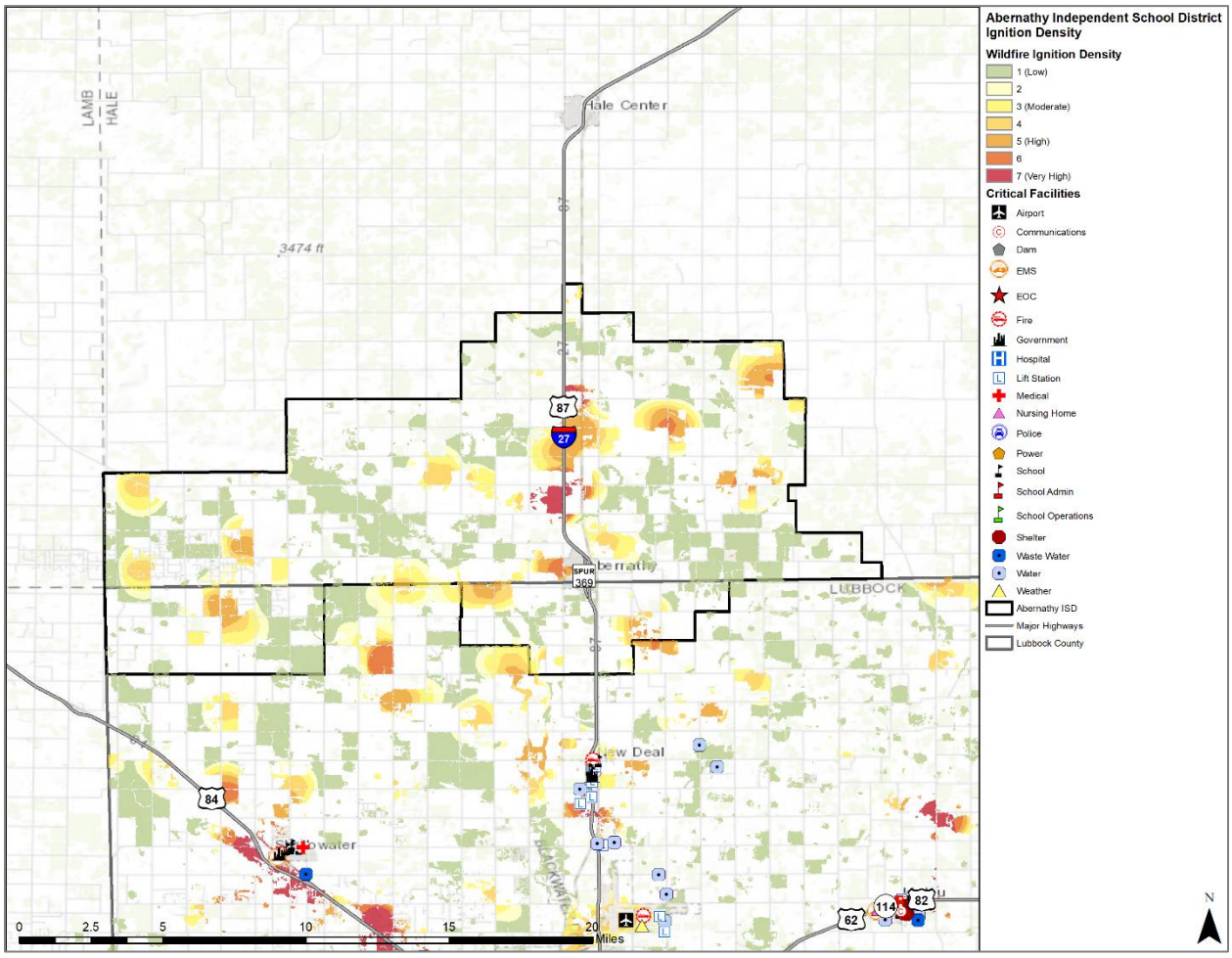


Figure 11-65. Wildfire Ignition Density – Frenship ISD

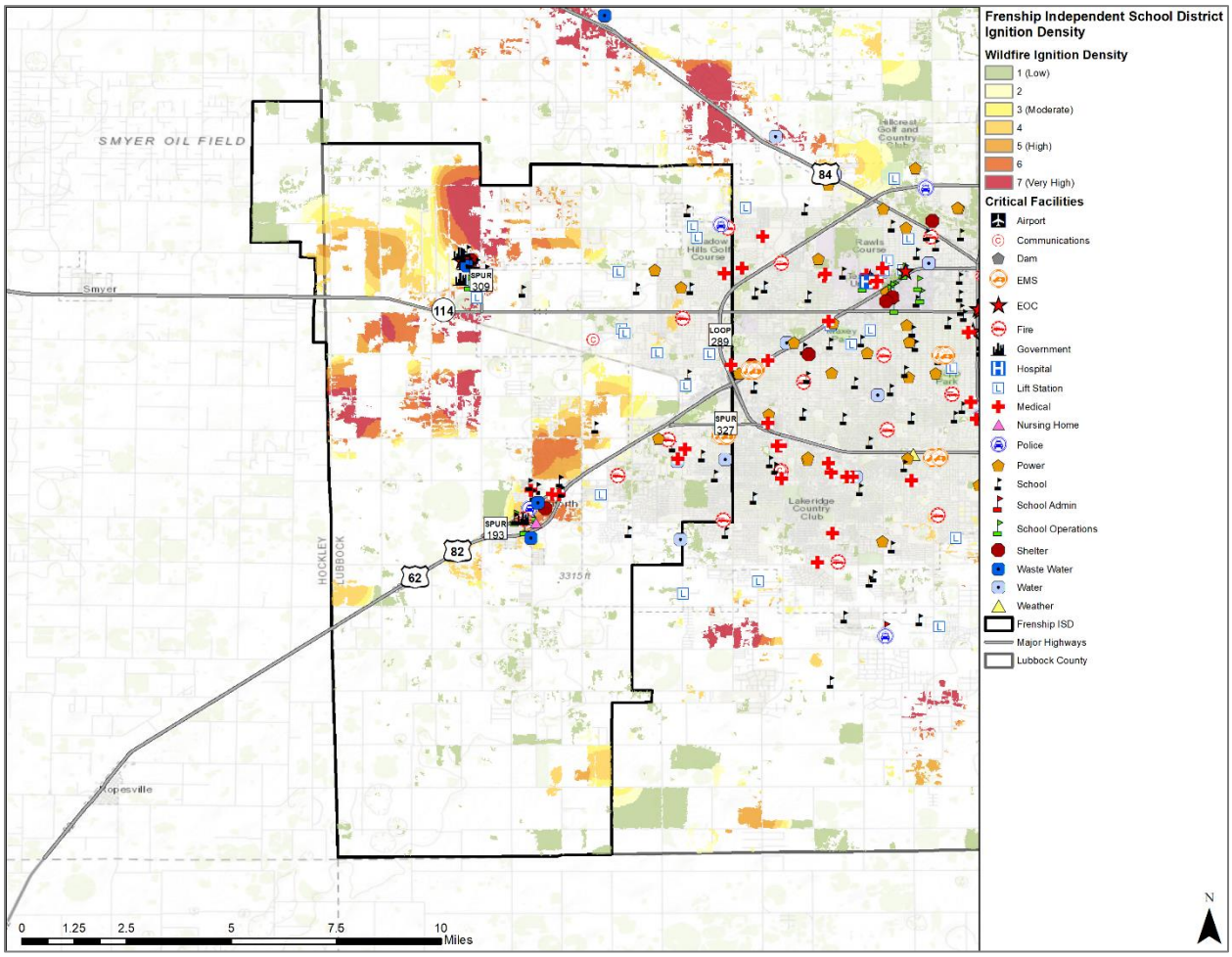


Figure 11-66. Wildfire Ignition Density – Idalou ISD

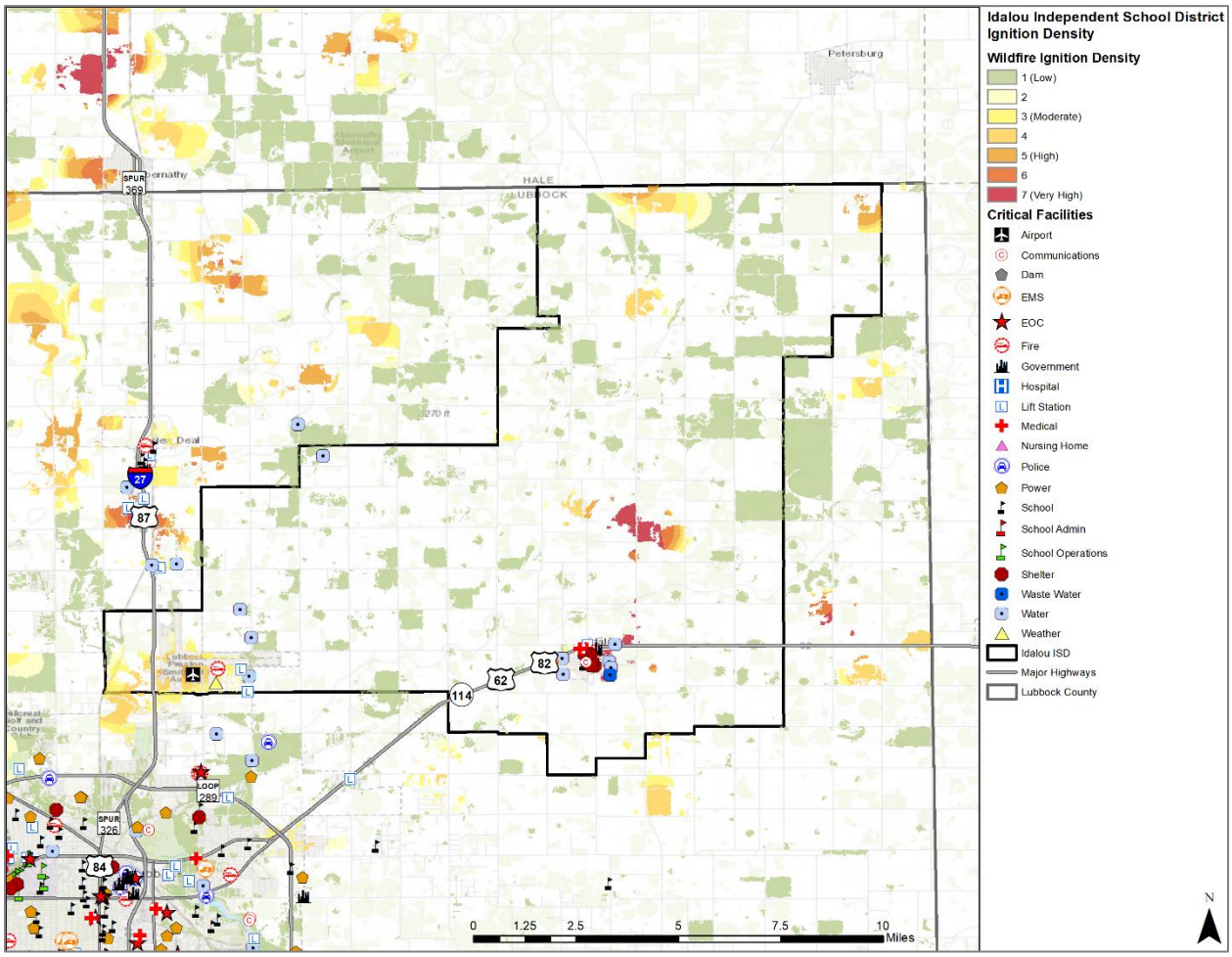


Figure 11-67. Wildfire Ignition Density – Lubbock ISD

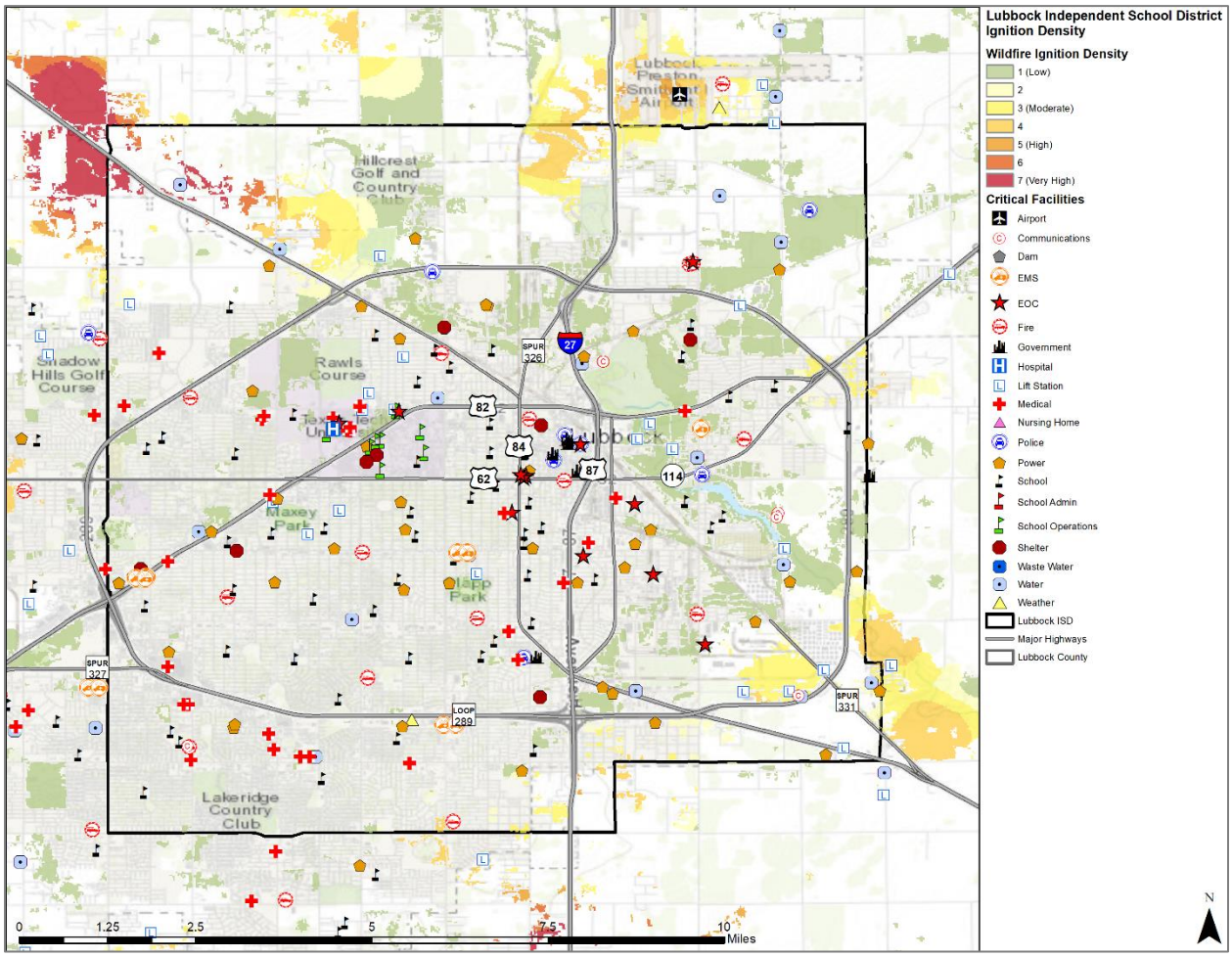


Figure 11-68. Wildfire Ignition Density – Lubbock-Copper ISD

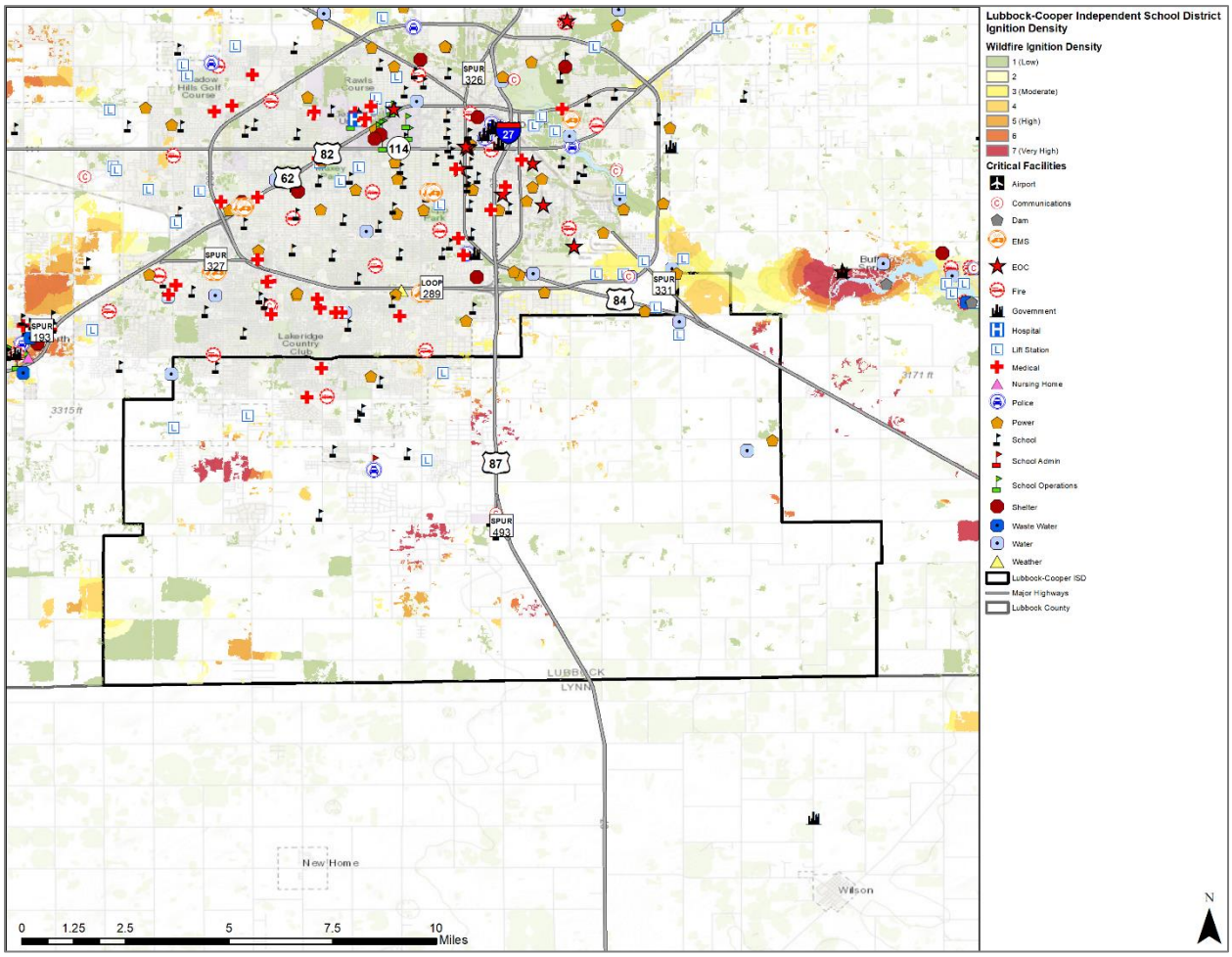


Figure 11-69. Wildfire Ignition Density – New Deal ISD

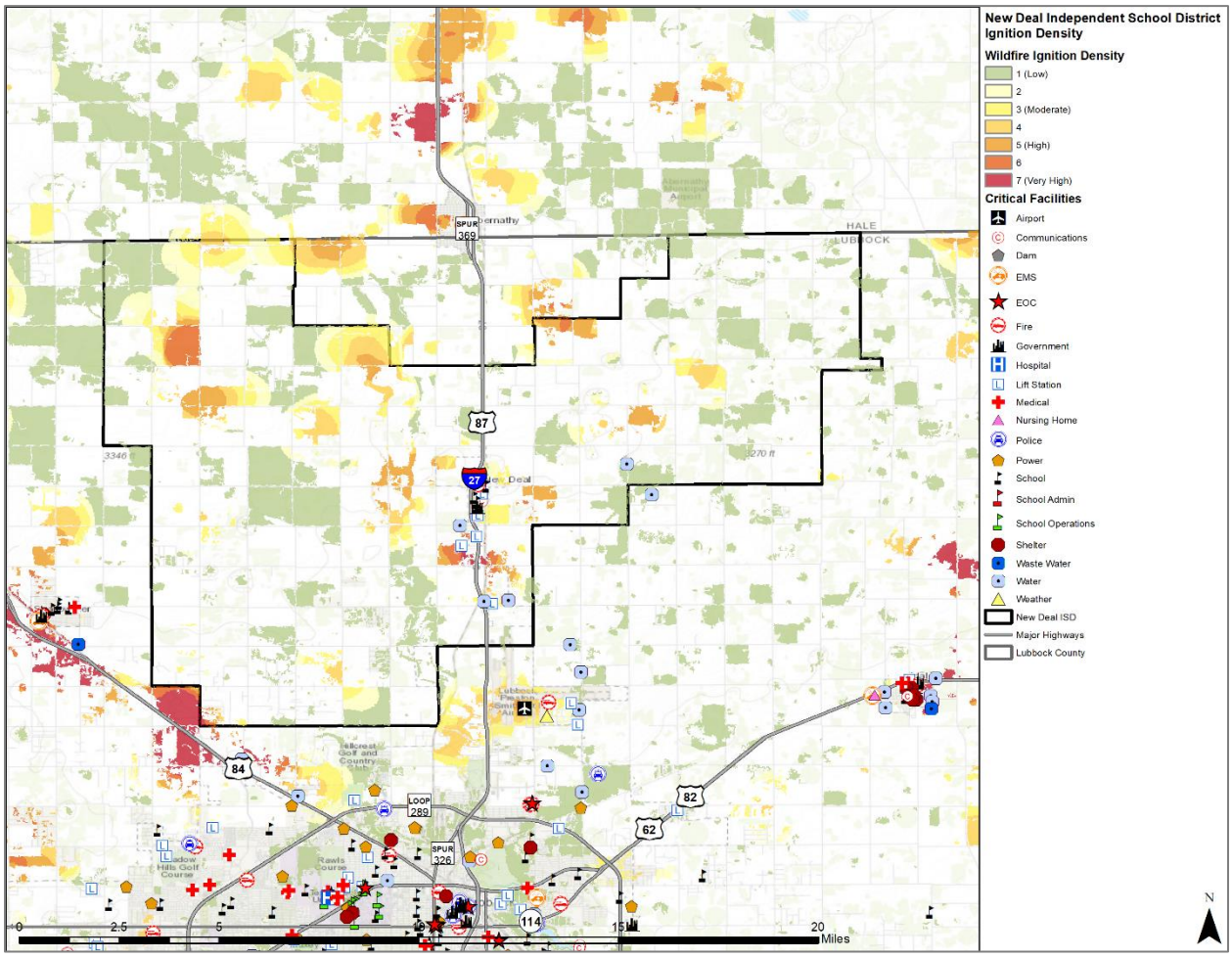


Figure 11-70. Wildfire Ignition Density – Roosevelt ISD

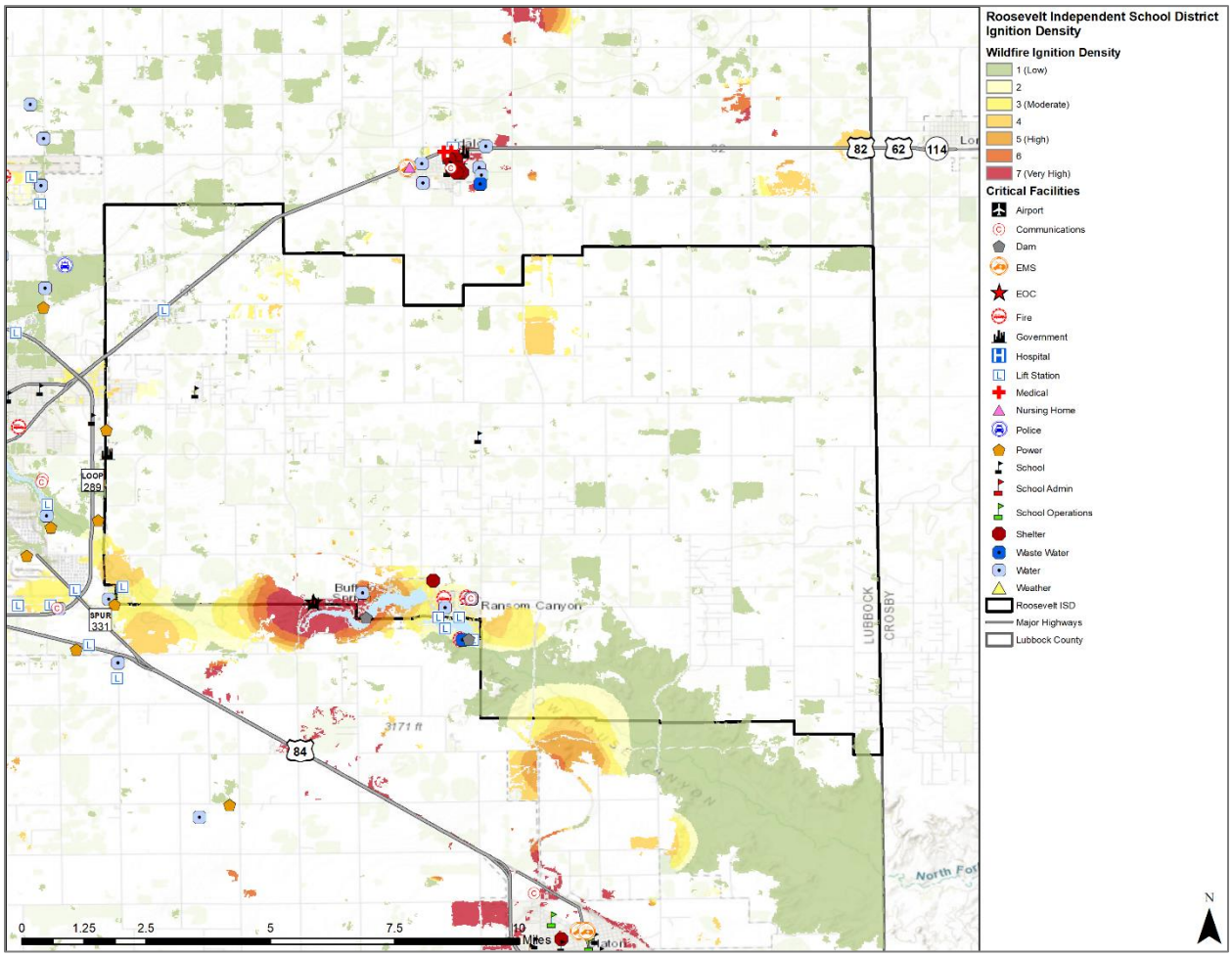


Figure 11-71. Wildfire Ignition Density – Shallowater ISD

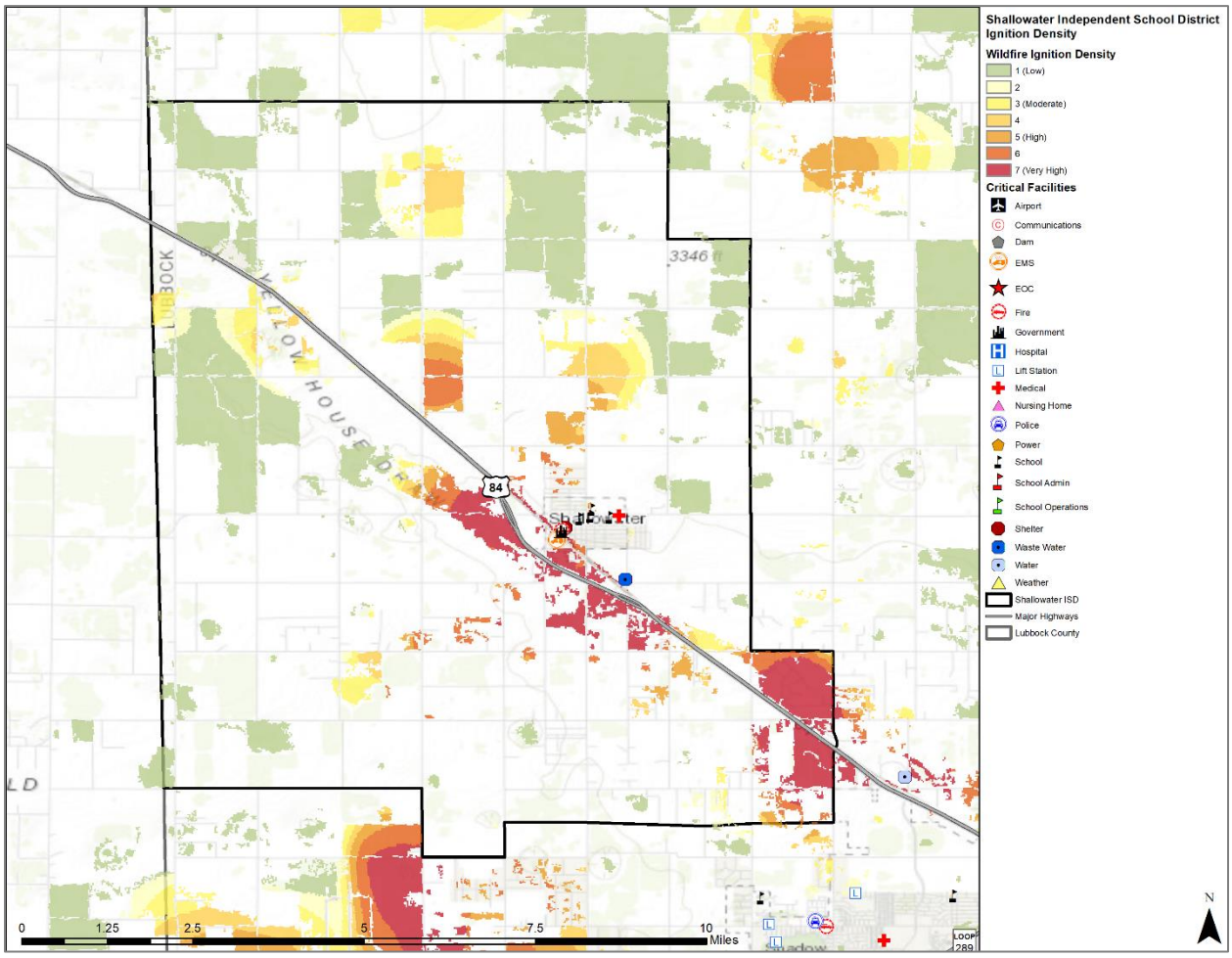


Figure 11-72. Wildfire Ignition Density – Slaton ISD

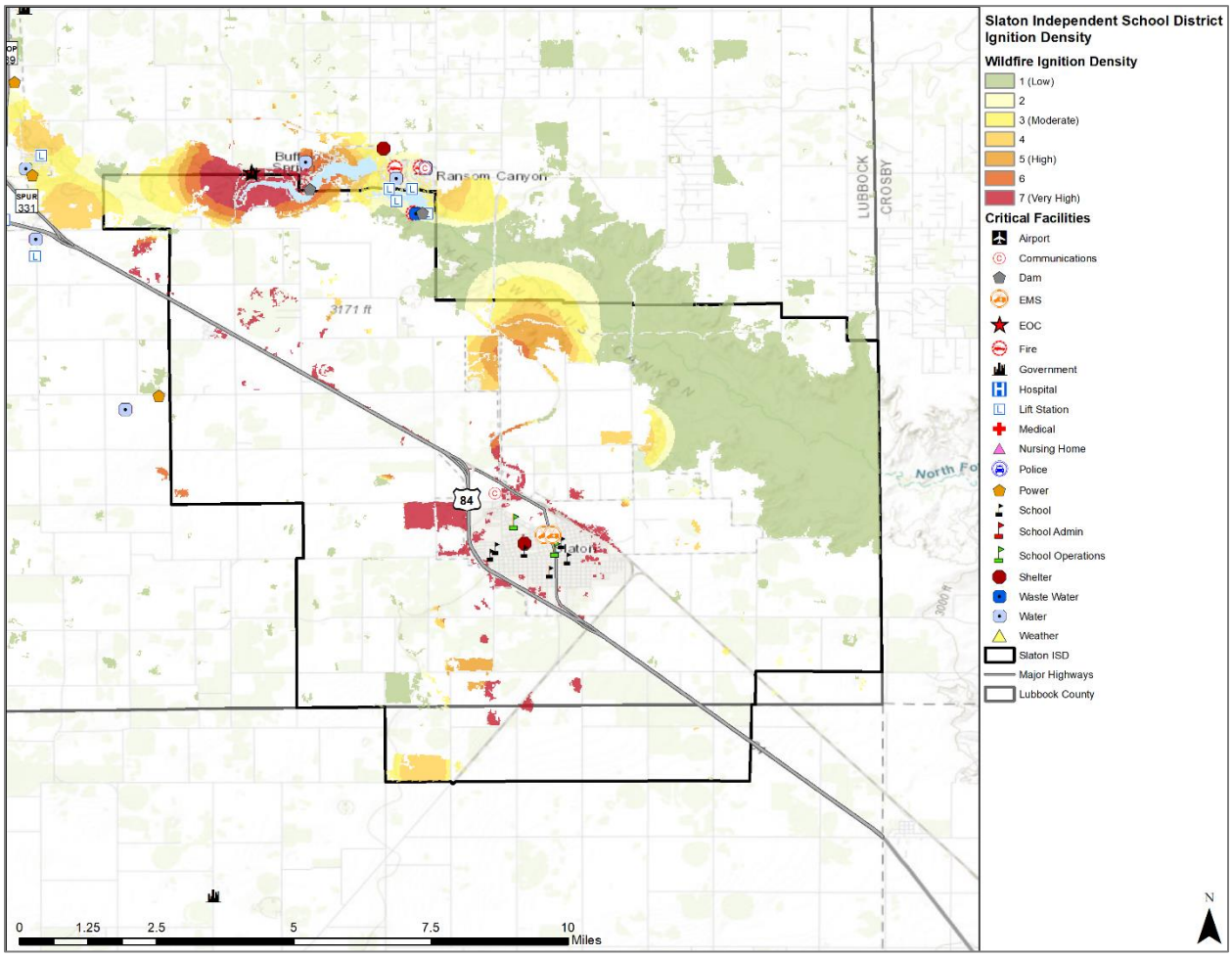


Figure 11-73. Wildfire Ignition Density – Betty M. School of Education Innovation

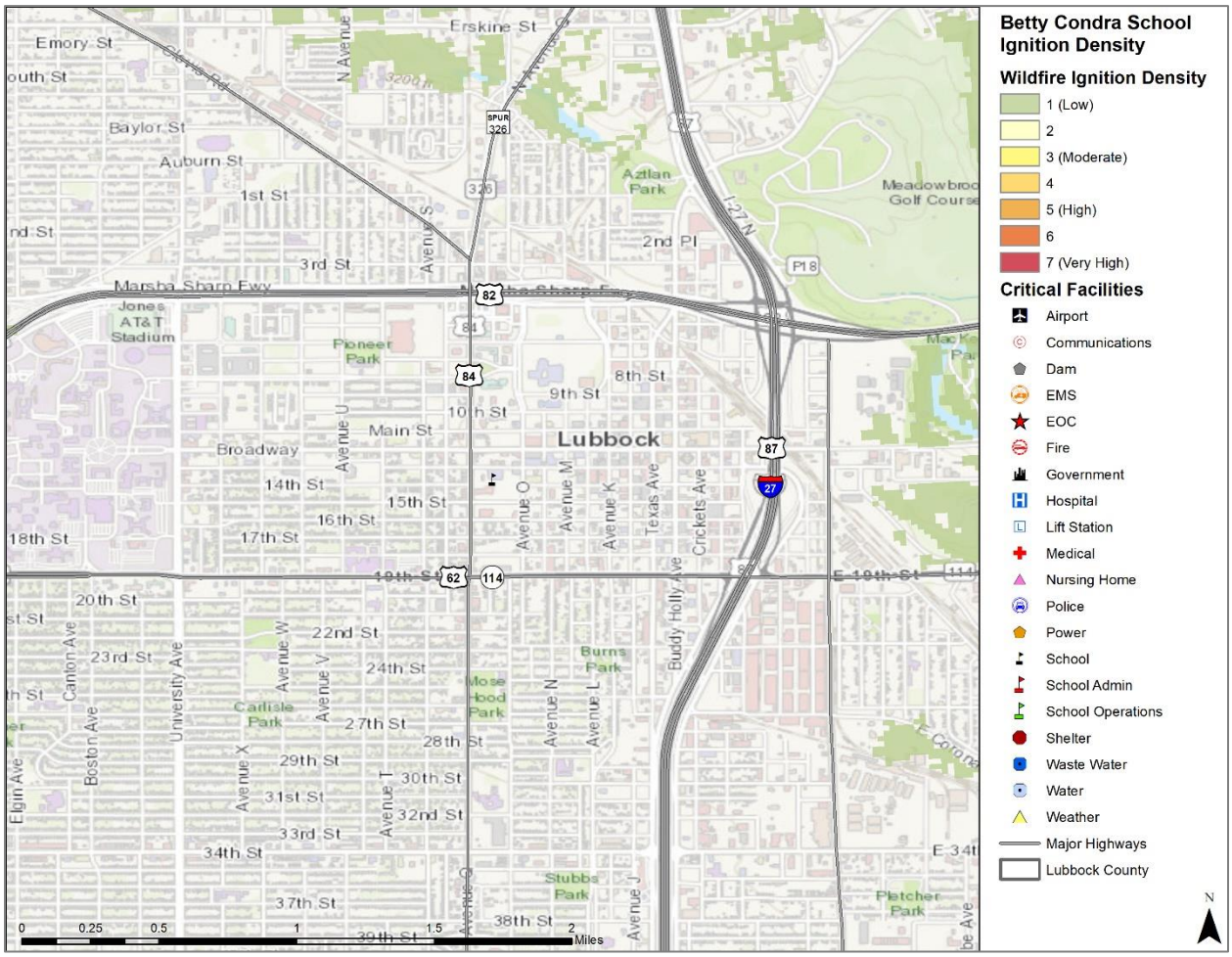


Figure 11-74. Wildfire Ignition Density – South Plains College

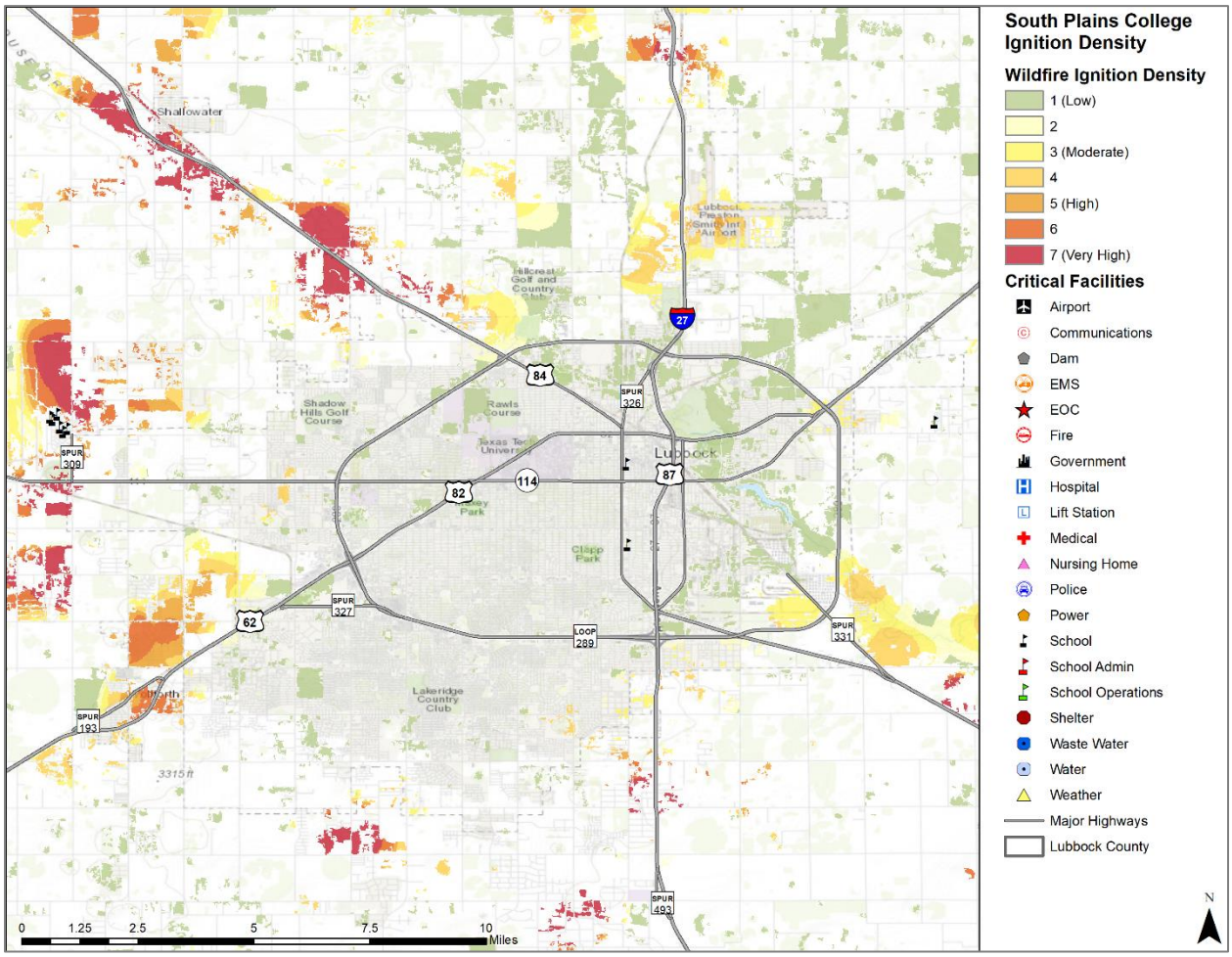


Figure 11-75. Wildfire Ignition Density – Texas Tech University System

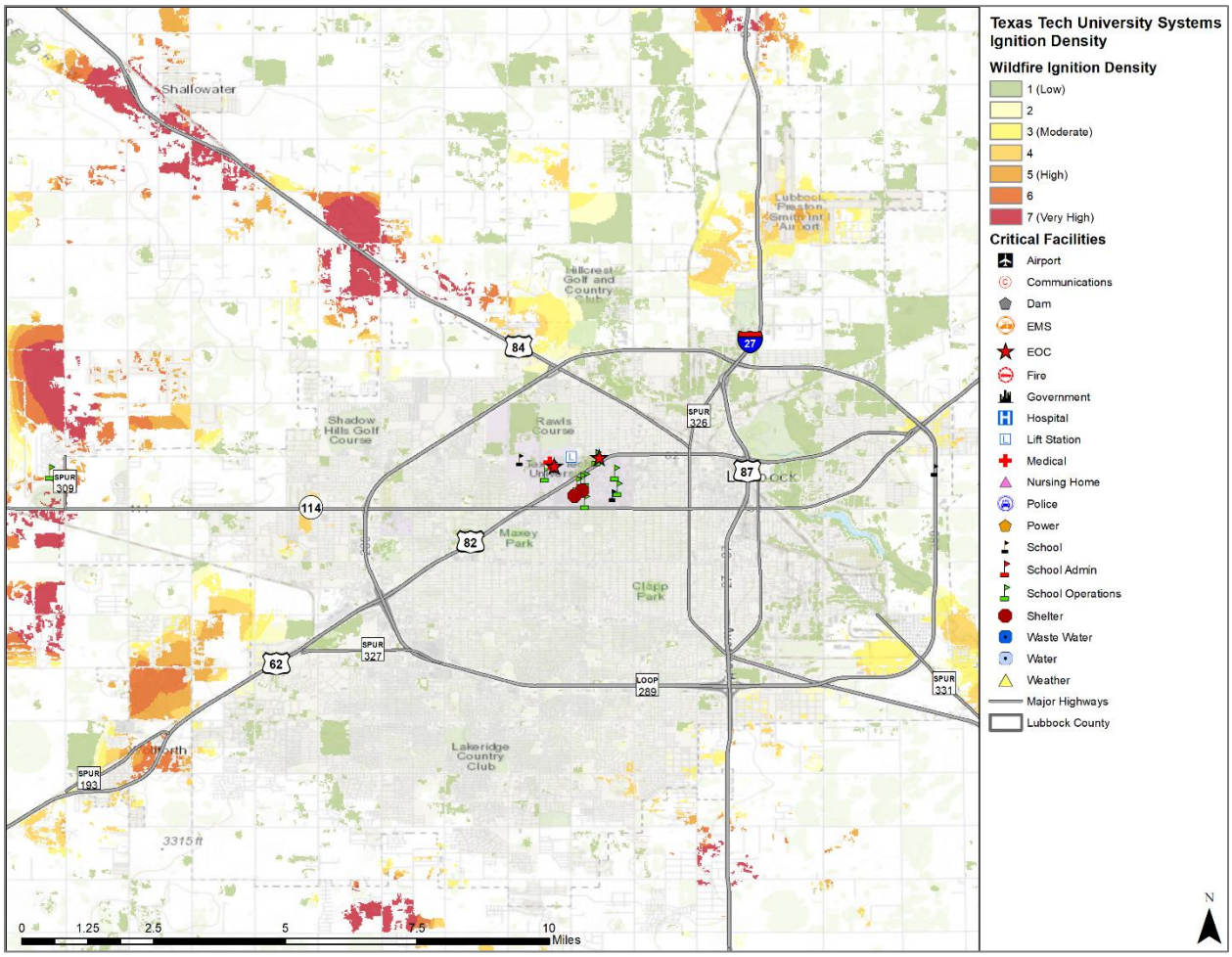


Figure 11-76. Wildfire Ignition Density – Texas Tech Health Sciences Center

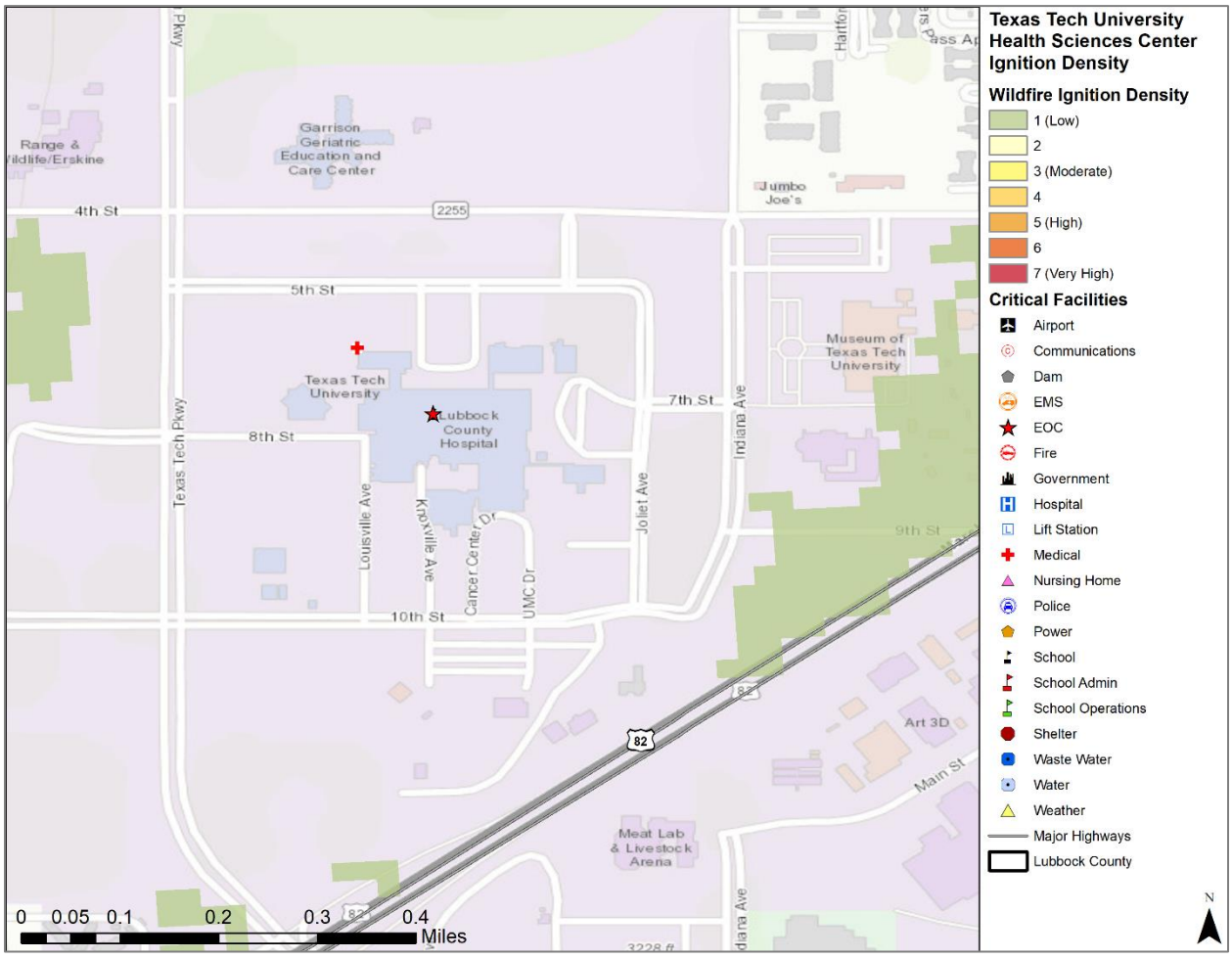


Figure 11-77. Wildfire Ignition Density – Lubbock County Hospital System

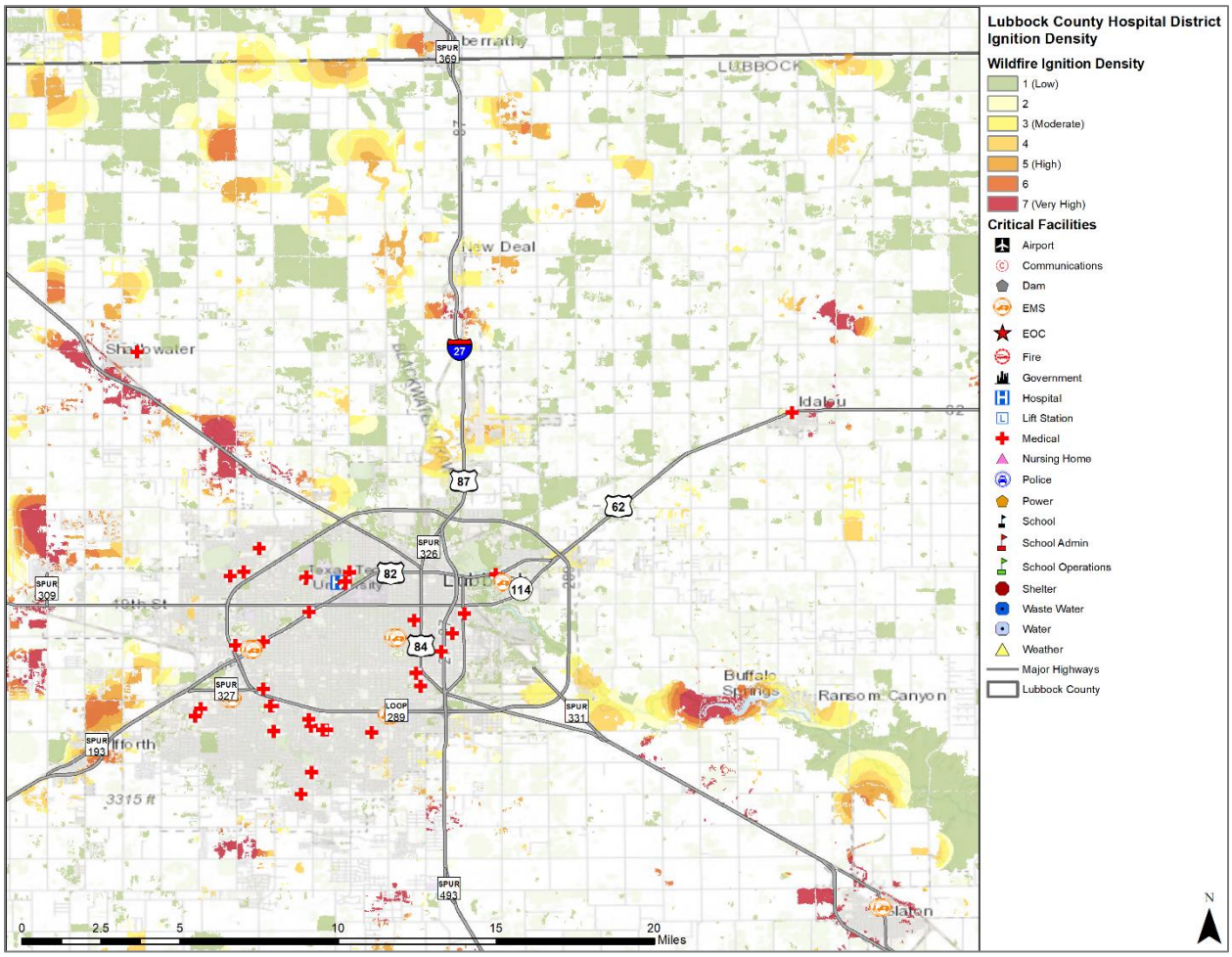


Figure 11-78. Wildfire Ignition Density – Lubbock County WCID #1

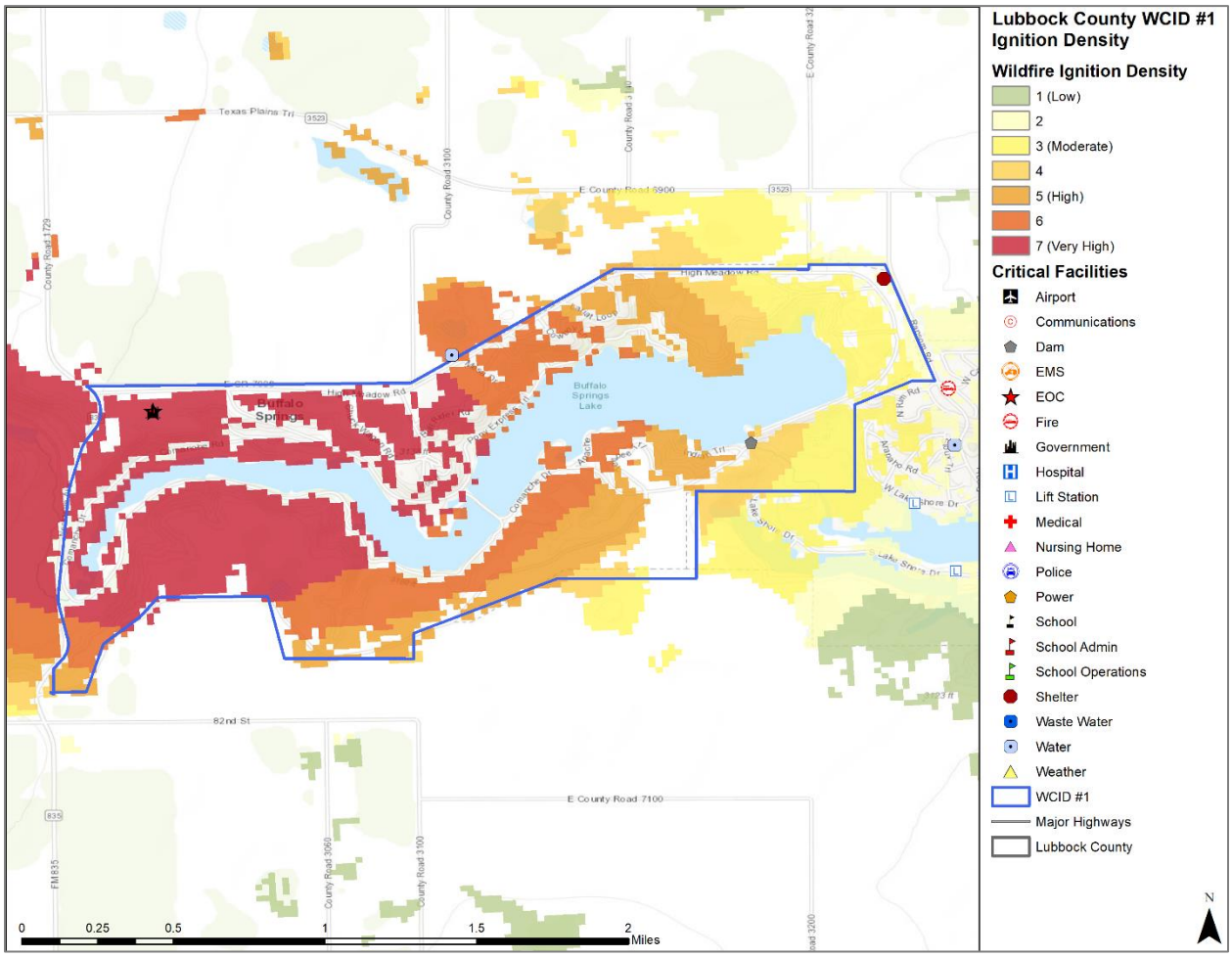


Figure 11-79. Wildfire Ignition Density – Lubbock Reese Redevelopment Authority

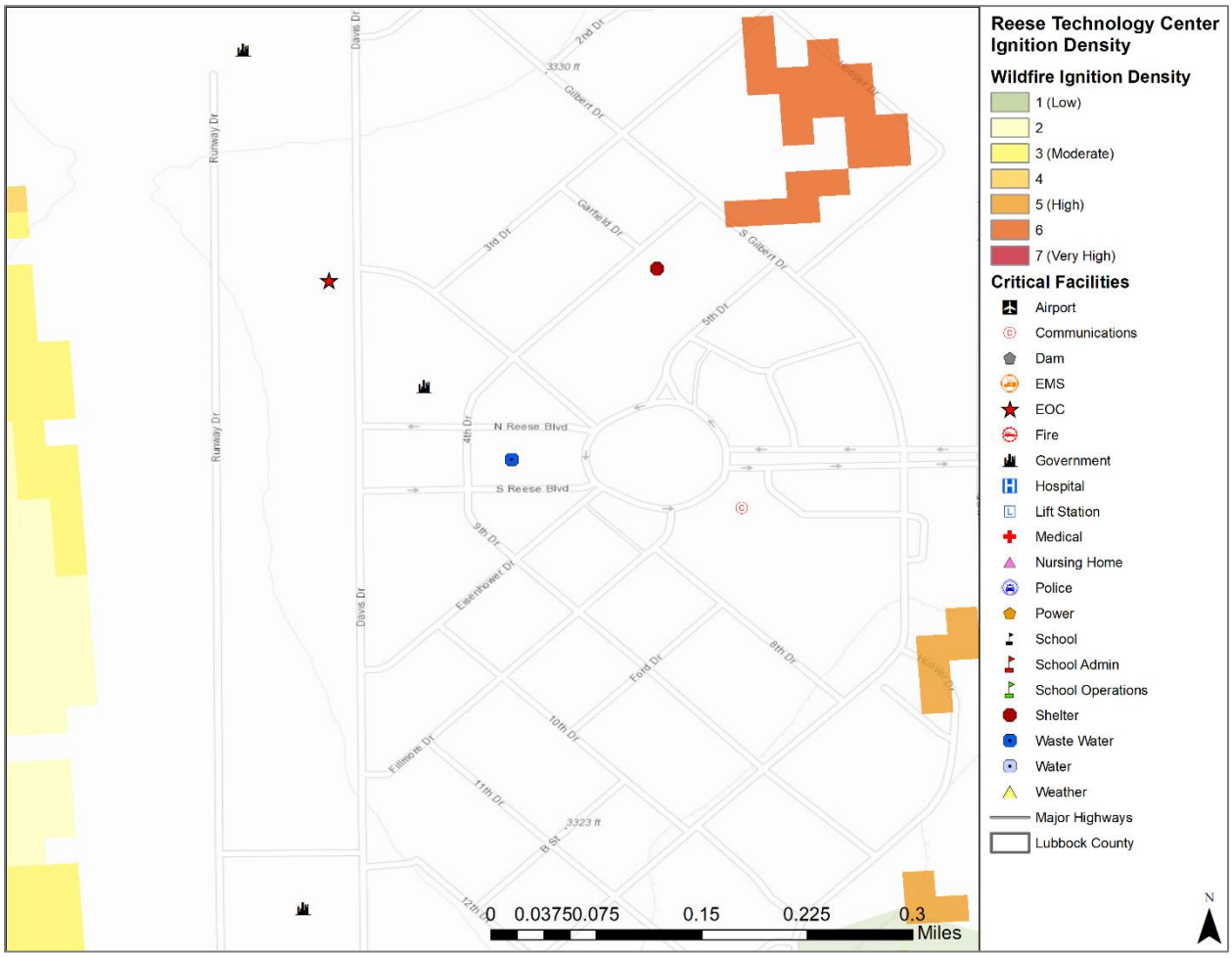


Figure 11-80. Wildfire Ignition Density – South Plains Association of Governments

Diminished air quality is an environmental impact that can result from a wildfire event and pose a potential health risk. The smoke plumes from wildfires can contain potentially inhalable carcinogenic matter. Fine particles of invisible soot and ash that are too small for the respiratory system to filter can cause immediate and possibly long-term health effects. The elderly or those individuals with compromised respiratory systems may be more vulnerable to the effects of diminished air quality after a wildfire event.

Climatic conditions such as severe freezes and drought can significantly increase the intensity of wildfires since these conditions kill vegetation, creating a prime fuel source for wildfires. The intensity and rate at which wildfires spread are directly related to wind speed, temperature, and relative humidity.

The severity of impact from major wildfire events can be substantial. Such events can cause multiple deaths, shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. Severity of impact is gauged by acreage burned, homes and structures lost, and the number of resulting injuries and fatalities.

For the Lubbock County planning area, the impact from a wildfire event can be considered “Limited," meaning injuries are treatable with first aid, complete shutdown of facilities and services for 24-hours or less, and less than 10 percent of property is destroyed or with major damage.

Severity of impact is gauged by acreage burned, homes and structures lost, injuries and fatalities. Based on this, impact for each participating jurisdiction, ISDs and special district is listed below in Table 11-5.

Table 11-5. Impact by Jurisdiction

JURISDICTION	IMPACT	DESCRIPTION
Lubbock County	Limited	Lubbock County has an estimated 16,932 people or 6% of the total population that live within the Wildland Urban Interface (WUI). Lubbock County, including citizens in unincorporated areas, may suffer injuries treatable with first aid. Critical facilities could be shut down for 24-hours or less, and less than 10 percent of total property could be damaged.
Village of Buffalo Springs	Minor	The Village of Buffalo Springs has semi-dense areas in the WUI (1-3 structures per acre), and those areas have a moderate to high wildfire risk. Although there are moderate to high-risk areas, there have been no wildfire events over the last 5 years and zero acres burned. Therefore, citizens could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
City of Idalou	Limited	City of Idalou doesn't contain any areas within the WUI, and the city only has a few small areas with a low wildfire threat. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down, it would be for 24 hours or less, and it is expected that less than 10 percent of property would be damaged.
City of Lubbock	Limited	The City of Lubbock has areas in the Northeast that are semi-dense (1- 3 structures per acre) populated in the WUI. These areas have a low to moderate wildfire threat. Citizens in the city could be injured or suffer illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down, it would be for 24 hours or less, and it is expected that less than 10 percent of property would be damaged.

JURISDICTION	IMPACT	DESCRIPTION
Town of New Deal	Minor	The Town of New Deal has areas that are semi-densely populated in the WUI (1-3 structures per acre), and those areas have a moderate wildfire threat. Citizens in the town could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent of total property could be damaged.
Town of Ransom Canyon	Minor	Town of Ransom Canyon has areas of semi-dense population within the WUI (1-3 structures per acre), and those areas have a moderate wildfire threat and has a moderate wildfire risk. Citizens could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent of total property could be damaged.
City of Shallowater	Limited	City of Shallowater has semi-dense areas in the WUI (1-3 structures per acre), and those areas have a low wildfire threat. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down, it would be for 24 hours or less, and it is expected that less than 10 percent of property would be damaged.
City of Slaton	Limited	City of Slaton has a small area of semi-dense population in the WUI (1-3 structures per acre), and those areas have a low wildfire threat. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down, it would be for 24 hours or less, and it is expected that less than 10 percent of property would be damaged.
City of Wolfforth	Limited	The City of Wolfforth has semi-densely populated areas in the WUI (1-3 structures per acre), and those areas have a low to moderate wildfire threat. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down, it would be for 24 hours or less, and it is expected that less than 10 percent of property would be damaged.

JURISDICTION	IMPACT	DESCRIPTION
Abernathy ISD	Limited	Abernathy ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Frenship ISD	Minor	Frenship ISD has five facilities located within the WUI and has a moderate risk to wildfire. Students and faculty could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
Idalou ISD	Limited	Idalou ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Lubbock ISD	Minor	Lubbock ISD has three facilities located within the WUI and has a moderate risk to wildfire. Students and faculty could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
Lubbock-Copper ISD	Limited	Lubbock-Cooper ISD has three facilities located within the WUI and has a moderate risk to wildfire. Students and faculty could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
New Deal ISD	Limited	New Deal ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.

JURISDICTION	IMPACT	DESCRIPTION
Roosevelt ISD	Limited	Roosevelt ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Shallowater ISD	Limited	Shallowater ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Slaton ISD	Limited	Slaton ISD facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Betty M. Condra School of Education Innovation	Limited	Betty M. Condra School of Education Innovation facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
South Plains College	Limited	South Plains College facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Texas Tech University System	Limited	Texas Tech University System facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
Texas Tech University Health Sciences Center	Limited	Texas Tech University Health Sciences Center facilities are located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.

JURISDICTION	IMPACT	DESCRIPTION
Lubbock County Hospital System	Minor	Lubbock County Hospital District has four facilities located within the WUI and has a moderate risk to wildfire. Students and faculty could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
Lubbock County WCID #1	Minor	Lubbock County WCID #1 has one facility located within the WUI and has a moderate risk to wildfire. Students and faculty could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week, and 10 percent or more of total property could be damaged.
Lubbock Reese Redevelopment Authority	Limited	Lubbock Reese Redevelopment Authority facility is located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.
South Plains Association of Governments	Limited	The SPAG facility is located outside of the WUI and have a limited risk for wildfires. Injuries or illnesses would be treatable with first aid, critical facilities could be shut down for 24-hours or less and less than 10 percent of facilities could be destroyed.

ASSESSMENT OF IMPACTS

A Wildfire event poses a potentially significant risk to public health and safety, particularly if the wildfire is initially unnoticed and spreads quickly. The impacts associated with a wildfire are not limited to the direct damages. The impact of climate change could produce larger, more wide-spread wildfire events, exacerbating the current wildfire impacts. More extreme wildfire conditions can be frequently associated with a variety of impacts, including:

- Persons in the area at the time of the fire are at risk for injury or death from burns and/or smoke inhalation.
- First responders are at greater risk of physical injury since they are in close proximity to the hazard while extinguishing flames, protecting property, or evacuating residents in the area.
- First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat.
- Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.

- Critical city and/or county departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted.
- Non-critical businesses may be directly damaged, suffer loss of utility services, or be otherwise inaccessible, delaying normal operations and slowing the recovery process.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility.
- Older homes are generally exempt from modern building code requirements, which may require fire suppression equipment in the structure.
- Some high-density neighborhoods feature small lots with structures close together, increasing the potential for fire to spread rapidly.
- Air pollution from smoke may exacerbate respiratory problems of vulnerable residents.
- Charred ground after a wildfire cannot easily absorb rainwater, increasing the risk of flooding and potential mudflows.
- Wildlife may be displaced or destroyed.
- Historical or cultural resources may be damaged or destroyed.
- Tourism can be significantly disrupted, further delaying economic recovery for the area.
- Vegetated dunes can be stripped, significantly damaging the function of the dunes to protect inland areas from the destructive forces of wind and waves.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Fire suppression costs can be substantial, exhausting the financial resources of the community.
- Residential structures lost in a wildfire may not be rebuilt for years, reducing the tax base for the community.
- The Historic Dunbar Lake and Buffalo Spring Lake recreation and tourism can be unappealing for years following a large wildfire, devastating directly related businesses.
- Direct impacts to municipal water supply may occur through contamination of ash and debris during the fire, destruction of aboveground delivery lines, and soil erosion or debris deposits into waterways after the fire.

The economic and financial impacts of a wildfire event on local government will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a wildfire event.

SECTION 12: EXTREME HEAT

HAZARD DESCRIPTION

Extreme heat is a prolonged period of excessively high temperatures and exceptionally humid conditions. Extreme heat during the summer months is a common occurrence throughout the State of Texas, and Lubbock County is no exception. The entire planning area, including all participating jurisdictions, typically experience extended heat waves. A heat wave is an extended period of extreme heat and is often accompanied by high humidity.

Although heat can damage buildings and facilities, it presents a more significant threat to the safety and welfare of citizens. The major human risks associated with severe summer heat include heat cramps; sunburn; dehydration; fatigue; heat exhaustion; and even heat stroke. The most vulnerable population to heat casualties are children and the elderly or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being.

LOCATION

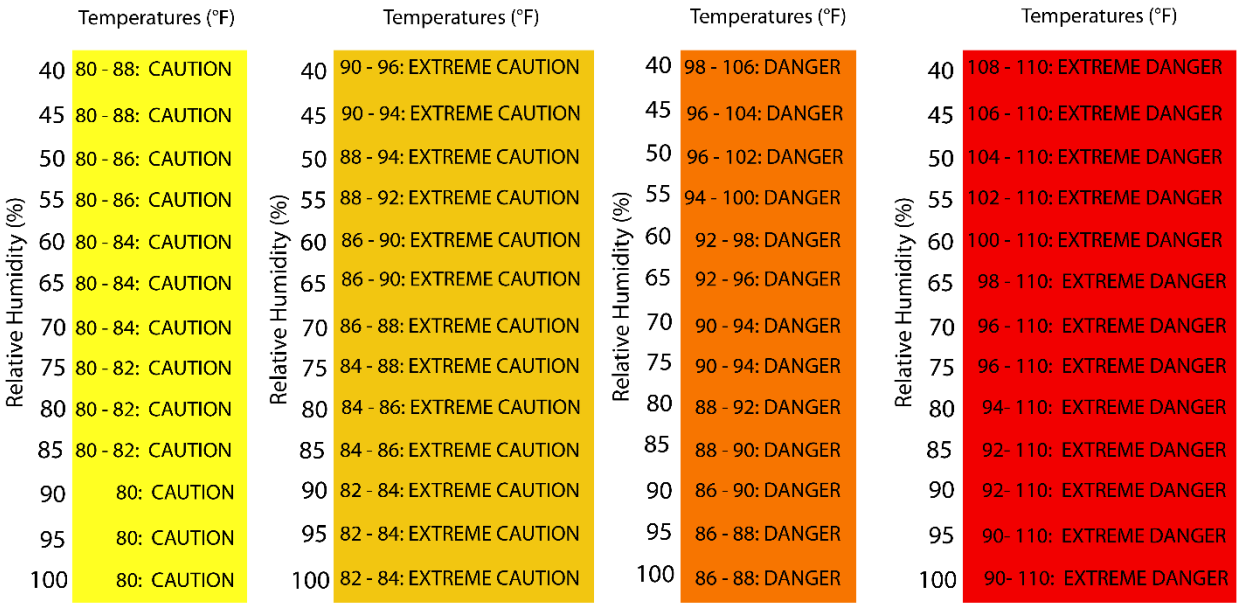
Though a death from extreme heat has not been recorded at a specific location in the County, there is no specific geographic scope to the extreme heat hazard. Extreme heat could occur anywhere within the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

EXTENT

The magnitude or intensity of an extreme heat event is measured according to temperature in relation to the percentage of humidity. According to the National Oceanic Atmospheric Administration (NOAA), this relationship is referred to as the “Heat Index” and is depicted in Figure 12-1. This index measures how hot it feels outside when humidity is combined with high temperatures.

SECTION 12: EXTREME HEAT

Figure 12-1. Extent Scale for Extreme Summer Heat[1]



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

The Extent Scale in Figure 12-1 displays varying categories of caution depending on the relative humidity combined with the temperature. For example, when the temperature is at 90 degrees Fahrenheit (°F) or lower, caution should be exercised if the humidity level is at or above 40 percent.

The shaded zones on the chart indicate varying symptoms or disorders that could occur depending on the magnitude or intensity of the event. “Caution” is the first category of intensity, and it indicates when fatigue due to heat exposure is possible. “Extreme Caution” indicates that sunstroke, muscle cramps, or heat exhaustion are possible, and a “Danger” level means that these symptoms are likely. “Extreme Danger” indicates that heat stroke is likely. The National Weather Service (NWS) initiates alerts based on the Heat Index as shown in Table 12-1.

Table 12-1. Heat Index and Warnings

CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
Extreme Danger	125°F and higher	Heat stroke or sun stroke likely.	
Danger	103 – 124°F	Sunstroke, muscle cramps, and/or heat exhaustion are likely. Heatstroke possible with prolonged exposure and/or physical activity.	A heat advisory will be issued to warn that the Heat Index may exceed 105°F.
Extreme Caution	90 – 103°F	Sunstroke, muscle cramps, and/or heat exhaustion possible	An Excessive Heat Warning is issued if the Heat Index

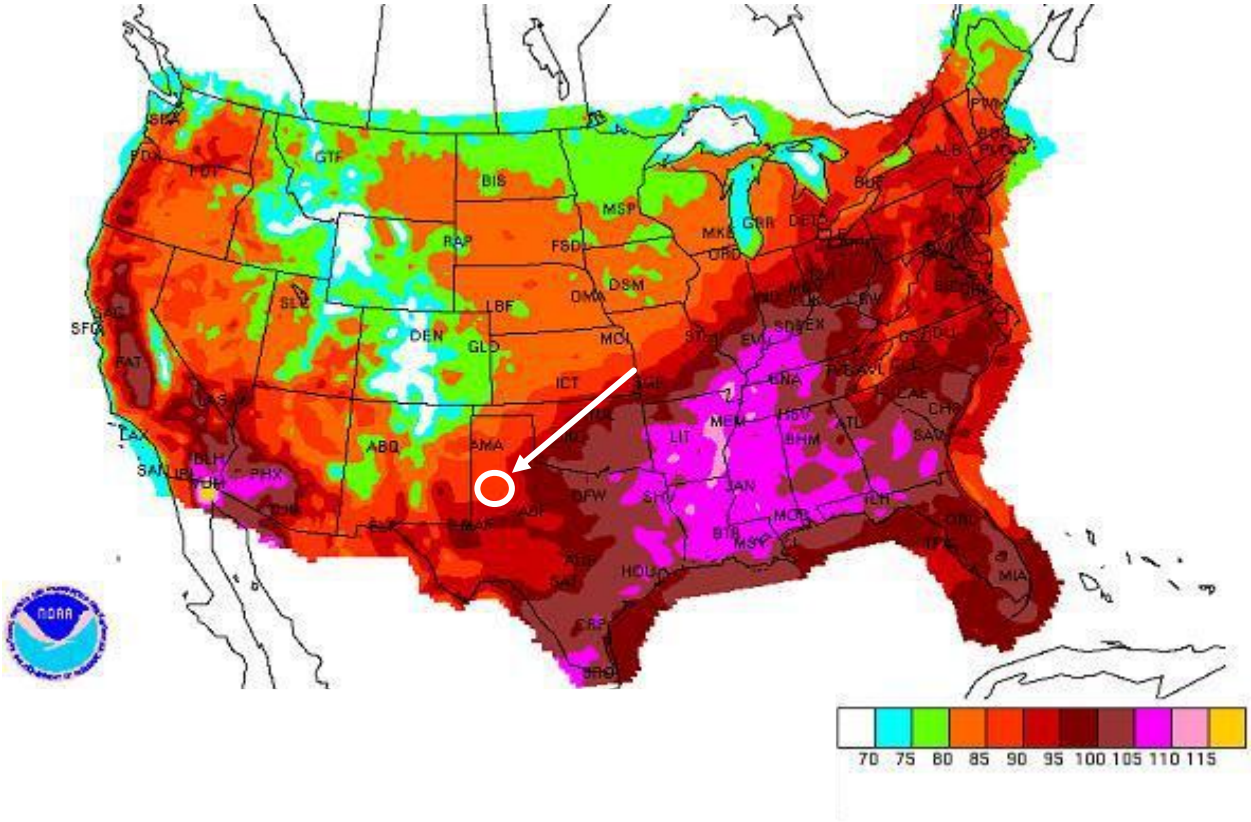
[1] Source: NOAA

CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
		with prolonged exposure and/or physical activity.	rises above 105°F at least 3 hours during the day or above 80°F at night.
Caution	80 – 90°F	Fatigue is possible with prolonged exposure and/or physical activity.	

Lubbock County's is flat tableland, gently sloping from the northwest to the southeast. The area is known as the Southern High Plains, located within the larger Great Plains of the Western U.S. elevation variations from 2,900 to 3,400 feet located in Northwest Texas. There are few naturally occurring trees, the majority of which are mesquite, Chinese elms, oaks, pines, and cedar trees. Due to its geography, and its warm, sunny, semiarid climate. The Lubbock County planning area can expect an extreme heat event each summer. Citizens, especially children and the elderly should exercise caution by staying out of the heat for prolonged periods when a heat advisory or excessive heat warning is issued. In addition, those working or remaining outdoors for extended periods of time are at greater risk.

Figure 12-2 displays the daily maximum heat index as derived from NOAA based on data compiled from 1838 to 2015. The white circle shows the Lubbock County planning area. The primary orange and partial red colors indicate a daily maximum heat index of 85 -95 degrees F. The Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts could experience extreme heat from 85° to 95° and should mitigate to the extent of "extreme caution", which can include sunstroke, muscle cramps, heat exhaustion and potential heatstroke with prolonged exposure. This is the highest temperature (extreme caution category) the planning area can expect.

Figure 12-2. Average Daily Maximum Heat Index Days[2]



HISTORICAL OCCURRENCES

Every summer, the hazard of heat-related illness becomes a significant public health issue throughout much of the US. Mortality from all causes increases during heat waves, and excessive heat is an important contributing factor to deaths from other causes, particularly among the elderly. Table 12-2 depicts historical occurrences of mortality from heat from 1994 to 2004 from the Texas Department of State Health Services and 2005 through December 2021 from the NCEI database.

Table 12-2. Extreme Heat Related Deaths in Texas

YEAR	DEATHS
1994	1
1995	12
1996	10
1997	2

[2] Source: NRDC and the white circle indicates the Lubbock County planning area.

YEAR	DEATHS
1998	66
1999	22
2000	71
2001	20
2002	1
2003	0
2004	3
2005	49
2006	2
2007	2
2008	7
2009	120
2010	4
2011	46
2012	3
2013	2
2014	0
2015	5
2016	6
2017	3
2018	7
2019	7
2020	1
2021	0

Because the Texas Department of State Health Services reports on total events statewide, previous occurrences for extreme heat are derived from the NCEI database. According to heat

related incidents located solely within Lubbock County, there is only one heat wave[3] on record for the Lubbock County planning area (Table 12-3). Historical extreme heat information, as provided by the NCEI, shows extreme heat activity across a multi-county forecast area for each event, the appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event. Historical extreme heat data for all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts are provided on a County-wide basis per the NCEI database. Only extreme heat events that have been reported have been factored into this Risk Assessment. It is highly likely additional extreme heat occurrences have gone unreported before and during the recording period. Due to the limited number of reported events, average high temperatures have been analyzed in order to determine the probability of future events.

Table 12-3. Historical Extreme Heat Events, 1996-2021

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	6/1/2008	0	0	$64,243	$128,487
Lubbock County	6/17/2017	0	0	$0	$0
TOTALS		**0**	**0**	**$64,243**	**$128,487**

Based on the list of historical extreme heat events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, one event was reported to the NCEI since the 2015 Plan.

SIGNIFICANT EVENTS

June 17, 2017

A dome of exceptionally hot and dry air overspread much of the Texas South Plains. High temperatures in many locations of 110 to 112 degrees were the hottest recorded since the infamous summer heatwave of 2011. At Lubbock, a new daily record high of 112 degrees was set which fell just two degrees shy of tying the all-time hottest temperature set on June 27, 1994. Areas of west and northwest Lubbock experienced power grids blacked out at times during the afternoon. There were no reported heat-related illnesses that required medical attention. All event entries recorded highs of at least 110 degrees, with maximums of 112 set at both Lubbock International Airport and near Lake Alan Henry (Garza County).

June 1-20, 2008

Abnormally hot and dry weather prevailed over the West Texas South Plains region during the first half of June. The month started with a span of six consecutive days that saw 100-degree temperatures across the area, and fourteen of the month's first 16 days brought triple digit heat. Daytime temperature maxima reached record values at Childress and Lubbock on five occasions, including a 110-degree record set on June 3 at Childress. Breezy winds accompanied the unseasonably warm weather, which was about 15 to 20 degrees above climatologically averages.

[3] Even though the County experiences heat waves each summer, NCEI data only records events reported. Based on reports, only one event is on record.

PROBABILITY OF FUTURE EVENTS

Average high temperatures for the planning area through the summer months indicate a probability of one event or more every year. This frequency supports a highly likely probability of future events.

VULNERABILITY AND IMPACT

There is no defined geographic boundary for extreme heat events. While the entire Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, is exposed to extreme temperatures, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from extreme heat events. Therefore, any estimated property losses associated with the extreme heat hazard are anticipated to be minimal across the area.

Extreme temperatures do however present a significant threat to life and safety for the population of the County as a whole. Heat casualties for example are typically caused by a lack of adequate air-conditioning or heat exhaustion. The most vulnerable population to heat casualties are the elderly or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being. Children may also be more vulnerable if left unattended in vehicles. Students at the participating Independent School Districts and Colleges/Universities are also susceptible as sporting events and practices are often held outside during early fall or late spring when temperatures are at the highest. In addition, populations living below the poverty level are unable to run air-conditioning on a regular basis and are limited in their ability to seek medical treatment. Another segment of the population at risk are those whose jobs consist of strenuous labor outdoors. Additionally, livestock and crops can become stressed, decreasing in quality or in production, during times of extreme heat.

The population over 65 in the Lubbock County planning area is estimated at 12.4% of the total population and children under the age of 5 are estimated at 6.6%, or an estimated total of 20,415 potentially vulnerable residents in the planning area based on age. In addition, an estimated 18.5% of the planning area population live below the poverty level (Table 12-4). Under privileged populations disproportionately impacted by extreme heat events as they are less likely to be able to afford air conditioning during the hot summer months as well as less likely to have access to medical care.

Table 12-4. Populations at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Lubbock County	38,331	20,415	57,053
Village of Buffalo Springs	109	8	4
City of Idalou	377	96	310
City of Lubbock	31,496	17,082	51,146
Town of New Deal	159	21	214

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Ransom Canyon	233	35	10
City of Shallowater	413	104	131
City of Slaton	830	540	1,161
City of Wolfforth	355	612	462

Extreme high temperatures can have significant secondary impacts, leading to droughts, water shortages, increased fire danger, and prompt excessive demands for energy. The possibility of rolling blackouts increases with unseasonably high temperatures in what is a normally mild month with low power demands. Typically, more than 12 hours of warning time would be given before the onset of an extreme heat event.

The potential impact of extreme heat for the entire Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts can be considered “Limited”. It is possible that critical facilities and infrastructure could be shut down for 24 hours if cooling units are running constantly, leading to a temporary power outage. Less than ten percent of residential and commercial property could be damaged if extreme heat events lead to structure fires. Based on historical records over a 26-year period, annualized property and crop losses for the Lubbock County planning area are negligible. In terms of vulnerability to structures, the impact from extreme heat is considered negligible

ASSESSMENT OF IMPACTS

The greatest risk from extreme heat is to public health and safety. The impact of climate change could produce longer, more severe heat waves, exacerbating the current impacts. Worsening extreme heat conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly and children under 5, can face serious or life-threatening health problems from exposure to extreme heat including hyperthermia, heat cramps, heat exhaustion, and heat stroke (or sunstroke).
- Response personnel, including utility workers, public works personnel, and any other professions where individuals are required to work outside, are more subject to extreme heat related illnesses since their exposure would typically be greater.
- High energy demand periods can outpace the supply of energy, potentially creating the need for rolling brownouts which would elevate the risk of illness to vulnerable residents.
- Highways and roads may be damaged by excessive heat causing asphalt roads to soften and concrete roads to shift or buckle.
- Vehicles engines and cooling systems typically run harder during extreme heat events resulting in increases in mechanical failures.
- Extreme heat events during times of drought can exacerbate the environmental impacts associated with drought, decreasing water and air quality and further degrading wildlife habitat.
- Extreme heat increases ground-level ozone (smog), increasing the risk of respiratory illnesses.

- Food suppliers can anticipate an increase in food costs due to increases in production costs and crop and livestock losses.
- Fisheries may be negatively impacted by extreme heat, suffering damage to fish habitats (either natural or man-made) and a loss of fish and/or other aquatic organisms due to decreased water flows or availability.
- Negatively impacted water suppliers may face increased costs resulting from the transport of water resources or development of supplemental water resources.
- Tourism and recreational activities predominant in the Historic Dunbar Lake and Buffalo Springs Lake areas may be negatively impacted during extreme heat events, reducing seasonal revenue.

The economic and financial impacts of extreme heat on the community will depend on the duration of the event, demand for energy, drought associated with extreme heat, and many other factors. The level of preparedness and the amount of planning done by the jurisdiction, local businesses, and citizens will impact the overall economic and financial conditions before, during, and after an extreme heat event.

SECTION 13: FLOOD

HAZARD DESCRIPTION

Floods generally result from excessive precipitation. The severity of a flood event is determined by a combination of several major factors, including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

The primary types of general flooding are inland and coastal flooding. Inland or riverine flooding is a result of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Inland or riverine flooding is overbank flooding of rivers and streams, typically resulting from large-scale weather systems that generate prolonged rainfall over a wide geographic area, thus it is a naturally occurring and inevitable event. Some river floods occur seasonally when winter or spring rainfalls fill river basins with too much water, too quickly. Torrential rains from decaying hurricanes or tropical systems can also produce river flooding.

LOCATION

The Flood Insurance Rate Map (FIRM) data provided by FEMA for Lubbock County shows the following flood hazard areas:

- Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance requirements and floodplain management standards apply.
- Zone AE: Areas subject to inundation by 1-percent-annual-chance shallow flooding. It is the base floodplain where BFEs are provided. AE zones are now used on new format FIRMs instead of A1-30 zones.

- Zone X: Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones.

Locations of flood zones in Lubbock County based on the digital Flood Insurance Rate Map (DFIRM) from FEMA are illustrated in Figures 13-1 to 13-26.

Figure 13-1. Estimated Flood Zones in Lubbock County

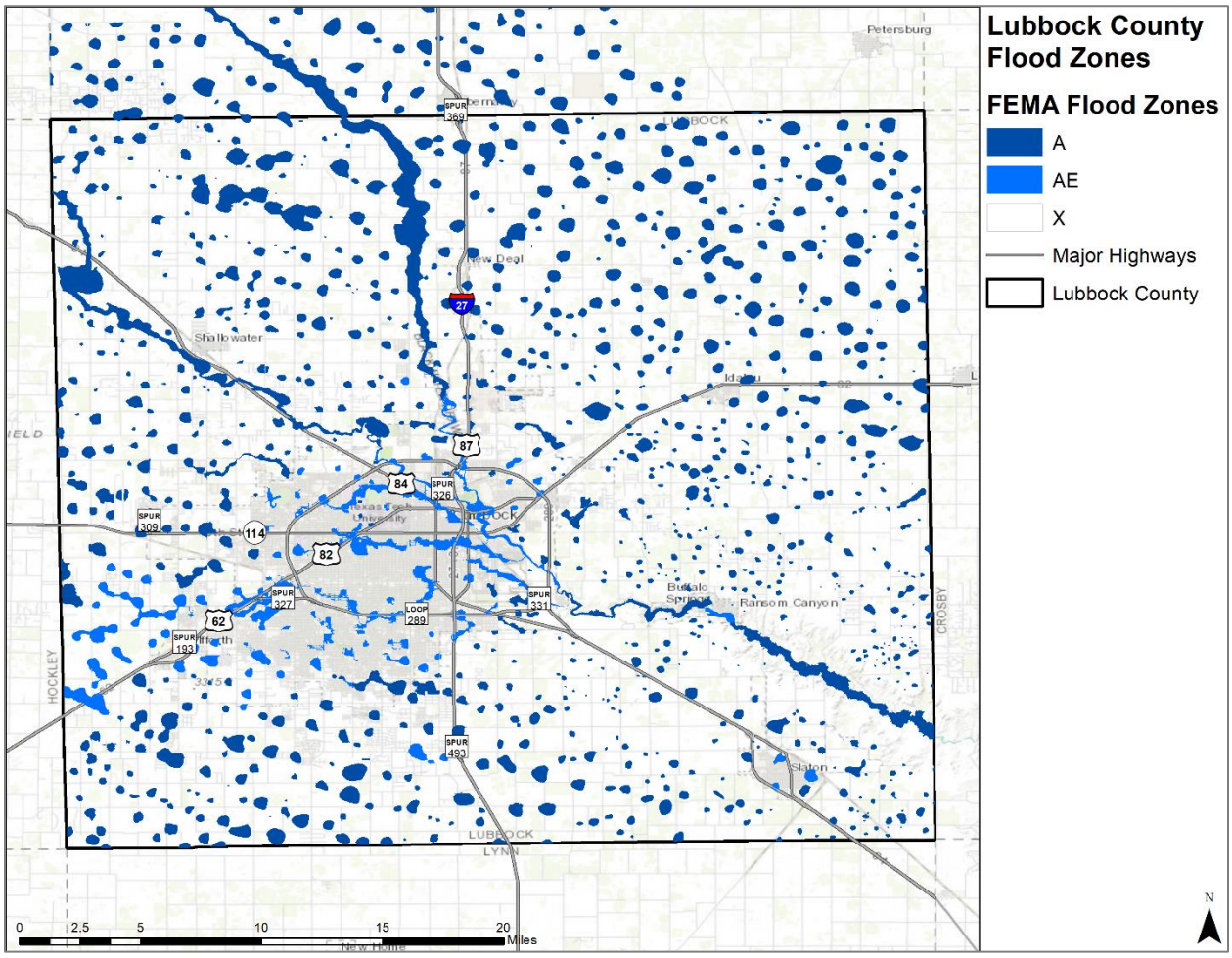


Figure 13-2. Estimated Flood Zones in the Village of Buffalo Springs

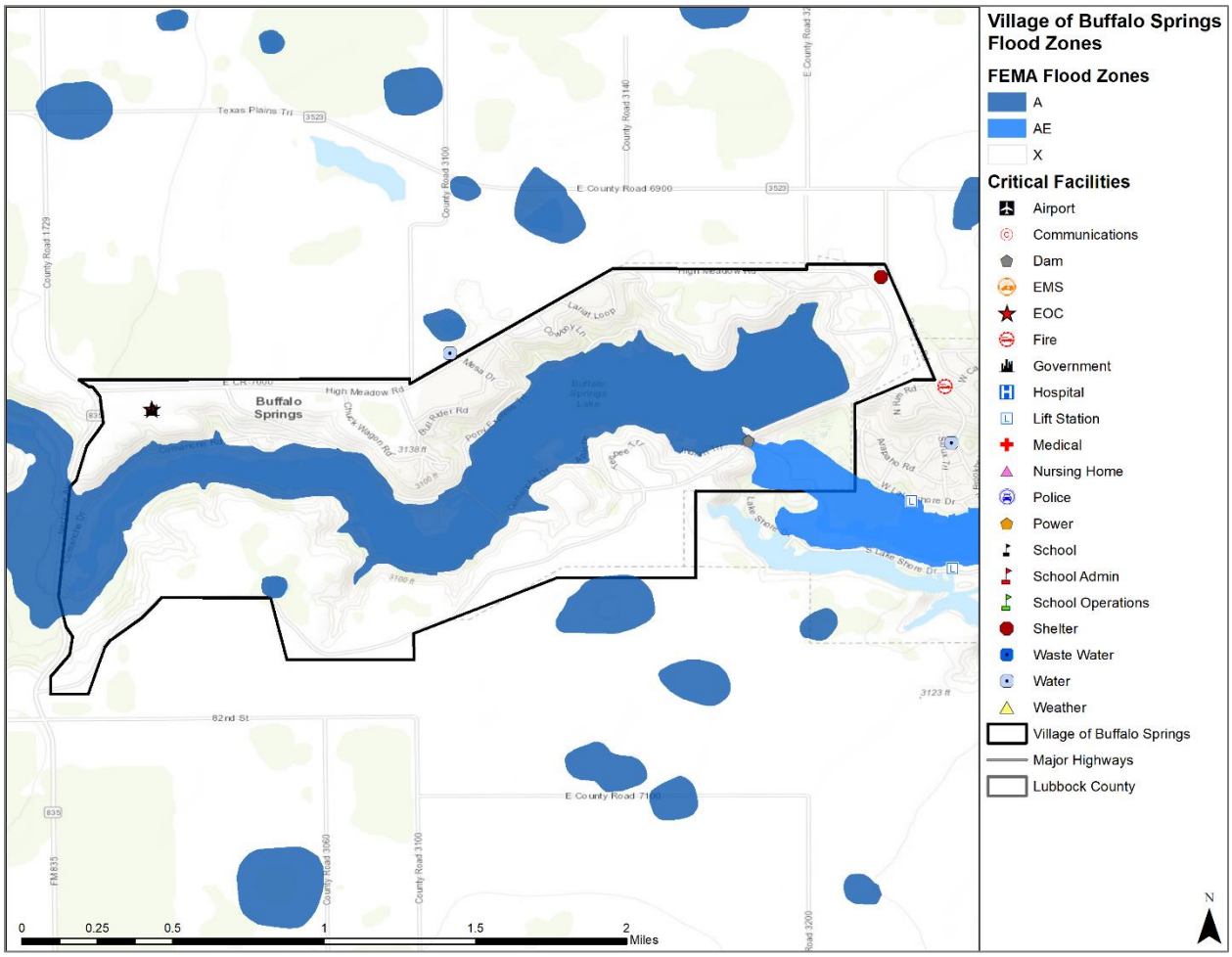


Figure 13-3. Estimated Flood Zones in the City of Idalou

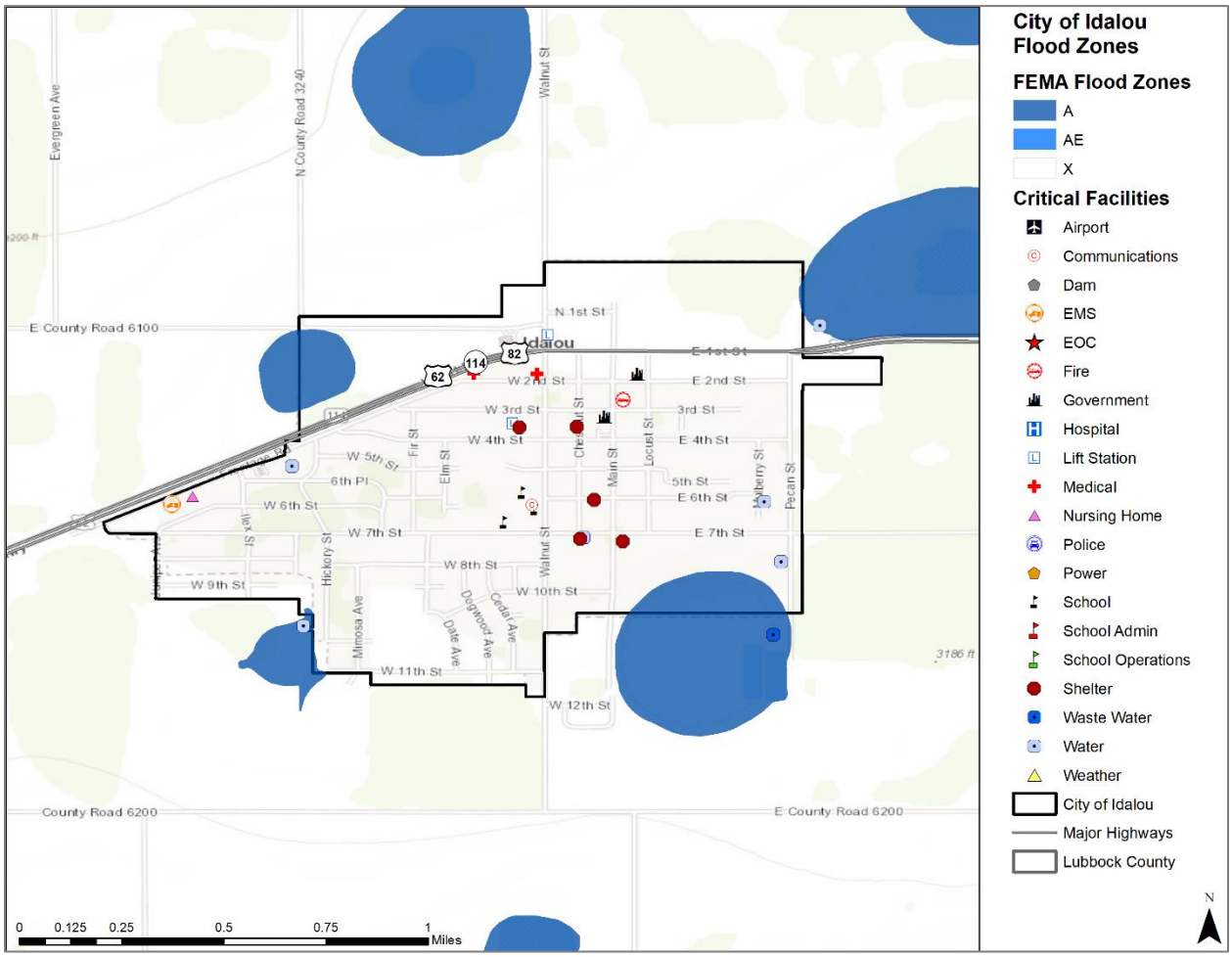


Figure 13-4. Estimated Flood Zones in the City of Lubbock

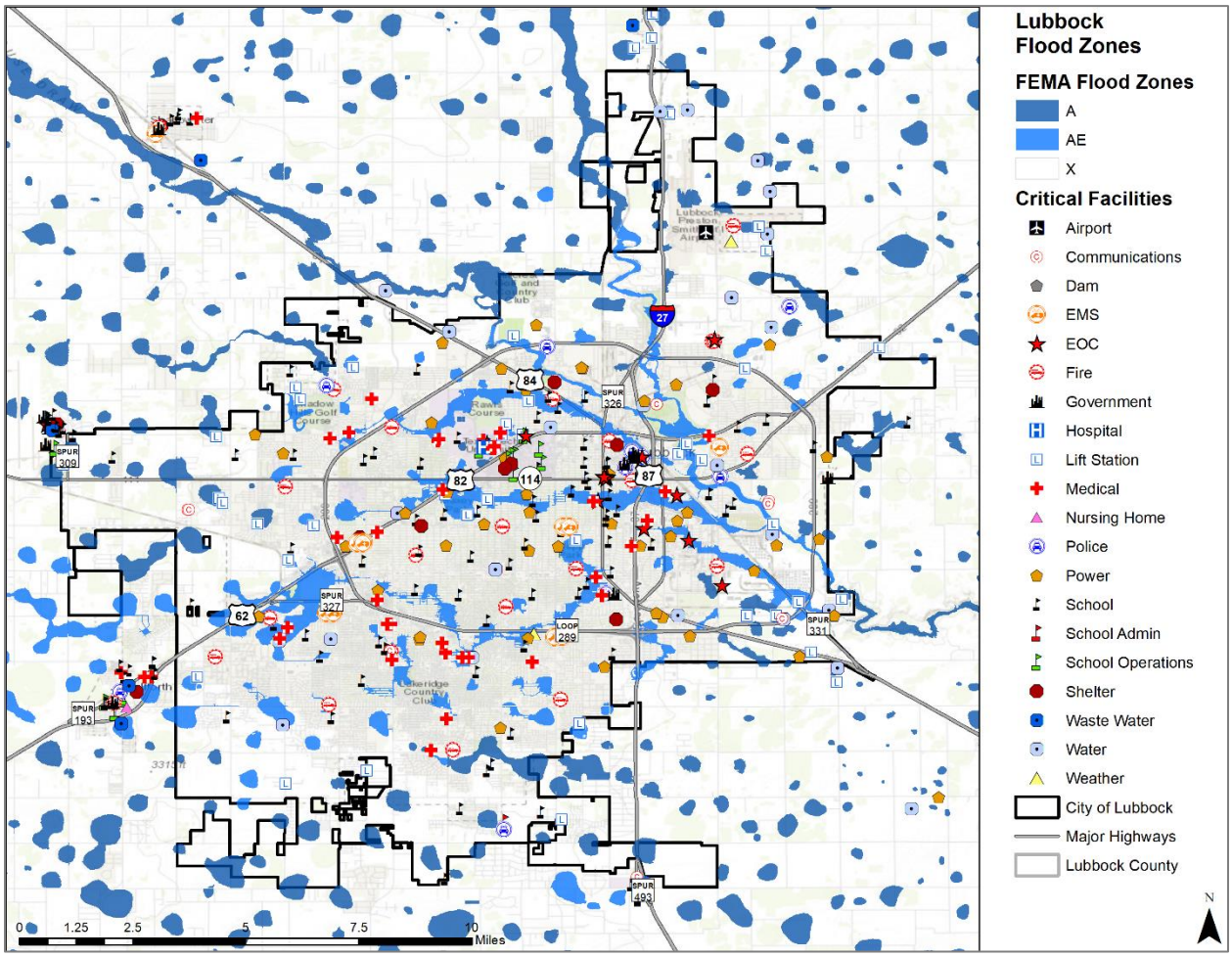


Figure 13-5. Estimated Flood Zones in the Town of New Deal

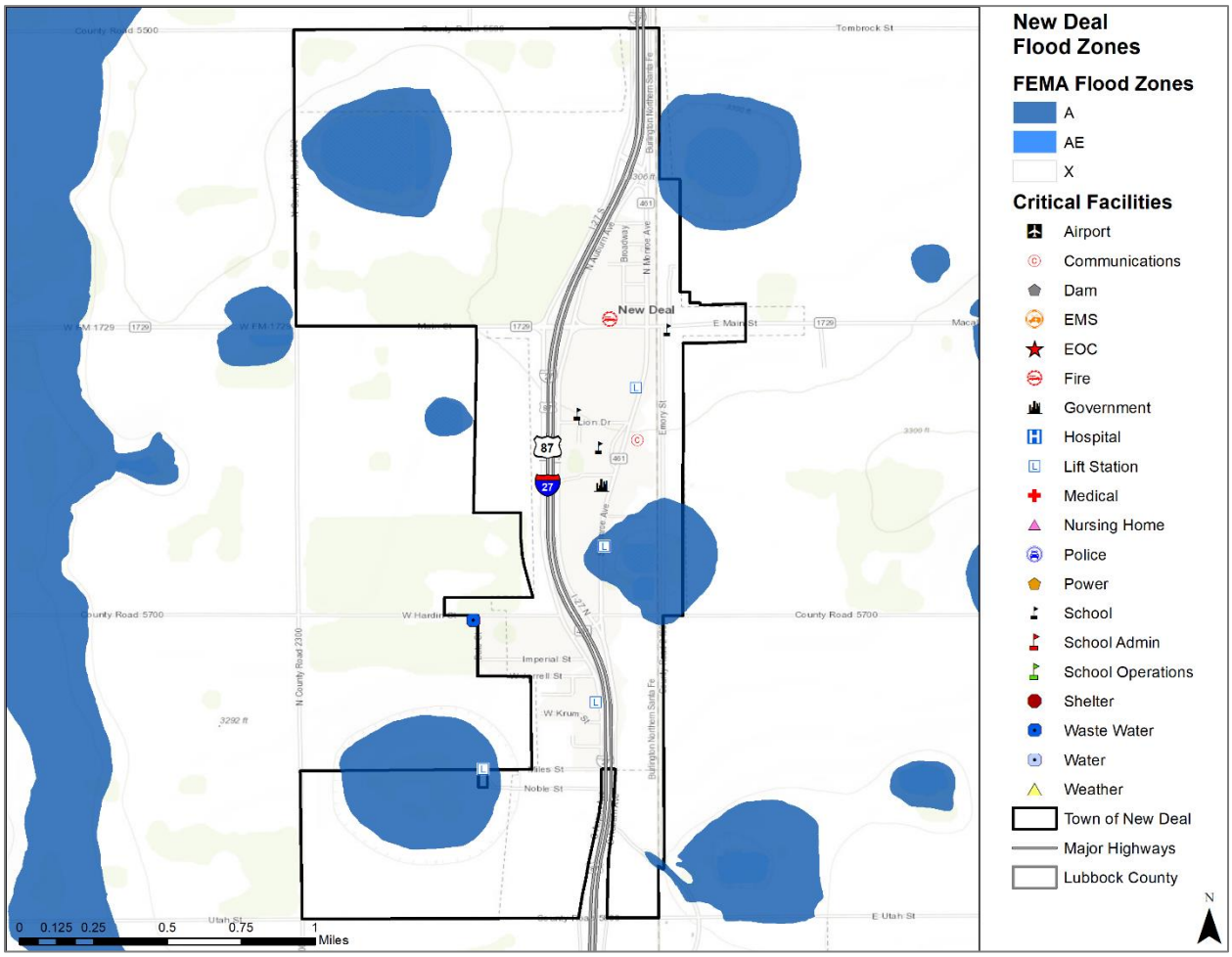


Figure 13-6. Estimated Flood Zones in the Town of Ransom Canyon

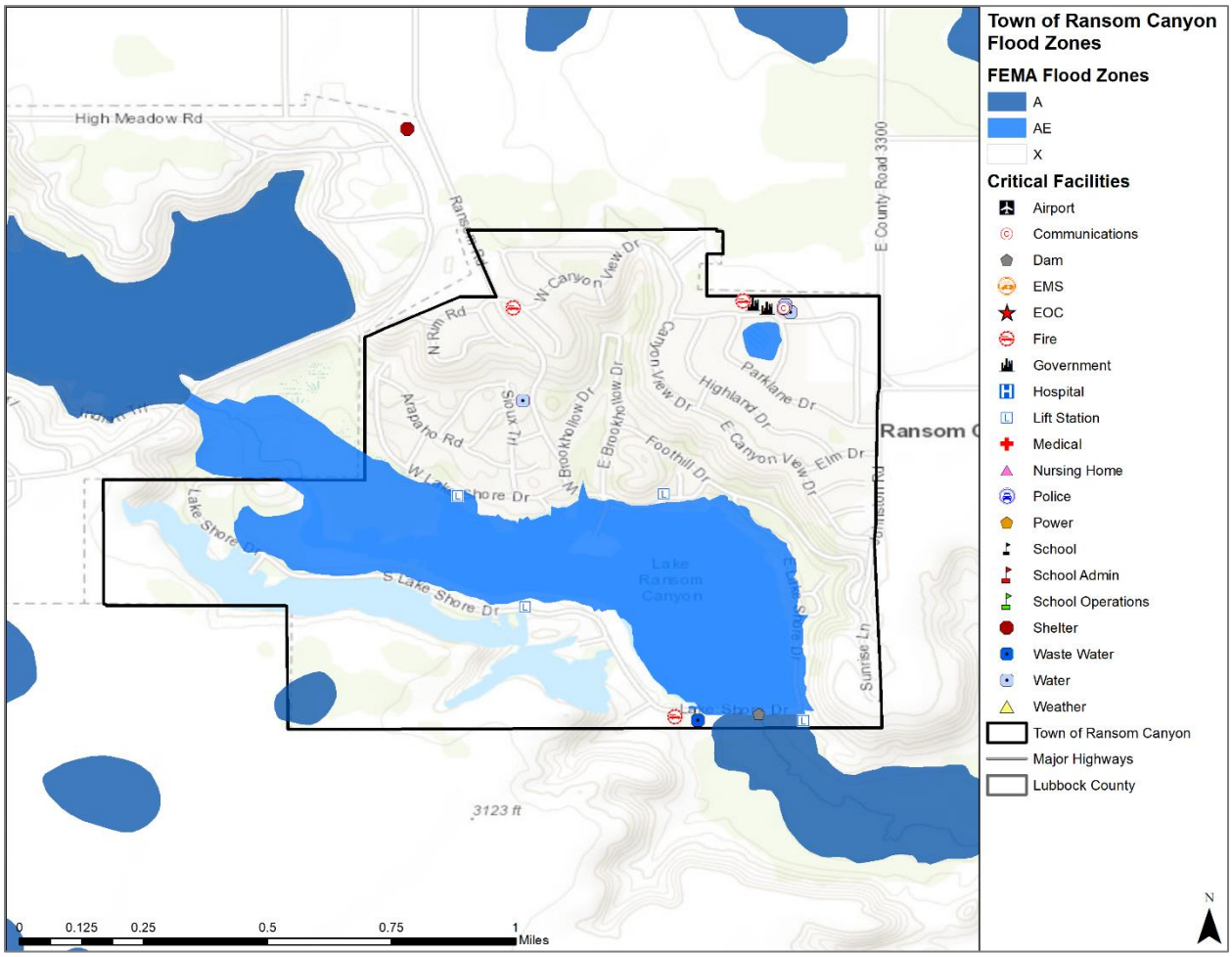


Figure 13-7. Estimated Flood Zones in the City of Shallowater

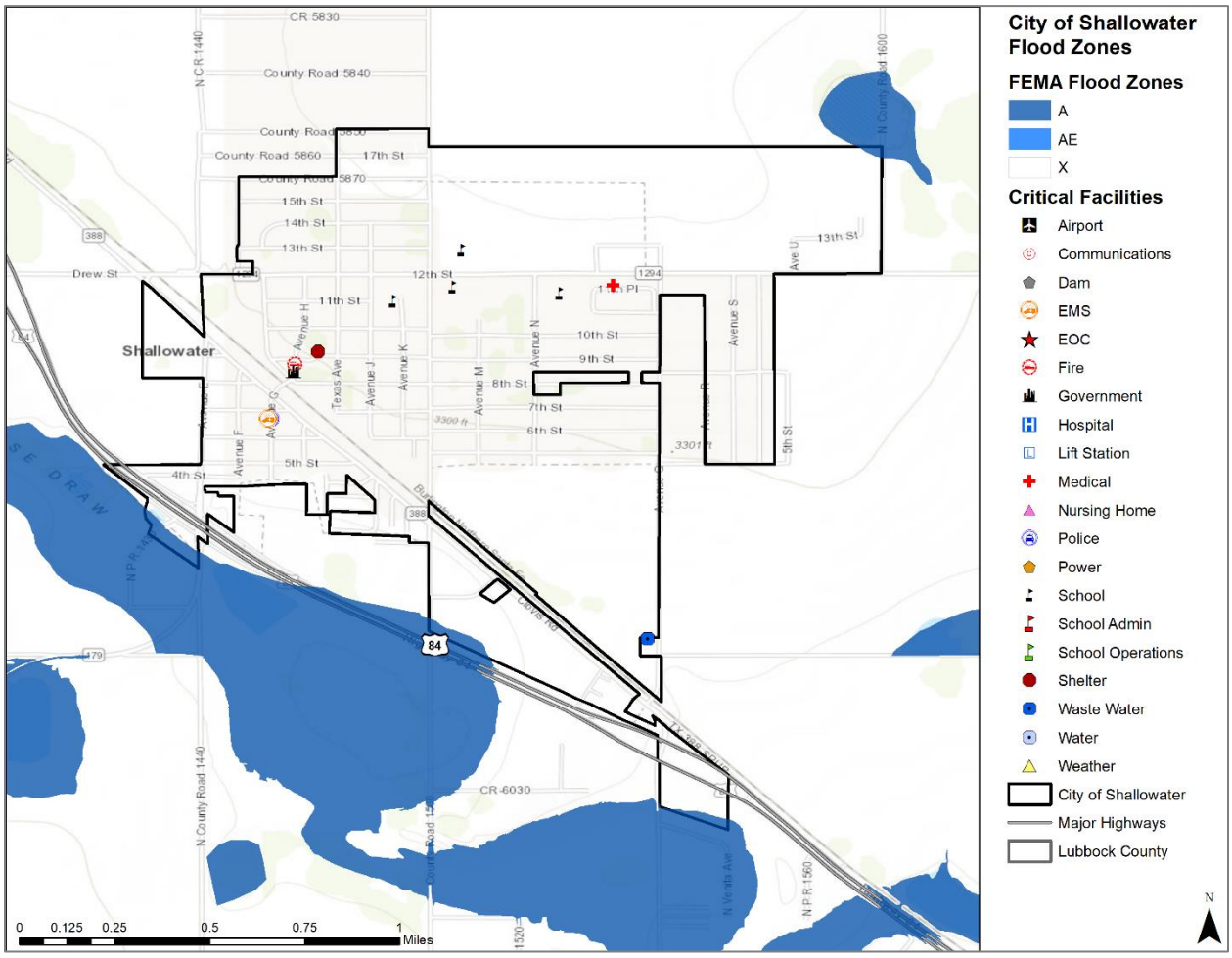


Figure 13-8. Estimated Flood Zones in the City of Slaton

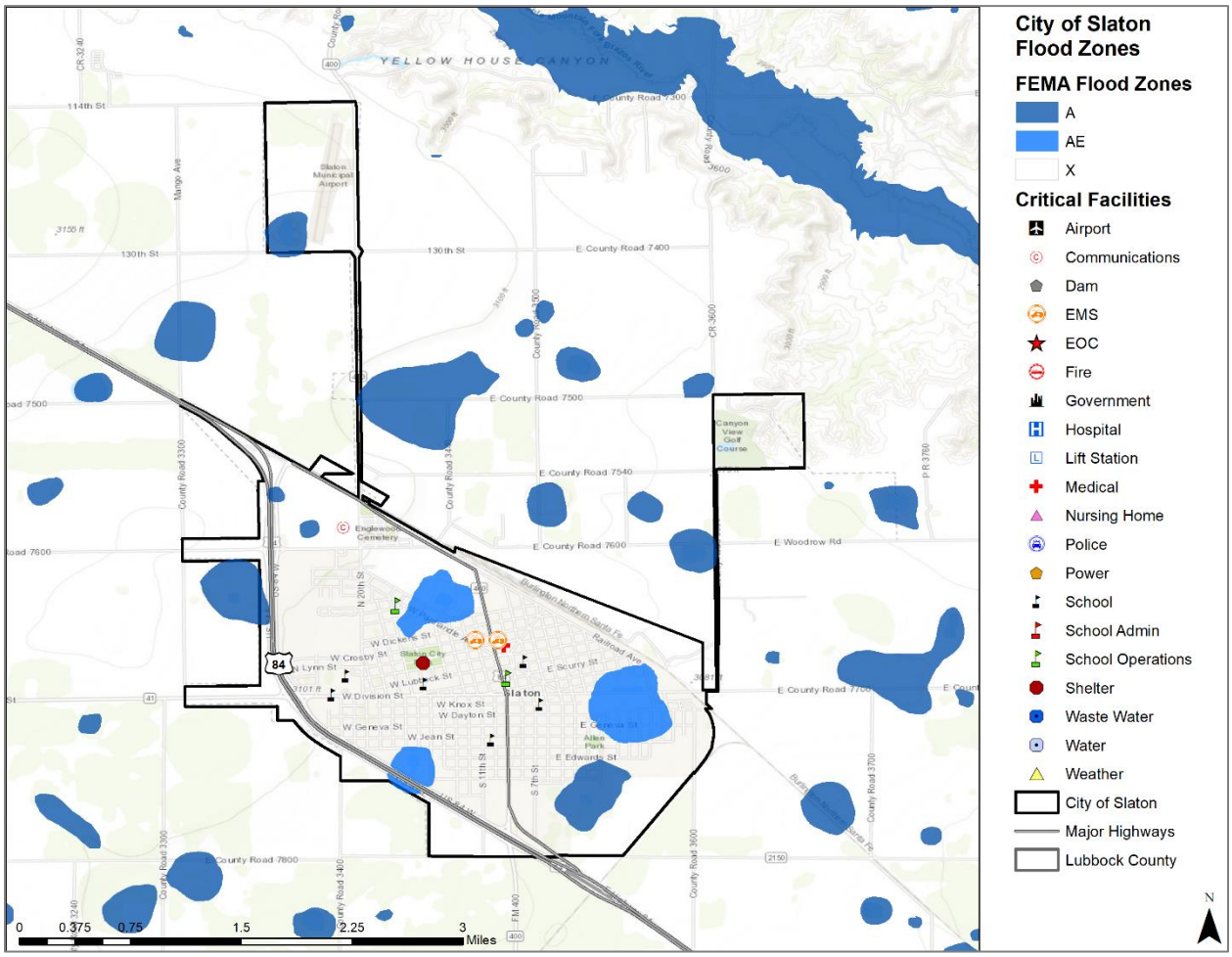


Figure 13-9. Estimated Flood Zones in the City of Wolfforth

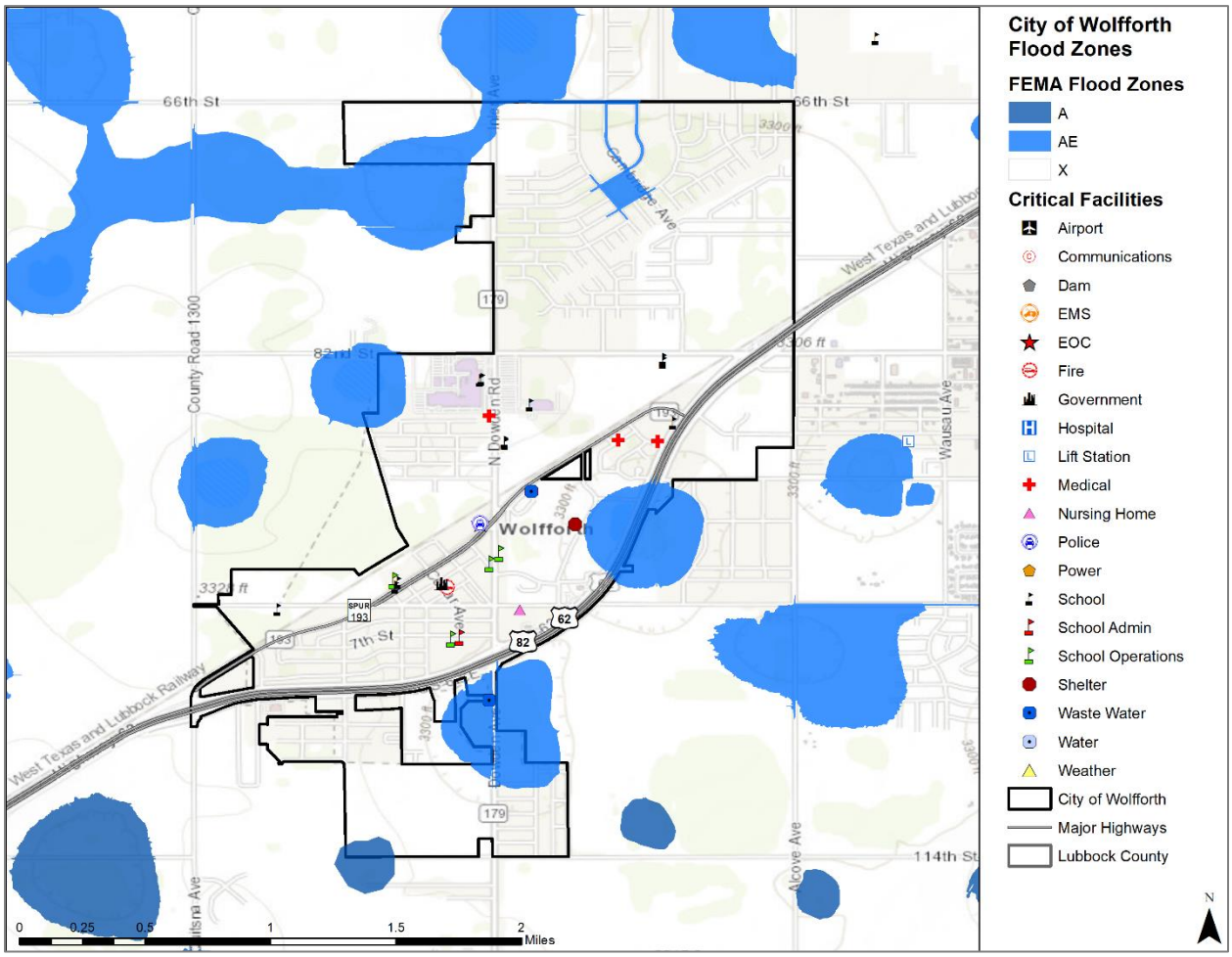


Figure 13-10. Estimated Flood Zones in Abernathy ISD

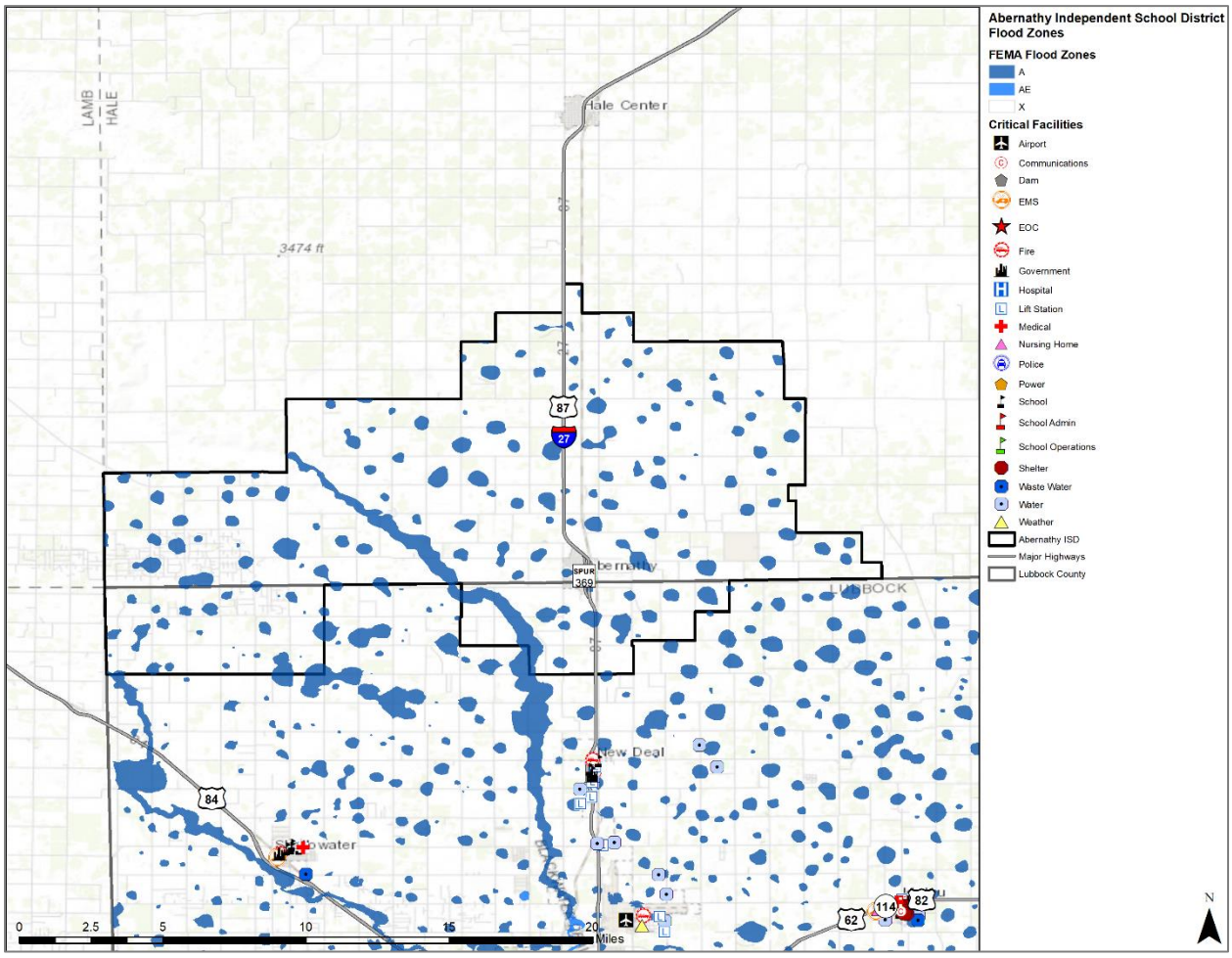


Figure 13-11. Estimated Flood Zones in Frenship ISD

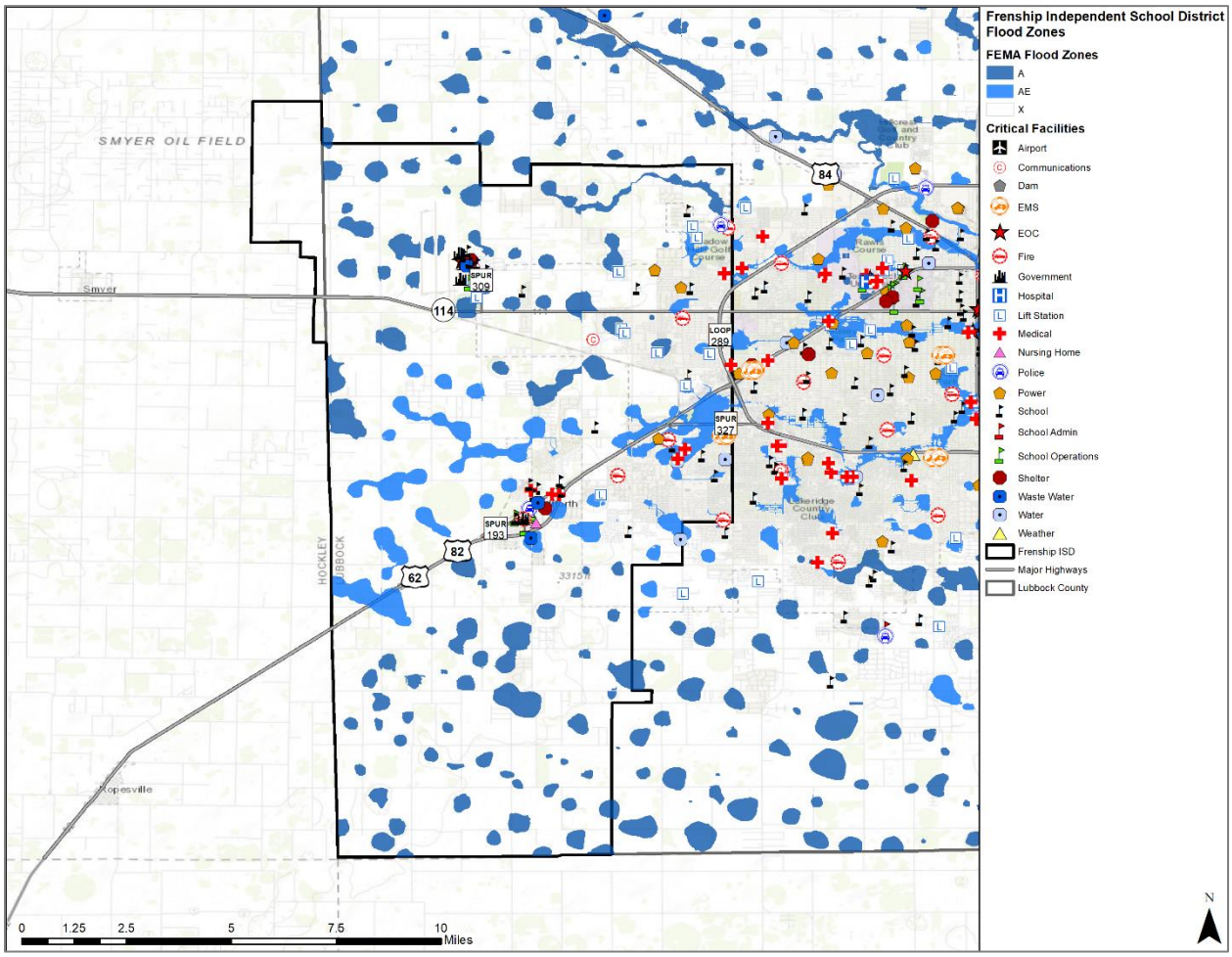


Figure 13-12. Estimated Flood Zones in Idalou ISD

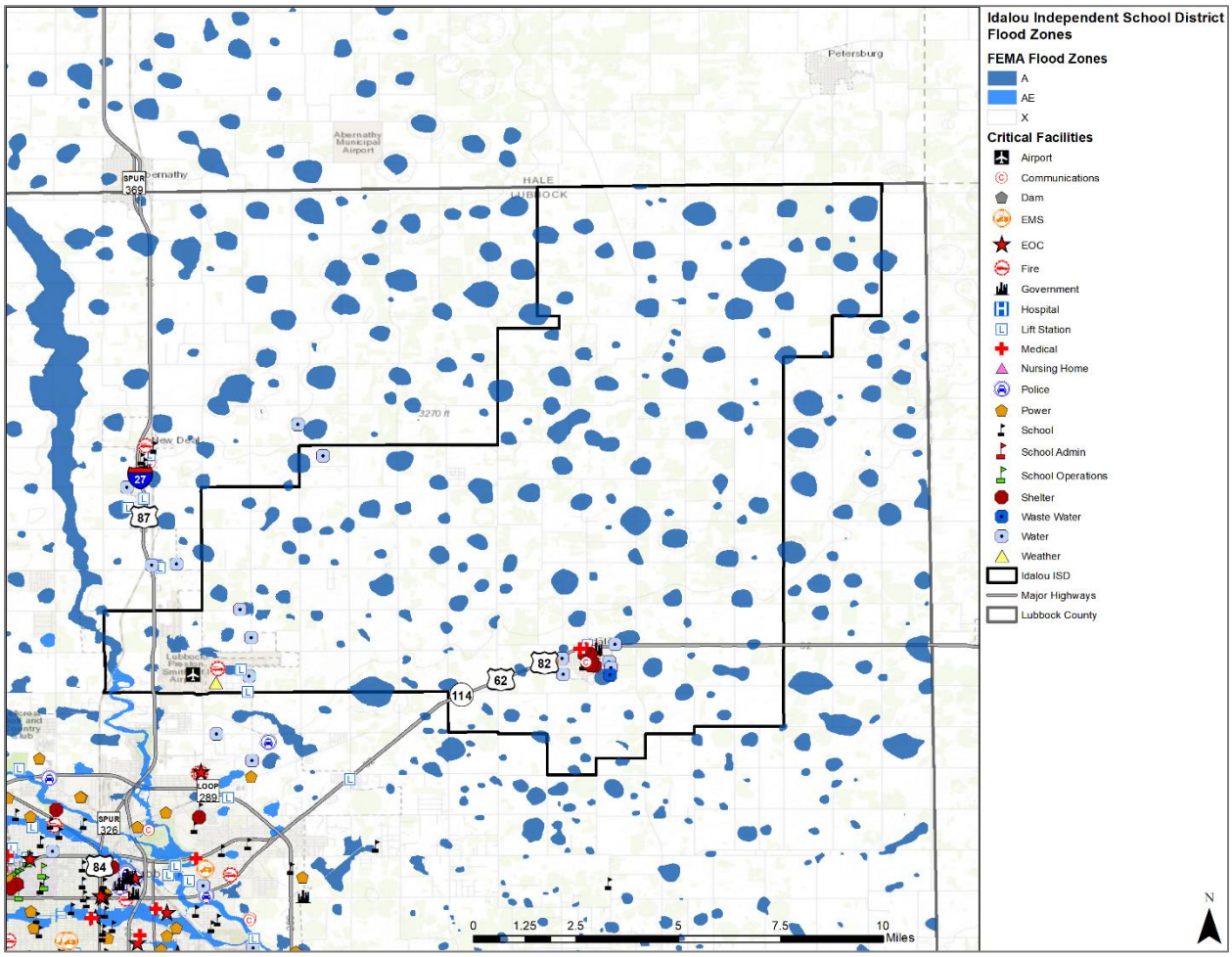


Figure 13-13. Estimated Flood Zones in Lubbock ISD

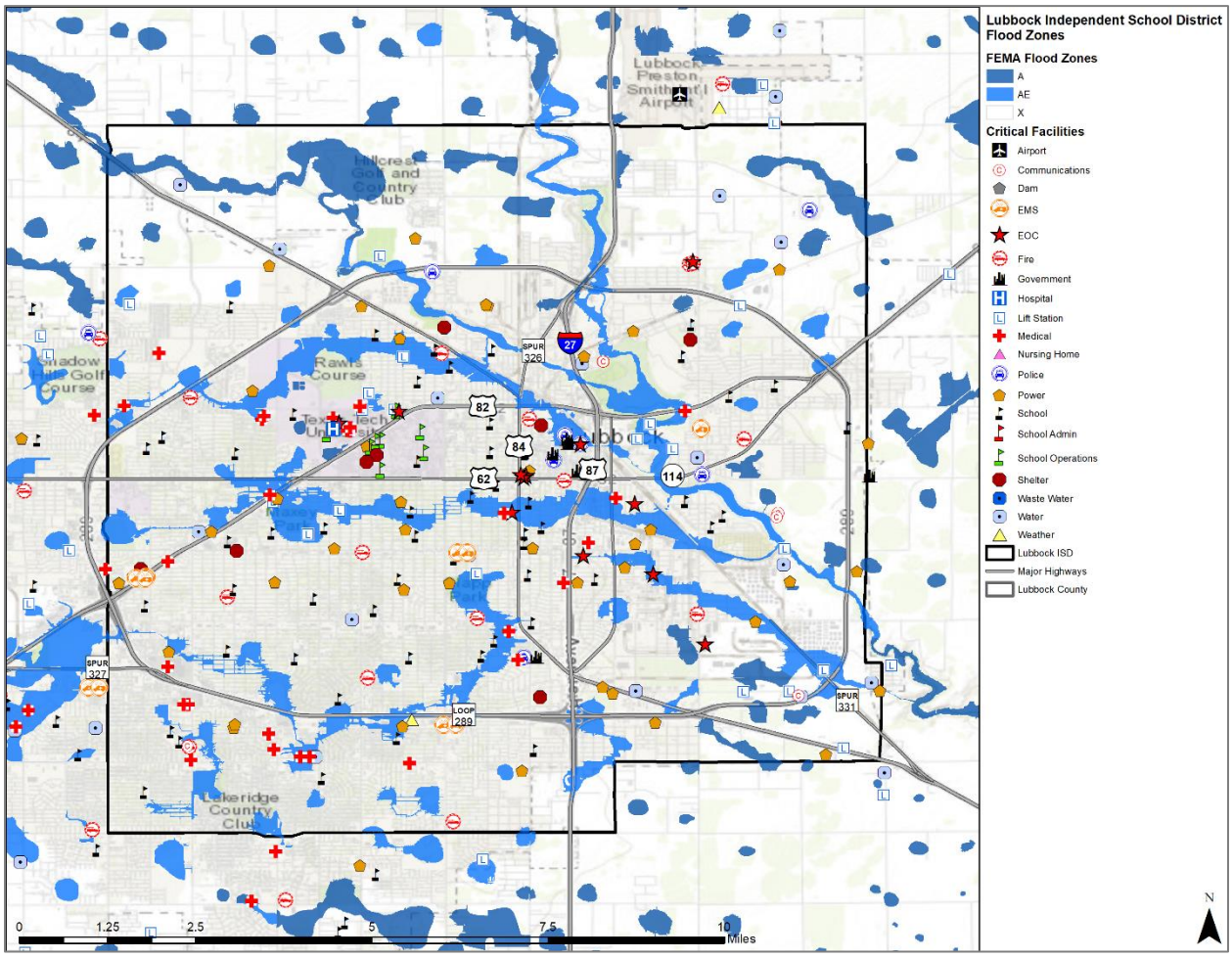


Figure 13-14. Estimated Flood Zones in Lubbock-Copper ISD

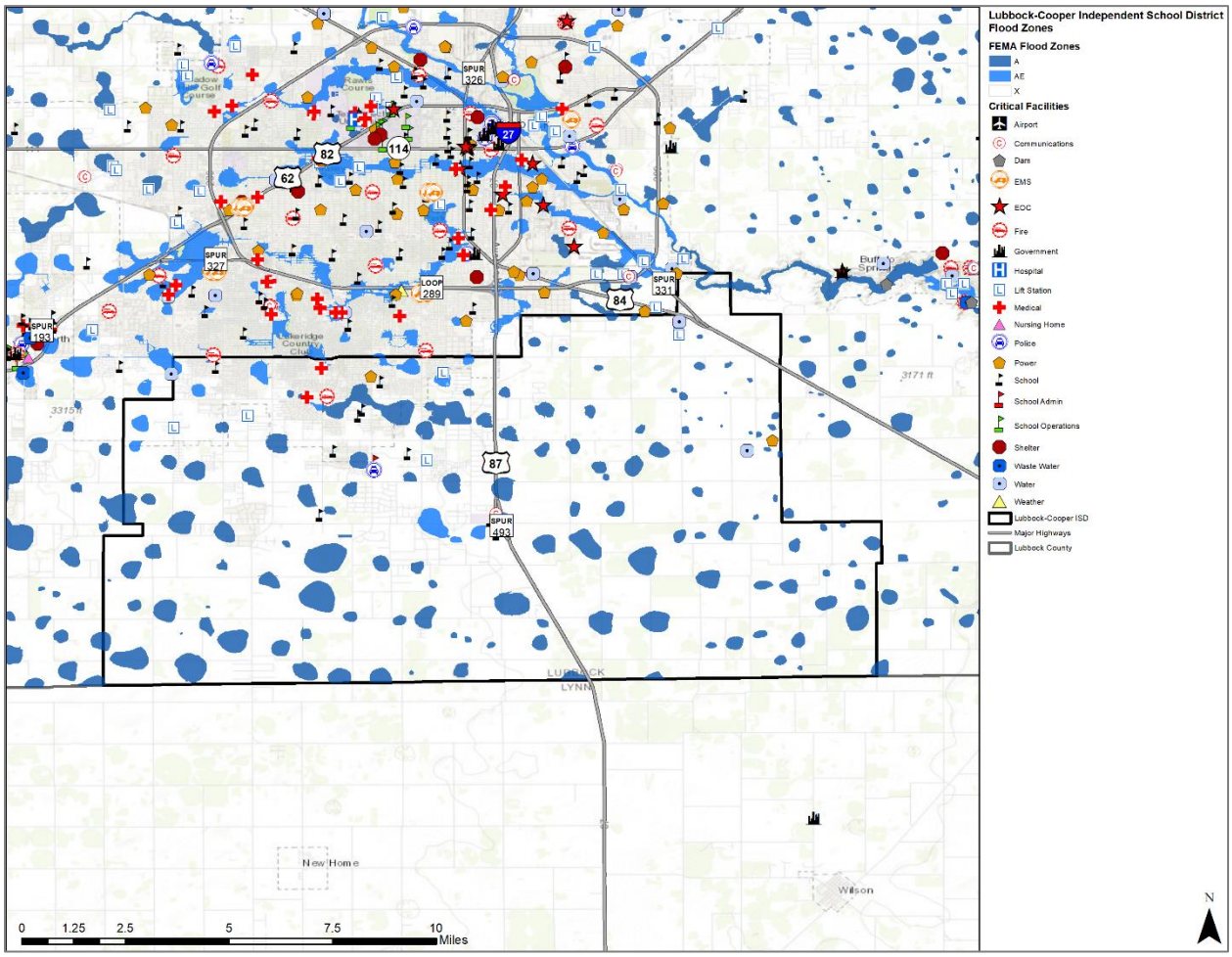


Figure 13-15. Estimated Flood Zones in New Deal ISD

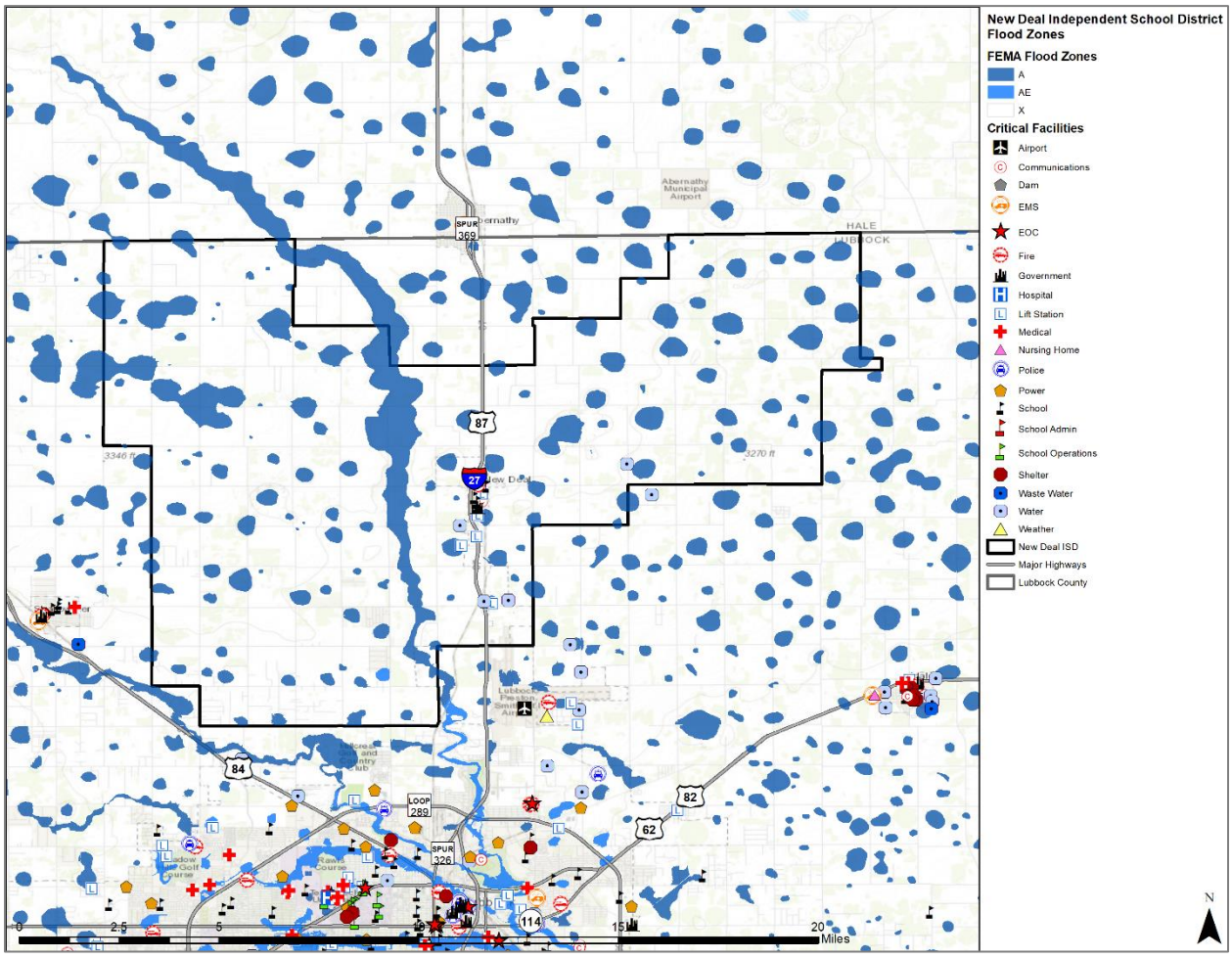


Figure 13-16. Estimated Flood Zones in Roosevelt ISD

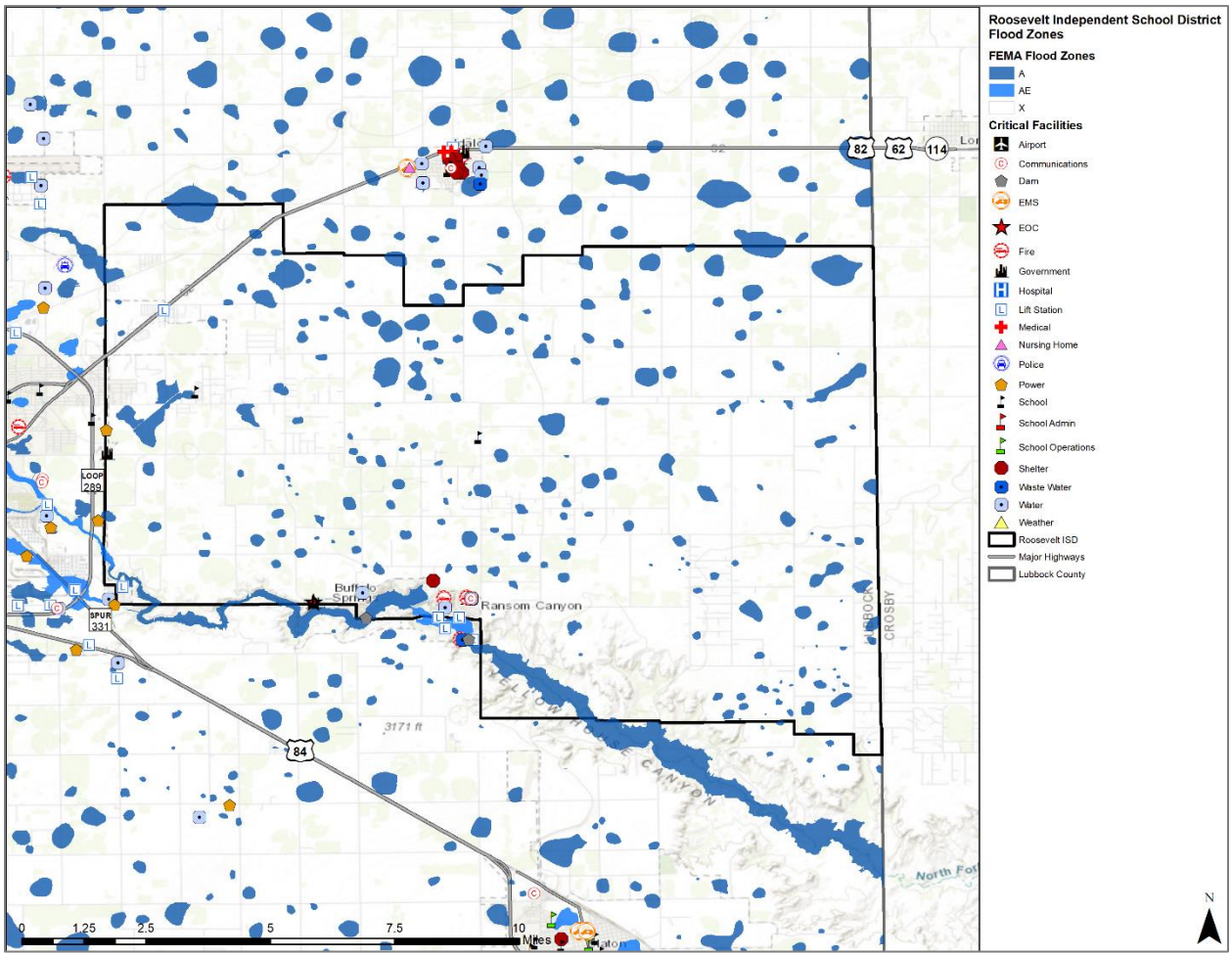


Figure 13-17. Estimated Flood Zones in Shallowater ISD

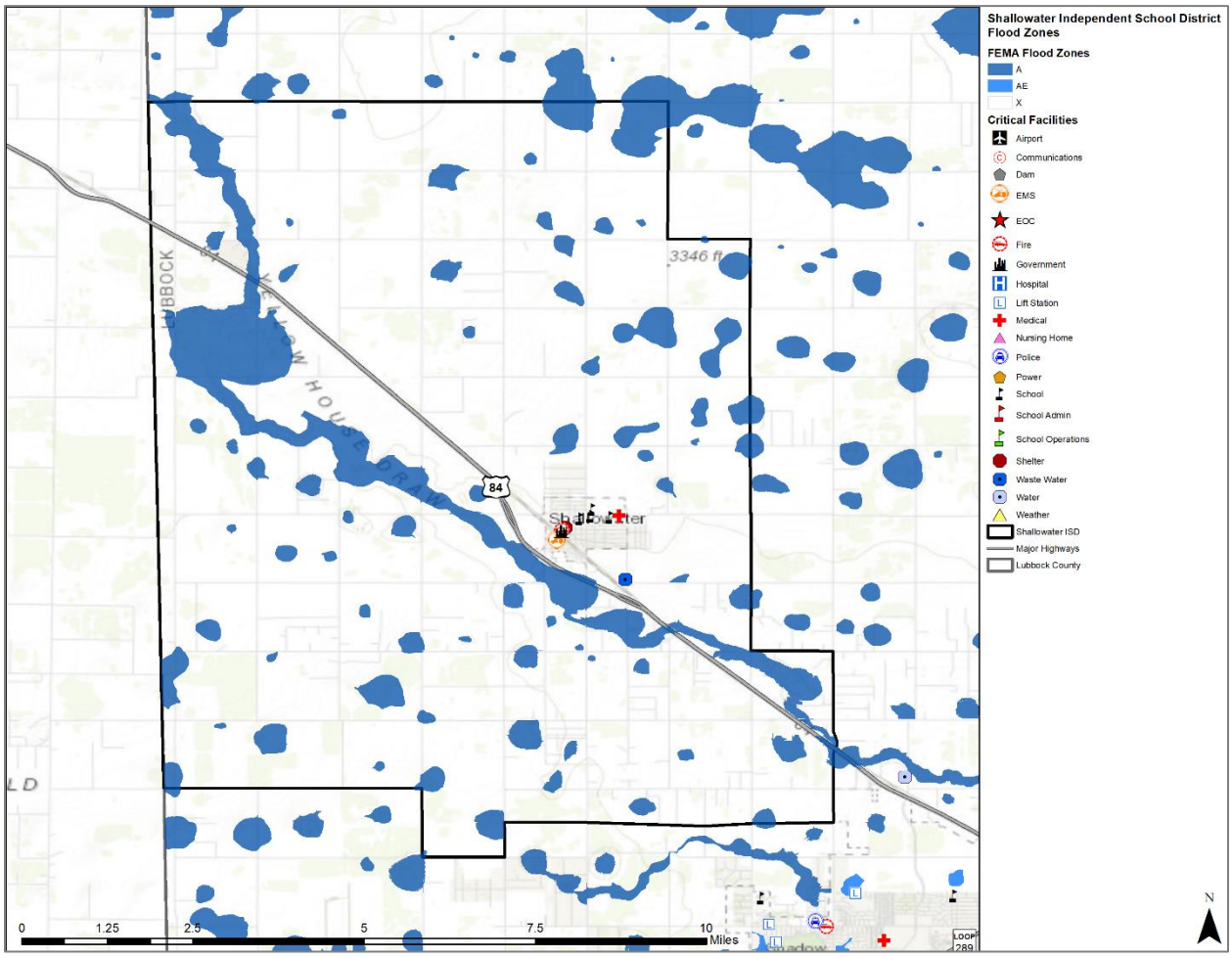


Figure 13-18. Estimated Flood Zones in Slaton ISD

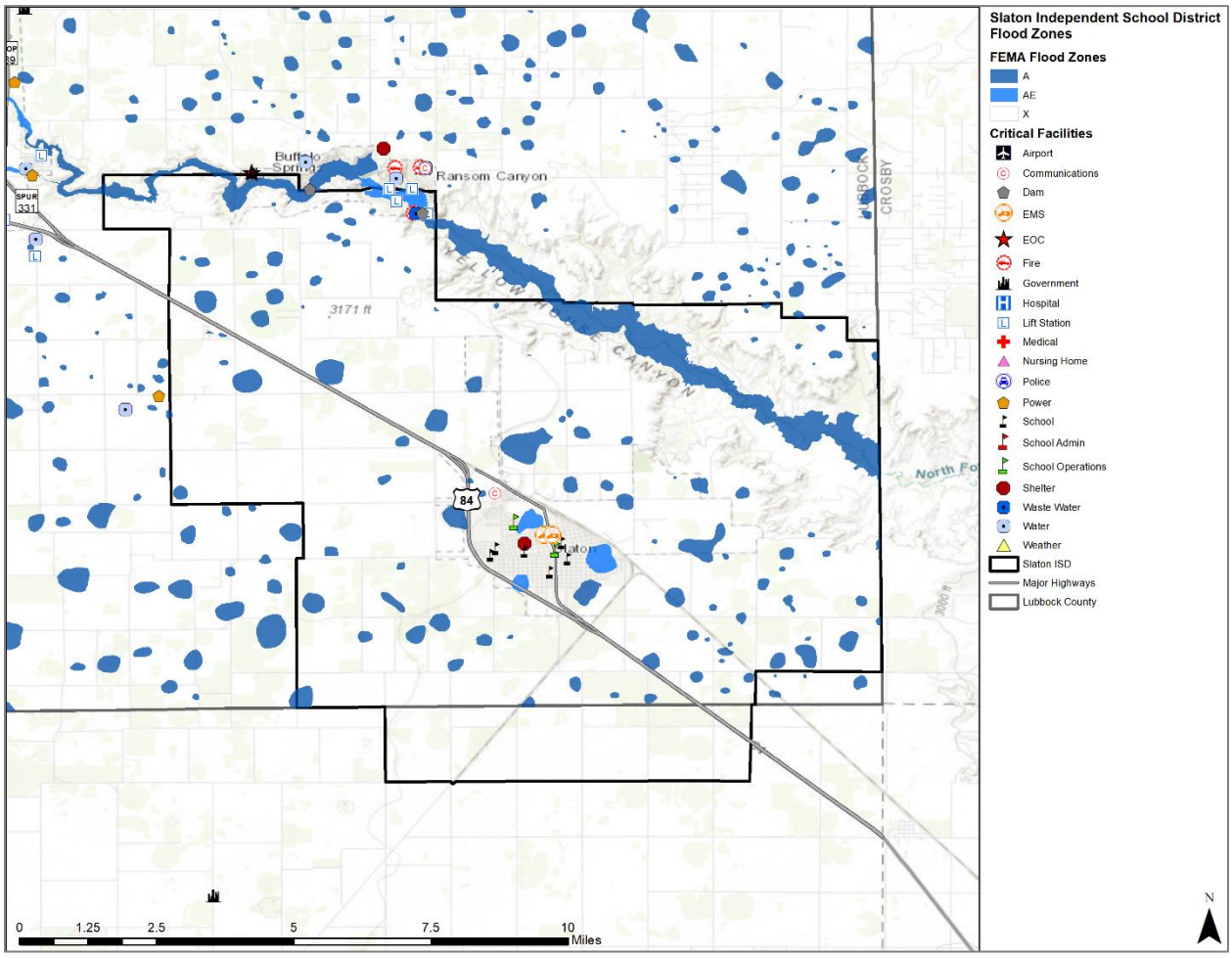


Figure 13-19. Estimated Flood Zones in Betty M. Condra School for Education Innovation

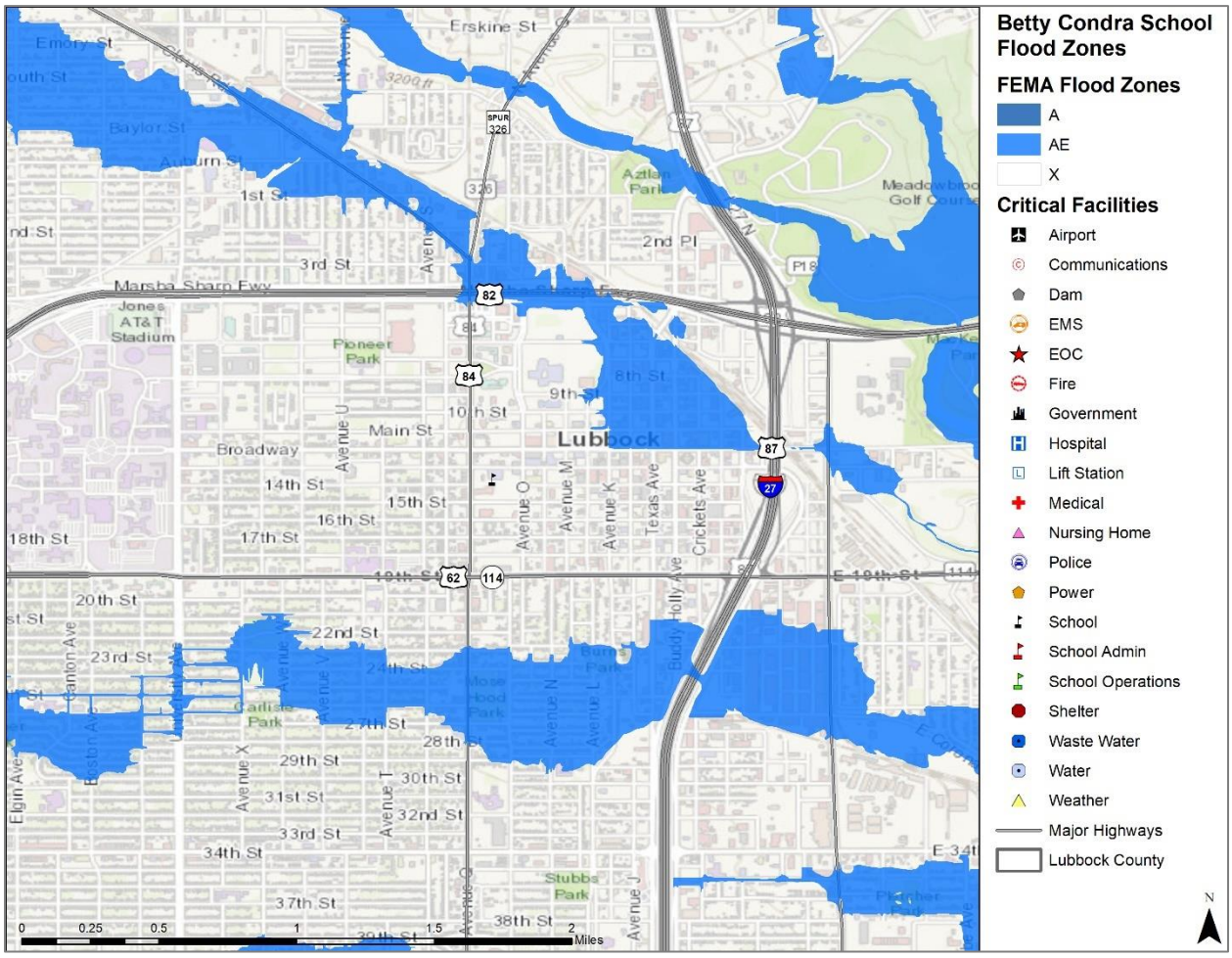


Figure 13-20. Estimated Flood Zones in South Plains College

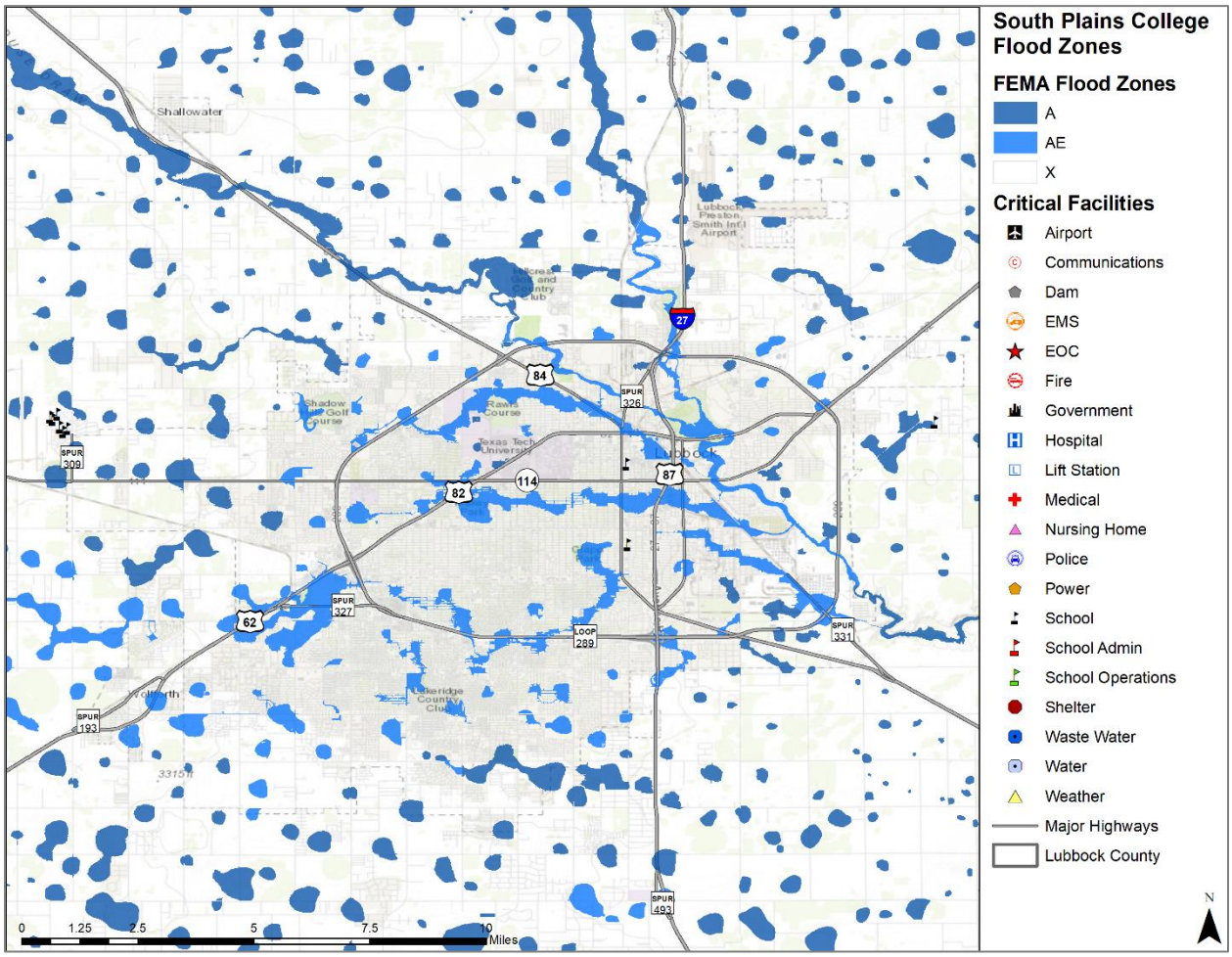


Figure 13-21. Estimated Flood Zones in Texas Tech University System

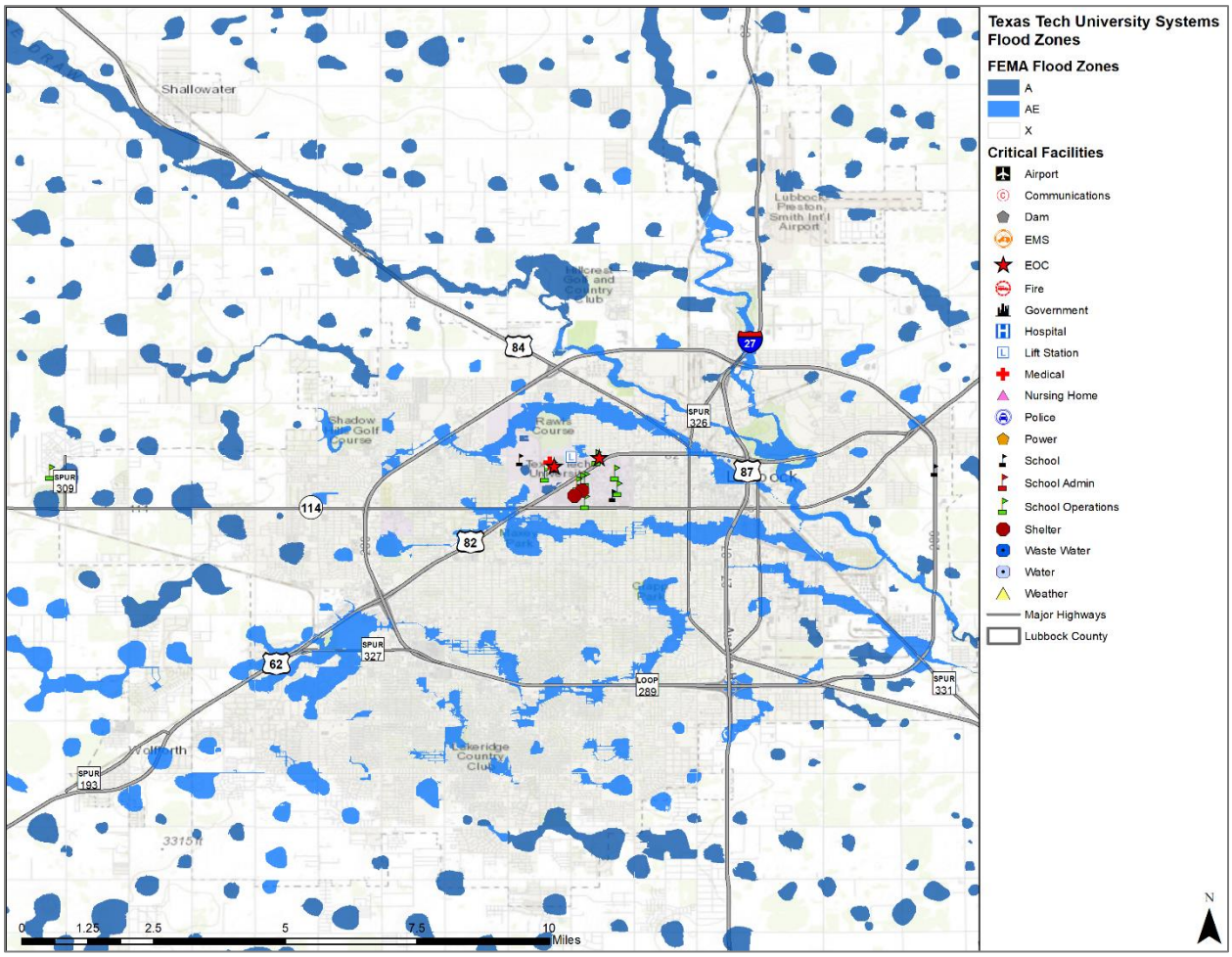


Figure 13-22. Estimated Flood Zones in Texas Tech University Health Sciences Center

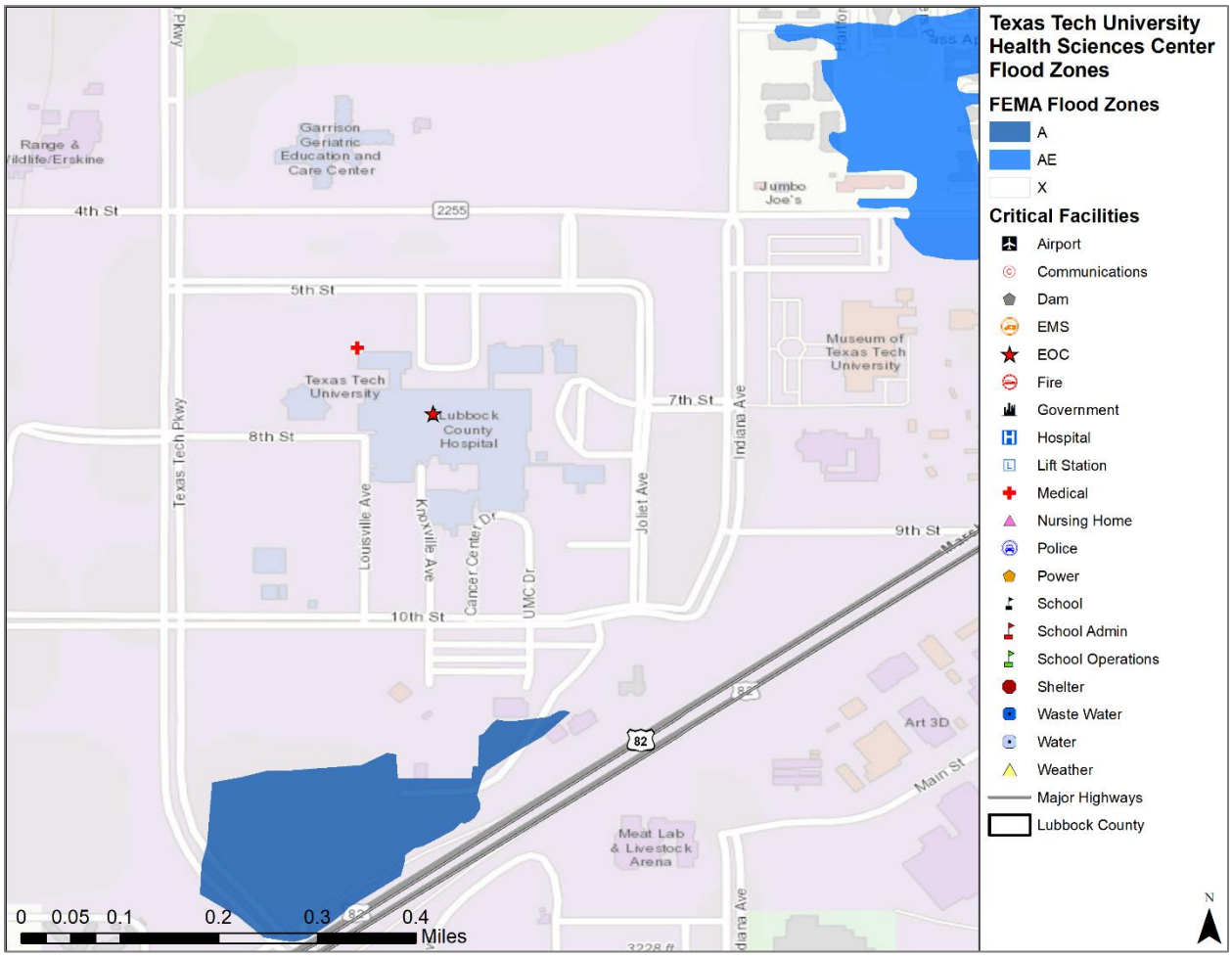


Figure 13-23. Estimated Flood Zones in Lubbock County Hospital System

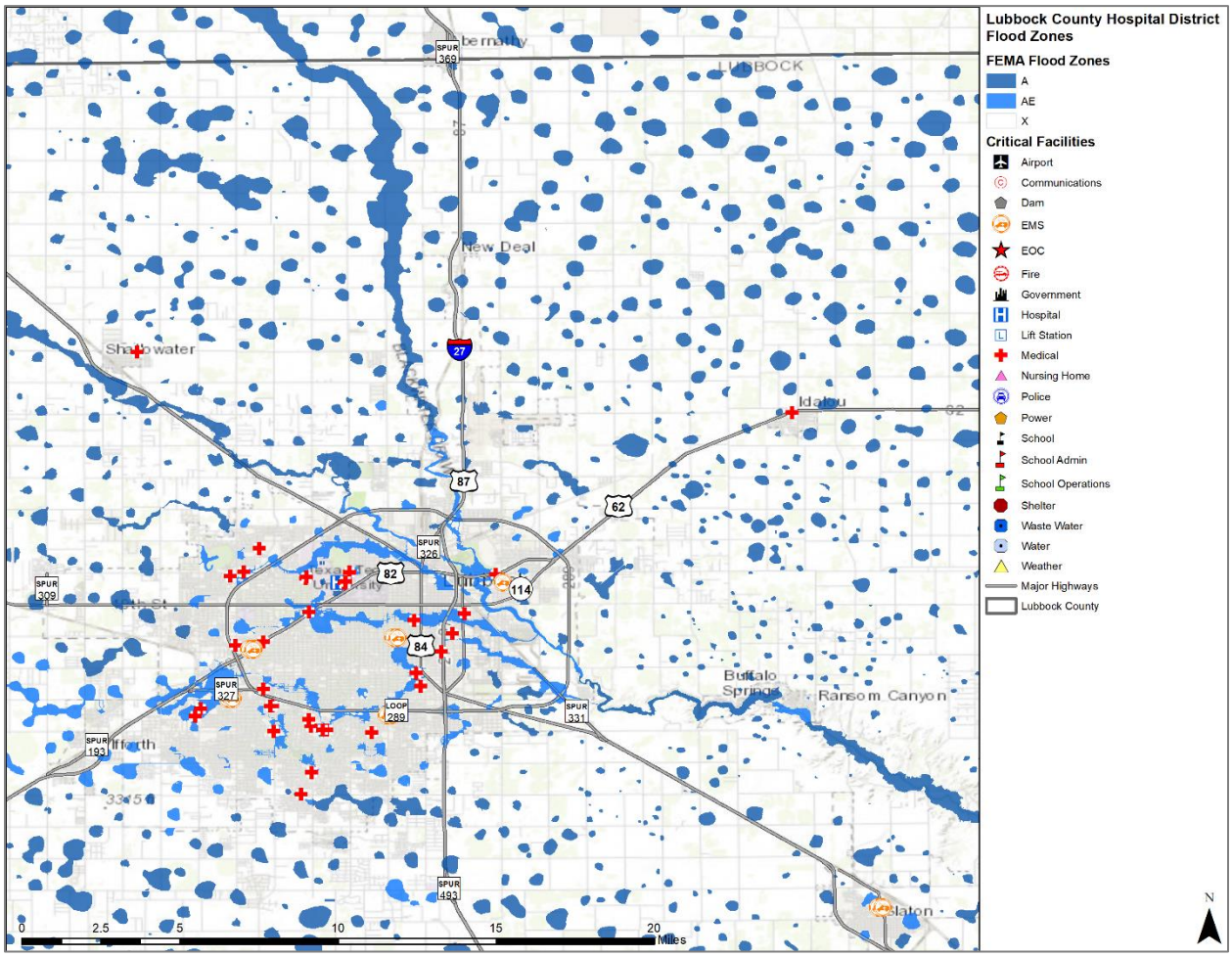


Figure 13-24. Estimated Flood Zones in Lubbock County WCID#1

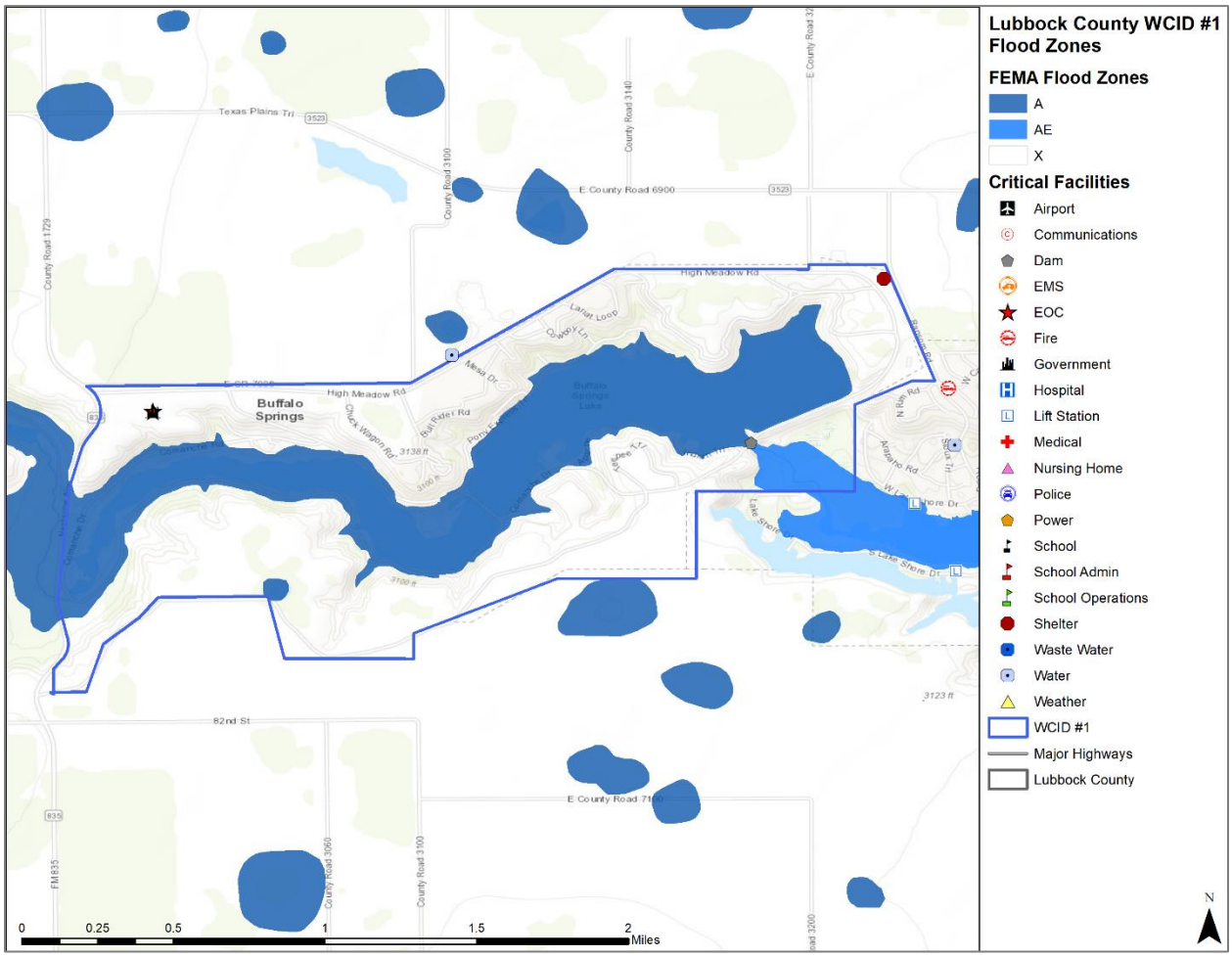


Figure 13-25. Estimated Flood Zones in Lubbock Reese Redevelopment Authority

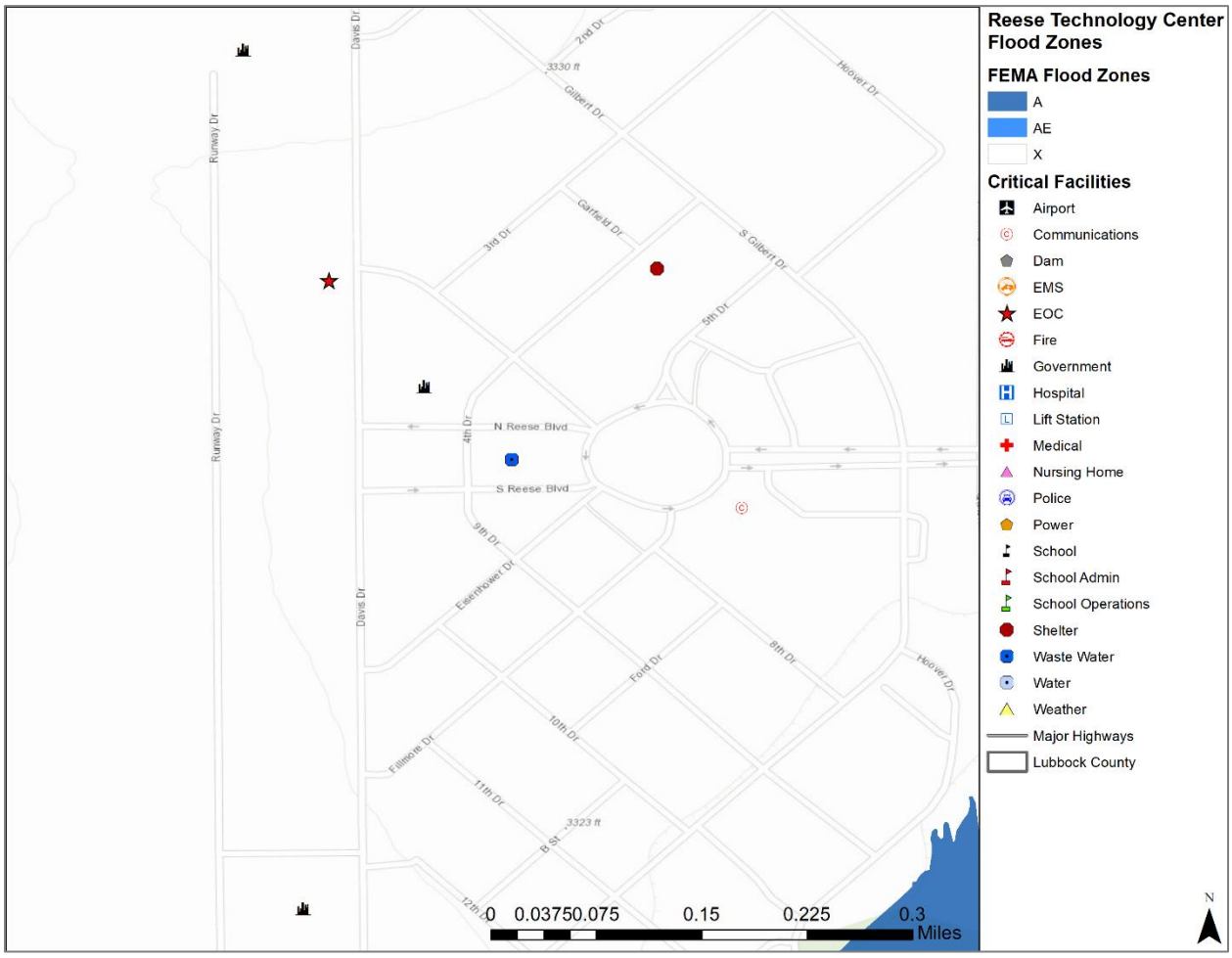
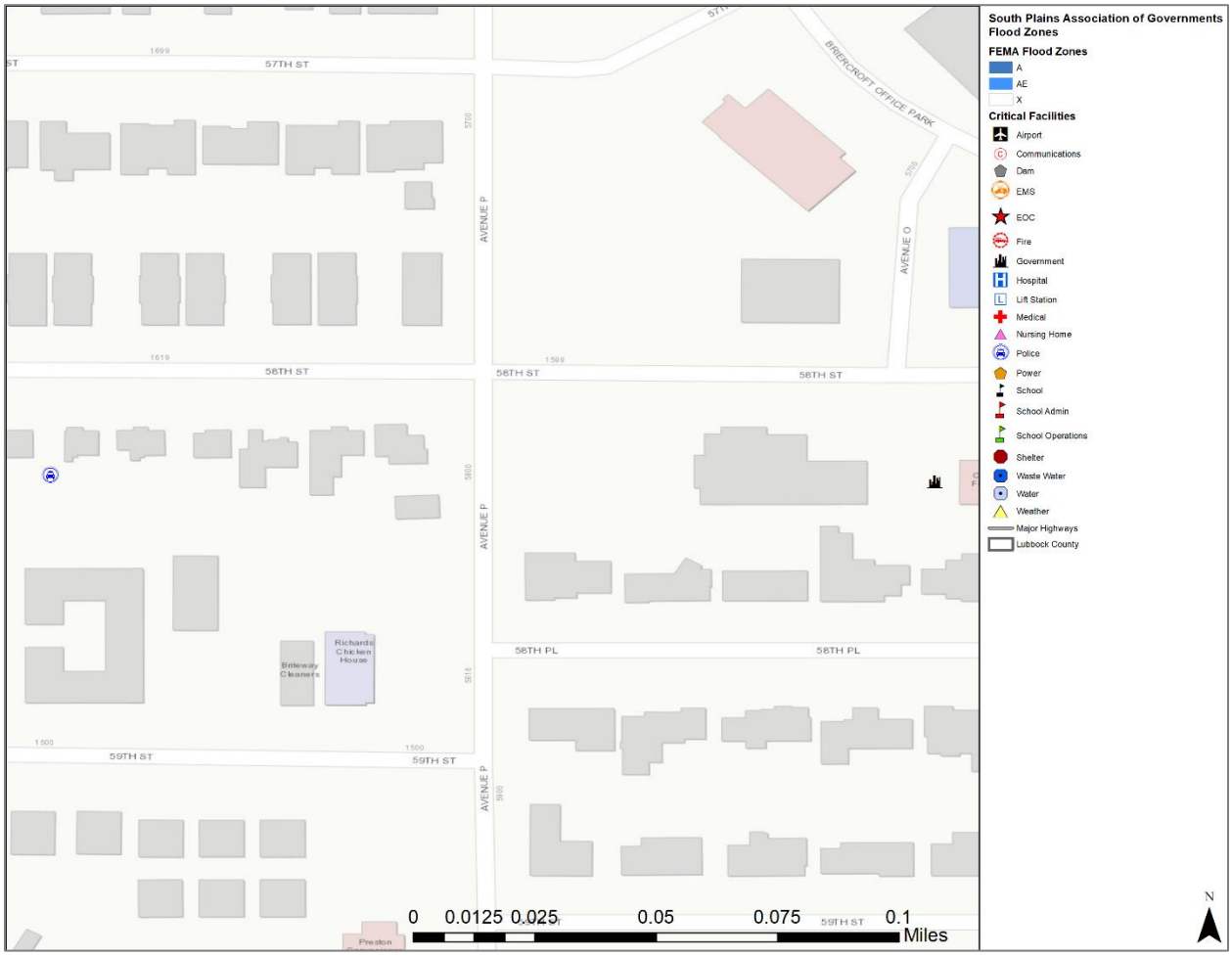


Figure 13-26. Estimated Flood Zones in South Plains Association of Governments (SPAG)



EXTENT

The severity of a flood event is determined by a combination of several factors including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

Determining the intensity and magnitude of a flood event is dependent upon the flood zone and location of the flood hazard area in addition to depths of flood waters. Extent of flood damages can be expected to be more damaging in the areas that will convey a base flood. FEMA categorizes areas on the terrain according to how the area will convey flood water. Flood zones are the categories that are mapped on Flood Insurance Rate Maps. Table 13-1 provides a description of FEMA flood zones and the flood impact in terms of severity or potential harm. Flood Zones A, AE, and X are the only hazard areas mapped in the region. Figures 13-1 through 13-26 should be read in conjunction with the extent for flooding in Tables 13-1 and 13-2 to determine the intensity of a potential flood event.

Table 13-1. Flood Zones

INTENSITY	ZONE	DESCRIPTION
HIGH	ZONE A	Areas with a one percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
	ZONE A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a Base Flood Elevation (BFE) (old format).
	ZONE AE	The base floodplain where base flood elevations are provided. AE Zones are now used on the new format FIRMs instead of A1-A30 Zones.
	ZONE AO	River or stream flood hazard areas and areas with a one percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
	ZONE AH	Areas with a one percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
	ZONE A99	Areas with a one percent annual chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
	ZONE AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
HIGH COASTAL	ZONE VE, V1-30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
MODERATE to LOW	ZONE X 500	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile; or an area protected by levees from 100-year flooding.

Zone A is interchangeably referred to as the 100-year flood, the one percent-annual chance flood, the Special Flood Hazard Area (SFHA), or more commonly, the base flood. This is the area that will convey the base flood and constitutes a threat to the planning area. The impact from a flood event can be more damaging in areas that will convey a base flood.

Structures built in the SFHA are subject to damage by rising waters and floating debris. Moving flood water exerts pressure on everything in its path and causes erosion of soil and solid objects. Utility systems, such as heating, ventilation, air conditioning, fuel, electrical systems, sewage maintenance systems and water systems, if not elevated above base flood elevation, may also be damaged.

The intensity and magnitude of a flood event is also determined by the depth of flood waters. Table 13-2 describes the stream gauge data provided by the United States Geological Survey (USGS).

Table 13-2. Extent for Lubbock County[1]

JURISDICTION[2]	PEAK FLOOD EVENT
Lubbock County	Brazos River, at Loop 289 in Lubbock, Texas, reached an overflow elevation of 13.7 feet in May 2021. The average peak flow for the Brazos River is 11.4 feet at this site.
Lubbock County	Brazos River, near Lubbock, Texas, reached an overflow elevation of 7.4 feet in June 1941. The average peak flow for the Brazos River is 6.3 feet at this site.

The range of flood intensity that the planning area can experience is high, or Zone A. Based on historical occurrences, the planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts could expect to experience from 4-5 inches of rain within a 6-hour period, resulting in flash flooding.

The data described in Tables 13-1 and 13-2, together with Figures 13-1 through 13-26, and historical occurrences for the area, provides an estimated potential magnitude and severity for the planning area. For example, the City of Lubbock, as shown in Figure 13-4, has areas designated as Zone A and AE. Reading this figure in conjunction with Table 13-1 means the area is an area of high risk for flood.

HISTORICAL OCCURRENCES

Historical evidence indicates that areas within the planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts are susceptible to flooding, especially in the form of flash flooding. It is important to note that only flood events that have been reported have been factored into this risk assessment, therefore it is likely that additional flood occurrences have gone unreported before and during the recording period. Table

[1] Severity estimated by averaging floods at certain stage level over the history of flood events. Severity and peak events are based on U.S. Geological Survey data.
[2] Severity is provided for jurisdictions where peak data was provided.

13-3 identifies historical flood events within the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

Historical flood data events for each participating ISDs, universities, planning authorities and special districts are primarily provided in the NCEI database within the county or city in which they are located as most do not have events reported separate and apart from the reported community events. Several additional events, not reported to the NCEI, have been provided by some participating ISDs. The New Deal ISD reported one flood event in May 2019 with damages to the ISD facilities in the amount of $4,391,359. The Roosevelt ISD reported one flood event in March 2021 with damages to the ISD facilities in the amount of $1,609,899. The Shallowater ISD reported two flood events (2012 and 2015) with damages to the ISD facilities in the total amount of $152,153. These damages have been added to the reported NCEI events in Table 13-3. None of the additional participating districts, universities, and entities provided events or damages separate and apart from the NCEI events.

Table 13-4 provides the historical flood event summary by jurisdiction, ISDs, universities, planning authorities and hospital/special districts. Historical data is provided by team members and the Storm Prediction Center (NOAA), NCEI database for Lubbock County.

Table 13-3. Historical Flood Events, 1996-2021[3]

JURISDICTION	DATE	TIME	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Lubbock	6/11/1999	9:00 PM	0	0	$0	$3,383,249
Lubbock County	6/22/1999	1:22 AM	0	0	$3,383,249	$0
City of Lubbock	7/16/1999	8:20 PM	0	0	$16,866	$0
City of Lubbock	3/12/2007	12:57 PM	0	0	$157,447	$0
City of Lubbock	3/25/2007	6:35 PM	0	0	$68,455	$0
City of Lubbock	5/8/2007	12:53 PM	0	0	$135,200	$0
City of Lubbock	6/3/2007	9:40 PM	0	0	$20,241	$0
City of Lubbock	6/19/2007	11:50 PM	0	0	$20,241	$0
City of Lubbock	9/26/2007	4:40 PM	0	0	$134,850	$0
City of Lubbock	5/27/2008	4:45 PM	0	0	$6,489	$0
City of Wolfforth	9/11/2008	3:00 PM	0	0	$5,782,744	$0
City of Lubbock	7/29/2009	10:30 PM	0	0	$13,055	$0
City of Lubbock	4/16/2010	12:00 PM	0	0	$193,442	$0
City of Wolfforth	7/3/2010	10:33 PM	0	0	$5,803,221	$0

[3] Only recorded events with fatalities, injuries, and/or damages are listed, values are in 2022 dollars. Historical events are listed from January 1996 through December 2021.

JURISDICTION	DATE	TIME	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	7/4/2010	7:00 AM	0	0	$1,289,605	$4,900,498
City of Lubbock	8/11/2011	8:30 PM	0	0	$620,512	$0
City of Wolfforth	4/29/2012	10:27 PM	0	0	$611	$0
Shallowater ISD	2012	Unknown	0	0	$125,170	$0
Lubbock County	6/7/2014	11:10 PM	0	0	$17,694	$117,959,411
Lubbock County	9/24/2014	6:00 PM	0	0	$295,285	$0
Shallowater ISD	04/2015	Unknown	0	0	$26,983	$0
City of Wolfforth	5/4/2015	5:22 PM	0	0	$295,566	$11,822,628
City of Lubbock	5/14/2015	7:42 PM	0	0	$118,226	$0
City of Shallowater	5/28/2015	12:15 PM	0	0	$11,822,628	$2,364,526
Lubbock County	7/6/2015	10:30 PM	0	0	$0	$589,028
Lubbock County	6/1/2016	11:27 AM	0	0	$5,832,510	$0
City of Shallowater	6/1/2016	11:00 AM	0	0	$58,325	$174,975
City of Shallowater	8/23/2016	6:30 PM	0	0	$14,008	$87,549
Lubbock County	8/31/2016	3:05 PM	0	0	$291,830	$0
Lubbock County	5/24/2019	2:00 PM	0	0	$109,784	$0
New Deal ISD	5/2019	Unknown	0	0	$4,391,359	$0
Lubbock County	9/21/2019	6:00 PM	0	0	$10,950	$0
Roosevelt ISD	3/12/2021	Unknown	0	0	$1,609,899	$0
TOTALS			**0**	**0**	**$42,666,445**	**$141,281,864**

Table 13-4. Summary of Historical Flood Events, January 1996-2021

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Lubbock County	20	0	0	$11,230,907	$123,448,937
Village of Buffalo Springs	0	0	0	$0	$0
City of Idalou	1	0	0	$0	$0
City of Lubbock	25	0	0	$1,505,024	$3,383,249
Town of New Deal	4	0	0	$0	$0

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Ransom Canyon	0	0	0	$0	$0
City of Shallowater	5	0	0	$11,894,961	$2,627,050
City of Slaton	0	0	0	$0	$0
City of Wolfforth	7	0	0	$11,882,142	$11,822,628
Abernathy ISD	0	0	0	$0	$0
Frenship ISD	0	0	0	$0	$0
Idalou ISD	0	0	0	$0	$0
Lubbock ISD	0	0	0	$0	$0
Lubbock-Copper ISD	0	0	0	$0	$0
New Deal ISD	1	0	0	$4,391,359	$0
Roosevelt ISD	1	0	0	$1,609,899	$0
Shallowater ISD	2	0	0	$152,153	$0
Slaton ISD	0	0	0	$0	$0
Betty M. Condra School of Education Innovation	0	0	0	$0	$0
South Plains College	0	0	0	$0	$0
Texas Tech University System	0	0	0	$0	$0
Texas Tech University Health Sciences Center	1	0	0	$0	$0
Lubbock County Hospital System	0	0	0	$0	$0
Lubbock County WCID #1	0	0	0	$0	$0
Lubbock Reese Redevelopment Authority	0	0	0	$0	$0
South Plains Association of Governments	0	0	0	$0	$0
TOTAL LOSSES	**7**	**0**	**0**	**$183,948,309**	

Based on the list of historical flood events for the Lubbock County planning area (listed above), including all participating jurisdictions, ISDs, universities, planning authorities, and hospital/ special districts, 23 of the events have occurred since the 2015 Plan.

SIGNIFICANT EVENTS

May 24, 2019 – Lubbock County

A persistent upper-level trough over the western United States allowed for another day of convective development across the South Plains of West Texas. Widespread severe thunderstorms developed and produced widespread hail up to the size of golf balls across Lubbock County. Flooding was extreme in Lubbock County, where the Texas Department of Transportation closed off South Loop 289 near Avenue P in the City of Lubbock due to flooding. Several vehicles became stranded in flood waters throughout the south side of the City of Lubbock. Estimated damages related to event totaled $100,000, with no reported injuries or fatalities.

June 1, 2016 – Lubbock County

A nearly 90-milelong axis of heavy rain fell from the southwest side of Lubbock. Rainfall measurements of 2 to 4 inches were common, with areas in Lubbock measuring 5 inches. Flooding stranded dozens of cars in southwest Lubbock, with businesses closing early due to impassable streets and flooded parking lots. No injuries were reported, however some motorists required rescuing from water depths as great as five feet deep. Some streets and roads were closed for 18 hours due to standing water. Several hundred homes suffered significant water damage and loss of personal property. Additionally, funnel clouds accompanied a few of these slow-moving storms. Economic losses, such as reports of washing out large expanses of farm fields, and property damage from flooding event totaled approximately $5 million.

April 29, 2012 – Lubbock County

On April 29, repeated heavy rains from slow-moving thunderstorms produced up to four inches of rain and flooded several area roads. Up to 2.5 feet of flowing water was observed over Highway 62/82.

August 11, 2011 – City of Lubbock

A slow-moving storm produced one to four inches of rainfall over a period of about one hour within the City of Lubbock. Many city roads became flooded, with several high-water rescues performed by emergency personnel. Several thousand cloud-to-ground lightning strikes also affected the city. Numerous structure fires were reported around the city, including one that completely destroyed an apartment complex.

July 3-6, 2010 – Lubbock County

Following the excessive rains and flash floods, which occurred late on July 3 and early on July 4, residual flooding persisted in low-lying areas of southern Lubbock County through much of July 6. Prolonged standing floodwaters caused extensive damages to cotton crops across the southern half of Lubbock County. Local agricultural officials declared that these damages totaled $2.8 million. In all, Lubbock County officials estimated that more than 300 homes and businesses sustained damages in the Fourth of July flash floods and floods. It is likely that more than 100 vehicles became stranded or otherwise damaged in the floodwaters across the county; although, no serious injuries were reported.

September 11-12, 2008 – Lubbock County

On September 11-12, Lubbock received its highest ever 24-hour rainfall total of 7.80 inches. The onset of particularly heavy rain rates began during the afternoon rush hour. Numerous vehicles became disabled in the rising waters on Lubbock city streets, 28 of which were closed due to flooding during the evening hours.

PROBABILITY OF FUTURE EVENTS

Based on 66 recorded historical occurrences within a 26-year reporting period within the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts, flooding is highly likely with 1 to 2 events per year anticipated.

VULNERABILITY AND IMPACT

A property's vulnerability to a flood depends on its location and proximity to the floodplain. Structures that lie along banks of a waterway are the most vulnerable and are often repetitive loss structures. The County and all participating jurisdictions encourage development outside of the floodplain, and the impact for flood for the entire planning area is "Minor" as facilities and services would be shut down for more than one week, more than 10 percent of property destroyed or with major damage, and injuries or illness would not potentially result in permanent disability.

Table 13-5 includes the critical facilities identified in Appendix C that were determined to be located within the SFHA by FIRM mapping and further by each participating jurisdiction, ISDs, universities, planning authorities and hospital/special districts.

Table 13-5. Critical Facilities in the Floodplain by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Lubbock County	1 EOC, 1 Sheriff's Office, 1 County Annex Building, 1 County Courthouse
Village of Buffalo Springs	1 Dam
City of Idalou	1 Wastewater Treatment Plant, 1 Water Tower, 1 Well
City of Lubbock	2 Fire Stations, 1 Police Station, 2 Pump Stations, 16 Lift Stations, 7 Substations, 1 Radio Tower, 1 Reservoir Level and Control (Canadian River Authority)
Town of New Deal	2 Lift Stations, 1 Pump Station
Town of Ransom Canyon	2 Lift Stations, 1 Dam
City of Shallowater	None Reported
City of Slaton	None Reported
City of Wolfforth	1 Sewage Plant
Abernathy ISD	None Reported
Frenship ISD	2 Elementary Schools
Idalou ISD	None Reported
Lubbock ISD	1 Middle School, 1 Education Support Center, 1 Maintenance Facility, Chapman Field, Lomax School
Lubbock-Copper ISD	None Reported

JURISDICTION	CRITICAL FACILITIES
New Deal ISD	None Reported
Roosevelt ISD	None Reported
Shallowater ISD	None Reported
Slaton ISD	None Reported
Betty M. Condra School of Education Innovation	None Reported
South Plains College	None Reported
Texas Tech University System	None Reported
Texas Tech University Health Sciences Center	None Reported
Lubbock County Hospital System	6 Clinics, 2 Rehabilitation Centers
Lubbock County WCID #1	None Reported
Lubbock Reese Redevelopment Authority	None Reported
South Plains Association of Governments	None Reported

Historic loss estimates due to flood are presented in Table 13-6 below. Considering 66 flood events over a 26-year period, frequency is approximately two to three events every year.

Table 13-6. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Lubbock County	$134,679,844	$5,179,994
Village of Buffalo Springs	$0	$0
City of Idalou	$0	$0
City of Lubbock	$4,888,273	$188,011
Town of New Deal	$0	$0
Town of Ransom Canyon	$0	$0
City of Shallowater	$14,522,011	$558,539
City of Slaton	$0	$0
City of Wolfforth	$23,704,770	$911,722

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Abernathy ISD	$0	$0
Frenship ISD	$0	$0
Idalou ISD	$0	$0
Lubbock ISD	$0	$0
Lubbock-Copper ISD	$0	$0
New Deal ISD	$4,391,359	$168,898
Roosevelt ISD	$1,609,899	$61,919
Shallowater ISD	$152,153	$5,852
Slaton ISD	$0	$0
Betty M. Condra School of Education Innovation	$0	$0
South Plains College	$0	$0
Texas Tech University System	$0	$0
Texas Tech University Health Sciences Center	$0	$0
Lubbock County Hospital System	$0	$0
Lubbock County WCID #1	$0	$0
Lubbock Reese Redevelopment Authority	$0	$0
South Plains Association of Governments	$0	$0
Planning Area	**$183,948,309**	**$7,074,935**

While all citizens are at risk to the impacts of a flood, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 18.5% of the planning area population live below the poverty level (Table 13-7).

Table 13-7. Populations at Greatest Risk by Jurisdiction[4]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Lubbock County	57,053

[4] US Census Bureau 2020 data for Lubbock County

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Village of Buffalo Springs	4
City of Idalou	310
City of Lubbock	51,146
Town of New Deal	214
Town of Ransom Canyon	10
City of Shallowater	131
City of Slaton	1,161
City of Wolfforth	462

The severity of a flooding event varies depending on the relative risk to citizens and structures located within each jurisdiction. Table 13-8 depicts the level of impact for Lubbock County and each participating jurisdiction.

Table 13-8. Impact by Jurisdiction

JURISDICTION	IMPACT	DESCRIPTION
Lubbock County	Minor	It is anticipated that the Lubbock County could anticipate an impact of “minor” with critical facilities would be shut down for one week or more weeks, with more than 10 percent of property would be destroyed or damaged. Any injuries or illness would not potentially result in permanent disability.
Village of Buffalo Springs	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
City of Idalou	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
City of Lubbock	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Town of New Deal	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.

JURISDICTION	IMPACT	DESCRIPTION
Town of Ransom Canyon	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
City of Shallowater	Minor	Any injuries and/or illnesses do not result in permanent disability. Complete shutdown of facilities and services for more than 1 week, with more than 10 percent of property is destroyed or with major damage.
City of Slaton	Limited	Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
City of Wolfforth	Minor	It is anticipated that the City of Wolfforth could anticipate an impact of “minor” with critical facilities wo would be shut down for one week or more weeks, with more than 10 percent of property would be destroyed or damaged. Any injuries or illness would not potentially result in permanent disability.
Abernathy ISD	Limited	Abernathy ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Frenship ISD	Minor	Frenship ISD has two schools located within the Flood Zone AE. The school population could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week and 10 percent or more of total property could be damaged or destroyed.
Idalou ISD	Limited	Idalou ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Lubbock ISD	Minor	Lubbock ISD has 11 schools located with the Flood Zone AE. The school’s population could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week or more and more than 10 percent of total property could be damaged or destroyed.

JURISDICTION	IMPACT	DESCRIPTION
Lubbock-Copper ISD	Limited	Lubbock-Cooper ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
New Deal ISD	Limited	New Deal ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Roosevelt ISD	Limited	Roosevelt ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Shallowater ISD	Limited	Shallowater ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Slaton ISD	Limited	Slaton ISD facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Betty M. Condra School of Education Innovation	Limited	Betty M. Condra School of Education Innovation facilities are location outside of the special flood hazard area and are at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
South Plains College	Limited	South Plains College is located outside of the special flood hazard area and is at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is

JURISDICTION	IMPACT	DESCRIPTION
		expected that less than 10 percent of property would be destroyed or damaged.
Texas Tech University System	Minor	Texas Tech University System has multiple buildings located within Flood Zones A and AE. Citizens could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week and more than 10 percent of total property could be damaged.
Texas Tech University Health Sciences Center	Limited	Texas Tech University Health Sciences Center facility is located outside of the special flood hazard area and is at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
Lubbock County Hospital System	Minor	Lubbock County Hospital District has 2 locations within the Flood Zone AE. Citizens could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for a week and 10 percent of total property could be damaged.
Lubbock County WCID #1	Substantial	Lubbock County WCID #1 covers the City of Buffalo Springs, which contains large areas of Flood Zone A. Injuries and deaths can be expected in a severe flood event with more than 50 percent of property damage destroyed or damage, and a complete shutdown of critical facilities for 30 days or more.
Lubbock Reese Redevelopment Authority	Limited	Lubbock Reese Redevelopment Authority is located outside of the special flood hazard area and is at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.
South Plains Association of Governments	Limited	SPAG is located outside of the special flood hazard area and is at minimal risk for flood. Any injuries or illnesses would be treatable with first aid, with minor quality of life lost. If critical facilities are shut down it would be for 24 hours or less, and it is expected that less than 10 percent of property would be destroyed or damaged.

ASSESSMENT OF IMPACTS

Flooding is the deadliest natural disaster that occurs in the U.S. each year, and it poses a constant and significant threat to the health and safety of the people in the Lubbock County planning area. The impact of climate change could produce larger, more severe flood events, exacerbating the current flood impacts. Worsening flood conditions can be frequently associated with a variety of impacts, including:

- Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm's way.
- Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents.
- Health risks and threats to residents are elevated after the flood waters have receded due to contaminated flood waters (untreated sewage and hazardous chemicals) and mold growth typical in flooded buildings and homes.
- Significant flood events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Floods can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders are exposed to downed power lines, contaminated and potentially unstable debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities.
- Significant flooding can result in the inability of emergency response vehicles to access areas of the community.
- Critical staff may suffer personal losses or otherwise impacted by a flood event and unable to report for duty, limiting response capabilities.
- City or county departments may be flooded, delaying response and recovery efforts for the entire community.
- Private sector entities that the jurisdiction and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the flood may be negatively impacted while utilities are being restored or water recedes, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures substantially damaged by a flood may not be rebuilt for years and uninsured or underinsured residential structures may never be rebuilt, reducing the tax base for the community.

- Large floods may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Flooding may cause significant disruptions of clean water and sewer services, elevating health risks and delaying recovery efforts.
- The psycho-social effects on flood victims and their families can traumatize them for long periods of time, creating long term increases in medical treatment and services.
- Extensive or repetitive flooding can lead to decreases in property value for the affected community.
- Flood poses a potential catastrophic risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Flood related declines in production may lead to an increase in unemployment.
- Large floods may result in loss of livestock, potential increased livestock mortality due to stress and water borne disease, and increased cost for feed.
- Recreation activities at the Historic Dunbar Lake and Buffalo Spring Lake may be unavailable and tourism can be unappealing for years following a large flood event, devastating directly related local businesses and negatively impaction economic recovery.
- The Historic Dunbar Lake and Buffalo Spring Lake area may suffer significant wildlife mortality during and following a flood due to damaged or destroyed ecosystems and water contamination.

The overall extent of damages caused by floods is dependent on the extent, depth and duration of flooding, and the velocities of flows in the flooded areas. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a flood event.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) PARTICIPATION

Flood insurance offered through the National Flood Insurance Program (NFIP) is the best way for home and business owners to protect themselves financially against the flood hazard. Lubbock County and all participating jurisdictions are currently participating in the NFIP and are in good standing.

Lubbock County and the City of Lubbock currently have adopted higher standards above the NFIP minimum such as 1 foot of freeboard for new construction and substantial Improvements of structures. All other participating jurisdictions currently have adopted the minimum NFIP standards. These jurisdictions are considering adopting additional higher regulatory NFIP standards to limit floodplain development. It is noted that special districts, ISDs and Universities are not eligible participants in the NFIP.

The flood hazard areas throughout the planning area are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, of which adversely affect public safety.

These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood-proofed or otherwise protected from flood damage. Mitigation actions are included to address flood maintenance issues as well, including routinely clearing debris from drainage systems and bridges and expanding drainage culverts and storm water structures to more adequately convey flood waters.

It is the purpose of Lubbock County and all participating jurisdictions to continue to promote the public health, safety and general welfare by minimizing public and private losses due to flood conditions in specific areas. The NFIP participating jurisdiction in the Plan is guided by their local Flood Damage Prevention Ordinance. Each community will continue to comply with NFIP requirements through their local permitting, inspection, and record-keeping requirements for new and substantially developed construction. Further, the NFIP program promotes sound development in floodplain areas and includes provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- Ensure that potential buyers are notified that property is in a flood area.

In order to accomplish these tasks, Lubbock County and all participating jurisdictions seek to follow these guidelines to achieve flood mitigation by:

- Restrict or prohibit uses that are dangerous to health, safety, or property in times of flood, such as filling or dumping, that may cause excessive increases in flood heights and/or velocities;
- Require that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction as a method of reducing flood losses;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging, and other development, which may increase flood damage; and
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

NFIP COMPLIANCE AND MAINTENANCE

As mentioned, Lubbock County and all participating jurisdictions have developed mitigation actions that relate to either NFIP maintenance or compliance. Compliance and maintenance actions can be found in Section 18.

SECTION 13: FLOOD

Flooding was identified by a majority of the participating communities as a high-risk hazard during hazard ranking activities at the Risk Assessment Workshop. As such, many of the mitigation actions were developed with flood mitigation in mind. A majority of these flood actions address compliance with the NFIP and implementing flood awareness programs. All participating jurisdictions recognize the need and are working towards adopting higher NFIP regulatory standards to further minimize flood risk in their community. In addition, each jurisdiction is focusing on public flood awareness activities. This includes promoting the availability of flood insurance by placing NFIP brochures and flyers in public libraries or public meeting places in participating jurisdictions.

Each NFIP participating jurisdiction has a designated floodplain administrator. The floodplain administrators in the planning area will continue to maintain compliance with the NFIP including continued floodplain administration, zoning ordinances, and development regulation. The floodplain ordinance adopted by jurisdictions outline the minimum requirements for development in special flood hazard areas.

REPETITIVE LOSS

The Severe Repetitive Loss (SRL) Grant Program under FEMA provides federal funding to assist states and communities in implementing mitigation measures to reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential structures insured under the NFIP. The Texas Water Development Board (TWDB) administers the SRL grant program for the State of Texas. One of the goals of the FMA program is to reduce the burden of repetitive loss and severe repetitive loss properties on the NFIP through mitigation activities that significantly reduce or eliminate the threat of future flood damages.

Repetitive Loss properties are defined as structures that are:

- Any insurable building for which 2 or more claims of more than $1,000 each, paid by the National Flood Insurance Program (NFIP) within any 10-year period, since 1978;
- May or may not be currently insured under the NFIP.

Severe Repetitive Loss properties are defined as residential properties that are:

- Covered under the NFIP and have at least four flood related damage claim payments (building and contents) over $5,000.00 each, and the cumulative amount of such claims payments exceed $20,000; or
- At least two separate claim payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

In either scenario, at least two of the referenced claims must have occurred within any ten-year period and must be greater than 10 days apart.[5] Table 13-9 shows repetitive loss and severe repetitive loss properties for the Lubbock County planning area. The following jurisdictions do not have any repetitive loss properties: unincorporated Lubbock County, City of Idalou, Town of New Deal, Town of Ransom Canyon, City of Shallowater, City of Slaton, and City of Wolfforth.

[5] Source: Texas Water Development Board

Table 13-9. Repetitive Loss and Severe Repetitive Loss Properties

JURISDICTION	BUILDING TYPE	NUMBER OF STRUCTURES	NUMBER OF STRUCTURES	TOTAL PAID ($)
Village of Buffalo Springs	Single Family	1	2	$80,672.73
City of Lubbock	Single Family	6	15	$92,626.01

SECTION 14: DAM AND LEVEE FAILURE

HAZARD DESCRIPTION

DAMS

Dams are water storage, control, or diversion structures that impound water upstream in reservoirs. Dam failure can take several forms, including a collapse of or breach in the structure. While most dams have storage volumes small enough that failures have few or no repercussions, dams storing large amounts can cause significant flooding downstream. Dam failures can result from any one or a combination of the following causes:

- Prolonged periods of rainfall and flooding, which cause most failures;
- Inadequate spillway capacity, resulting in excess overtopping of the embankment;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, or maintain gates, valves, and other operational components;
- Improper design or use of improper construction materials;
- Failure of upstream dams in the same drainage basin;
- High winds, which can cause significant wave action and result in substantial erosion;
- Destructive acts of terrorism; and,
- Earthquakes, which typically cause longitudinal cracks at the tops of the embankments, leading to structural failure.

Benefits provided by dams include water supplies for drinking; irrigation and industrial uses; flood control; hydroelectric power; recreation; and navigation. At the same time, dams also represent a risk to public safety. Dams require ongoing maintenance, monitoring, safety inspections, and sometimes even rehabilitation to continue safe service.

In the event of a dam failure, the energy of the water stored behind the dam is capable of causing rapid and unexpected flooding downstream, resulting in loss of life and substantial property damage. A devastating effect on water supply and power generation could be expected as well. The terrorist attacks of September 11, 2001 generated increased focus on protecting the country's infrastructure, including ensuring the safety of dams.

SECTION 14: DAM AND LEVEE FAILURE

One major issue with the safety of dams is their age. The average age of America's 84,000 dams is 52 years. According to statistics released in 2009 by the Association of State Dam Safety Officials[1], more than 2,000 dams near population centers are in need of repair. In addition to the continual aging of dams, there have not been significant increases in the number of safety inspectors resulting in haphazard maintenance and inspection.

The Association of State Dam Safety Officials estimate that $16 billion will be needed to repair all high-hazard dams, but the total for all state dam-safety budgets is less than $60 million[2]. The current maintenance budget does not match the scale of America's long-term modifications of its watersheds. Worse still, more people are moving into risky areas. As the American population grows, dams that once could have failed without major repercussions are now upstream of cities and development.

LEVEE

A levee is simply a man-made embankment built to keep a river from overflowing its banks or to prevent ocean waves from washing into undesired areas. A levee is typically little more than a mound of less permeable soil, like clay, wider at the base and narrower at the top. These mounds run in a long strip in varying height, sometimes for many miles, along a river, lake or ocean. But there's no set height for levees. Their measurements vary according to the storms the area receives, even if those storms occur only once every hundred or thousand years.

Living by the water provides humans with a number of advantages: fertile farmland, transportation, trade and hydroelectric power. Levees allow humans to enjoy these assets without fear of flooding. But humans often forget how powerful waters behind a levee can be. In 1927, the Mississippi River swelled under heavy rains, charging through a line of levees and flooding

[1] Association of State Dam Safety Officials, Journal of Dam Safety
[2] Source: www.damsafety.org

an area the size of Ireland. In 1953, the North Sea broke through the Netherland's ancient system of dikes and killed thousands.

In 2005, New Orleans made international news when Hurricane Katrina breached its levees. Much of the city lies 10 feet (3 meters) below sea level. Over the course of the city's history, low-lying, boggy areas have been pumped dry to create new land. Much of this reclaimed land has sunk as it dried out. The entire city now depends on the levees, along with massive pumping stations, to keep the water out.

LOCATION

The State of Texas has 7,413 dams, all regulated by the Texas Commission on Environmental Quality (TCEQ). The National Dam Safety Review Board (in coordination with FEMA) and the National Inventory of Dams (NID) lists a total of ten dams or levees in or near the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts (Appendix D). Each of these dams were analyzed individually by location, volume, elevation, and condition (where available) when determining the risk, if any, for each dam. Each dam or levee site was further analyzed for potential risks utilizing FEMA's National Flood Hazard Layer (where available) to map locations and fully understand development near the dam or levee and topographical variations that may increase risk.

Most of the dams listed were embankments for typically dry detention drainage areas, irrigation reservoirs, or shored up stream embankments. These types of structures are utilized for flood control and irrigation and do not pose a dam or levee failure risk. Other dams in the planning area feature such limited storage capacity that they pose no risk to structures, infrastructure, or citizens. Dams that were deemed to pose no past, current, or future risk to the planning area are not profiled in the plan as no loss of life or impact to critical facilities or infrastructure is expected in the event of a breach. Based on this detailed analysis, the planning team was able to determine that only three of the seven dams pose a risk to the planning area.

The John T. Montford dam is located outside of the Lubbock County planning area in Garza County. However, it is owned and operated by the City of Lubbock; therefore, it is included in the analysis. The Lubbock Terminal Reservoir Levee is located in the City of Lubbock, with a potential breach affecting only the City of Lubbock. The Lake McMillan Dam is located in the Village of Buffalo Springs and owned by the LCWCID. A potential breach of the Lake McMillan Dam would affect the Village of Buffalo Springs as well as the Town of Ransom Canyon which is located within a one-mile radius of the dam. All three dams are listed in Table 14-1 with regulation information and profiled in detail in the Extent section of this hazard profile.

Figure 14-1 illustrates the general location for the critical dams in the planning area. While inundation maps are not available for the profiled dams, an estimated inundation radius has been included on the location map for each profiled dam or levee (indicated by the red circle). For dams with a maximum storage capacity of 100,000 acre-feet or more, all structures within five miles are considered to be at risk to potential dam or levee failure hazards. For dams with a maximum storage capacity between 10,000 and 100,000 acre-feet, all structures within three miles are considered to be at risk to potential dam or levee failure hazards. For dams with a maximum storage capacity of less than 10,000 acre-feet, all structures within one mile are considered to be at risk to potential dam or levee failure hazards.

SECTION 14: DAM AND LEVEE FAILURE

The jurisdictions profiling dam or levee failure include Lubbock County, Village of Buffalo Springs, City of Lubbock, Town of Ransom Canyon and the LCWCID. None of the remaining participating entities, ISDs, universities, planning authorities and hospital/special districts are profiling dam failure.

Figure 14-1. Lubbock County Critical Dam and Levee Locations

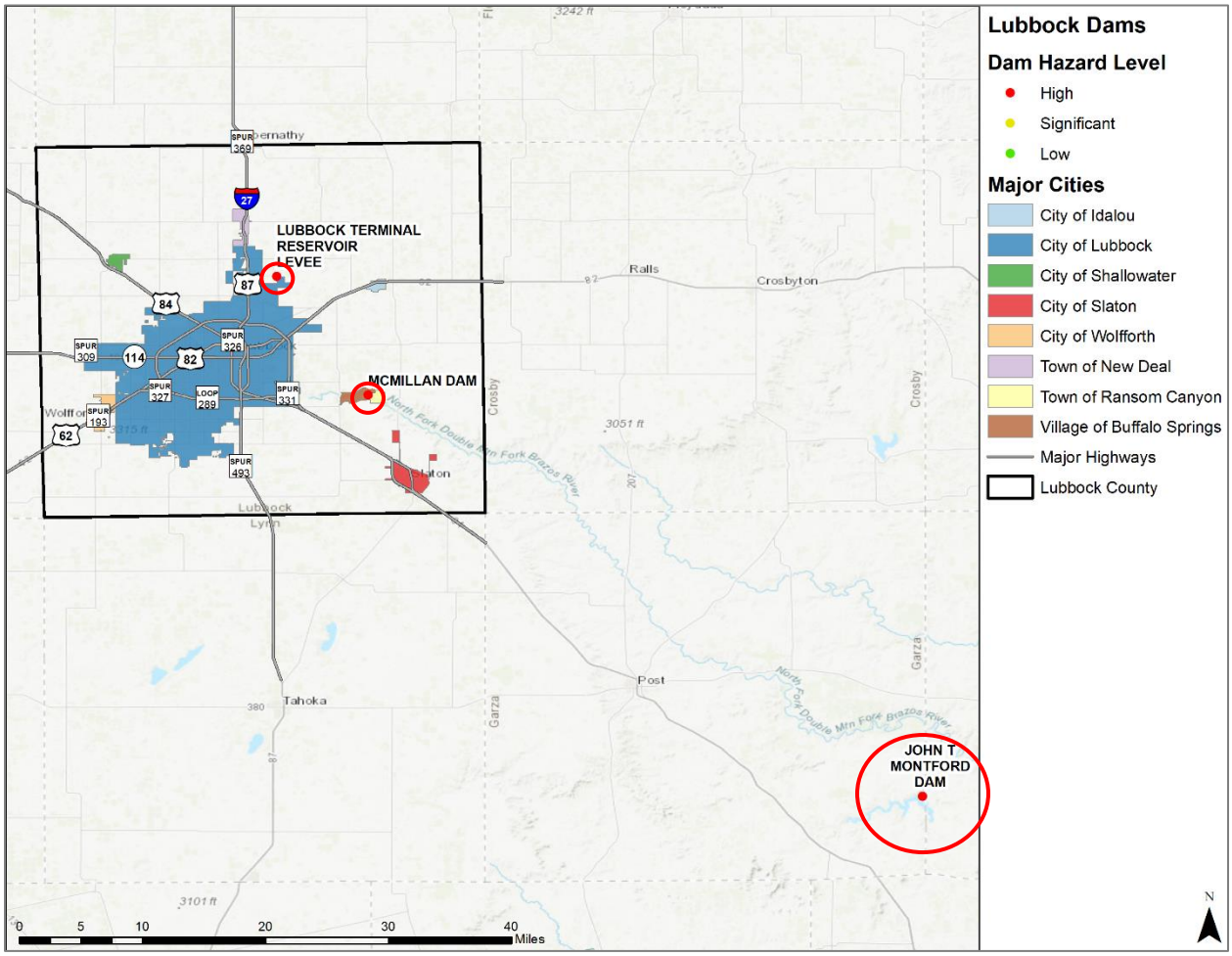


Table 14-1. Lubbock County Dam and Levee Survey

JURISDICTION	DAM OR LEVEE NAME	HEIGHT (Ft.)	STORAGE (Acre Ft.)	CONDITION	HAZARD CLASSIFICATION
Village of Buffalo Springs / Town of Ransom Canyon / LCWCID	Lake McMillian Dam	76	8,280	Fair	High
City of Lubbock / Lubbock County	John T. Montford Dam	141	354,500	Satisfactory	High
City of Lubbock	Lubbock Terminal Reservoir Levee	15	590	Satisfactory	High

EXTENT

The extent or magnitude of a dam or levee failure event is described in terms of the classification of damages that could result from a dam's failure, not the probability of failure. For dams with a maximum storage capacity of 100,000 acre-feet or more, all census blocks within five miles are considered to be at risk to potential dam or levee failure hazards. For dams with a maximum storage capacity between 10,000 and 100,000 acre-feet, all census blocks within three miles are considered to be at risk to potential dam or levee failure hazards. For dams with a maximum storage capacity of less than 10,000 acre-feet, all census blocks within one mile are considered to be at risk to potential dam or levee failure hazards.

Lake McMillian Dam:

Lake McMillian Dam is located within the Village of Buffalo Springs on the Double Mountain Fork Brazos River and is used for recreational purposes. It is owned by the Lubbock County WCID #1 and was constructed in 1960 by earthen construction containing rock and soil. The extent classification is considered high, and the area located near the dam is a semi-dense population area within the Village of Buffalo Springs and the Town of Ransom Canyon. A dam failure could cause power outages and disrupt utilities systems and populations. In the event of dam failure residential homes and the Ranch House at Ransom Canyon would be vulnerable. In the event of a breach, it is estimated the average breach width would be 267.6 ft. with a maximum breach flow of 534,103 cubic feet per second, according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 23 feet with the highest depth in the immediate area of the dam breach.

John T. Montford Dam:

John T. Montford Dam is located outside of Lubbock County limits in rural unincorporated Garza County but was built and is owned by the City of Lubbock. The dam is located on Lake Alan Henry, which is a reservoir that provides a recreational area for people to enjoy fishing, skiing, hunting and other outdoor water activities. The extent classification is considered high, although the area located near the dam breach area is rural and not densely populated. Populations in the plan area and critical facilities would not be directly impacted. If there was a breach, it is estimated the average breach width would be 798.8 ft. with a maximum breach flow of 4,108,466 cubic feet per second, according to the National Weather Service (NWS) Dam Break Equation. FEMA has not completed a study to determine flood hazard areas for Garza County, Texas. Unmapped floodplain areas are identified by FEMA as areas outside the Special Flood Hazard Area, with minimal chance of flood occurrence (outside the 500-year floodplain). A dam breach could result in an estimated depth up to 15 feet with the highest depth in the immediate area of the dam breach.

Lubbock Terminal Reservoir Levee:

Lubbock Terminal Reservoir Levee is the result of using off-channel water from Brazos River. Located in the City of Lubbock, the levee is owned by the Bureau of Reclamation, and was earthen constructed in 1965. Although the extent classification is considered high, the area located near the dam breach area is not densely populated. While there are a few residential homes, the majority of the land area is rural and used for agricultural purposes. Populations in the planning area and critical facilities would not be directly impacted. In the event of a breach, it is estimated the average breach width would be 92.1 ft. with a maximum breach flow of 15,363 cubic feet per second, according to the National Weather Service (NWS) Dam Break Equation. A dam breach

could result in an estimated depth up to 15 feet with the highest depth in the immediate area of the dam breach.

Table 14-2 represents the extent or magnitude of a dam or levee failure event that could be expected for the Lubbock County planning area for each profiled dam.

Table 14-2. Extent by Jurisdiction

JURISDICTION	PROFILED DAM	EXTENT (FLOW DEPTH)	LEVEL OF INTENSITY TO MITIGATE
Village of Buffalo Springs / Town of Ransom Canyon / LCWCID	Lake McMillian Dam	0-23 feet	Dam failure presents a moderate threat for the impacted communities and the LCWCID due to the dam's condition. Loss of life is not expected. While some residential structures could be impacted, the greatest threat in the event of a breach would be localized flooding. Some infrastructure and utilities could be minimally impacted. Economic loss would be minimal.
City of Lubbock / Lubbock County	John T. Montford Dam	0-15 feet	Dam failure presents a low threat for the city and county due to the dam's condition. Loss of life (outside of the planning area) could be anticipated depending on the breach conditions. While some residential structures and a few commercial structures could be impacted, the greatest threat in the event of a breach would be localized flooding. Some infrastructure and utilities could be minimally impacted. Economic loss would be minimal.
City of Lubbock	Lubbock Terminal Reservoir Levee	0-15 feet	Dam failure presents a low threat for the city due to the dam's condition and limited capacity. Loss of life is not expected. While some residential structures could be impacted, the greatest threat in the event of a breach would be localized flooding and impacts to local farm land. Some infrastructure and utilities could be minimally impacted. Economic loss would be minimal.

HISTORICAL OCCURRENCES

The State of Texas has not experienced loss of life or extensive economic damage due to a dam or levee failure since the first half of the twentieth century. However, there may be many incidents that are not reported and, therefore, the actual number of incidents is likely to be greater. There

has not been a recorded dam or levee failure event for any of the participating jurisdictions in the Lubbock County planning area, including all participating jurisdictions, ISDs, universities, planning authorities and hospital/special districts.

PROBABILITY OF FUTURE EVENTS

No historical events of dam or levee failure have been recorded in the Lubbock County planning area, though the risk of dam or levee failure is monitored closely. Due to the lack of historical occurrences, the probability of a future event is unlikely for Lubbock County, meaning an event is possible in the next ten years.

VULNERABILITY AND IMPACT

There are seven dams and/or levees in the Lubbock County planning area. All dams or levees were evaluated in-depth to determine the risk, if any, associated with each dam. This analysis indicated that three dams present a risk to structures or infrastructure in the planning area.

Flooding is the most prominent effect of dam or levee failure. If the dam or levee failure is extensive, a large amount of water would enter the downstream waterways forcing them out of their banks. There may be significant environmental effects, resulting in flooding that could disperse debris and hazardous materials downstream that can damage local ecosystems. If the event is severe, debris carried downstream can block traffic flow, cause power outages, and disrupt local utilities, such as water and wastewater, which could result in school closures. For specific vulnerability, please refer to the narrative for each dam or levee under the Extent section of this profile.

Annualized loss-estimates for dam or levee failure are not available; neither is there a breakdown of potential dollar losses for critical facilities, infrastructure and lifelines, or hazardous-materials facilities. If a significant dam or levee should fail, however, the severity of impact for the planning area would likely be minimal.

The severity of impact from a dam or levee breach would be “Limited,” meaning it could result in injuries treatable with first aid, critical facilities being shut down for 24-hours or less and less than ten percent of the property in the estimated breach inundation area destroyed or with major damage. Creating mitigation actions to remove or protect people and structures from the path of destruction is necessary in order to minimize impact from dam or levee failure.

ASSESSMENT OF IMPACTS

Any individual dam or levee has a very specific area that will be impacted by a catastrophic failure. Dams identified as high or significant hazard can directly threaten the lives of individuals living or working in the inundation zone below the dam. The impact from any catastrophic failure would be similar to that of a flash flood. The impact of climate change could produce greater risk of dam or levee failures due to larger more frequent floods, exacerbating the current dam or levee failure impacts. Increased dam or levee failure threats can be associated with a variety of impacts, including:

- There could be injuries from impacts with debris carried by the flood.
- Swift-water rescue of individuals trapped by the water puts the immediate responders at risk for their own lives.
- Individuals involved in the cleanup may be at risk from the debris left behind.

- Continuity of operations for any jurisdiction outside the direct impact area could be very limited.
- Roads and bridges could be destroyed.
- Homes and businesses could be damaged or destroyed.
- Emergency services may be temporarily unavailable.
- Disruption of operations and the delivery of services in the impacted area.
- A large dam or levee with a high head of water could effectively scour the terrain below it for miles, taking out all buildings and other infrastructure.
- Scouring force could erode soil and any buried pipelines.
- Scouring action of a large dam or levee will destroy all vegetation in its path.
- Wildlife and wildlife habitat caught in the flow will likely be destroyed.
- Fish habitat will likely be destroyed.
- Topsoil will erode, slowing the return of natural vegetation.
- The destructive high velocity water flow may include substantial debris and hazardous materials, significantly increasing the risks to life and property in its path.
- Debris and hazardous material deposited downstream may cause further pollution of areas far greater than the inundation zone.
- Destroyed businesses and homes may not be rebuilt, reducing the tax base and impacting long term economic recovery.
- Historical or cultural resources may be damaged or destroyed.
- Recreational activities and tourism may be temporarily unavailable or unappealing, slowing economic recovery.

The economic and financial impacts of dam or levee failure on the area will depend entirely on the location of the dam, scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any dam or levee failure event.

SECTION 15: MITIGATION STRATEGY

MITIGATION GOALS

Based on the results of the risk and capability assessments, the Planning Team developed and prioritized the mitigation strategy. This involved utilizing the results of both assessments and reviewing the goals and objectives that were included in the previous 2015 Plan Update. At the Mitigation Workshop in May 2022, Planning Team members reviewed the mitigation strategy from the previous 2015 Plan Update. The consensus among all members present was that the strategy developed for the 2015 Plan did not require changes, as it identified overall improvements to be sought in the Plan Update. However, the order and priority of the goals and objectives were reorganized.

GOAL 1

Protect public health and safety.

OBJECTIVE 1.1

Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

OBJECTIVE 1.2

Maximize utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.

OBJECTIVE 1.3

Reduce the danger to, and enhance protection of, high risk areas during hazard events.

OBJECTIVE 1.4

Protect critical facilities and services.

GOAL 2

Build and support local capacity and commitment to continuously become less vulnerable to hazards.

OBJECTIVE 2.1

Build and support local partnerships to continuously become less vulnerable to hazards.

OBJECTIVE 2.2

Build a cadre of committed volunteers to safeguard the community before, during, and after a disaster.

OBJECTIVE 2.3
Build hazard mitigation concerns into county and city/town/village planning and budgeting processes.

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

OBJECTIVE 3.1
Heighten public awareness regarding the full range of natural and man-made hazards the public may face.

OBJECTIVE 3.2
Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards and increase individual efforts to respond to potential hazards.

OBJECTIVE 3.3
Publicize and encourage the adoption of appropriate hazard mitigation measures.

GOAL 4
Protect new and existing properties.

OBJECTIVE 4.1
Reduce repetitive losses to the National Flood Insurance Program (NFIP).

OBJECTIVE 4.2
Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.

OBJECTIVE 4.3
Enact and enforce regulatory measures to ensure that future development will not put people in harm's way or increase threats to existing properties.

GOAL 5
Maximize the resources for investment in hazard mitigation.

OBJECTIVE 5.1
Maximize the use of outside sources of funding.

OBJECTIVE 5.2
Maximize participation of property owners in protecting their properties.

OBJECTIVE 5.3
Maximize insurance coverage to provide financial protection against hazard events.

OBJECTIVE 5.4
Prioritize mitigation projects, based on cost-effectiveness and sites facing the greatest threat to life, health, and property.

GOAL 6
Promote growth in a sustainable manner.

OBJECTIVE 6.1
Incorporate hazard mitigation activities into long-range planning and development activities.

OBJECTIVE 6.2

Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

OBJECTIVE 6.3

Utilize regulatory approaches to prevent creation of future hazards to life and property.

SECTION 16: PREVIOUS ACTIONS

SUMMARY

Planning Team members were given copies of the previous mitigation actions submitted in the 2015 Plan at the mitigation workshop. Participating jurisdictions within Lubbock County reviewed the previous actions and provided an analysis as to whether the action had been completed, should be deferred as an ongoing activity, or be deleted from the Plan Update. The actions from the 2015 Plan are included in this section as they were written in 2015, with the exception of the "2022 Analysis" section. The following jurisdictions were not participants within the last plan, therefore there are no past actions for their review: Abernathy ISD, Betty M. Condra School of Education and Innovation, TTU Health Sciences Center, and the Lubbock Reese Redevelopment Authority.

SECTION 16: PREVIOUS ACTIONS

LUBBOCK COUNTY COUNTY-WIDE

	Lubbock County-Wide– Action #1
Proposed Action:	Purchase and install one user license to enable access to county-wide I-Info Alert / Notification System.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County, participating jurisdictions, ISDs, South Plains College; South Plains Association of Government; Lubbock County Hospital District/University Medical Center (UMC)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Alert/Notification System will allow optimal response time to notify both residents and businesses of all natural and human-caused disasters; reduce loss of lives and property; ensure unified method of disseminating alerts by community officials, first responders.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Dam Failure, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought, Wildfire, Flood, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	Approximately $4,000 per user license fee annually
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers; Lubbock County Water Control District #1: Police Dept., Superintendent Admin. Office; South Plains College: Risk Management Office; South Plains Association of Government: Homeland Security Officer; Lubbock County Hospital District (UMC): Safety Division
Implementation Schedule:	2014 and ongoing
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. License was purchased but would like to purchase additional licenses for other entities in Lubbock County HMAP. Completed by City of Lubbock. City of Lubbock uses Everbridge for a Mass Notification System out of Emergency Management operational budget. Update to education and awareness.

SECTION 16: PREVIOUS ACTIONS

		Lubbock County-Wide– Action #2
	Proposed Action:	As part of the county-wide I-Info Alert/Notification System, develop a public education program on hazard risk, how the public can protect themselves and property, and interpretation of specific alerts as they pertain to warnings and public information.
	BACKGROUND INFORMATION	
	Site and Location:	Lubbock County, participating jurisdictions, ISDs, South Plains College; South Plains Association of Government; Lubbock County Hospital District/University Medical Center (UMC)
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Educating the public through various social media outlets including PSA's, regarding how the Alert/Notification System will aid in implementing appropriate measures to manage the public before, during, and following a disaster; reduce loss of lives and property; allow residents to return to their communities in an orderly and expeditious time after the event.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Dam Failure, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought, Wildfire, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	Protect/harden all structures due to increased warning time during disaster or hazard threat
Priority (High, Moderate, Low):	High
Estimated Cost:	$500 per participating entity, annually
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers; Lubbock County Water Control District #1: Police Dept., Superintendent Admin. Office; South Plains College: Risk Management Office; South Plains Association of Government: Homeland Security Officer; Lubbock County Hospital District (UMC): Safety Division
Implementation Schedule:	2014 and ongoing
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County-Wide– Action #3
Proposed Action:	Locate sites and install county-wide system of dry fire hydrants. Sites will be chosen based on population, property valuation, loss potential, and fire history. Approximately one hydrant per jurisdiction/entity.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County, participating jurisdictions, ISDs, South Plains College; South Plains Association of Government; Lubbock County Hospital District/University Medical Center (UMC)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Maximize county-wide natural resources and available water sources; aid in preventing, reducing wildland and urban fire by installing an all-weather, year-round water source for fire suppression; reduce fire insurance rates through ISO.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Drought, Wildfire
Effect on new/existing buildings:	Reduce wildfire threat to new/existing
Priority (High, Moderate, Low):	High; phased projects, with installation of high priority hydrants first, and others in future years as a long-range plan
Estimated Cost:	$550 - $750 per hydrant, per participating entity, plus labor, materials
Potential Funding Sources:	HMGP, Texas Dept. Natural Resources, Texas Forest Service
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers; Lubbock County Water Control District #1: Police Dept., Superintendent Admin. Office; South Plains College: Risk Management Office; South Plains Association of Government: Homeland Security Officer; Lubbock County Hospital District (UMC): Safety Division
Implementation Schedule:	2014 and phased project
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Notes action may want to reflect un-incorporated areas of the County as most incorporated jurisdictions have a hydrant system. Update to structure and infrastructure.

SECTION 16: PREVIOUS ACTIONS

		Lubbock County-Wide– Action #4
	Proposed Action:	Map locations of installed dry fire hydrants. Maps will be shared with all participating jurisdictions, the public, and local, county, and state agencies. Procure contracts and land use agreements with property owners, promote mapped sites through public awareness program.
	BACKGROUND INFORMATION	
	Site and Location:	Lubbock County, participating jurisdictions, ISDs, South Plains College; South Plains Association of Government; Lubbock County Hospital District/University Medical Center (UMC)
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Expedite management and extinguishing of urban and wildland fires throughout county by mapping known locations of dry fire hydrants; aid in preventing and reducing wildland and urban fires. Reduce property and fire insurance rates county-wide through ISO.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Drought, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	Labor, materials, permitting, land agreements, supplies estimated at $250 annually per entity
Potential Funding Sources:	HMGP, Texas Dept. Natural Resources, Texas Forest Service
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers; Lubbock County Water Control District #1: Police Dept., Superintendent Admin. Office; South Plains College: Risk Management Office; South Plains Association of Government: Homeland Security Officer; Lubbock County Hospital District (UMC): Safety Division
Implementation Schedule:	2014 and phased project
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to education and awareness.

SECTION 16: PREVIOUS ACTIONS

		Lubbock County-Wide– Action #5
	Proposed Action:	Purchase personal protective equipment for First Responders for severe weather events.
	BACKGROUND INFORMATION	
	Site and Location:	Lubbock County, participating jurisdictions, ISDs, South Plains College; South Plains Association of Government; Lubbock County Hospital District/University Medical Center (UMC)
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize first responders' exposure to severe dust particles, heat, and chemicals pertaining to natural and human caused disasters. Recent severe dust storms in the region have resulted in illness, risk of sight loss, and respiratory ailments for Responders not adequately protected.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Wildfire, Severe Winter Storm, Thunderstorm, Wildfire, Extreme Heat, Hazmat Release
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	Homeland Security Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers; Lubbock County Water Control District #1: Police Dept., Superintendent Admin. Office; South Plains College: Risk Management Office; South Plains Association of Government: Homeland Security Officer; Lubbock County Hospital District (UMC): Safety Division
Implementation Schedule:	2013-2018
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update. Completed by City of Lubbock. The City of Lubbock purchases appropriate work PPE to ensure workers and staff are safe in all environments and for all hazards. This is accomplished through operational budgets.

LUBBOCK COUNTY

	Lubbock County– Action #1
Proposed Action:	Implement a program to protect critical facilities to the 500-year flood before, during and following a flood event. Project includes flood proofing or relocating current EMC office located in basement area of courthouse annex, and County hospital District facilities located in SFHA.
BACKGROUND INFORMATION	
Site and Location:	Courthouse annex and Lubbock County Hospital District
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure all critical facilities remain accessible and functioning to provide essential services to residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Mitigate retrofitted or new critical facilities
Priority (High, Moderate, Low):	High
Estimated Cost:	Costs will vary depending on project. Projects may include retrofitting, relocating, and flood-proofing structures; $20,000 to $1 Million
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Emergency Management office
Implementation Schedule:	2013-2018
Incorporation into Existing Plans:	Council of Government Agreement, Emergency Operations Plan, Continuance Of Operations Plan (COOP), HMAP Update, NFIP Ordinance

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #2
Proposed Action:	Purchase trauma bags for all emergency response vehicles and include training of staff.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life by enabling all first responders to rapidly deploy life-saving technology to any medical and non-medical emergency in the event of a disaster.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Winter Storm, Drought, Flood, Wildfire, Hail, Severe Thunderstorm, Dam Failure, Extreme Heat, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	HMGP Grants, Local Revenue
Lead Agency/Department Responsible:	
Implementation Schedule:	None
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #3
Proposed Action:	Purchase an unmanned aerial vehicle.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce human exposure and reduce potential danger to tactical officers; enhance intelligence gathering capabilities.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Completed team training, will need to equipment.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #4
Proposed Action:	Purchase of tactical body armor.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide enhanced protection to tactical officers to ensure their safety in responding to disasters and minimize timeframe for securing residents' safety.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$250,000
Potential Funding Sources:	Department of Homeland Security, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Funded by DOH grants, but equipment has a five-year life span.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #5
Proposed Action:	Purchase of helicopter / fixed wing aircraft.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce human exposure and reduce potential danger to tactical officers; enhance intelligence gathering capabilities
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #6
Proposed Action:	Purchase of replacement bomb dog and training of K- 9 and handler
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to first responders and the public by providing enhanced intelligence gathering capabilities from explosive devices.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update. Partial completion.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #7
Proposed Action:	Purchase of communications equipment.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide for enhanced inter-operable communications during any incident.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Drought, Severe Winter Storm, Tornado
Effect on new/existing buildings:	
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000,000
Potential Funding Sources:	HMGP Grants, Local Revenue, Grants
Lead Agency/Department Responsible:	Lubbock County Emergency Management
Implementation Schedule:	1 to 3 years from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Equipment as a life cycle and will need to be updated.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #8
Proposed Action:	Upgrade County facilities that support emergency operations by adding shutters to primary windows and doors.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County Facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to Lubbock County facilities allowing continuity of operations to include enhanced command and control, and inter-operable communications capabilities
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Severe Winter Storm, Severe Thunderstorm, Tornado
Effect on new/existing buildings:	Improve and harden structures from cited hazards
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Partial completion.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #9
Proposed Action:	Install emergency portable generators, mobile trailers at county critical facilities as backup in the event of loss of power during disaster and severe weather events.
BACKGROUND INFORMATION	
Site and Location:	Critical facilities that support continuity of operations as provided by fire, police, emergency management, utility operations, first responders
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide enhanced response capability and continuity of operations to include enhanced command and control and inter-operable communications capabilities.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Extreme Heat, Severe Winter Storm, Severe Thunderstorm, Drought, Hail, Tornado, Flood, Dam Failure
Effect on new/existing buildings:	Buildings continue to provide critical utility services
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Partial Completion. Update to structure and infrastructure.

	Lubbock County– Action #10
Proposed Action:	Purchase personal chemical / protective equipment for specific disaster events for first responders.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to first responders from hazmat incidents / wildland fires and severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Wildfire, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update. Partial completion.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #11
Proposed Action:	Purchase of small tactical robot.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life by utilizing robotics to identify situations posing danger to people and minimize use of first responders in entering/rescue in dangerous events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Pipeline Failure, Pandemic
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000
Potential Funding Sources:	Department of Homeland Security
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #12
Proposed Action:	Purchase fleet of ATVs.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide law enforcement officers enhanced intelligence gathering, and search and rescue capabilities. Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Extreme Heat, Severe Winter Storm, Flood
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #13
Proposed Action:	Purchase of upgrades for bomb robot.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to first responders and the public by providing enhanced intelligence gathering capabilities from explosive devices. Avoid loss of life and property damage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Funded by DOH grants, but equipment is near end-of-life span.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #14
Proposed Action:	Purchase of emergency rations (food and water) for responders and public.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide continuity of operations for response and recovery efforts for many types of emergency incidents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Extreme Heat, Tornado, Flood, Drought
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update. Partial completion. Received donations.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #15
Proposed Action:	Purchase of FLIR / night vision systems.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to tactical officers and enhanced intelligence gathering capabilities. Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$12,000,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Funded by DOH grants, but equipment is has life span.

SECTION 16: PREVIOUS ACTIONS

	Lubbock County– Action #16
Proposed Action:	Purchase of replacement mobile command/communication vehicles.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to All Responders enhanced command and control and inter-operable communications capabilities. Avoid loss of life
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,500,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

		Lubbock County– Action #17
	Proposed Action:	Purchase of AED's (Automatic External Defibrillator) for all emergency response vehicles and include training of staff. Provide ability for all first responders to rapidly deploy life-saving technology to cardiac medical emergencies as a result of stress-related situations during disasters.
	BACKGROUND INFORMATION	
	Site and Location:	County
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; improve quality of life for residents.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Wildfire, Hazmat Release, Severe Winter Storm, Extreme Heat, Tornado, Flood, Hail, Severe Thunderstorm, Drought
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000
Potential Funding Sources:	HMGP Grants, Department of Homeland Security, Texas Forest Service, Local Revenue
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	3 years from funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Defer to Plan Update. Partial Completion.

	Lubbock County– Action #18
Proposed Action:	Develop a public awareness program regarding the availability of federal flood insurance.
BACKGROUND INFORMATION	
Site and Location:	County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce losses in dollars to uninsured structures following a flood event; reduce flood insurance premiums.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce flood potential by elevating structures protecting by flood insurance policy
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000
Potential Funding Sources:	Local Revenue, other sources
Lead Agency/Department Responsible:	County Planning Dept.
Implementation Schedule:	2013
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Comprehensive Community Development

2022 ANALYSIS:
Defer to Plan Update.

VILLAGE OF BUFFALO SPRINGS

	Village of Buffalo Springs– Action #1
Proposed Action:	Enhance and expand existing limited alert system equipment currently in place at McMillan Dam and educate residents in downstream inundation area regarding flooding risk due to dam failure.
BACKGROUND INFORMATION	
Site and Location:	½ mile west of Ransom Canyon city limits
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Ransom Canyon with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

	Village of Buffalo Springs– Action #2
Proposed Action:	Implement public education program to educate all residents of flood insurance availability.
BACKGROUND INFORMATION	
Site and Location:	Village-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life to 1/3 of residents and 80-100 homes potentially affected by dam failure.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Reduce flood potential of structures downstream of dam
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Ransom Canyon with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

		Village of Buffalo Springs– Action #3
	Proposed Action:	As part of the Village's Emergency Operations Plan, construct an alternate evacuation route for residents affected by McMillan Dam failure, and disseminate information to affected residents regarding dam failure, location of evacuation routes, and shelters.
	BACKGROUND INFORMATION	
	Site and Location:	Site west of Ransom Canyon Dam
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life for residents unable to evacuate due to traffic congestion or flooded road.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Police, EMC
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

	Village of Buffalo Springs– Action #4
Proposed Action:	Purchase and provide NOAA radios for early warning and post-event information and place in schools and critical facilities.
BACKGROUND INFORMATION	
Site and Location:	Throughout Village
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide early warning to reduce impact on people and property from severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm
Effect on new/existing buildings:	Reinforce structures prior to disaster/weather event
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	EMC
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

CITY OF IDALOU

	City of Idalou– Action #1
Proposed Action:	Construct multi-use Community Storm Shelter and EOC.
BACKGROUND INFORMATION	
Site and Location:	Site to be determined
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; ensure emergency services continue for residents in the event of disaster.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$850,000
Potential Funding Sources:	HMGP, USDA, City Match
Lead Agency/Department Responsible:	Emergency Management, City Administration
Implementation Schedule:	2014 and as grants become available
Incorporation into Existing Plans:	Emergency Operations Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	City of Idalou– Action #2
Proposed Action:	Construct series of detention ponds with water filtration system for emergency potable water in the event of water system failure, depletion and wildfire.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; ensure continued quality of life for residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Wildfire
Effect on new/existing buildings:	Continue to provide water to City buildings
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	City Administration, Public Works
Implementation Schedule:	Over the next four years
Incorporation into Existing Plans:	Comprehensive Community Development Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Update to include structure and infrastructure.

SECTION 16: PREVIOUS ACTIONS

	City of Idalou– Action #3
Proposed Action:	Disseminate NFIP public awareness information to citizens regarding availability of flood insurance.
BACKGROUND INFORMATION	
Site and Location:	Idalou City Hall
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life by permitting and elevating buildings in high-risk flood zones.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce flood potential by elevating structures/protecting by flood insurance policy
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

2022 ANALYSIS:
Completed.

SECTION 16: PREVIOUS ACTIONS

	City of Idalou– Action #4
Proposed Action:	Purchase a generator and other needed supplies for heating/cooling shelter during extreme temperature events.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life and continue providing essential services to residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Winter Storm, Extreme Heat
Effect on new/existing buildings:	Back-up power for lights and HVAC
Priority (High, Moderate, Low):	Low
Estimated Cost:	$10,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	As funds are available
Incorporation into Existing Plans:	Emergency Operations Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

	City of Idalou– Action #5
Proposed Action:	Conduct public education program regarding current Nexis Alert system, hazard risk, and provide information describing system alerts pertaining to notification, evacuation, during severe weather events.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Hail, Tornado, Severe Winter Storm, Extreme Heat, Drought, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,500
Potential Funding Sources:	Internal Budget
Lead Agency/Department Responsible:	Emergency Management, City Administration
Implementation Schedule:	Currently in place
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. Ongoing action.

SECTION 16: PREVIOUS ACTIONS

	City of Idalou– Action #6
Proposed Action:	Promote residential storm shelters / safe rooms program.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life by enhanced shelters within new and existing residential structures.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Hail
Effect on new/existing buildings:	Harden existing/new residential construction
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Emergency Management, City Administration
Implementation Schedule:	As funds become available
Incorporation into Existing Plans:	Comprehensive Community Development Plan, Building Permit Process

2022 ANALYSIS:
Defer to Plan Update. Update date to education and awareness.

	City of Idalou– Action #7
Proposed Action:	Implement program to clear debris from flood-prone areas, bridges, drains and culverts to prevent overtopping and backup during flash floods.
BACKGROUND INFORMATION	
Site and Location:	Idalou City Hall and local businesses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce minor flooding of structures in SFHAs.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Severe Winter Storm
Effect on new/existing buildings:	Reduce potential for flooding structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	City
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	Annually starting in 2013
Incorporation into Existing Plans:	Emergency Operations Plan, Flood Damage Prevention Ordinance

2022 ANALYSIS:
Completed and Defer to Plan Update. Ongoing action with a policy in place. Update to structure and infrastructure.

	City of Idalou– Action #8
Proposed Action:	Establish native grass buffers around Playa Lakes to filter out soil and contaminants from flooding; replenish dry Playa Lakes to ensure protection of aquifers and mitigate declining water tables due to drought.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce contamination from runoff to Playa Lake recharge areas which act as a natural wetland area in protection of underground aquifers.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Drought
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	Internal Budget
Lead Agency/Department Responsible:	City Administration, Public Works
Implementation Schedule:	2013
Incorporation into Existing Plans:	Environmental Protection Plan, Water Conservation Plan

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

	City of Idalou– Action #9
Proposed Action:	Develop water conservation / drought education programs.
BACKGROUND INFORMATION	
Site and Location:	City of Idalou
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Enhance water conservation and ensure continued supply of potable water.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500
Potential Funding Sources:	Internal Funds
Lead Agency/Department Responsible:	City Administration, Public Works
Implementation Schedule:	As funds are available
Incorporation into Existing Plans:	Water Conservation Plan, Firewise Community Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. Ongoing action with a policy in place.

CITY OF LUBBOCK

	City of Lubbock– Action #1
Proposed Action:	Widen Milwaukee Avenue and improve carrying capacity of floodwaters at Playa Lake 94.
BACKGROUND INFORMATION	
Site and Location:	98th St. @ Milwaukee, in vicinity of Playa Lake 94
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce property damage and potential flooding of area structures; reduce monetary cost of road improvements due to washout.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm
Effect on new/existing buildings:	Reduce flooding due to improved drainage
Priority (High, Moderate, Low):	High
Estimated Cost:	$245,000
Potential Funding Sources:	Public Works, CIP funds
Lead Agency/Department Responsible:	Street Engineering
Implementation Schedule:	Mid- 2013
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

2022 ANALYSIS:
Completed and Defer to Plan Update. Project completed in 2014. An additional structural control project was also completed for storm sewer improvements at 98th and Salisbury. Annually, capital improvement projects are now being ranked scored for future implementation projects. Several projects are in schematic design phases.

SECTION 16: PREVIOUS ACTIONS

	City of Lubbock– Action #2
Proposed Action:	Enhance holding capacity of the dry side of the John T. Montford Dam structure and install a MAT system to mitigate flooding.
BACKGROUND INFORMATION	
Site and Location:	Lake Alan Henry at Dam site
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce property damage and avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Reduce flooding potential downstream of dam
Priority (High, Moderate, Low):	High
Estimated Cost:	$4.5 Million
Potential Funding Sources:	Bonds, HMGP Grants
Lead Agency/Department Responsible:	Water Utility Engineering
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. Project completed in 2013. The water utilities department is currently having the entire Dam Area inspected by an engineer to recommend needed improvements for maintenance of the area. There is a plan to open a new Capital Project in 21-22 to address areas needing improvements on the dry side of the Dam. Most of these improvements will mitigate on going erosion within the Dam area.

	City of Lubbock– Action #3
Proposed Action:	Install eight miles of gravity flow storm sewer pipe as part of the Northwest Lubbock Drainage Improvements project, and to help maintain CRS rating for flood prevention.
BACKGROUND INFORMATION	
Site and Location:	NW Loop 289, Quaker Avenue, Erskine Street
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce property damage due to flooding, reduce cost of future flooding and avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm
Effect on new/existing buildings:	Reduce potential flooding due to drainage project
Priority (High, Moderate, Low):	High
Estimated Cost:	$70 Million
Potential Funding Sources:	Stormwater Fees, HMGP Grants
Lead Agency/Department Responsible:	Stormwater Engineering
Implementation Schedule:	2013-2017
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

2022 ANALYSIS:
Defer to Plan Update. Still in progress. Phase 1 and 2 of the projects were completed in 2017. Phase 3 is in construction and Phase 4 is in design. Additional phases will add additional playas to the Northwest System.

	City of Lubbock– Action #4
Proposed Action:	Study the current condition of the intake tower bridge and structure at John Montford Dam; stabilize and harden structure if movement has occurred within the surrounding soils.
BACKGROUND INFORMATION	
Site and Location:	Lake Alan Henry in Garza County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life due to dam failure.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Reduce dam failure and potential downstream flood
Priority (High, Moderate, Low):	High
Estimated Cost:	$417,000+
Potential Funding Sources:	Bonds, HMGP Grants
Lead Agency/Department Responsible:	Water Utility Engineering
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Emergency Operations Plan, Emergency Response and Evacuation Plan

2022 ANALYSIS:
Completed. This project was completed in 2016. The project determined there is no additional movement of the structure. Additional equipment installed to monitor site. No further implementation beyond routine maintenance is needed.

	City of Lubbock– Action #5
Proposed Action:	Retrofit pump station emergency electric generators with automatic switchover capabilities at water booster pump stations.
BACKGROUND INFORMATION	
Site and Location:	City of Lubbock water supply and distribution system at 13 pump stations
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continued protection of residents and continued essential services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Severe Winter Storm, Tornado, Wildfire, Extreme Heat, Flood
Effect on new/existing buildings:	Continue to supply critical utilities to structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$3.3 Million
Potential Funding Sources:	Water Revenue
Lead Agency/Department Responsible:	Water Utility Wastewater
Implementation Schedule:	2013
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Completed. This project has been completed, there are no further additional generator retrofits for pump station sites. Any new pump stations will be built with a generator.

	City of Lubbock– Action #6
Proposed Action:	Replace regulatory and warning traffic signs, install breakaway poles within the city limits, and install pavement markings at intersections and school zones to mitigate flood velocity damage during flooding events.
BACKGROUND INFORMATION	
Site and Location:	Throughout the City
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce danger to residents and students in high flood risk zones by providing warning signs.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000 ($150,000 over two years)
Potential Funding Sources:	Taxes
Lead Agency/Department Responsible:	Traffic Engineering
Implementation Schedule:	2013
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

2022 ANALYSIS:
Completed and Defer to Plan Update. Project as documented has been completed in 2020. Additional sites are being reviewed for future hazard prevention implementation. Update to education and awareness.

	City of Lubbock– Action #7
Proposed Action:	Purchase emergency generators as backup in disasters and power outages to start Water and Wastewater pumps in compliance with TCEQ regulations.
BACKGROUND INFORMATION	
Site and Location:	Southwest Water Reclamation Plant
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continued essential services to residents in the event of power failure.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Severe Winter Storm, Flood, Tornado, Severe Winter Storm, Wildfire, Extreme Heat
Effect on new/existing buildings:	Continued critical utility service to structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$450,000
Potential Funding Sources:	City of Lubbock
Lead Agency/Department Responsible:	Water and Wastewater Utility Engineering
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Completed and Defer to Plan Update. Project was completed 2019. The southwest water reclamation plan is now supported by emergency generators. Recommended future implementation will be to provide emergency power to the effluent pump station. The electrical upgrades for the Southeast Water Reclamation Plant effluent pump station are currently in progress (Grant Applications submitted for electrical upgrades and generators). The upgrades include rehab, new transformers, automatic switch gear for generator power, and generators.

	City of Lubbock– Action #8
Proposed Action:	Install new central computer traffic system and communication system including controllers, hardware, and wireless Ethernet to protect against outages in the event of severe weather events.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continued operation of traffic system and communications during severe weather and disasters; improve quality of life for residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Severe Winter Storm, Tornado, Hail, Flood, Wildfire, Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$4,750,000
Potential Funding Sources:	City of Lubbock
Lead Agency/Department Responsible:	Traffic Engineering
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Traffic and Emergency Plans

2022 ANALYSIS:
Completed. Several traffic signals on thoroughfare-to-thoroughfare intersections are now covered to include battery backups to allow the signal to continue to operate during power outages. During power outages, the battery backups ensure all pertinent signals within the City of Lubbock continue to run. The battery backup program is still ongoing. This allows for cameras at intersections to run during power outages to assist the Traffic Management System and the Emergency Operations Center. Fiber optic runs will continue and are planned for in both water, wastewater, and street projects by installing conduit for future fiber to assist interconnectivity of the City's operations.

SECTION 16: PREVIOUS ACTIONS

	City of Lubbock– Action #9
Proposed Action:	Purchase permanent emergency generators for the City's water system throughout the community as backup in disasters and severe weather events.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Continue providing essential services to residents during power failure during severe weather.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Severe Winter Storm, Flood, Tornado, Severe Winter Storm, Wildfire, Extreme Heat
Effect on new/existing buildings:	Continued utility services for structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1.8 Million
Potential Funding Sources:	Bonds
Lead Agency/Department Responsible:	Water Utility Engineering
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Emergency Operations Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Project is still in early planning phases. This is specific to sewer lift stations. Update to structure and infrastructure.

	City of Lubbock– Action #10
Proposed Action:	Purchase two Humvee rescue response vehicles that can be used by Police Department during severe weather events or wildfire.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life for first responders and expedite rescue operations to save lives.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Flood, Wildfire, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$150,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Police Department
Implementation Schedule:	2013-2014 or upon funding
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed and Defer to Plan Update. Since 2015, the Lubbock Police Department has annually purchased 4x4 vehicles to aid in severe weather and wildfire events. Current fleet is greater than 10 vehicles.

SECTION 16: PREVIOUS ACTIONS

City of Lubbock– Action #11	
Proposed Action:	Complete and implement Emergency Action Plans for Montford Dam and Canyon Lake Dam #2 and #3.
BACKGROUND INFORMATION	
Site and Location:	Citywide, Lake Alan Henry
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure adequate emergency plan is in place for area dams; reduce potential loss of lives and property in the event of dam failure.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Reduce potential flooding in inundation area
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000
Potential Funding Sources:	City of Lubbock
Lead Agency/Department Responsible:	Water Utility Engineering
Implementation Schedule:	2013-2014 pending TCEQ approval
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Completed. Annual. Emergency Action Plans for Montford Dam, Canyon Lake Dam #2, and Canyon Lake Dam #3 are complete and are annually reviewed. Tabletop exercises have been conducted and are scheduled to continue. Recommendations to extend property protection actions include a study of Higinbotham excavation to increase storage volume capacity during rain events. This project is in a feasibility stage at this time.

SECTION 16: PREVIOUS ACTIONS

	City of Lubbock– Action #12
Proposed Action:	Implement and incorporate smart growth initiatives into approved Hazard Mitigation Plan and long-term community development planning activities.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure adequate water supplies and key infrastructure are available as City grows and expands; improve and maintain quality of life for residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Wildfire, Extreme Heat, Drought
Effect on new/existing buildings:	Reduce flooding, adequate water supplies to homes
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	City of Lubbock
Lead Agency/Department Responsible:	Water Utility Engineering
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Comprehensive Community Development Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. First step was the 2040 Comprehensive Plan adoption in 2019. A process to impact development policy and ordinances is in progress. Planning department is leading the Unified Development Code project.

TOWN OF NEW DEAL

	Town of New Deal– Action #1
Proposed Action:	Purchase NOAA "All Hazard" radios for early warning and post-event information to place in all schools, critical facilities, and nursing homes.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve response time to disaster; reduce loss of life and property damage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

		Town of New Deal– Action #2
	Proposed Action:	Implement a tree trimming program to remove weak trees near right of ways to avoid debris in roadway following a severe weather event.
	BACKGROUND INFORMATION	
	Site and Location:	Citywide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve response time to disaster through clear roadways; reduce loss of life and property damage by fallen limbs and trees
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	Reduce damage to construction by fallen trees/limbs
Priority (High, Moderate, Low):	Low
Estimated Cost:	$10,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

		Town of New Deal– Action #3
	Proposed Action:	Purchase generator for critical facilities for power supply in the event of utility failure during severe weather events.
	BACKGROUND INFORMATION	
	Site and Location:	City facilities
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve quality of life; continue to provide essential services to residents before, during and after a severe weather event.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	Continues essential services to buildings
Priority (High, Moderate, Low):	Low
Estimated Cost:	$20,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

	Town of New Deal– Action #4
Proposed Action:	Develop public awareness program to notify residents of availability of flood insurance/reduced cost of a flood policy in low-risk flood hazard areas.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Increase policy base in low-risk flood areas that may flood due to poor drainage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce flood potential by elevating structures/protecting by flood insurance policy
Priority (High, Moderate, Low):	Low
Estimated Cost:	$500
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Floodplain Manager
Implementation Schedule:	2013
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Floodplain Management Plan

2022 ANALYSIS:
Defer to Plan Update.

TOWN OF RANSOM CANYON

	Town of Ransom Canyon– Action #1
Proposed Action:	Expand existing limited alert system equipment currently in place for Ransom Canyon residents in proximity to McMillan Dam and educate residents of flood risk downstream in inundation area.
BACKGROUND INFORMATION	
Site and Location:	Ransom Canyon at dam site
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce potential loss of lives by upgrading current alert system and equipment.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Improve response time for securing structures downstream of dam
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Buffalo Springs with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update. Update to education and awareness.

SECTION 16: PREVIOUS ACTIONS

	Town of Ransom Canyon– Action #2
Proposed Action:	Implement public awareness program to educate residents on availability of flood insurance and flood risk city wide.
BACKGROUND INFORMATION	
Site and Location:	City wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life to 1/3 of residents and 80-100 homes potentially affected by dam failure and flood risk.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Reduce flooding potential in inundation areas
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Buffalo Springs with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan, Flood Damage Prevention Ordinance

2022 ANALYSIS:
Defer to Plan Update.

	Town of Ransom Canyon– Action #3
Proposed Action:	As part of the Village's Emergency Operations Plan, construct an alternate evacuation route for residents affected by McMillan Dam failure, and disseminate information to affected residents regarding dam failure, location of evacuation routes, and shelters.
BACKGROUND INFORMATION	
Site and Location:	Site west of Ransom Canyon Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life for residents unable to evacuate due to traffic congestion or flooded road.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure
Effect on new/existing buildings:	Reduce flooding potential in inundation areas
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Police, EMC
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Emergency Operations Plan, Disaster Response and Recovery Plan

2022 ANALYSIS:
Defer to Plan Update. Update to local plans and regulations.

CITY OF SHALLOWATER

	City of Shallowater– Action #1
Proposed Action:	Develop a program to disseminate NFIP public awareness information to citizens.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life by permitting and elevating buildings in high-risk flood zones; increase policy base and reduce monetary outlay associated with flooded structures.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Increase flood policies for post-disaster recovery
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

2022 ANALYSIS:
Completed.

	City of Shallowater– Action #2
Proposed Action:	Develop a public awareness campaign in conjunction with Shallowater ISD to notify resident of proposed storm shelter at Shallowater High School campus.
BACKGROUND INFORMATION	
Site and Location:	Residents within approved radius of shelter site on campus.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Revenue, HMGP Grants
Lead Agency/Department Responsible:	Emergency Manager
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. In progress, estimated to be completed in 2022. No updates required.

	City of Shallowater– Action #3
Proposed Action:	Implement a program for clearing debris from bridges, drains, and culverts to reduce impediments to first responders following flash flooding.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Increase floodplain conveyance areas.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce potential flooding due to improved drainage
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$15,000
Potential Funding Sources:	HMGP, Local Revenue, other sources
Lead Agency/Department Responsible:	Road and Bridge
Implementation Schedule:	Upon funding
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Completed.

CITY OF SLATON

	City of Slaton– Action #1
Proposed Action:	Purchase generator to supply Emergency Operation facilities during electrical outages due to severe weather event.
BACKGROUND INFORMATION	
Site and Location:	City facilities to be determined
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide continued essential services to critical facilities and residents in the event of power outage in a flood event or other disaster.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Severe Winter Storm, Tornado, Severe Thunderstorm
Effect on new/existing buildings:	Continue essential services to buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000
Potential Funding Sources:	HMGP, RFC, SRL, CDBG, ICC, Forest Service, DHS, Local Revenue, other sources
Lead Agency/Department Responsible:	Highway Supervisor
Implementation Schedule:	3rd Quarter- 2013
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Revise action to include 911 operation center and lift stations throughout City. Update to structure and infrastructure.

SECTION 16: PREVIOUS ACTIONS

	City of Slaton– Action #2
Proposed Action:	Distribute NFIP public awareness information to citizens including availability of flood insurance.
BACKGROUND INFORMATION	
Site and Location:	Slaton City Hall
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Educate residents regarding low cost of flood insurance in low-risk flood zones; increase policy base.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce cost of post-disaster rebuilding and recovery
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

2022 ANALYSIS:
Defer to Plan Update.

	City of Slaton– Action #3
Proposed Action:	Implement program to routinely remove debris from drainage ways and roadside ditches to prevent back up of flood velocity and improve conveyance of stream during flood events.
BACKGROUND INFORMATION	
Site and Location:	Drainage ways
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce drainage and potential minor flooding issues along area creeks and streams.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce potential flooding due to improved drainage
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	City Administration
Implementation Schedule:	2013-2014
Incorporation into Existing Plans:	Storm Water Management Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

CITY OF WOLFFORTH

City of Wolfforth– Action #1	
Proposed Action:	Purchase snowplows and sand hauling/spreading equipment.
BACKGROUND INFORMATION	
Site and Location:	City
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce roadway accidents and costs associated with aiding vehicle accidents during severe winter weather events
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$300,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Maintenance Dept.
Implementation Schedule:	2014
Incorporation into Existing Plans:	Not reflected in previous plan.

2022 ANALYSIS:
Completed. City has purchased equipment for road grading, dump truck for spreading and hauling sand.

	City of Wolfforth– Action #2
Proposed Action:	Construct shelter for emergency vehicles and covered walkways for accessing vehicles during severe weather events.
BACKGROUND INFORMATION	
Site and Location:	City office
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce cost to repair vehicles annually damaged by severe weather.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Winter Storm, Severe Thunderstorm, Hail
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$40,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Defer to Plan Update. The city is constructing a building for emergency vehicles it is budgeted at $400,000 and will be completed in 2022. Update to structure and infrastructure.

	City of Wolfforth– Action #3
Proposed Action:	Construct underground emergency operations center.
BACKGROUND INFORMATION	
Site and Location:	Site to be determined
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provides security from severe weather and ensures essential operations will continue during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Hail, Severe Winter Storm, Tornado
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2.5 Million
Potential Funding Sources:	HMGP, PDM
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014-2020
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Revise action to include additional buildings.

	City of Wolfforth– Action #4
Proposed Action:	Construct detention facilities with water filtration system for alternate water supply source in the event of drought and extreme heat conditions.
BACKGROUND INFORMATION	
Site and Location:	To be determined
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve quality of life for residents; ensure continued supply of potable water.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Wildfire
Effect on new/existing buildings:	Continued supply of water to new/existing buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Council
Implementation Schedule:	2014
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Completed. Underground water storage and treatment facility built and currently adding onto the plant.

	City of Wolfforth– Action #5
Proposed Action:	Develop and implement community wide program to conserve existing water supply source.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve quality of life for residents; ensure continued supply of potable water by educating residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100
Potential Funding Sources:	HMGP, PDM
Lead Agency/Department Responsible:	Council
Implementation Schedule:	2014
Incorporation into Existing Plans:	Comprehensive Community Development Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Defer to Plan Update. Action should be revised; city currently follows and enforces water restrictions. Update to education and awareness, local plans, and regulations.

	City of Wolfforth– Action #6
Proposed Action:	Purchase backup generators for city electric utility as backup for power outages during severe weather events and extreme weather conditions, which can cause power failure.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve quality of life for residents; ensure continued essential services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Severe Winter Storm
Effect on new/existing buildings:	Continue electric power to structures citywide
Priority (High, Moderate, Low):	Low
Estimated Cost:	$20,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Emergency Operations Plan, Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Completed. Backup generator was placed at city hall, EMS station, and working on one for the back city hall/training center.

	City of Wolfforth– Action #7
Proposed Action:	Implement program to purchase air conditioners/ heaters for low income and elderly residents susceptible to severe weather.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve quality of life for low income, elderly residents; ensure continued essential services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Emergency Operations Plan, Risk management Plan

2022 ANALYSIS:
Defer to Plan Update. New storage building will help with housing in severe cold or heat services for residence. Building is equipped with HVAC. Update to local plans and regulations, education and awareness.

	City of Wolfforth– Action #8
Proposed Action:	Develop and implement NFIP public education program for residents affected by high flood risk areas.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce economic and monetary losses from flooded structures.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Minimize post-disaster rebuilding/relocation costs; protect structures with flood policies
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100
Potential Funding Sources:	Local Revenue
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Flood Management Plan

2022 ANALYSIS:
Defer to Plan Update. Action is low priority due to the city only flooding during flash floods. Should be revised.

City of Wolfforth– Action #9	
Proposed Action:	Upgrade and expand outdoor warning siren system.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve evacuation of residents; shelter is in place for residents during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Revenue, City budget
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update. Revise action to include 2021-2022 tax note 2 new outdoor warning sirens will be placed in 2022. Update to include education and awareness.

	City of Wolfforth– Action #10
Proposed Action:	Promote private storm shelters and safe room program for existing and new residential construction.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce need for residents to evacuate during severe weather events by sheltering in place at home; reduce loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail
Effect on new/existing buildings:	Strengthen buildings in event of cited hazards
Priority (High, Moderate, Low):	Low
Estimated Cost:	$100,000
Potential Funding Sources:	Local Revenue, City budget
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Residential Construction Manual, Building Permit process

2022 ANALYSIS:
Completed and Defer to Plan Update. Ongoing. Storm shelter program is in place for residence.

	City of Wolfforth– Action #11
Proposed Action:	Update existing floodplain ordinance, prohibiting construction in high-risk flood zones.
BACKGROUND INFORMATION	
Site and Location:	Special Flood Hazard Areas within community
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize loss of life in flood-prone areas; minimize rescues from floodwaters.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce flooding potential in high-risk zones
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100
Potential Funding Sources:	Local Revenue, City budget
Lead Agency/Department Responsible:	Floodplain Administrator
Implementation Schedule:	2014
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

2022 ANALYSIS:
Completed and Defer to Plan Update. Ordinances for construction and zoning areas are in place. Update to local plans and regulations.

	City of Wolfforth– Action #12
Proposed Action:	Develop and manage storm drain maintenance program to improve drainage capabilities.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize minor flooding and drainage problems in areas of the city with inadequate or undersized storm drains.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on new/existing buildings:	Reduce risk of flooding by improved drainage
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000
Potential Funding Sources:	Local Revenue, City Budget
Lead Agency/Department Responsible:	Floodplain Administrator, Maintenance
Implementation Schedule:	2014
Incorporation into Existing Plans:	Storm Water Management Plan

2022 ANALYSIS:
Completed.

SECTION 16: PREVIOUS ACTIONS

	City of Wolfforth– Action #13
Proposed Action:	Implement program to require tall grass/weed maintenance through local ordinance.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce potential fuel for wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce wildfire impact on all construction
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500
Potential Funding Sources:	Local Revenue, Property Owners
Lead Agency/Department Responsible:	Code Enforcement
Implementation Schedule:	2014
Incorporation into Existing Plans:	Community Firewise Program

2022 ANALYSIS:
Completed. Action enforced by code enforcement.

	City of Wolfforth– Action #14
Proposed Action:	Purchase equipment and vehicles for emergency response.
BACKGROUND INFORMATION	
Site and Location:	Citywide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Assist in providing first responders with adequate equipment to ensure protection; evacuation of residents during and after severe weather events and other disasters.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire, Flood, Severe Winter Storm, Severe Thunderstorm, Extreme Heat
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Grants
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014
Incorporation into Existing Plans:	Not reflected in previous plan.

2022 ANALYSIS:
Defer to Plan Update. City is currently purchasing new equipment for emergency response.

FRENSHIP INDEPENDENT SCHOOL DISTRICT (ISD)

	Frenship ISD– Action #1
Proposed Action:	Purchase communication equipment including: 1 tower/repeater 5000, 75 handheld radios (Motorola 400 mhz. two-way radios), FCC regulated, 375.00, Package 5000 x 6- portable radio, mobile radio, license.
BACKGROUND INFORMATION	
Site and Location:	2 high schools, 1 alternative school, 10 (admin), 3 middle schools, 7 elementary schools
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Purchase compatible communications equipment to enable communications with Lubbock County in the event of a severe weather event
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Hail, Severe Winter Storm, Severe Thunderstorm, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed. Federal funds used to upgrade channels and system.

		Frenship ISD– Action #2
	Proposed Action:	Purchase 13 backup mobile generators and trailers to use on 12 campuses in the event of power failure.
	BACKGROUND INFORMATION	
	Site and Location:	12 sites at each school campus
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of school days due to power outage; continue essential services to students; reduce cost of lost frozen food service at each campus.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Severe Thunderstorm, Hail, Extreme Heat, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$240,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Superintendent, Maintenance
Implementation Schedule:	2014 or upon funding
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

	Frenship ISD– Action #3
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Delete Action. ISD does not feel it is beneficial or pertains to them at this time.

IDALOU INDEPENDENT SCHOOL DISTRICT (ISD)

	Idalou ISD– Action #1
Proposed Action:	Develop Hazard Awareness program to inform students, teachers, and parents of safety measures before, during and after a severe weather or natural disaster event.
BACKGROUND INFORMATION	
Site and Location:	ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Educate to reduce or avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,500
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Idalou ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan, Risk Management Plan

2022 ANALYSIS:
Completed. ISD distributes information through e-notes. Regular drills are conducted in most weather-hazard types.

		Idalou ISD– Action #2
	Proposed Action:	Purchase NOAA “All Hazard” radios for early warning and post-event information and place in all schools.
	BACKGROUND INFORMATION	
	Site and Location:	School campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve response time to disaster; reduce loss of life and property damage.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$300
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Idalou ISD
Implementation Schedule:	2014
Incorporation into Existing Plans:	Disaster Response and Recovery Plan, Risk Management Plan

2022 ANALYSIS:
Delete Action. Idalou ISD PD does monitor radio traffic through Lubbock County Dispatch. All admin and campus front offices have radios for communication, so ISD doesn’t know if NOAA radios are necessary.

	Idalou ISD– Action #3
Proposed Action:	Cut firebreaks into wooded areas around school campuses according to risk factor.
BACKGROUND INFORMATION	
Site and Location:	ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss to students, faculty and infrastructure in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce risk of building exposure to wildfire
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, HMGP Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014
Incorporation into Existing Plans:	Disaster Response and Recovery Plan, Risk Management Plan

2022 ANALYSIS:
Delete Action. ISD has no wooded areas surrounding critical buildings on campus.

		Idalou ISD– Action #4
	Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
	BACKGROUND INFORMATION	
	Site and Location:	Throughout ISD campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Delete Action. ISD does not feel it pertains to them at this time.

LUBBOCK INDEPENDENT SCHOOL DISTRICT (ISD)

	Lubbock ISD– Action #1
Proposed Action:	Purchase door contacts for all doors for Lubbock ISDs'.
BACKGROUND INFORMATION	
Site and Location:	Elementary schools, middle schools, high schools
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life. This would complete a four-million-dollar safety project to help secure the schools from hazard and outside threats.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Terrorism
Effect on new/existing buildings:	Moderate
Priority (High, Moderate, Low):	High
Estimated Cost:	$792,000
Potential Funding Sources:	Department of Homeland Security, Local Funding
Lead Agency/Department Responsible:	Lubbock ISD – Chief of Police and maintenance
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

	Lubbock ISD– Action #2
Proposed Action:	Purchase and install (non-breakable) windows in 52 school buildings – 11,781 windows.
BACKGROUND INFORMATION	
Site and Location:	Elementary schools, middle schools, high schools
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	This project would reduce the likelihood of injury during a tornado, severe thunderstorm, or high wind event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Tornado, Severe Thunderstorm, Severe Winter Storm
Effect on new/existing buildings:	Harden existing school buildings/minimize hazard risk
Priority (High, Moderate, Low):	High
Estimated Cost:	$35,000,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	School Maintenance
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. Revise action to include purchase and install security film for severe weather and intruders.

	Lubbock ISD– Action #3
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Elementary schools, middle schools, high school campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed.

	Lubbock ISD– Action #4
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Revise action to note a system can be purchase that is compatible with City of Lubbock alert system. Update to education and awareness.

LUBBOCK-COOPER INDEPENDENT SCHOOL DISTRICT (ISD)

	Lubbock-Cooper ISD– Action #1
Proposed Action:	Replace current glass with Lexan material in side entry.
BACKGROUND INFORMATION	
Site and Location:	Seven campus sites
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Strengthen buildings, reduce loss of school days due to severe weather, cost of replacing windows (if shattered), and long-term cost savings of continued repair to windows due to weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Tornado, Severe Thunderstorm
Effect on new/existing buildings:	Harden existing campus buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$850 per door and $300 installation with 140 doors for $161,000
Potential Funding Sources:	HMGP Grant
Lead Agency/Department Responsible:	Facilities Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Delete Action. ISD no longer feels it is a priority.

		Lubbock-Cooper ISD– Action #2
	Proposed Action:	Replace current glass with Lexan material in main entry.
	BACKGROUND INFORMATION	
	Site and Location:	Seven campus entry ways. All of these entries were designed or retrofitted to be a "choke point" for gaining entry into the campuses.
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	This will help finish safety considerations for students and staff that began with SOS-COPS grant. This will complete a major item to increase the overall safety of the campuses and reduce effects of severe weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Tornado, Severe Winter Storm, Severe Thunderstorm
Effect on new/existing buildings:	Strengthen existing buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$970 per door and $400 installation with 74 doors for a total cost of $101,380
Potential Funding Sources:	HMGP Grant
Lead Agency/Department Responsible:	Facilities Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Delete Action. ISD no longer feels it is a priority.

	Lubbock-Cooper ISD– Action #3
Proposed Action:	Retrofit gyms to make them tornado resistant.
BACKGROUND INFORMATION	
Site and Location:	One gym area on each of the campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; avoid cost to rebuild gyms when destroyed.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado
Effect on new/existing buildings:	Strengthen building from tornado risk
Priority (High, Moderate, Low):	High
Estimated Cost:	$145,000 each gym for $1,015,000
Potential Funding Sources:	HMGP Grant
Lead Agency/Department Responsible:	Facilities Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan, Construction Manual

2022 ANALYSIS:
Delete Action. ISD no longer feels it is a priority.

		Lubbock-Cooper ISD– Action #4
	Proposed Action:	Purchase backup generator for each campus.
	BACKGROUND INFORMATION	
	Site and Location:	Seven campuses at LCISD
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Allows critical facility to maintain operations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Severe Winter Storm, Tornado, Hail
Effect on new/existing buildings:	Continue essential services during disaster
Priority (High, Moderate, Low):	High
Estimated Cost:	Generator: $14,500, Fuel tank: $5,000, and Installation: $9,000 = $28,500 per campus, $199,500 total
Potential Funding Sources:	HMGP Grant
Lead Agency/Department Responsible:	Facilities
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

	Lubbock-Cooper ISD– Action #5
Proposed Action:	Cut firebreaks into wooded areas around school campuses according to risk factor.
BACKGROUND INFORMATION	
Site and Location:	ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss to students, faculty and infrastructure in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce risk of building exposure to wildfire
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, HMGP Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014
Incorporation into Existing Plans:	Disaster Response and Recovery Plan, Risk Management Plan

2022 ANALYSIS:
Delete Action. ISD no longer feels it is a priority.

	Lubbock-Cooper ISD– Action #6
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Delete Action. ISD does not feel it is beneficial or pertains to them at this time.

NEW DEAL INDEPENDENT SCHOOL DISTRICT (ISD)

	New Deal ISD– Action #1
Proposed Action:	Retrofit gym for safe room to protect students in the event of natural disasters and severe weather events.
BACKGROUND INFORMATION	
Site and Location:	School campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life by providing safe shelter to students
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Wildfire
Effect on new/existing buildings:	Harden school campus buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$2 Million
Potential Funding Sources:	HMGP, PDM
Lead Agency/Department Responsible:	Superintendent Office
Implementation Schedule:	2014-2016 upon funding
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. The district has passed a bond to construct a new elementary/MS campus. The new campus will have safe rooms built into the new building. The new campus is projected at approximately $20 million to complete. The timeline for this project is 2 years. Update to structure and infrastructure.

	New Deal ISD– Action #2
Proposed Action:	Replace existing windows with shatter proof glass.
BACKGROUND INFORMATION	
Site and Location:	Campus buildings
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce injury to students due to blown glass during severe weather and other disaster events; reduce monetary loss of school days due to damaged buildings.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Hail, Extreme Heat
Effect on new/existing buildings:	Minimize damage to buildings during hazard events
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$250,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014 or upon funding
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update.

	New Deal ISD– Action #3
Proposed Action:	Purchase backup generator for campus buildings.
BACKGROUND INFORMATION	
Site and Location:	Campus buildings
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continued essential services to students during power failure; reduce cost of loss of school days due to outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Wildfire
Effect on new/existing buildings:	Minimize damage to buildings that provide utilities
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$20,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2015 or upon funding
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Defer to Plan Update. Ongoing. Update to structure and infrastructure.

	New Deal ISD– Action #4
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Elementary schools, middle schools, high school campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed. Over the last 2 years the district has removed over 100 downed or weakened trees.

	New Deal ISD– Action #5
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Ongoing. Update to education and awareness.

ROOSEVELT INDEPENDENT SCHOOL DISTRICT (ISD)

	Roosevelt ISD– Action #1
Proposed Action:	Purchase backup generator for each campus.
BACKGROUND INFORMATION	
Site and Location:	All campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Allows critical facility to maintain operations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Severe Winter Storm, Tornado, Hail, Severe Thunderstorm
Effect on new/existing buildings:	Harden buildings against shutdown during disasters
Priority (High, Moderate, Low):	High
Estimated Cost:	Generator: $14,500, Fuel tank: $5,000, and Installation: $9,000 = $28,500 per campus
Potential Funding Sources:	HMGP Grant
Lead Agency/Department Responsible:	Facilities
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure.

		Roosevelt ISD– Action #2
	Proposed Action:	Implement program to reduce tall grass/weeds on campuses to prevent wildfire.
	BACKGROUND INFORMATION	
	Site and Location:	All campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce potential fuel for wildfire.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Protect new/existing construction from wildfire
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	Initial Grant, Parent Volunteer Services
Lead Agency/Department Responsible:	School Administration
Implementation Schedule:	2014
Incorporation into Existing Plans:	Wildfire Protection Plan

2022 ANALYSIS:
Completed.

	Roosevelt ISD– Action #3
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to education and awareness.

SHALLOWATER INDEPENDENT SCHOOL DISTRICT (ISD)

		Shallowater ISD– Action #1
	Proposed Action:	Construct a storm shelter and gym for school on existing property.
	BACKGROUND INFORMATION	
	Site and Location:	Shallowater High School
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Hail, Severe Winter Storm, Extreme Heat, Flood, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	Harden campuses
Priority (High, Moderate, Low):	High
Estimated Cost:	$2 Million
Potential Funding Sources:	Bonds, HMGP Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed.

	Shallowater ISD– Action #2
Proposed Action:	Implement a public education program regarding hazard risk and evacuation in conjunction with construction of a storm shelter and gym at Shallowater High School campus.
BACKGROUND INFORMATION	
Site and Location:	Shallowater High School
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Hail, Severe Winter Storm, Flood, Hazmat Release, Pipeline Failure, Pandemic, Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Bonds, HMGP Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. While evacuation plans are practiced with students across the district on an annual basis, currently there are no formal public education programs in place. We do advertise the availability of the storm shelters to the general public in order to promote awareness in the event of an emergency.

	Shallowater ISD– Action #3
Proposed Action:	Cut firebreaks into wooded areas around school campuses according to risk factor.
BACKGROUND INFORMATION	
Site and Location:	ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss to students, faculty, and infrastructure in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce risk of building exposure to wildfire
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, HMGP Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014
Incorporation into Existing Plans:	Disaster Response and Recovery Plan, Risk Management Plan

2022 ANALYSIS:
Delete Action. Our maintenance director, who was in place at the time when this action item was originally written, stated that this project never took place. None of our campuses are surrounded by wooded areas so no firebreaks were cut. Since that time, however, the district worked with the City to put fire hydrants/emergency water lines around the perimeters of our campuses as a proactive measure. This action item is incomplete, but there are also no future plans to implement it either.

	Shallowater ISD– Action #4
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. This is an ongoing effort by the district and records are maintained through a combination of maintenance staff, district police officers, and district administration. Update to education and awareness.

SLATON INDEPENDENT SCHOOL DISTRICT (ISD)

	Slaton ISD– Action #1
Proposed Action:	Install NOAA all-hazard radios at all campuses for early warning of severe weather events.
BACKGROUND INFORMATION	
Site and Location:	All ISD campuses, administration building
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce response time for shelter in place or evacuation to protect students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Wildfire, Severe Thunderstorm, Hail
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Slaton ISD, HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

2022 ANALYSIS:
Completed. Use of school funding.

		Slaton ISD– Action #2
	Proposed Action:	Purchase six emergency generators for back up for air, heat and electric.
	BACKGROUND INFORMATION	
	Site and Location:	Six buildings: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, Stephen F Austin Elementary, Administration Office, and Ag Barn.
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Necessary to maintain services of critical facilities.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property, Human and Animal Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Severe Winter Storm, Severe Thunderstorm, Tornado
Effect on new/existing buildings:	Continue essential electrical services on site
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$233,628
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. In-progress, issues with funding. Update to structure and infrastructure.

	Slaton ISD– Action #3
Proposed Action:	Become a FEMA-approved Red Cross Shelter for housing students and residents during severe weather events, including purchase of portable beds and blankets.
BACKGROUND INFORMATION	
Site and Location:	Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Help maintain quality of life for students, faculty, are area residents displaced during severe natural disasters; reduce loss of school days following a disaster.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Wildfire
Effect on new/existing buildings:	Retrofit buildings as safe shelters
Priority (High, Moderate, Low):	Low
Estimated Cost:	$60,725
Potential Funding Sources:	Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. ISD has four tornado shelters that are built on school campuses. ISD is assuming FEMA approved but unsure if certified. Update to type of action to local plans and note action to only include FEMA-approved shelter. Similar action to #8.

	Slaton ISD– Action #4
Proposed Action:	Evaluate condition of existing fire sprinkler system and either install new Fire Sprinkler System in buildings or retrofit existing system to include fire alarms.
BACKGROUND INFORMATION	
Site and Location:	Six buildings: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, Stephen F Austin Elementary, Administration Office, and Ag Barn
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Replacement costs of six buildings would be over $10 Million, protection of property (six buildings); avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Safety improvement of buildings from fire
Priority (High, Moderate, Low):	High
Estimated Cost:	$640,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed. ISD has system with fire alarm and is monitored by outside company in Lubbock.

	Slaton ISD– Action #5
Proposed Action:	Develop Hazard Awareness program to inform students, teachers, and parents of safety measures before, during and after a severe weather or natural disaster event.
BACKGROUND INFORMATION	
Site and Location:	Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Educate to reduce or avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,500
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. In progress.

	Slaton ISD– Action #6
Proposed Action:	Purchase NOAA "All Hazard" radios for early warning and post-event information and place in all schools.
BACKGROUND INFORMATION	
Site and Location:	7 buildings: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, Stephen F Austin Elementary, Administration Office, Transportation Building, and Maintenance Building
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve response time to disaster; reduce loss of life and property damage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Flood, Severe Winter Storm
Effect on new/existing buildings:	Secure buildings with early warning
Priority (High, Moderate, Low):	Low
Estimated Cost:	$629.65
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed. Use of school funding. Duplicate action to #1.

	Slaton ISD– Action #7
Proposed Action:	Install Portable Water Source as backup in the event of public water shortage due to severe weather event or natural disaster.
BACKGROUND INFORMATION	
Site and Location:	4 locations: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life, continue essential services to students.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Wildfire, Extreme Heat, Drought
Effect on new/existing buildings:	Provide essential water source during disaster
Priority (High, Moderate, Low):	Low
Estimated Cost:	$53,500
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. In-progress. Update to structure and infrastructure.

	Slaton ISD– Action #8
Proposed Action:	Become a FEMA approved safe shelter site and retrofit 5 areas of campuses to use as safe rooms and purchase portable beds and blankets.
BACKGROUND INFORMATION	
Site and Location:	5 areas: Gym at Slaton High School, Gym at Slaton Junior High School, Gym at Cathelene Thomas Elementary, Gym at Stephen F Austin Elementary, and one room at Administration Office
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life and structural damage to identified safe room designated areas.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail
Effect on new/existing buildings:	Harden buildings by retrofitting as shelters
Priority (High, Moderate, Low):	High
Estimated Cost:	$1 Million per location
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan, Disaster Response and Recovery Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. ISD has a tornado shelter on each campus. Action revised to include purchasing of portable bed/blankets and other supplies. Action type-preparedness.

	Slaton ISD– Action #9
Proposed Action:	Replace all current glass in doors and windows with shattered proof glass.
BACKGROUND INFORMATION	
Site and Location:	4 locations: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; replacement costs of all windows when damaged.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail
Effect on new/existing buildings:	Safety improvement for buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$69,239.79
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to plan update. In-progress. Update description to be more generalized such as “harden/retrofit all critical infrastructure and campuses buildings to a hazard-resistant level”.

	Slaton ISD– Action #10
Proposed Action:	Purchase 30 handheld two-way radios for communication.
BACKGROUND INFORMATION	
Site and Location:	Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, Stephen F Austin Elementary, Administration Office, Cosmetology, Ag Barn, Maintenance, and Transportation
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve response time to disaster; reduce loss of life and property damage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,889
Potential Funding Sources:	Slaton ISD, HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Not reflected in previous plan.

2022 ANALYSIS:
Completed. Secured more than 30 radios. School funding.

	Slaton ISD– Action #11
Proposed Action:	Install water drainage system at campuses as backup in severe weather events.
BACKGROUND INFORMATION	
Site and Location:	Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm
Effect on new/existing buildings:	Safety improvement, back up water to buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. In-progress. High school has a lift station in the background. Will need consult operations. Update to structure and infrastructure.

	Slaton ISD– Action #12
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Delete Action. ISD does not feel it is beneficial or pertains to them at this time.

SOUTH PLAINS COLLEGE

South Plains College– Action #1	
Proposed Action:	Replace existing glass with non-breakable glass in all school buildings.
BACKGROUND INFORMATION	
Site and Location:	South Plains College Campus (eight buildings)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; avoid loss of school days due to broken windows and campus repairs.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Severe Thunderstorm, Tornado, Hail, Severe Winter Storm
Effect on new/existing buildings:	Harden structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	HMGP
Lead Agency/Department Responsible:	South Plains Maintenance Department
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. After Audits, rather than replace all glass, a policy is recommended to replace glass as needed with non-breakable glass, and that all new door/ window install would require non-breakable glass.

		South Plains College– Action #2
	Proposed Action:	Install firebreak trenches around campuses as safety measure in event of wildfire.
	BACKGROUND INFORMATION	
	Site and Location:	Build new trenches around 8 buildings, all South Plains buildings
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid property loss.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce wildfire risk to buildings in/around campus
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	HMGP, Texas Forest Service
Lead Agency/Department Responsible:	South Plains College Maintenance Department
Implementation Schedule:	2013
Incorporation into Existing Plans:	Community Firewise Program

2022 ANALYSIS:
Delete Action. Recommended action is to be re-evaluate based on need and explore new action for hazard type.

	South Plains College– Action #3
Proposed Action:	Implement active shooter education and training programs.
BACKGROUND INFORMATION	
Site and Location:	Reese Center – all buildings
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Preventing loss of life and minimizing injury to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 development and implementation
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	South Plains Reese Center
Implementation Schedule:	2013
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed. College Emergency Management Coordinator conducts ALICE and RUN HIDE FIGHT training each school term. Enacted 2016. EMC is a certified instructor for both programs

		South Plains College– Action #4
	Proposed Action:	Install indoor and outdoor warning system to include voice capability.
	BACKGROUND INFORMATION	
	Site and Location:	Reese Center – all buildings
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Alert the population to the presence of dangerous situations allowing them to take appropriate action and avoid injury.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project, Public Education and Awareness, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Hail, Severe Thunderstorm, Dam Failure, Flood, Extreme Heat, Wildfire, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,578,000 for outdoor marquee PA system, repair/upgrade outdoor siren system
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	South Plains Reese Center
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed. In lieu of siren/ PA, the College has implemented a mass communication system allowing for immediate call/ text/ email/ social media push notifications.

		South Plains College– Action #5
	Proposed Action:	Certify campuses as Storm Ready communities and educate students and employees on hazard risk and warnings.
	BACKGROUND INFORMATION	
	Site and Location:	Reese Center – all buildings
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Prepare each campus to identify, communicate and respond safely to severe weather events. Reduce the likelihood of injury or death and provide sufficient time to seek shelter.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Public Education and Awareness, Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Flood
Effect on new/existing buildings:	Harden campus buildings against disasters
Priority (High, Moderate, Low):	High
Estimated Cost:	$80,000 for required equipment on all campuses
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	South Plains Reese Center
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed. Inclement weather response plans have been written into the South Plains College Emergency Operations Plan are disseminated to the community via website and campus safety mobile applications.

	South Plains College– Action #6
Proposed Action:	Enhance the communication capabilities of the Emergency Operations Center and campus situation rooms.
BACKGROUND INFORMATION	
Site and Location:	Reese Center – all buildings
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Each campus will be equipped to manage and respond to needs arising from planned and unplanned incidents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Terrorism, Flood, Dam Failure
Effect on new/existing buildings:	Harden facilities
Priority (High, Moderate, Low):	High
Estimated Cost:	$80,000 per room
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	South Plains Reese Center
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

		South Plains College– Action #7
	Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
	BACKGROUND INFORMATION	
	Site and Location:	Campus wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire threat.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Risk Manager
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Completed. Conducted as part of routine grounds maintenance / regular procedures.

	South Plains College– Action #8
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Completed and Defer to Plan Update. Ongoing. South Plains College has implemented after action reports into the Emergency Operations Plan to be completed by the Incident Management Team for each incident utilizing Microsoft Teams, Maxient, and Campus Police reporting software. Update to education and awareness.

TEXAS TECH UNIVERSITY SYSTEM

Texas Tech University System (Lubbock Campus)– Action #1	
Proposed Action:	Design and build chilled water, steam and auxiliary electrical supply redundancy, and excess capacity system.
BACKGROUND INFORMATION	
Site and Location:	TTUS Lubbock campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Prevent loss of production arising from insufficient heating and cooling capacity. Estimate of savings is dependent upon duration of the outage ranging from $698,000 daily loss of revenue
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Terrorism, Flood, Wildfire
Effect on new/existing buildings:	Continue essential services onsite
Priority (High, Moderate, Low):	High
Estimated Cost:	$23 Million for one boiler/one chiller
Potential Funding Sources:	HMGP, other grants
Lead Agency/Department Responsible:	TTUS, Physical Plant & Operations
Implementation Schedule:	2013
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

2022 ANALYSIS:
Completed. Action mitigated in a different way.

Texas Tech University System (Lubbock Campus)– Action #2	
Proposed Action:	Implement a system-wide Continuity of Operation Plan (COOP).
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Rapid recovery of operations from a disaster saving approximately $300,000 daily.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Terrorism, Flood, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$280,000 consulting/implementation
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed. Action mitigated in a different way.

Texas Tech University System (Lubbock Campus)– Action #3	
Proposed Action:	Implement active shooter education and training programs.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Preventing loss of life and minimizing injury to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 development and implementation
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	N/A

2022 ANALYSIS:
Completed. Action mitigated in a different way.

Texas Tech University System (Lubbock Campus)– Action #4	
Proposed Action:	Enhance the communication capabilities of the Emergency Operations Center and campus situation rooms.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Each campus will be equipped to manage and respond to needs arising from planned and unplanned incidents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Drought, Terrorism, Flood, Dam Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$80,000 per room including furniture, fixtures, and IT equipment. An estimated four rooms will be needed.
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, Component EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to include Wildfire. Update to education and awareness.

Texas Tech University System (Lubbock Campus)– Action #5	
Proposed Action:	Implement an Evacuation Plan for students and employees, including an education program and evacuation exercises.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Increased awareness of evacuation procedures. Provide alternate exit and ambulatory strategies for all personnel. Reduce and prevent loss of life and injury.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Terrorism, Flood, Dam Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000 in equipment (chairs, vests), training materials, policy document printing
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	TTUPD, Component EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Completed. Action mitigated in a different way-basic evacuation plan complete, and tabletop held with university officials.

Texas Tech University System (Lubbock Campus)– Action #6	
Proposed Action:	Acquire/build safe shelter areas for facilities and outdoor venues.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide safer shelter areas for individuals attending or working the sporting events to mitigate loss of life or injury and enhance the overall safety of operations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Terrorism, Flood, Extreme Heat
Effect on new/existing buildings:	Provide safe shelter structure
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000 for design, engineering and hardening existing baseball, football, and basketball facilities
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, Physical Plant & Operations
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update.

Texas Tech University System (Lubbock Campus)– Action #7	
Proposed Action:	Certify campuses as Storm Ready communities.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Prepare each campus to identify, communicate and respond safely to severe weather events. Reduce the likelihood of injury or death and provide sufficient time to seek shelter.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Public Education and Awareness, Structural Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Flood
Effect on new/existing buildings:	Harden structures through retrofitting/strengthening
Priority (High, Moderate, Low):	High
Estimated Cost:	$80,000 for required equipment on all campuses
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, Component EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Completed. Action mitigated in a different way-complete-Storm Ready University.

Texas Tech University System (Lubbock Campus)– Action #8	
Proposed Action:	Implement de-icing retrofit for KTXT tower and guy wires.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce the possibility of ice accumulation on the tower and wires thereby reducing the likelihood of property damage, injury or death from falling ice when accumulation melts and breaks away from the surface.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Winter Storm
Effect on new/existing buildings:	Protect buildings from ice and severe winter weather
Priority (High, Moderate, Low):	High
Estimated Cost:	$2.5 Million design, purchase and install de-icing equipment
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	TTUS Risk Management, TTU
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Completed. Action mitigated in a different way.

Texas Tech University System (Lubbock Campus)– Action #9	
Proposed Action:	Install monitoring and telemetry capabilities for utility tunnels.
BACKGROUND INFORMATION	
Site and Location:	TTUS Lubbock campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Prevent water damage arising from flooding in the tunnels escaping into connected buildings.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection, Structural Project, Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1.58 Million to design, purchase, install devices and system to monitor presence of water
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Risk Management, Physical Plant & Operations
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

Texas Tech University System (Lubbock Campus)– Action #10	
Proposed Action:	Upgrade and expand indoor and outdoor warning system to include voice capability.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses and outdoor venues
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Alert the population to the presence of dangerous situations allowing them to take appropriate action and avoid injury
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structural Project, Public Education and Awareness, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Hail, Severe Thunderstorm, Dam Failure, Flood, Extreme Heat, Wildfire, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,578,000 for outdoor marquee, PA system, repair/upgrade outdoor siren system
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Component EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Public Information Policy, Emergency Response and Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update. Partially complete; Action mitigated in a different way-Indoor PA and TV boards added to certain buildings. New Action: Coordinate outdoor warning system with City of Lubbock.

Texas Tech University System (Lubbock Campus)– Action #11	
Proposed Action:	Design and build water tower(s) to maintain local supply in absence of electricity.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Maintain domestic water pressure for consumption and fire control in absence of electricity. Directly impacts health, safety, and property preservation.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Structural Project, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Terrorism, Flood, Wildfire
Effect on new/existing buildings:	Provide essential backup electric services to buildings
Priority (High, Moderate, Low):	High
Estimated Cost:	$1.5 Million per tank, number of tanks required dependent on engineering analysis and population served
Potential Funding Sources:	HMGP Grants, Texas Forest Service
Lead Agency/Department Responsible:	TTUS, Physical Plant & Operations
Implementation Schedule:	2013
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

2022 ANALYSIS:
Delete Action. No longer is a priority as water provided from City of Lubbock.

Texas Tech University System (Lubbock Campus)– Action #12	
Proposed Action:	Conduct campus-wide severe weather education activities for students, faculty, and parents.
BACKGROUND INFORMATION	
Site and Location:	TTUS campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Educate our employees and students in identifying and responding to hazardous weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Severe Thunderstorm, Tornado, Hail, Severe Winter Storm, Extreme Heat, Wildfire, Flood, Dam Failure
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000 for printed material, media and food for attendees
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	Component EMCs
Implementation Schedule:	2013
Incorporation into Existing Plans:	Public Information Policy, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Revise as New Action: Provide campus-wide Emergency Management education to include severe weather. Implementation schedule 2023-2024.

Texas Tech University System (Lubbock Campus)– Action #13	
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Campus wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Risk Manager
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update.

Texas Tech University System (Lubbock Campus)– Action #14	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout ISD campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Emergency Management
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

LUBBOCK COUNTY HOSPITAL SYSTEM

	Lubbock County Hospital System– Action #1
Proposed Action:	Purchase a water purification system that would support up to 500 patients and staff in the event of contamination of public drinking water system due to severe weather events.
BACKGROUND INFORMATION	
Site and Location:	UMC on 4th St
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life and capacity to sustain critical facility in case of water shortage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Hail, Severe Thunderstorm, Tornado, Wildfire, Severe Winter
Effect on new/existing buildings:	Provide essential public water system backup
Priority (High, Moderate, Low):	High
Estimated Cost:	$105,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	UMC Facility Management
Implementation Schedule:	Within “x” month(s) or year(s) of plan adoption
Incorporation into Existing Plans:	Not reflected in previous plan

2022 ANALYSIS:
Delete Action. Unnecessary unless imminent treat that city level can’t control. This should be at the city level unless their current possibilities indicate could happen. What is the probability and if were to be a high risk, what is the plan at the city level? We can always boil water and get water bottles. Our hospital doesn’t have the capability to connect water supply with potable water.

	Lubbock County Hospital System– Action #2
Proposed Action:	Purchase sewage back-up system.
BACKGROUND INFORMATION	
Site and Location:	UMC on 4th St
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Continue essential services to patients and staff. Maintain critical facility, in case of City failure to provide sewage capability.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Water Shortage, Drought
Effect on new/existing buildings:	Essential sewer services maintained
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	UMC Facility Management
Implementation Schedule:	2013
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Delete Action. Unrealistic for hospital system.

	Lubbock County Hospital System– Action #3
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Hospital Complex
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Administrator
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. Ongoing. Update to include Thunderstorm Wind & Flood.

	Lubbock County Hospital System– Action #4
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout the hospital district
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Delete Action. Not applicable for hospital system.

LUBBOCK COUNTY WATER CONTROL DISTRICT #1

Lubbock County Water Control District #1– Action #1	
Proposed Action:	Work with Buffalo Springs and Ransom Canyon to expand alert system equipment currently in place to assist in notification of 1/3 of residents living downstream of McMillan Dam in the event of dam failure and resulting flooding.
BACKGROUND INFORMATION	
Site and Location:	½ mile west of Ransom Canyon city limits
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection, Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	WCD with inter-local government
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

Lubbock County Water Control District #1– Action #2	
Proposed Action:	Make repairs to McMillan Dam as identified as high risk by TCEQ to prevent failure.
BACKGROUND INFORMATION	
Site and Location:	McMillan earthen dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce potential for dam failure, loss of lives of residents downstream of dam site.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention, Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Effect on new/existing buildings:	Protect downstream structures by reducing dam failure risk
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	TDNR, HMGP
Lead Agency/Department Responsible:	Water Control District
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

Lubbock County Water Control District #1– Action #3	
Proposed Action:	Acquire, reuse, and preserve open spaces adjacent to floodplain areas and dams.
BACKGROUND INFORMATION	
Site and Location:	McMillan Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Severe Thunderstorm, Wildfire, Severe Winter Storm
Effect on new/existing buildings:	Reduce area flooding
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	WCD with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

Lubbock County Water Control District #1– Action #4	
Proposed Action:	Maintain natural environmental features such as earthen berms that act as wind and wildfire buffers, Playa Lakes as natural wetland areas and detention ponds to capture floodwaters and runoff.
BACKGROUND INFORMATION	
Site and Location:	LCWD owned or acquired land
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Severe Thunderstorm, Wildfire
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	HMGP Grants
Lead Agency/Department Responsible:	WCD with inter-local agreement
Implementation Schedule:	2013
Incorporation into Existing Plans:	Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update.

Lubbock County Water Control District #1– Action #5	
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Elementary schools, middle schools, high school campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. Site location pertains to ISDs which would be Roosevelt and Slaton ISD. There are downed and weakened trees located near McMillan Dam, where action can be revised to this site location and proposed action update to site location as well. Update to include Flood & Dam Failure.

SECTION 16: PREVIOUS ACTIONS

Lubbock County Water Control District #1– Action #6	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	Throughout water control district
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in areas with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Previous plan indicated “superintendent” will need to update department responsible.

SOUTH PLAINS ASSOCIATION OF GOVERNMENT

South Plains Association of Government– Action #1	
Proposed Action:	Provide public education and disaster awareness/ preparedness to the SPAG fifteen county region.
BACKGROUND INFORMATION	
Site and Location:	SPAG
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life. Texas South Plains participated in a region-wide collaboration with DSHS to educate the public regarding disasters and how to prepare for them.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Public Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Drought, Flood, Hail, Wildfire
Effect on new/existing buildings:	None
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000
Potential Funding Sources:	Grants
Lead Agency/Department Responsible:	FEMA/TDEM Hazard Mitigation Section
Implementation Schedule:	SPAG-2013 Texas South Plains
Incorporation into Existing Plans:	Public Information Policy, Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update.

South Plains Association of Government– Action #2	
Proposed Action:	Purchase and implement 25 licenses for SPURS to improve the mass notification method for special needs citizens. The Mass Emergency Notification will allow license holders to receive emergency notifications via email, text, and telephone.
BACKGROUND INFORMATION	
Site and Location:	South Plains Unified Regional System (SPURS)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Wildfire, Extreme Heat, Severe Winter Storm
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000
Potential Funding Sources:	FEMA, TDEM
Lead Agency/Department Responsible:	SPAG Homeland Security Unit
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan, Emergency Response and Evacuation Plan

2022 ANALYSIS:
Defer to Plan Update. Update to education and awareness.

South Plains Association of Government– Action #3	
Proposed Action:	Implement and coordinate regional residential NSSA/ATSA certified safe room rebate program.
BACKGROUND INFORMATION	
Site and Location:	Community of South Plains (183 homeowners)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Prevention of loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Severe Thunderstorm, Hail
Effect on new/existing buildings:	Reduce risk to existing/new construction
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	FEMA, TDEM
Lead Agency/Department Responsible:	SPAG-Homeland Security Unit
Implementation Schedule:	2013
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Update to local plans and regulations.

South Plains Association of Government– Action #4	
Proposed Action:	Purchase personal protective equipment for first responders for severe weather events.
BACKGROUND INFORMATION	
Site and Location:	SPAG Region-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize first responders' exposure to severe dust particles, heat, and chemicals pertaining to natural and human caused disasters. Recent severe dust storms in the region have resulted in illness, risk of sight loss, and respiratory ailments for responders not adequately protected.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Wildfire, Severe Winter Storm, Thunderstorm, Wildfire, Extreme Heat, Hazmat Release
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	HMGP, other grants
Lead Agency/Department Responsible:	SPAG-Homeland Security Unit
Implementation Schedule:	2013
Incorporation into Existing Plans:	Yes

2022 ANALYSIS:
Defer to Plan Update.

SECTION 16: PREVIOUS ACTIONS

South Plains Association of Government– Action #5	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	SPAG Administration building
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Minimize natural hazard data deficiencies by tracking and recording historical weather events, along with any reported or archived previous occurrence data.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Prevention

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Severe Winter Storm, Thunderstorm, Hail, Extreme Heat, Wildfire, Dam Failure, Drought
Effect on new/existing buildings:	Strengthen building codes in area with historically higher severe weather patterns
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Minimal, $5,000 annually
Potential Funding Sources:	NOAA, Grants
Lead Agency/Department Responsible:	Superintendent
Implementation Schedule:	2014-2015
Incorporation into Existing Plans:	Emergency Operations Plan

2022 ANALYSIS:
Defer to Plan Update. Previous plan indicated “superintendent” will need to update department responsible. Update to education and awareness.

South Plains Association of Government– Action #6	
Proposed Action:	Remove downed trees and weakened trees that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	Administration building site
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Natural landform protection and reduced risk of loss of life and property in the event of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Property Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on new/existing buildings:	Reduce threat to structures by removing fire fuels
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Texas Forest Service, fire prevention grants
Lead Agency/Department Responsible:	Executive Director
Implementation Schedule:	2014-2016
Incorporation into Existing Plans:	Risk Management Plan

2022 ANALYSIS:
Defer to Plan Update. Update to structure and infrastructure. Update to include thunderstorm wind and flood.

SECTION 17: MITIGATION ACTIONS

SUMMARY

As discussed in Section 2, at the mitigation workshop the planning team and stakeholders met to develop mitigation actions for each of the natural hazards included in the Plan Update. Each of the actions in this section were prioritized based on FEMA's Social, Technical, Administrative,

SECTION 17: MITIGATION ACTIONS

Political, Legal, Economic, and Environmental (STAPLEE) criteria necessary for the implementation of each action.

As part of the economic evaluation of the STAPLEE analysis, jurisdictions analyzed each action in terms of the overall costs, measuring whether the potential benefit to be gained from the action outweighed costs associated with it. As a result of this exercise, priority was assigned to each mitigation action by marking them as High (H), Moderate (M), or Low (L). An action that is ranked as "High" indicates that the action will be implemented as soon as funding is received. A "Moderate" action is one that may not be implemented right away depending on the cost and number of citizens served by the action. Actions ranked as "Low" indicate that they will not be implemented without first seeking grant funding and after "High" and "Moderate" actions have been completed.

All mitigation actions created by Planning Team members are presented in this section in the form of Mitigation Action Worksheets. More than one hazard is sometimes listed for an action, if appropriate. Actions presented in this section represent a comprehensive range of mitigation actions per current State and FEMA Guidelines, including two actions, per hazard, and of two different types for each participating jurisdiction. The term county-wide action refers to Lubbock County and the Cities of Buffalo Springs, Idalou, Lubbock, New Deal, Ransom Canyon, Shallowater, Slaton, and Wolfforth. County-wide does not include ISDs nor special districts.

Table 17-1. Lubbock County Mitigation Action Matrix

TYPE OF ACTION	
Action #1 – Plans/Regulations (Blue)	Action #4 – Structural (Orange)
Action #2 – Education/Awareness (Red)	Action #5 – Preparedness/Response (Black)
Action #3 – Natural Systems Protections (Green)	

Jurisdiction	Thunderstorm Wind	Hail	Winter Storm	Lightning	Drought	Tornado	Wildfire	Extreme Heat	Flood	Dam Failure
Lubbock County	XXX	XXX	XXX	XXX	XXX	XXX	XXXX	XXX	XXX	XXX
Village of Buffalo Springs	XXX	XXX	XXX	XXX	XX	XXX	XXX	XX	XXX	XX
City of Idalou	XXXX	XX	XXXX	XX	XXX	XXX	XXXXX	XXXX	XXXXX	N/A
City of Lubbock	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXXX	XXXXX
Town of New Deal	XXXX	XX	XXXX	XX	XX	XXXX	XXX	XXX	XXX	N/A
Town of Ransom Canyon	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XX
City of Shallowater	XX	XX	XX	XX	XX	XX	XXX	XX	XX	N/A

Jurisdiction	Thunderstorm Wind	Hail	Winter Storm	Lightning	Drought	Tornado	Wildfire	Extreme Heat	Flood	Dam Failure
City of Slaton	X	X	X	X	X	X	X	X	X	N/A
City of Wolfforth	X	X	X	X	X	X	X	X	X	N/A
Abernathy ISD	X	X	X	X	X	X	X	X	X	N/A
Frenship ISD	X	X	X	X	X	X	X	X	X	N/A
Idalou ISD	X	X	X	X	X	X	X	X	X	N/A
Lubbock ISD	X	X	X	X	X	X	X	X	X	N/A
Lubbock-Copper ISD	X	X	X	X	X	X	X	X	X	N/A
New Deal ISD	X	X	X	X	X	X	X	X	X	N/A
Roosevelt ISD	X	X	X	X	X	X	X	X	X	N/A
Shallowater ISD	X	X	X	X	X	X	X	X	X	N/A
Slaton ISD	X	X	X	X	X	X	X	X	X	N/A
Betty M. Condra School of Education Innovation	X	X	X	X	X	X	X	X	X	N/A
South Plains College	X	X	X	X	X	X	X	X	X	N/A
Texas Tech University System	X	X	X	X	X	X	X	X	X	N/A
Texas Tech Health Sciences Center	X	X	X	X	X	X	X	X	X	N/A
Lubbock County Hospital System	X	X	X	X	X	X	X	X	X	N/A
Lubbock County WCID #1	X	X	X	X	X	X	X	X	X	X
Reese Redevelopment Authority	X	X	X	X	X	X	X	X	X	N/A
South Plains Association of Governments	X	X	X	X	X	X	X	X	X	N/A

LUBBOCK COUNTY – COUNTY-WIDE ACTIONS

		Lubbock County-wide – Action #1
	Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide including all participating jurisdictions
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure (where applicable), Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	County and Local Emergency Managers
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County-wide – Action #2
	Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide critical facilities including all participating jurisdictions
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure (if applicable), Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	County Public Works/City Engineer/Local Administrator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		Lubbock County-wide – Action #3
	Proposed Action:	Upgrade critical facilities to include drought mitigation measures such as greywater reuse systems and drought tolerant landscaping.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide critical facilities including all participating jurisdictions
	Risk Reduction Benefit: *(Current Cost/Losses Avoided)*	Reduce damages at critical facilities
	Type of Action: *(Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)*	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on New/Existing Buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	County Public Works/City Engineer/Local Administrator
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan

COMMENTS:

		Lubbock County-wide – Action #4
	Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide critical facilities including all participating jurisdictions
	Risk Reduction Benefit: *(Current Cost/Losses Avoided)*	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
	Type of Action: *(Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)*	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure (if applicable), Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on New/Existing Buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	County Public Works/City Engineer/Local Administrator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation and prevents injury to residents.

		Lubbock County-wide – Action #5
	Proposed Action:	Develop a Community Wildfire Protection Plan.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide including all participating jurisdictions that do not have plan in place.
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injuries and fatalities.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	County/Local Administrator
Implementation Schedule:	Within 12-24 month(s) of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:
Note: This is a requirement for the new TFS grant.

LUBBOCK COUNTY

		Lubbock County– Action #1
	Proposed Action:	Roadway and Drainage Improvements.
	BACKGROUND INFORMATION	
	Site and Location:	109th St from University to 0.4mi E of University; CR 1700 at CR 6300; CR 1700 at CR 6400; Woodrow Rd from FM 1730 to CR 1000; University Ave from 115th St to FM 1585; CR 7300 from CR 1300 to US 62/82; CR 7100 from CR 1100 to CR 1200; CR 1900 from CR 5300 to CR 5400; CR 5500 from IH27 to CR 2600; CR 3860 from FM 40 to CR 7300; CR 3650 from FM 40 to CR 6840
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages caused by flooding by maintain and restoring drainage capacity.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High/Moderate
Estimated Cost:	$5,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Public Works
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Master Drainage Plan; Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		Lubbock County – Action #2
	Proposed Action:	Provide lightning preparedness information to citizens through a social media campaign. Provide enhanced preparedness information to the Lubbock County citizens.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Lightning
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical, Energy, Communications
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	Within 1 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

COMMENTS:

	Lubbock County – Action #3
Proposed Action:	Install lightning protection for existing and future IT and Communication infrastructure and other critical facilities.
BACKGROUND INFORMATION	
Site and Location:	County-wide Critical Facilities and Shelter Locations, including but not limited to: County Court House, Sheriff's Office, Detention Centers, County Annex Building.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Lightning
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical, Energy, Communications
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Office of Emergency Management
Implementation Schedule:	Within 3 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

COMMENTS:

		Lubbock County – Action #4
	Proposed Action:	Install emergency generators at county critical facilities as backup in the event of loss of power during disaster and severe weather events.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide Critical Facilities and Shelter Locations, including but not limited to: Community Centers that support emergency response operations as provided by fire, police, emergency management, utility operations, and first responders.
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Office of Emergency Management, Sheriff's Office
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		Lubbock County– Action #5
	Proposed Action:	Purchase and install one user license to enable access to county-wide I-Info Alert / Notification System.
	BACKGROUND INFORMATION	
	Site and Location:	All participating jurisdictions, ISD, and special entities
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$4,000 per user license fee annually
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers, ISD/Special District Staff
Implementation Schedule:	Within 12-24 months of plan adoption, then annually
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County– Action #6
	Proposed Action:	As part of the county-wide I-Info Alert/Notification System, develop a public education program on hazard risk, how the public can protect themselves and property, and interpretation of specific alerts as they pertain to warnings and public information.
	BACKGROUND INFORMATION	
	Site and Location:	All participating jurisdictions, ISD, and special entities
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500 per participating entity, annually
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers, ISD/Special District Staff
Implementation Schedule:	Within 12-24 months of plan adoption, then annually
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Lubbock County– Action #7
Proposed Action:	Install county-wide system of dry fire hydrants. Project would be competed in phases with installation of high priority hydrants first, and others in future years as a long-range plan
BACKGROUND INFORMATION	
Site and Location:	All participating jurisdictions, ISD, and special entities, including unincorporated areas within Lubbock County
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injury and loss of life. Ensures continuity of critical services during a severe weather event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Drought, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety and Security
Effect on new/existing buildings:	Reduce wildfire threat to new/existing
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000 per hydrant and participating entity
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County / Office of Emergency Management
Implementation Schedule:	Within 12-60 months of plan adoption, ongoing
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

		Lubbock County– Action #8
	Proposed Action:	Map locations of installed dry fire hydrants. Maps will be shared with all participating jurisdictions, the public, and local, county, and state agencies. Procure contracts and land use agreements with property owners, promote mapped sites through public awareness program.
	BACKGROUND INFORMATION	
	Site and Location:	All participating jurisdictions, ISD, and special entities, including unincorporated areas within Lubbock County
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injury and loss of life. Promotes hazard awareness and resources. Ensure continuity of critical services during a severe weather event.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Drought, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$250 annually per entity, plus additional cost for permitting & land agreements
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers, ISD/Special District Staff
Implementation Schedule:	Within 12-60 months of plan adoption, ongoing
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

	Lubbock County– Action #9
Proposed Action:	Implement flood mitigation measures and/or relocate critical facilities to be more resistant to flooding hazard and out of flood hazard areas.
BACKGROUND INFORMATION	
Site and Location:	County-wide critical facilities within flood prone areas or severe / repetitive loss properties including but not limited to: EMC office, Courthouse Annex, and County Hospital District
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injury and loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety and Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$20,000 - $10,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County EMC
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Council of Government Agreement, Emergency Operations Plan, Continuance of Operations Plan (COOP), HMAP Update, NFIP Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	Lubbock County– Action #10
Proposed Action:	Continue to identify and upgrade/harden critical facilities that support emergency operations to be more hazard resistant.
BACKGROUND INFORMATION	
Site and Location:	County-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities. Ensure continuity of critical services during and after an event. Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, EMC
Implementation Schedule:	Within 12-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	Lubbock County– Action #11
Proposed Action:	Acquire and install generators / emergency portable generators with hard wired quick connection, and mobile trailers at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	County-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Energy (Power/Fuel)
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, EMC
Implementation Schedule:	Within 12-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		Lubbock County– Action #12
	Proposed Action:	Develop a public awareness program regarding the availability of federal flood insurance.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	County Planning Department
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Comprehensive Community Development

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County– Action #13
	Proposed Action:	Update/upgrade current communications equipment.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens through improved communication. Provides enhanced inter-operable communications during a severe weather event.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000 - $1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Emergency Management
Implementation Schedule:	Within 12-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County– Action #14
	Proposed Action:	Purchase the following: • Personal protective equipment for First Responders • Trauma bags for all emergency response vehicles and include training of staff. • Chemical / protective equipment
	BACKGROUND INFORMATION	
	Site and Location:	County-wide emergency responders
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities to emergency responders during severe weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000 - $5,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County, City Emergency Managers, ISD/Special District Staff
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Lubbock County– Action #15
Proposed Action:	Purchase the following equipment: • An unmanned aerial vehicle. • Helicopter / fixed wing aircraft.
BACKGROUND INFORMATION	
Site and Location:	County-wide emergency response agencies
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities to emergency responders during severe weather events. Enhance intelligence gathering capabilities.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

Lubbock County– Action #16	
Proposed Action:	Purchase the following technical equipment: • Tactical body armor • Small tactical robot • Purchase new for bomb robot due to manufactures end of life of current robot • FLIR / night vision systems
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life by utilizing robotics to identify situations posing danger to people and minimize use of first responders in entering/rescue in dangerous events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000 - $12,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants, DOH grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	1 year from funding
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock County– Action #17	
Proposed Action:	Purchase the following emergency response vehicles: • Purchase fleet of ATVs • Mobile command/communication vehicles
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide law enforcement officers enhanced intelligence gathering, and search and rescue capabilities. Avoid loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000 - $1,500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	Within 12-36 months
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County– Action #18
	Proposed Action:	Continue to purchase of emergency rations (food and water) for responders and public.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide continuity of operations for response and recovery efforts for many types of emergency incidents.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants, Donations
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Lubbock County– Action #19
Proposed Action:	Purchase of AED's (Automatic External Defibrillator) for all emergency response vehicles and include training of staff. Provide ability for all first responders to rapidly deploy life-saving technology to cardiac medical emergencies as a result of stress-related situations during disasters.
BACKGROUND INFORMATION	
Site and Location:	County-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Avoid loss of life; improve quality of life for residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	Within 36 months of
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Lubbock County– Action #20
	Proposed Action:	Purchase of replacement K-9 and training of K- 9 and handler.
	BACKGROUND INFORMATION	
	Site and Location:	County-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide protection to first responders and the public.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County Sheriff's Office, Emergency Management
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:

VILLAGE OF BUFFALO SPRINGS

		Village of Buffalo Springs – Action #1
	Proposed Action:	Review current codes and ordinances within the Village and look to update to ensure codes are current and incorporate community-wide mitigation and resilience standards.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages throughout the community.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Village of Buffalo Springs – Action #2
Proposed Action:	Create a Community Wide Wildfire Protection Plan.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages throughout the community.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$20,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:

	Village of Buffalo Springs– Action #3
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide critical facilities, including but not limited to: EOC, lift stations, water tower
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan, Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		Village of Buffalo Springs– Action #4
	Proposed Action:	Enhance and expand existing limited alert system equipment currently in place at McMillan Dam and educate residents in downstream inundation area regarding flooding risk due to dam failure.
	BACKGROUND INFORMATION	
	Site and Location:	½ mile west of Ransom Canyon city limits
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness. Reduce risk of damages, injury and loss of life.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs and Ransom Canyon with inter-local agreement
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan, Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	Village of Buffalo Springs– Action #5
Proposed Action:	Implement public education program to educate all residents of flood insurance availability.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	Village of Buffalo Springs and Ransom Canyon with inter-local agreement
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan, Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

Village of Buffalo Springs– Action #6	
Proposed Action:	Construct alternate evacuation routes for residents and disseminate information to affected residents regarding location of evacuation routes and shelters.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to residents through improved evacuation alternatives; improve first responder capabilities through improved access alternatives.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs Police, EMC
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Village of Buffalo Springs– Action #7
Proposed Action:	Purchase and provide NOAA radios for early warning and post-event information.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens through improved communication and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Village of Buffalo Springs EMC
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan, Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

CITY OF IDALOU

	City of Idalou – Action #1
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities, including but not limited to: City Hall, Fire Department, EMS Station, Frontage Road Building, (4) city water wells**.**
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$625,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City Administration and Emergency Management
Implementation Schedule:	6 months to 5 years of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan; Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Idalou – Action #2
Proposed Action:	Installation of VHF radio repeater for city VHF radios in order to provide extended coverage for radio communications.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens and emergency response personnel through improved communication and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$15,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City Administration and Emergency Management
Implementation Schedule:	6 months to 5 years of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan; Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Idalou – Action #3
Proposed Action:	Obtain certification and conduct community education outreach for Storm Ready program.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Thunderstorm Wind, Tornado, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City Administration and Emergency Management
Implementation Schedule:	6 months to 5 years of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan; Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Idalou – Action #4
Proposed Action:	Construct a community-wide storm shelter.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$25,000,000.00
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City Administration and Emergency Management
Implementation Schedule:	6 months to 5 years of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan; Emergency Operations Plan

COMMENTS:

		City of Idalou– Action #5
	Proposed Action:	Construct multi-use Community Storm Shelter and EOC. Purchase needed supplies for heating/cooling shelter during extreme temperature events.
	BACKGROUND INFORMATION	
	Site and Location:	Site to be determined
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and fatalities. Ensures continuity of emergency services during and after a severe weather event.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$850,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Emergency Management
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Continuity of Operations Plan (COOP)

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Idalou– Action #6
Proposed Action:	Construct detention ponds with water filtration system for emergency potable water in the event of water system failure.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injury and fatalities. Ensures continuity of emergency services during and after a severe weather event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Public Works
Implementation Schedule:	Within 12-48 months of plan adoption
Incorporation into Existing Plans:	Continuity of Operations Plan (COOP), Comprehensive Community Development Plan

COMMENTS:

	City of Idalou– Action #7
Proposed Action:	Conduct public education program regarding current Nexis alert system, hazard risk, and provide information describing system alerts pertaining to notification, evacuation, during severe weather events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,500
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Emergency Management
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Idalou– Action #8
Proposed Action:	Promote residential storm shelters / safe rooms program.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injury and fatalities during and after a severe weather event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Emergency Management
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Comprehensive Community Development Plan, Building Permit Process

COMMENTS:

	City of Idalou– Action #9
Proposed Action:	Implement program to clear debris from bridges, drains and culverts.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages by maintaining and restoring drainage capacity.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Emergency Management
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Emergency Operations Plan, Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Idalou– Action #10
Proposed Action:	Establish native grass buffers around Playa Lakes to filter out soil and contaminants from flooding; replenish dry Playa Lakes to ensure protection of aquifers and mitigate declining water tables due to drought.
BACKGROUND INFORMATION	
Site and Location:	City-areas around Playa Lakes
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce contamination from runoff and recharge areas which act as a natural wetland area in protection of underground aquifers.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Public Works
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Environmental Protection Plan, Water Conservation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Idalou– Action #11
Proposed Action:	Develop water conservation / drought education programs.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Enhance water conservation and ensure continued supply of potable water. Reduce risk of fatalities to vulnerable and at-risk populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Idalou Administration / Public Works
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Water Conservation Plan, Firewise Community Plan

COMMENTS:

CITY OF LUBBOCK

	City of Lubbock – Action #1
Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Communications and Marketing
Implementation Schedule:	Within 6 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		City of Lubbock – Action #2
	Proposed Action:	Develop alternative evacuation routes/plans and designate emergency thoroughfares, particularly in areas with limited capacity. Educate citizens on evacuation routes and procedures.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to residents through improved evacuation alternatives and awareness efforts.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Office of Emergency Management
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		City of Lubbock – Action #3
	Proposed Action:	Jim Bertram Lake 7 – Construction of Dam & Related Infrastructure
	BACKGROUND INFORMATION	
	Site and Location:	Southeast of the City of Lubbock near FM835 along the North Fork of the Double Mountain Fork of the Brazos River
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through improved drainage capacity. Reduce risk of damages and injury to vulnerable populations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Dam Failure
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 15 years of plan adoption
Incorporation into Existing Plans:	Water Utilities Operational Plan

COMMENTS:
Lake 7 will assist the city to diversify its water supplies by reusing treated wastewater for drinking water (drought resistant and renewable). In addition, Lake 7 will help mitigate potential flooding of areas downstream such as the Village of Buffalo Springs and the Town of Ransom Canyon.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		City of Lubbock – Action #4
	Proposed Action:	Replacing or rehabilitating deteriorating manholes at strategic locations to prevent sewer overflows.
	BACKGROUND INFORMATION	
	Site and Location:	Throughout the sewer collection system particularly in the older areas of Lubbock, Texas
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of water contamination. Reduce risk of surface water infiltration ad sewage backup. Ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Dam Failure
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structure and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Water Utilities Operational Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Lubbock – Action #5
Proposed Action:	Acquire and install generators with hard wired quick connections on critical infrastructure located at the Southeast Water Reclamation Plant.
BACKGROUND INFORMATION	
Site and Location:	Southeast Water Reclamation Plant, 3603 Guava Avenue, City of Lubbock, Texas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power to critic facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Water Utilities Operational Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		City of Lubbock– Action #6
	Proposed Action:	Strategic Water Supply Plan Update: Planning for future water supplies and incorporating diversification strategies (including reuse water and conservation) will help the city to reduce the risk of running out of water during drought years and/or interruption in service during natural disasters or extreme weather events.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injuries and fatalities to at-risk and vulnerable populations during extreme weather conditions.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Water Utilities Operational Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock – Action #7
Proposed Action:	Install USGS gauging stations at outfall of major storm sewer systems.
BACKGROUND INFORMATION	
Site and Location:	Outfalls for the South, South Central, and Northwest Storm Drainage Systems in the City of Lubbock, Texas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk. Reduce risk of damages and injury to vulnerable populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structures and Infrastructure, Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$150,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 1 year of plan adoption
Incorporation into Existing Plans:	Strategic Water Supply Plan

COMMENTS:
Gauges at these locations will assist the city in determining the amount of Stormwater being discharged into the North Fork of the Double Mountain Fork of the Brazos River. This will help the city anticipate potential damage due to flood events and determine the amount of water that can be impounded in future Lake 7.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		City of Lubbock – Action #8
	Proposed Action:	Educate water utility customers on the importance of water conservation and the use of water wise (Smartscape) plants and grasses that are drought tolerant.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 1 year of plan adoption
Incorporation into Existing Plans:	Water Conservation & Drought Contingency Plan

COMMENTS:

		City of Lubbock – Action #9
	Proposed Action:	Adopt and implement a program for clearing debris from bridges, drains, and culverts.
	BACKGROUND INFORMATION	
	Site and Location:	Inside the City of Lubbock
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through improved drainage capacity. Reduce risk of damages and injury to vulnerable populations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Health/Safety
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	moderate
Estimated Cost:	$250,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Code Administration
Implementation Schedule:	Implemented as part of ongoing operation
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Lubbock – Action #10
Proposed Action:	Procurement and installation of emergency generator.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$8,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution. This will allow facility to function during power outages.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Lubbock – Action #11
Proposed Action:	Upgrade electrical capacity in Banquet Hall and Meeting Rooms and procurement of charging stations and tables.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$750,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Lubbock – Action #12
Proposed Action:	Upgrade Storm Water Sump Pumps.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of water contamination. Reduce risk of surface water infiltration and sewage backup. Ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Dam Failure
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	Reduce risk to existing infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$472,500
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution. This will ensure facility can continue to be operated during flooding conditions.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		City of Lubbock – Action #13
	Proposed Action:	Upgrade East Loading Dock to include upgrading equipment and to comply with changes in trucking standards.
	BACKGROUND INFORMATION	
	Site and Location:	Lubbock Memorial Civic Center
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk to at-risk or vulnerable populations during extreme weather conditions.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Dam Failure, Thunderstorm Wind, Tornado, Hail, Lightning, Winter Storm, Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,800,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 15 or years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution. This will provide more efficient loading and unloading of transportation vehicles for supplies and resources, current dock does not provide capacity needed during emergency operations.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock – Action #14
Proposed Action:	Procurement of security fencing and barricades.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk to at-risk or vulnerable populations during extreme weather conditions.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure – Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Hail, Lightning, Winter Storm, Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 10 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution.

	City of Lubbock – Action #15
Proposed Action:	Enclosure of central courtyard.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk to at-risk or vulnerable populations during extreme weather conditions.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure – Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Hail, Lightning, Winter Storm, Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,750,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 15 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter and point of distribution.

	City of Lubbock – Action #16
Proposed Action:	Procurement of accessible shower facilities
BACKGROUND INFORMATION	
Site and Location:	Lubbock Memorial Civic Center
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk to at-risk or vulnerable populations during extreme weather conditions.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure - Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Thunderstorm Wind, Tornado, Winter Storm, Hail, Extreme Heat, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/ Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Memorial Civic Center
Implementation Schedule:	Within 15 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan / Sheltering Plan

COMMENTS:
Facility is in multiple plans to be utilized as an emergency temporary shelter. Facility currently only has one (1) accessible shower available when used as an emergency temporary shelter.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock – Action #17
Proposed Action:	Purchase three sets of vehicle barricade systems for use in street closures and evacuations. Three sets will allow for enough barricades to completely block off a major thoroughfare.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities during extreme weather conditions.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm, Flood, Tornado, Wildfire, Dam Failure
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/security and Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$360,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock Police Department
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
Reduce the number of officers used to block key vehicle approach routes during severe weather and other significant events to reduce/prevent loss of life due to a vehicle entering a hazard area. These systems will keep public from moving the system and entering in secured or evacuated areas.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		City of Lubbock – Action #18
	Proposed Action:	Establish a City of Lubbock Fusion Center to provide rapid collection and dissemination of intelligence and field reports related to upcoming natural hazards to ensure effective and efficient mitigation and response actions are coordinated in an appropriate manner.
	BACKGROUND INFORMATION	
	Site and Location:	Lubbock Police Department Headquarters
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities through providing real-time situational awareness and more efficient use of resources.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations, Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Winter Storm, Hail, Flood, Drought, Lightning, Wildfire, Extreme Heat, Dam Failure
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/security and Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock Police Department
Implementation Schedule:	Within 10 years of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock – Action #19
Proposed Action:	Purchase a reinforced ambulance with high clearance.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Fire Rescue
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities during extreme weather conditions.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Winter Storm, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$819,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock Fire Rescue
Implementation Schedule:	Within 24-60 months of plan adoption or as funds become available
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
Assists in search and recovery operations during winter weather or tornado events where normal vehicles cannot access. Provides protection to emergency medical responders and patients during winter weather and tornado events and around debris.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock – Action #20
Proposed Action:	Purchase a reinforced rescue vehicle with high clearance.
BACKGROUND INFORMATION	
Site and Location:	Lubbock Police Department Headquarters
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities during extreme weather conditions
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Winter Storm, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$389,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock Police Department
Implementation Schedule:	Within 24-60 months of plan adoption or as funds become available
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
Assists in search and recovery operations during winter weather or tornado events where normal vehicles cannot access.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock– Action #21
Proposed Action:	Install new central computer traffic system and communication system including controllers, hardware, and wireless Ethernet to protect against outages in the event of severe weather events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continued operation of traffic system and communications during severe weather and disasters; improve quality of life for residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Winter Storm, Tornado, Hail, Flood, Wildfire, Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$4,750,000
Potential Funding Sources:	City of Lubbock
Lead Agency/Department Responsible:	Traffic Engineering
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Traffic and Emergency Plans

COMMENTS:
The battery backup program is still ongoing. This allows for cameras at intersections to run during power outages to assist the Traffic Management System and the Emergency Operations Center. Fiber optic runs will continue and are planned for in both water, wastewater, and street projects by installing conduit for future fiber to assist interconnectivity of the City's operations.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock– Action #22
Proposed Action:	Continue to assess areas to widen and improve carrying capacity of floodwaters.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce property damage and potential flooding of area structures; reduce monetary cost of road improvements due to washout.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$245,000
Potential Funding Sources:	Local Funds, State and Federal Grant
Lead Agency/Department Responsible:	City of Lubbock Street Engineering
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual, Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Lubbock– Action #23
Proposed Action:	Hire consultant to inspect and identify improvements on the dry side of the John T. Montford Dam structure.
BACKGROUND INFORMATION	
Site and Location:	Lake Alan Henry at Dam site
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce property damage and avoid loss of life. Reduce rate of erosion within the Dam area.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce flooding potential downstream of dam
Priority (High, Moderate, Low):	High
Estimated Cost:	$4,500,000
Potential Funding Sources:	Local Funds, State and Federal Grant
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Lubbock– Action #24
Proposed Action:	Install eight miles of gravity flow storm sewer pipe as part of the Northwest Lubbock Drainage Improvements project, and to help maintain CRS rating for flood prevention.
BACKGROUND INFORMATION	
Site and Location:	NW Loop 289, Quaker Avenue, Erskine Street
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through improved drainage capacity. Reduce risk of damages and injuries. Reduce emergency response demands.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce potential flooding due to drainage project
Priority (High, Moderate, Low):	High
Estimated Cost:	$70 million
Potential Funding Sources:	Local Funds, State and Federal Grant
Lead Agency/Department Responsible:	City of Lubbock Stormwater Engineering
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

COMMENTS:
Phase 3 is in construction and Phase 4 is in design. Additional phases will add additional playas to the Northwest System.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Lubbock– Action #25
Proposed Action:	Continue to assess addition sites that requirement upgrades/replacement of regulatory and warning traffic signs, install breakaway and/or install pavement markings at intersections and school zones to mitigate flood velocity damage during flooding events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce danger to residents and students in high flood risk zones by providing warning signs.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness, Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000
Potential Funding Sources:	Local Funds, State and Federal Grant
Lead Agency/Department Responsible:	City of Lubbock Traffic Engineering
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock– Action #26
Proposed Action:	Purchase emergency generators as backup in disasters and power outages.
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities and infrastructures including but not limited to effluent pump stations, lift stations.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power to critic facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy (Power/Fuel)
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$450,000 - $2,000,000
Potential Funding Sources:	Local Funds, State and Federal Grant
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP), Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Lubbock– Action #27
Proposed Action:	Annual review of Emergency Action Plans for Montford Dam and Canyon Lake Dam #2 and #3.
BACKGROUND INFORMATION	
Site and Location:	City-wide, Lake Alan Henry area
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure adequate emergency plan is in place for area dams. Reduces risk of damages, injuries, and loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local funds (staff time)
Lead Agency/Department Responsible:	City of Lubbock/Water Utilities
Implementation Schedule:	Annually
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		City of Lubbock– Action #28
	Proposed Action:	Unified Development Code project: Implement and incorporate smart growth initiative within development policy and ordinances.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure adequate water supplies and key infrastructure are available. Reduce risk of injury and fatalities to vulnerable and at-risk populations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Wildfire, Extreme Heat, Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000
Potential Funding Sources:	Local funds (staff time)
Lead Agency/Department Responsible:	City of Lubbock Planning Department
Implementation Schedule:	2023
Incorporation into Existing Plans:	Comprehensive Community Development Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

		City of Lubbock– Action #29
	Proposed Action:	Continue to explore and purchase rescue response vehicles that can be used during severe weather events.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk on injury and fatalities. Reduce risk to emergency response personnel. Ensure continuity of critical services and expedites rescue operations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$150,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock Police Department
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Lubbock– Action #30	
	Proposed Action:	Installation of a lateral for Lake 054 in order to restore capacity to the non-overflow playa lake in between storm events.
	BACKGROUND INFORMATION	
	Site and Location:	Indiana Avenue from 2nd Place to Grinnell Street and the Arnett Benson neighborhood.
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce danger to residents in flood zone. Reduce flood risk through improved drainage capacity. Reduce risk of damages to properties in the area. Reduce emergency response demands.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$6.5 million
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Lubbock CIP Engineering
Implementation Schedule:	Within 1-3 years of plan adoption, currently in design phase
Incorporation into Existing Plans:	Stormwater Management Plan, Drainage Criteria Manual

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

TOWN OF NEW DEAL

	Town of New Deal– Action #1
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,250,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal
Implementation Schedule:	Within 1-2 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

		Town of New Deal– Action #2
	Proposed Action:	Implement education and awareness program utilizing media, social media, flyers to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries fatalities and property damage.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Town of New Deal – Action #3
	Proposed Action:	Construct a multi-use Community Storm / Tornado shelter and EOC for the citizens of the community.
	BACKGROUND INFORMATION	
	Site and Location:	Location to be determined with town-limits
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life due to inclement weather situations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal / Emergency Management
Implementation Schedule:	Within 6 months - 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement

COMMENTS:

	Town of New Deal – Action #4
Proposed Action:	Conduct public education program on fire risks and wildland fire mitigation, with the assistance of the Texas Forest Service.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement

COMMENTS:

		Town of New Deal – Action #5
	Proposed Action:	Develop a Community Wildfire Protection Plan.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injuries and fatalities.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:

		Town of New Deal– Action #6
	Proposed Action:	Purchase NOAA “All Hazard” radios for early warning and post-event information.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages through improved communication and early warning.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal Emergency Management
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Town of New Deal– Action #7
Proposed Action:	Implement a tree trimming program to remove weak trees near right of ways to avoid debris in roadway following a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	Town-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of property damage, injury and facilities. Ensures continuity of critical services during a severe weather event. Improves emergency response.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations, Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal Emergency Management
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	Town of New Deal– Action #8
Proposed Action:	Develop public awareness program to notify residents of availability of flood insurance/reduced cost of a flood policy in low-risk flood hazard areas.
BACKGROUND INFORMATION	
Site and Location:	Community-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$500
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal Floodplain Manager
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Floodplain Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

		Town of New Deal – Action #9
	Proposed Action:	Purchase needed supplies for heating/cooling shelter during extreme temperature events.
	BACKGROUND INFORMATION	
	Site and Location:	Location to be determined for the Town of New Deal
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce loss of life to citizens and vulnerable populations due to inclement weather situations.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Extreme Heat, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of New Deal
Implementation Schedule:	Within 6 months – 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Emergency Operations Plan

COMMENTS:

TOWN OF RANSOM CANYON

		Town of Ransom Canyon – Action #1
	Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide critical facilities
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	Town of Ransom Canyon – Action #2
Proposed Action:	Acquire and install flood gauges for low-water crossings throughout high-risk areas.
BACKGROUND INFORMATION	
Site and Location:	Community-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Flood Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	Town of Ransom Canyon – Action #3
Proposed Action:	Increase drainage capacity. Upgrading undersized stormwater drains and culverts. Add stormwater detention and/retention ponds as deemed necessary.
BACKGROUND INFORMATION	
Site and Location:	Community-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk and sewage back-up through improved drainage capacity. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		Town of Ransom Canyon – Action #4
	Proposed Action:	Consult and hire an engineer to complete studies within the city to better address improvements and needs, studies included but not limited to dam inundation, H&H, wildfire risk, soil analysis, etc.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages and injuries.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	Town of Ransom Canyon – Action #5
Proposed Action:	Adopt and implement codes to ensure mitigation and resiliency within new developments that the Town has acquired.
BACKGROUND INFORMATION	
Site and Location:	Community-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damage and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:
Chief we discussed the Town acquire 61 properties- please let me know if this is what the Town would be interested in doing or if we need to expand to include additional actions for these homes/areas.
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	Town of Ransom Canyon – Action #6
Proposed Action:	Upgrade sewage capacity throughout city and in new development.
BACKGROUND INFORMATION	
Site and Location:	Community-wide, especially in areas surrounding Buffalo Spring Lake
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce sewage back-up through improved drainage capacity. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	Town of Ransom Canyon– Action #7
Proposed Action:	Implement a tree trimming program to remove weak trees near right of ways to avoid debris in roadway following a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	Community-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of property damage, injury and facilities. Ensures continuity of critical services during a severe weather event. Improves emergency response.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations, Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances; Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

		Town of Ransom Canyon – Action #8
	Proposed Action:	Assess and implement flood mitigation measures throughout the community. Provide information to homeowners to promote flood mitigation measures they can take in their residences.
	BACKGROUND INFORMATION	
	Site and Location:	Community-wide critical facilities
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages and injuries.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

		Town of Ransom Canyon – Action #9
	Proposed Action:	Develop a Community Wildfire Protection Plan.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injuries and fatalities.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 12-24 month(s) of plan adoption
Incorporation into Existing Plans:	Local Codes and Ordinances

COMMENTS:

	Town of Ransom Canyon – Action #10
Proposed Action:	Implement wildfire mitigation measures throughout community including firebreaks in wooded areas, burn bans signs, no vegetation in easement and/ or requiring fire-resistant landscaping.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injuries and fatalities.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-36 month(s) of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:

		Town of Ransom Canyon – Action #11
	Proposed Action:	Evaluate emergency road access conditions. Develop and implement option to improve access and/or add redundant access routes in high-risk areas.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injuries and fatalities. Ensures continuity of critical emergency response. Ensure appropriate evacuation for vulnerable and at-risk populations during extreme weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-36 month(s) of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan; Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

		Town of Ransom Canyon – Action #12
	Proposed Action:	Develop and build a community-wide FEMA approved / certified Safe Room.
	BACKGROUND INFORMATION	
	Site and Location:	Renovating Library and/or exploring alternative site to be determined within Town-limits
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens providing shelter during extreme weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

		Town of Ransom Canyon – Action #13
	Proposed Action:	Adopt and implement a community rebate program for residential safe rooms.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens providing shelter during extreme weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 36-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Town of Ransom Canyon – Action #14
Proposed Action:	Adopt a program to protect livestock and agriculture in extreme weather conditions.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to livestock and agriculture.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$20,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	Town of Ransom Canyon– Action #15
Proposed Action:	Expand existing limited alert system equipment currently in place for Ransom Canyon residents in proximity to McMillan Dam and educate residents of flood risk downstream in inundation area.
BACKGROUND INFORMATION	
Site and Location:	McMillan Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon and Buffalo Springs with inter-local agreement
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

		Town of Ransom Canyon– Action #16
	Proposed Action:	Implement public awareness program to educate residents on availability of flood insurance and flood risk city wide.
	BACKGROUND INFORMATION	
	Site and Location:	Community-Wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	Town of Ransom Canyon and Buffalo Springs with inter-local agreement
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Evacuation Plan, Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	Town of Ransom Canyon– Action #17
Proposed Action:	Construct alternate evacuation routes for residents and disseminate information to affected residents regarding location of evacuation routes and shelters.
BACKGROUND INFORMATION	
Site and Location:	Community-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to residents through improved evacuation alternatives; improve first responder capabilities through improved access alternatives.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Town of Ransom Canyon Police, EMC
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

CITY OF SHALLOWATER

	City of Shallowater – Action #1
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities and infrastructures, including but not limited to water wells
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$200,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Shallowater Administration
Implementation Schedule:	Within 18 months of plan adoptions
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Shallowater – Action #2
Proposed Action:	Install sprinkler systems at city owned parks.
BACKGROUND INFORMATION	
Site and Location:	City-wide parks, including but not limited to Young Park
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to public areas and infrastructure. Reduces risk of injury and fatalities to at-risk and vulnerable populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduces risk to existing structures and infrastructures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$200,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Shallowater Water Department
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

City of Shallowater – Action #3	
Proposed Action:	Update drainage capacity. Add detention and/retention basin/ponds as deemed necessary.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk and sewage back-up through improved drainage capacity. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Shallowater Administration
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Shallowater– Action #4
Proposed Action:	Develop a public awareness campaign in conjunction with Shallowater ISD to notify resident of proposed storm shelter at Shallowater High School campus. As well as disseminate NFIP public awareness information to citizens.
BACKGROUND INFORMATION	
Site and Location:	Residents within approved radius of shelter site on campus.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and fatalities by promoting hazard awareness.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Shallowater Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

CITY OF SLATON

	City of Slaton – Action #1
Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Slaton – Action #2
Proposed Action:	Acquire and distribute NOAA weather radios.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizen through improved communications and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Slaton – Action #3
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	City-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities. Ensure continuity of critical services during and after event. Recue risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan; Capital Improvement Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #4
Proposed Action:	Adopt on-site retention basin program in conjunction with development to address excessive stormwater and alternative water source.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Requiring developers to implement on-site retention basin for new developments will prevent downstream impacts, reduce impact to floodplain and provide additional potential water sources.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Lightning, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Local Building Codes / Ordinances

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #5
Proposed Action:	Develop alternative evacuation routes / plan and designate emergency thoroughfares, particularly in areas with limited capacity. Educate citizens on evacuation routes and procedures.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to residents through improved evacuation alternatives and awareness efforts.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Tornado, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Slaton – Action #6
Proposed Action:	Adopt and implement a program for clearing debris from bridges, drains and culverts
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages caused by flooding by maintaining or restoring drainage capacity.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Local Building Codes/Ordinances

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #7
Proposed Action:	Identify flood-prone and repetitive loss properties through the Texas Water Development Board Identify and implement actions to reduce or eliminate flooding at identified properties.
BACKGROUND INFORMATION	
Site and Location:	City-wide high flood risk property and repetitive loss properties
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages or injuries through flood mitigation at high-risk structures; Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community recovery efforts and costs.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Floodplain Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #8
Proposed Action:	Undertake a comprehensive study of flood risk and reduction alternatives, with the assistance of the US Army Corps of Engineers. Implement feasible alternatives for flood reduction.
BACKGROUND INFORMATION	
Site and Location:	City-wide flood hazard areas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #9
Proposed Action:	Develop a land acquisition program in flood hazard areas. Acquire and demolish repetitive loss properties. Acquire high risk vacant land and maintain as open space.
BACKGROUND INFORMATION	
Site and Location:	City-wide flood risk areas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Eliminate risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce downstream impacts associated with development in the floodplain; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure; Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Floodplain Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #10
Proposed Action:	Join the Community Rating System program.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood insurance premiums for residents; Reduce flood risk and build resiliency
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration / Floodplain Administrator
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Floodplain Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Slaton – Action #11
Proposed Action:	Adopt wetlands development regulations; Implement a Comprehensive Watershed Ordinance for new development.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Preserve/restore the natural function of the floodplain; Reduce flood damages and risk of injuries or fatalities through comprehensive development standards.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations, Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration / Floodplain Administrator
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #12
Proposed Action:	Upgrade undersized stormwater drains and culvert.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24-60 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #13
Proposed Action:	Implement a flood awareness program by providing FEMA/NFIP materials to mortgage lenders, real estate agents and insurance agents and place them in local libraries.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness; Increase flood insurance coverage.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Slaton – Action #14
Proposed Action:	Provide how-to information to residents for installing backflow valves to prevent reverse-flow floods.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damage impact on residents after a flood event; Reduce risk of sewage back-up in structures; Reduce risk of injury or illness to resident.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #15
Proposed Action:	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24-60 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #16
Proposed Action:	Implement stream restoration/channelization program to ensure adequate drainage/diversion of stormwater.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24-60 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #17
Proposed Action:	Flood-proof sewage treatment plants in flood hazard/low-lying areas.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of floodwater contamination; Reduce risk of surface water infiltration and sewage backup; Ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$250,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Wastewater Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Slaton – Action #18
Proposed Action:	Acquire and preserve open spaces adjacent to floodplain areas.
BACKGROUND INFORMATION	
Site and Location:	City-wide flood risk areas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk to structures and infrastructure in and near the floodplain; Reduce downstream impacts associated with development in the floodplain; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Floodplain Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton – Action #19
Proposed Action:	Conduct public education program on fire risks and wildland fire mitigation, with the assistance of the Texas Forest Service
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk and spread of wildfires through education and awareness programs; Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	City of Slaton – Action #20
Proposed Action:	Adopt and implement routine fire hydrant maintenance plan.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk and spread of wildfires through routine maintenance of fire hydrants; Reduce risk of injury or damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	City of Slaton – Action #21
Proposed Action:	Implement a community education program regarding fire dangers for identified risk areas; Distribute pamphlets through neighborhood associations or insert flyers in water bills to make residents aware of wildfire hazard areas and fire protection measures for homes and yards.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk and spread of wildfires through education and awareness programs; Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	City of Slaton – Action #22
Proposed Action:	Educate citizens on mitigation measures to prevent frozen pipes; Educate homeowners on carbon monoxide monitors/alarm.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages and injuries through mitigation education and awareness.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	City of Slaton – Action #23
Proposed Action:	Build safe room shelters throughout the city to include community center and/or manufactured home parks so that all residents can reach shelter in less than five minutes.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of fatalities and injuries through providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 24-60 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

		City of Slaton– Action #24
	Proposed Action:	Acquire and install generators with hard wired quick connections at critical facilities during electrical outages due to severe weather event.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide critical facilities including but not limited to 911 operation center and lift stations
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy (Power/Fuel)
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration / Emergency Management
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Continuance of Operations Plan (COOP)

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

	City of Slaton– Action #25
Proposed Action:	Distribute NFIP public awareness information to citizens including availability of flood insurance.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 12 months of plan adoption, Ongoing
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Slaton– Action #26
Proposed Action:	Implement program to routinely remove debris from drainage ways and roadside ditches to prevent back up of flood velocity and improve conveyance of stream during flood events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages caused by flooding by maintain or restoring drainage capacity.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Slaton Administration
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Storm Water Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

CITY OF WOLFFORTH

	City of Wolfforth – Action #1
Proposed Action:	Purchase of NOAA radios for early warning and post-event information to place at schools and critical facilities.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to citizens through improved communications and early warning. Reduce loss of life and property.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth – Action #2
Proposed Action:	Conduct Public Outreach / Education on Smart-911 alerting systems, hazard risk, and provide information describing system alerts pertaining to notifications and evacuation during serve weather events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-48 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth – Action #3
Proposed Action:	Develop an Emergency Management Team consisting of Council, Emergency Management, and head of all city departments.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injuries, and fatalities. Ensures continuity of critical services during and after a disaster event. Improved the protection and evacuation of residents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations - Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth – Action #4
Proposed Action:	Purchase emergency rations for responders and public.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to at-risk and vulnerable populations. Ensures operations and recovery during emergency incidents.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000
Potential Funding Sources:	City Budget
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth– Action #5
Proposed Action:	Construct shelter for emergency vehicles and covered walkways for accessing vehicles during severe weather events.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and damages. Ensures continuity of critical services and emergency response during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$400,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

COMMENTS:

	City of Wolfforth– Action #6
Proposed Action:	Construct Emergency Operations Center and Community Storm Shelter.
BACKGROUND INFORMATION	
Site and Location:	Site to be determined within city-limits
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and damages. Ensures continuity of critical services and emergency response during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hail, Lightning, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$3 million
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

	City of Wolfforth– Action #7
Proposed Action:	Develop and implement community wide program to conserve existing water supply source.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensures continued supply of potable water. Reduce risk on fatalities to at-risk or vulnerable populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Administration / Council
Implementation Schedule:	Within 12 month of plan adoption
Incorporation into Existing Plans:	Comprehensive Community Development Plan, Continuance of Operations Plan (COOP)

COMMENTS:

	City of Wolfforth– Action #8
Proposed Action:	Implement program to purchase air conditioners/ heaters for low income and elderly residents susceptible to severe weather.
BACKGROUND INFORMATION	
Site and Location:	City- wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk on fatalities to at-risk or vulnerable populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations, Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication, Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 - $100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-24 months of plan
Incorporation into Existing Plans:	Emergency Operations Plan, Risk management Plan

COMMENTS:

		City of Wolfforth– Action #9
	Proposed Action:	Develop and implement NFIP public education program for residents affected by high flood risk areas.
	BACKGROUND INFORMATION	
	Site and Location:	City-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk through education and awareness. Increase flood insurance coverage and build resiliency.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 48 months of plan adoption
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance, Flood Management Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

	City of Wolfforth– Action #10
Proposed Action:	Continue to upgrade and expand outdoor warning siren system.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Improve evacuation of residents; shelter is in place for residents during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Response and Evacuation Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth– Action #11
Proposed Action:	Promote private storm shelters and safe room program for existing and new residential construction.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk on fatalities to at-risk or vulnerable populations.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Residential Construction Manual, Building Permit process

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

	City of Wolfforth– Action #12
Proposed Action:	Continue to evaluate floodplain ordinance, prohibiting construction in high-risk flood zones.
BACKGROUND INFORMATION	
Site and Location:	City-wide high-risk areas
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injury and loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Floodplain Administrator
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Flood Damage Prevention Ordinance

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Protects communities and reduces risk of flooding.

	City of Wolfforth– Action #13
Proposed Action:	Purchase equipment and vehicles for emergency response.
BACKGROUND INFORMATION	
Site and Location:	City-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduces risk of injury and loss of life to emergency response personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	City of Wolfforth Emergency Management
Implementation Schedule:	Within 12-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
NFIP & WHY MITIGATION ACTION IS APPROPRIATE:
Promotes public safety.

ABERNATHY INDEPENDENT SCHOOL DISTRICT (ISD)

Abernathy Independent School District – Action # 1	
Proposed Action:	Implement education and awareness program utilizing classrooms, social media, bulletins, flyers, etc. to educate students, parents and area residents of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Abernathy Independent School District– Action #2	
Proposed Action:	Install lightning protection for existing and future infrastructure and critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District– Action #3	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District– Action #4	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District– Action #5	
Proposed Action:	Implement a program for clearing debris throughout campus locations, including assessment and removal trees / limbs that could impact district during a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Hail, Lightning, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District– Action #6	
Proposed Action:	Update drainage capacity. Add stormwater detention and/retention ponds as deemed necessary.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses, especially near football field
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk and sewage back-up through improved drainage capacity. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District– Action #7	
Proposed Action:	Construct FEMA certified safe room throughout district campuses.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses, especially in elementary and middle school locations.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Abernathy Independent School District– Action #8	
	Proposed Action:	Install cover walkways or canopies throughout district during extreme heat events.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Abernathy Independent School District– Action #9	
	Proposed Action:	Work with state and local agencies to determine at risk areas throughout district. Implement a fuel reduction program and distribute literature to students and faculty to promote hazard awareness.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of wildfires and the spread of wildfires through fuel reduction programs.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Abernathy Independent School District– Action #10	
	Proposed Action:	Mitigate utility lines that are surrounding district campuses.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at campus locations; Ensure continuity of critical services during and after event; Reduce risk of injury to students and faculty.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD administration, City of Abernathy
Implementation Schedule:	Within 36-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Abernathy Independent School District – Action #11	
Proposed Action:	Upgrade district critical facilities to include drought mitigation measures such as greywater reuse systems and drought tolerant landscaping.
BACKGROUND INFORMATION	
Site and Location:	District-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Abernathy ISD CFO and Maintenance Director
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

FRENSHIP INDEPENDENT SCHOOL DISTRICT (ISD)

	Frenship Independent School District – Action #1
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD CFO and Maintenance Director
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Frenship Independent School District– Action #2
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Frenship Independent School District– Action #3
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Frenship Independent School District– Action #4
Proposed Action:	Construct FEMA certified safe room throughout district.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Frenship Independent School District– Action #5	
Proposed Action:	Install cover walkways or canopies throughout district during extreme heat events.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Frenship Independent School District– Action #6	
Proposed Action:	Mitigate pavement throughout district to prevent cracking and potholes due to thawing and re-freezing.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk property damage and risk of injuries to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing infrastructures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 36-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Frenship Independent School District– Action #7
Proposed Action:	Implement a campus wide alert system and/or explore an alert notification app to be utilized by students, faculty, and parents to promote hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty through improved communication and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Frenship Independent School District– Action #8	
Proposed Action:	Update current public address system and contacts to ensure announcements are received and provided to students, parents and faculty regarding extreme events.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses and systems
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes awareness and protect students and faculty from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Frenship Independent School District – Action #9
Proposed Action:	Acquire mobile generators and trailers at all campus locations.
BACKGROUND INFORMATION	
Site and Location:	Frenship ISD, all 12 campus locations
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$240,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Frenship ISD Superintendent / Maintenance
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

IDALOU INDEPENDENT SCHOOL DISTRICT (ISD)

		Idalou Independent School District – Action #1
	Proposed Action:	Implement education and awareness program utilizing classrooms, social media, bulletins, flyers, etc. to educate students, parents and area residents of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	Idalou ISD CFO or Director of Maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Idalou Independent School District – Action #2
Proposed Action:	Upgrade ISD campuses to include drought mitigation measures such as grey water reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Idalou ISD CFO or Director of Maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Idalou Independent School District – Action #3
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Idalou ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Idalou Independent School District – Action #4
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Idalou ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Idalou Independent School District – Action #5
Proposed Action:	Develop and build a new school facility that functions as a community-wide FEMA approved Safe Room
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Idalou ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

LUBBOCK INDEPENDENT SCHOOL DISTRICT (ISD)

		Lubbock Independent School District – Action #1
	Proposed Action:	Upgrade ISD campuses to include drought mitigation measures such as grey water reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock ISD CFO or Director of Maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock Independent School District – Action #2	
Proposed Action:	Update and assess school access points to ensure proper evacuation protocol, shelter access and emergency/ first responders can access school personnel during an extreme weather event.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and fatalities to students and faculty during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness, Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Tornado, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Health/Medical
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$675,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock ISD Safety and Security, Facilities, and Police and Safety and identified vendor for installation and oversight
Implementation Schedule:	Within 12-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management / Response Plan; Evacuation Plan

COMMENTS:
It was discovered during our full-scale exercise that first responders were not able to access our room appropriately.

Lubbock Independent School District – Action #3	
Proposed Action:	Purchase door contacts for all doors for Lubbock ISDs'. Purchase and install security film for severe weather and intruders.
BACKGROUND INFORMATION	
Site and Location:	Lubbock ISD campus locations
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness - Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	Moderate
Priority (High, Moderate, Low):	High
Estimated Cost:	$792,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock ISD Chief of Police and Maintenance
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Independent School District – Action #4	
Proposed Action:	Harden/retrofit campus building to a hazard-resistant level.
BACKGROUND INFORMATION	
Site and Location:	Lubbock ISD campus location focusing on 52 school buildings
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facility. Ensure continuity of critical services during and after severe weather event. Reduce risk of injury to student and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$35,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock ISD Maintenance
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

	Lubbock Independent School District – Action #5	
	Proposed Action:	Purchase a compatible alert system with the City of Lubbock alert system that can notify, track and record data related severe weather events.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide throughout ISD campuses
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock ISD Superintendent
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

LUBBOCK-COPPER INDEPENDENT SCHOOL DISTRICT (ISD)

Lubbock – Copper Independent School District – Action #1	
Proposed Action:	Implement education and awareness program utilizing classrooms, social media, bulletins, flyers, etc. to educate students, parents and area residents of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Cooper ISD CFO or Director of Maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock-Copper Independent School District– Action #2	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Copper ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Lubbock-Copper Independent School District– Action #3	
Proposed Action:	Construct FEMA certified safe room throughout district.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Copper ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Lubbock-Copper Independent School District– Action #4	
Proposed Action:	Install lightning protection and wind protectors for existing and future infrastructure and critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Copper ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Lubbock-Copper Independent School District – Action #5	
Proposed Action:	Acquire and install generators with hard-wired quick connects at all campus locations
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000 - $250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Copper ISD administration and maintenance
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

COMMENTS:

Lubbock-Copper Independent School District – Action #6	
Proposed Action:	Upgrade district critical facilities to include drought mitigation measures such as greywater reuse systems and drought tolerant landscaping.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock-Copper ISD CFO and Maintenance Director
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

NEW DEAL INDEPENDENT SCHOOL DISTRICT (ISD)

	New Deal Independent School District – Action #1	
	Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide facilities/offices
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD CFO and Maintenance Director
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

New Deal Independent School District – Action #2	
Proposed Action:	Implement mitigation measures to insulate / protect pipes for extreme winter weather.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages resulting from freezing temperatures. Ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration and maintenance
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

New Deal Independent School District– Action #3	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

New Deal Independent School District – Action #4	
Proposed Action:	Implement a program for clearing debris throughout campus locations, including assessment and removal trees / limbs that could impact district during a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Hail, Lightning, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration and maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

New Deal Independent School District – Action #5	
Proposed Action:	Construct FEMA certified safe rooms within new elementary/MS campus.
BACKGROUND INFORMATION	
Site and Location:	New Elementary / MS Campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce injuries and fatalities by providing safe shelter to students and faculty during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$20,000,000
Potential Funding Sources:	Bonds, District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

New Deal Independent School District – Action #6	
Proposed Action:	Acquire and install generators and mobile generators with trailers at all campus locations.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$20,000 - $250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Disaster Response and Recovery Plan

COMMENTS:

New Deal Independent School District – Action #7	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	New Deal ISD administration
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

ROOSEVELT INDEPENDENT SCHOOL DISTRICT (ISD)

Roosevelt Independent School District – Action #1	
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD CFO and Maintenance Director
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Roosevelt Independent School District– Action #2	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Roosevelt Independent School District – Action #3	
Proposed Action:	Construct FEMA certified safe room throughout district.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses, especially in elementary and middle school locations.
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Roosevelt Independent School District – Action #4	
Proposed Action:	Implement mitigation measures to insulate / protect pipes for extreme winter weather.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages resulting from freezing temperatures. Ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD administration and maintenance
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Roosevelt Independent School District – Action #5	
Proposed Action:	Acquire and install generators at all campus locations.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000 - $250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD administration and maintenance
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Roosevelt Independent School District – Action #6	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Roosevelt ISD administration and maintenance
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

SHALLOWATER INDEPENDENT SCHOOL DISTRICT (ISD)

Shallowater Independent School District – Action #1	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Shallowater ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Shallowater Independent School District– Action #2	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Shallowater ISD administration and maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Shallowater Independent School District – Action #3	
Proposed Action:	Upgrade ISD campuses to include drought mitigation measures such as grey water reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Shallowater ISD CFO or Director of Maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Shallowater Independent School District – Action #4	
Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	Shallowater ISD Emergency Shelter Facilities (Domes)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect students and faculty from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,000 initially/$1,000 annually
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Shallowater ISD/City of Shallowater
Implementation Schedule:	Within 6 months of plan adoption
Incorporation into Existing Plans:	Emergency Response Plan

COMMENTS:
Our district facilities have served the community as severe weather storm shelters for the last 8 years, however, a strategic coordinated effort to educate the residents has never taken place. In advance of severe weather season, it would be helpful for the district to work with city officials to provide the community with updated information on when/where/how they can use local facilities to stay safe during storm season.

Shallowater Independent School District – Action #5	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Shallowater ISD maintenance staff, district police officers, and district administration
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

SLATON INDEPENDENT SCHOOL DISTRICT (ISD)

	Slaton Independent School District– Action #1
Proposed Action:	Install lightning protection for existing and future infrastructure and critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Slaton Independent School District– Action #2
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD administration and maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Slaton Independent School District– Action #3
Proposed Action:	Implement a program for clearing debris throughout campus locations, including assessment and removal trees / limbs that could impact district during a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Hail, Lightning, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD administration and maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Slaton Independent School District – Action #4
Proposed Action:	Implement mitigation measures including but not limited to promoting awareness of potential risk, addressing pavement to reduce damage, and/or insulate / protect pipes for extreme winter weather.
BACKGROUND INFORMATION	
Site and Location:	District-wide campuses
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages resulting from freezing temperatures. Ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD administration and maintenance
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

	Slaton Independent School District – Action #5
Proposed Action:	Develop Hazard Awareness program to inform students, teachers, and parents of safety measures before, during and after a severe weather or natural disaster event.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect student/faculty from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$1,500
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

	Slaton Independent School District – Action #6
Proposed Action:	Install Portable Water Source in the event of public water shortage due to severe weather event or natural disaster.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk on fatalities. Ensure continuity of critical services for student and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Wildfire, Extreme Heat, Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Low
Estimated Cost:	$53,500
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	In-progress
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

	Slaton Independent School District – Action #7
Proposed Action:	Purchase emergency resources such as portable beds and blankets for each designated tornado shelter on ISD campuses.
BACKGROUND INFORMATION	
Site and Location:	Slaton ISD tornado shelter locations at the following campus locations: Gym at Slaton High School, Gym at Slaton Junior High School, Gym at Cathelene Thomas Elementary, Gym at Stephen F Austin Elementary, and one room at Administration Office
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of injury and loss of life.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado, Hail
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000 - $1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Disaster Response and Recovery Plan

COMMENTS:

	Slaton Independent School District – Action #8
Proposed Action:	Harden/Retrofit critical facilities to hazard resistant levels.
BACKGROUND INFORMATION	
Site and Location:	Slaton ISD campuses: Slaton High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facility. Ensure continuity of critical services during and after an event. Reduce risk of injury to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	Within 12-60 months of plan adoption.
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

	Slaton Independent School District – Action #9
Proposed Action:	Install water drainage system at campuses as backup in severe weather events.
BACKGROUND INFORMATION	
Site and Location:	Slaton ISD campuses: High School, Slaton Junior High School, Cathelene Thomas Elementary, and Stephen F Austin Elementary
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facility by increasing drainage capacity. Ensure continuity of critical services during and after an event. Reduce risk of injury to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Slaton ISD
Implementation Schedule:	In-progress
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

BETTY M. CONDRA SCHOOL OF EDUCATION INNOVATION

Betty M. Condra School for Education Innovation – Action #1	
Proposed Action:	Implement education and awareness program utilizing classrooms, social media, bulletins, flyers, etc. to educate students, parents and area residents of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect students and faculty from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time)
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Betty M. Condra School for Education Innovation – Action #2	
Proposed Action:	Acquire and distribute NOAA weather radios to district location and administrative offices
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to students and faculty through improved communications and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Betty M. Condra School for Education Innovation – Action #3	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities within district
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Betty M. Condra School for Education Innovation – Action #4	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at campus critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Betty M. Condra School for Education Innovation – Action #5	
Proposed Action:	Develop and build a new school facility that functions as a community-wide FEMA approved Safe Room
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk to community residents, students and faculty by providing shelter during extreme weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$3,000,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Betty M. Condra School for Education Innovation – Action #6	
Proposed Action:	Upgrade district critical facilities to include drought mitigation measures such as greywater reuse systems and drought tolerant landscaping.
BACKGROUND INFORMATION	
Site and Location:	Betty M Condra School for Education Innovation 14219th Street, Lubbock, TX 79401
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	Betty M Condra School for Education Innovation
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

SOUTH PLAINS COLLEGE

		South Plains College– Action #1
	Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, campus safety app, etc. to educate citizens of hazards that can threaten the area and mitigation measures.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect students and faculty from potential injuries and damages.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000 annually
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	South Plains College Student Affairs and Administrative Services
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

		South Plains College– Action #2
	Proposed Action:	Restrict future development in high-risk areas.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damage to structures but locating buildings out of known hazard areas. Ensures continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risks to new structure and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	South Plains College Executive Council
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	South Plains College Policy

COMMENTS:

		South Plains College– Action #3
	Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains College Administrative Services
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

		South Plains College– Action #4
	Proposed Action:	Adopt a landscape ordinance (selection and planting guidelines).
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce impact on ground water. Reduce rainfall runoff volume and risk of flooding. Reduce risk and spread of wildfire.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	South Plains College Grounds Department
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	South Plains College Policy

Comments:

	South Plains College – Action #5
Proposed Action:	Remove downed trees and weakened trees on campuses that could impact district during a severe weather event.
BACKGROUND INFORMATION	
Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind, Hail, Lightning, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains College Grounds Department
Implementation Schedule:	Within 12 months of plan adoption, then continual assessments
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

		South Plains College– Action #6
	Proposed Action:	Upgrade critical facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Reese Campus 819 Gilbert DR South Plains College Lubbock Career and Technical Center 3907 Ave Q South Plains College Lubbock Downtown Campus 1625 13th ST
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains College Administrative Services
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

		South Plains College– Action #7
	Proposed Action:	Replace glass as needed with non-breakable glass, and that all new door/ window install would require non-breakable glass.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Campus (eight buildings)
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facility. Ensure continuity of critical services during and after an event. Reduce risk of injury to students and faculty.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$1,000 - $100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains Maintenance Department
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

		South Plains College– Action #8
	Proposed Action:	Enhance the communication capabilities of the Emergency Operations Center and campus situation rooms.
	BACKGROUND INFORMATION	
	Site and Location:	Reese Center – all buildings
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$80,000 per room
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains Reese Center
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

		South Plains College– Action #9
	Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
	BACKGROUND INFORMATION	
	Site and Location:	South Plains College Campus (eight buildings)
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	South Plains Administration / Incident Management Team
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

TEXAS TECH UNIVERSITY SYSTEM

Texas Tech University System (Lubbock Campus)– Action #1	
Proposed Action:	Continually assess for campus growth and the need to acquire additional generators and/or upgrade/replace existing systems due to age.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Component EMCs
Implementation Schedule:	Within 2-5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #2	
Proposed Action:	Upgrade / Enhance the technology of the Emergency Operations Center.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning. Ensures continuity of critical services during and after events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$120,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Component EMCs
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #3	
Proposed Action:	Assess and identify tornado safe shelter areas in existing facilities.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, fatalities, and injury.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Physical Plant & Operations
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #4	
Proposed Action:	Identify and improve facilities prone to severe weather events.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, fatalities, and injury. Ensure continuity of critical services during and after an event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, TTU Administration, and Finance
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #5	
Proposed Action:	Install monitoring and telemetry capabilities for utility tunnels.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages and injury. Ensures continuity of critical services during and after events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness, Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Wind
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication, Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1.58 million
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Physical Plant & Operations
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #6	
Proposed Action:	Upgrade and coordinate outdoor warning system to include interface with City of Lubbock systems.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus and outdoor venues
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$2,600,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management, Component EMCs, and the City of Lubbock
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Public Information Policy, Emergency Response and Evacuation Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #7	
Proposed Action:	Provide campus-wide Emergency Management education to include severe weather.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$10,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Component EMCs
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Public Information Policy, Emergency Operations Plan

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #8	
Proposed Action:	Remove downed trees and/or weakened trees on campus that are prone to increase risk during severe weather events.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Risk Management
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Risk Management

COMMENTS:

Texas Tech University System (Lubbock Campus)– Action #9	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	TTUS campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000 (annually)
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	TTUS Emergency Management
Implementation Schedule:	Within 5 years of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

Texas Tech University Health Sciences Center – Action #1	
Proposed Action:	Implement education and awareness program utilizing classrooms, social media, bulletins, flyers, etc. to educate students, parents and area residents of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Texas Tech University Health Sciences Center – Action #2	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Texas Tech University Health Sciences Center – Action #3	
Proposed Action:	Harden/retrofit critical facilities to hazard-resistant levels.
BACKGROUND INFORMATION	
Site and Location:	District-wide campus
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Texas Tech University Health Sciences Center – Action #4	
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide maintenance facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Texas Tech University Health Sciences Center – Action #5	
Proposed Action:	Adopt a landscape ordinance (selection and planting guidelines).
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce impact on ground water. Reduce rainfall runoff volume and risk of flooding. Reduce risk and spread of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	CFO or Director of Maintenance
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

LUBBOCK COUNTY HOSPITAL SYSTEM

	Lubbock County Hospital System – Action #1
Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages within the district.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000
Potential Funding Sources:	District Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	UMC District Coordinator
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Lubbock County Hospital System – Action #2
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	UMC District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

		Lubbock County Hospital System – Action #3
	Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
	BACKGROUND INFORMATION	
	Site and Location:	District-wide
	Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
	Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	UMC District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Lubbock County Hospital System – Action #4
Proposed Action:	Adopt a landscape ordinance (selection and planting guidelines).
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce impact on ground water. Reduce rainfall runoff volume and risk of flooding. Reduce risk and spread of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	UMC District Coordinator
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

	Lubbock County Hospital System – Action #5
Proposed Action:	Adopt and implement a routine tree trimming program that clears tree limbs near power lines and/or hanging in right-of-way; Remove dead trees from right-of way and drainage systems on a scheduled basis.
BACKGROUND INFORMATION	
Site and Location:	602 Ind. Ave. Lubbock, TX 79413
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to residents, employees, emergency, and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	UMC Ground Maintenance
Implementation Schedule:	Within 12 months of plan adoption, then annually through routine maintenance checks
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

LUBBOCK COUNTY WATER CONTROL DISTRICT (WCID) #1

Lubbock County Water Control District #1– Action #1	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide critical facilities
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$250,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	WCID#1 District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

Lubbock County Water Control District #1– Action #2	
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide maintenance facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	WCID #1 District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock County Water Control District #1– Action #3	
Proposed Action:	Assess and upgrade water and sewer infrastructure to enhance drainage capacity.
BACKGROUND INFORMATION	
Site and Location:	Lubbock County WCID#1 (Buffalo Springs Lake)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk and sewage back-up through improved drainage capacity. Reduce risk of damages and injuries. Reduce environmental and human health implications from mismanagement of anthropogenic waste.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1
Implementation Schedule:	Within 12-36 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS:

Lubbock County Water Control District #1– Action #4	
Proposed Action:	Work with Buffalo Springs and Ransom Canyon to expand alert system equipment currently in place to assist in notification of 1/3 of residents living downstream of McMillan Dam in the event of dam failure and resulting flooding.
BACKGROUND INFORMATION	
Site and Location:	½ mile west of Ransom Canyon city limits
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and protects citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1 with inter-local government
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Evacuation Plan, Emergency Operations Plan

COMMENTS:

Lubbock County Water Control District #1– Action #5	
Proposed Action:	Make repairs to McMillan Dam as identified as high risk by TCEQ to prevent failure.
BACKGROUND INFORMATION	
Site and Location:	McMillan Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of potential for dam failure and loss of lives of residents downstream of dam site.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock County Water Control District #1– Action #6	
Proposed Action:	Acquire, reuse, and preserve open spaces adjacent to floodplain areas and dams.
BACKGROUND INFORMATION	
Site and Location:	McMillan Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Eliminate risk of flood damages to high-risk areas and prevent future losses. Reduce risk on injuries to citizen and emergency response personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1 with inter-local agreement
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Evacuation Plan

COMMENTS:

Lubbock County Water Control District #1– Action #7	
Proposed Action:	Maintain natural environmental features such as earthen berms that act as wind and wildfire buffers, Playa Lakes as natural wetland areas and detention ponds to capture floodwaters and runoff.
BACKGROUND INFORMATION	
Site and Location:	LCWD owned or acquired land
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Eliminate risk of flood damages to high-risk areas and prevent future losses. Reduce risk on injuries to citizen and emergency response personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Natural Resource Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Thunderstorm Storm, Tornado, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1 with inter-local agreement
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	Evacuation Plan

COMMENTS:

Lubbock County Water Control District #1– Action #8	
Proposed Action:	Remove downed trees and weakened trees on campuses that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	District-wide especially near McMillan Dam
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injuries, and fatalities. Ensures continuity of critical services and emergency response.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Flood, Wildfire, Thunderstorm Wind, Tornado
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

Lubbock County Water Control District #1– Action #9	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Lubbock County WCID#1
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Risk Management Plan, Emergency Operations Plan

COMMENTS:

LUBBOCK REESE REDEVELOPMENT AUTHORITY

Lubbock Reese Redevelopment Authority – Action #1	
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide maintenance facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock Reese Redevelopment Authority – Action #2	
Proposed Action:	Adopt a landscape ordinance (selection and planting guidelines).
BACKGROUND INFORMATION	
Site and Location:	District-wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce impact on ground water. Reduce rainfall runoff volume and risk of flooding. Reduce risk and spread of wildfire.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	Low
Estimated Cost:	$5,000
Potential Funding Sources:	Local Funds (staff time)
Lead Agency/Department Responsible:	LRRA District Coordinator
Implementation Schedule:	Within 2 years of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #3	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	District-wide critical facilities, including Water Treatment Plant
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$350,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #4	
Proposed Action:	Upgrade storm drainage systems.
BACKGROUND INFORMATION	
Site and Location:	District-wide, including flight line and taxi ways
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce flood risk and sewage back-up through improved drainage capacity. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$125,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Facility Maintenance Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #5	
Proposed Action:	Upgrade protection of water lines to prevent damage during extreme weather events.
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure potable water and continuity of critical services. Reduce risk of damages and injuries.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 24-48 months of plan adoption
Incorporation into Existing Plans:	Facility Maintenance Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #6	
Proposed Action:	Upgrade fire hydrants.
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of wildfires and the spread of wildfire by increasing water access and emergency response capabilities.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #7	
Proposed Action:	Retrofit existing storm shelters.
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #8	
Proposed Action:	Purchase a large portable generator.
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #9	
Proposed Action:	Upgrade Lightning arresters on buildings
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	Reduce risk to new and existing structures and infrastructures
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

Lubbock Reese Redevelopment Authority– Action #10	
Proposed Action:	Purchase a reverse 911 systems to notify campus of emergency situations
BACKGROUND INFORMATION	
Site and Location:	District-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk through improved communications and early warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$50,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	LRRA Operations
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

SOUTH PLAINS ASSOCIATION OF GOVERNMENTS (SPAG)

South Plains Association of Governments – Action #1	
Proposed Action:	Upgrade maintenance facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.
BACKGROUND INFORMATION	
Site and Location:	District-wide facilities/offices
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide water for critical facilities during water outages and reduce water use.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$100,000
Potential Funding Sources:	District Funds, State and Federal Grants
Lead Agency/Department Responsible:	District Coordinator
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS:

South Plains Association of Governments – Action #2	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Site and Location:	1323 58th St Lubbock, TX 79412
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security, Energy
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS:

South Plains Association of Governments – Action #3	
Proposed Action:	Provide public education and disaster awareness/ preparedness to the SPAG fifteen county region.
BACKGROUND INFORMATION	
Site and Location:	1323 58th St Lubbock, TX 79412
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$30,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG, FEMA/TDEM Hazard Mitigation Section
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Public Information Policy, Emergency Operations Plan

COMMENTS:
Texas South Plains participated in a region-wide collaboration with DSHS to educate the public regarding disasters and how to prepare for them.

South Plains Association of Governments – Action #4	
Proposed Action:	Purchase and implement 25 licenses for SPURS to improve the mass notification method for special needs citizens. The Mass Emergency Notification will allow license holders to receive emergency notifications via email, text, and telephone.
BACKGROUND INFORMATION	
Site and Location:	SPAG - South Plains Unified Regional System (SPURS)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$300,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG Homeland Security Unit
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan, Emergency Response and Evacuation Plan

COMMENTS:

South Plains Association of Governments – Action #5	
Proposed Action:	Implement and coordinate regional residential NSSA/ATSA certified safe room rebate program.
BACKGROUND INFORMATION	
Site and Location:	Community of South Plains (183 homeowners)
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduce risk of damages, injury and fatalities during and after a severe weather event.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness, Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind, Hail
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG-Homeland Security Unit
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

South Plains Association of Governments – Action #6	
Proposed Action:	Track and record data related to observed or reported weather events and natural disasters for documenting future historical occurrences.
BACKGROUND INFORMATION	
Site and Location:	1323 58th St Lubbock, TX 79412
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Promotes hazard awareness and reduces risk to students and faculty through improved communication and warning.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Communication
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	$5,000 annually
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG
Implementation Schedule:	Ongoing
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

South Plains Association of Governments – Action #7	
Proposed Action:	Remove downed trees and weakened trees that increase fire risk.
BACKGROUND INFORMATION	
Site and Location:	1323 58th St Lubbock, TX 79412
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Reduces risk of damages, injuries, and fatalities. Ensures continuity of critical services and emergency response.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire, Thunderstorm Wind, Tornado, Flood
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	Reduce risk to new and existing structures
Priority (High, Moderate, Low):	High
Estimated Cost:	$25,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG - Executive Director
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Risk Management Plan

COMMENTS:

South Plains Association of Governments – Action #8	
Proposed Action:	Purchase personal protective equipment for first responders for severe weather events.
BACKGROUND INFORMATION	
Site and Location:	SPAG Region-Wide
Risk Reduction Benefit (Current Cost/Losses Avoided)**:**	Ensure continuity of critical services. Reduce risk of injury and fatalities to emergency responders during severe weather events.
Type of Action: (Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Winter Storm, Wildfire
Community Lifeline (Safety/Security, Health/Medical, Energy (Power/Fuel), Communication):	Safety/Security
Effect on new/existing buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	$5,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	SPAG-Homeland Security Unit
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS:

SECTION 18: PLAN MAINTENANCE

PLAN MAINTENANCE PROCEDURES

The following is an explanation of how the participating jurisdictions within Lubbock County, and the general public will be involved in implementing, evaluating, and enhancing the Plan over time. When the plan is discussed in all maintenance procedures it includes mitigation actions and hazard assessments. The sustained hazard mitigation planning process consists of four main parts:

- Incorporation
- Monitoring and Evaluation
- Updating
- Continued Public Involvement

INCORPORATION

Participating jurisdictions within Lubbock County will be responsible for further development and implementation of mitigation actions. Each action has been assigned to a specific department within the participating jurisdictions. The following describes the process by which participating jurisdictions will incorporate elements of the mitigation plan into other planning mechanisms.

PROCESS OF INCORPORATION

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

The potential funding sources listed for each identified action may be used when the jurisdiction seeks funds to implement actions. An implementation time period or a specific implementation date has been assigned to each action as an incentive for completing each task and gauging whether actions are implemented in a timely manner.

SECTION 18: PLAN MAINTENANCE

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

Upon formal adoption of the Plan Update, planning team members from each participating jurisdiction will work to integrate the hazard mitigation strategies into other plans and codes as they are developed. Participating team members will conduct periodic reviews of plans and policies, once per year at a minimum, and analyze the need for revisions in light of the approved Plan. The planning team will review all comprehensive land use plans (applicable jurisdictions only), capital improvement plans (applicable jurisdictions only), annual budget reviews, emergency operations or management plans, and transportation plans (applicable jurisdictions only) to guide and control development. Participating jurisdictions will ensure that capital improvement planning (applicable jurisdictions only) in the future will also contribute to the goals of this hazard mitigation Plan Update to reduce the long-term risk to life and property from all hazards. Within one year of formal adoption of the hazard mitigation Plan Update, existing planning mechanisms will be reviewed by each jurisdiction.

Lubbock County is committed to supporting the participating jurisdictions as they implement their mitigation actions. Planning team members will review and revise, as necessary, the long-range goals and objectives in strategic plan and budgets to ensure that they are consistent with this mitigation action plan. Additionally, the Planning Area will work to advance the goals of this hazard mitigation plan through its routine, ongoing, long-range planning, budgeting, and work processes.

Table 18-1 identifies types of planning mechanisms and examples of methods for incorporating the Plan Update into other planning efforts. The team members, listed in Table 18-2 below, will be responsible for the review of these planning mechanisms and their incorporation of the plan, with the exception of the Floodplain Management Plans; the jurisdictions who have a Floodplain Administrator on staff will be responsible for incorporating the plan when floodplain management plans are updated or new plans are developed.

Table 18-1. Methods of Incorporation of the Plan

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Annual Budget Review	Lubbock County: EMC Village of Buffalo Springs: City Administrator City of Idalou: Chief of Police City of Lubbock: Director of OEM Town of New Deal: Chief of Police Town of Ransom Canyon: EMC City of Shallowater: EMC City of Slaton: City Administrator City of Wolfforth: Deputy EMC Abernathy ISD: Director of Curriculum and Instruction	Various departments and key personnel that participated in the planning process for participating jurisdictions within Lubbock County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Frenship ISD: Director of Student Services Idalou ISD: Superintendent Lubbock ISD: Director of School Safety and Security Lubbock-Cooper ISD: Director of Student Services New Deal ISD: Superintendent Roosevelt ISD: District Police Chief Shallowater ISD: Assistant Superintendent of Curriculum and Instruction Slaton ISD: ISD Chief of Police Betty M. Condra: Superintendent South Plains College: Executive Director of Admin Services TTU Systems: EM Director TTU Health Sciences Center: EM Director Lubbock County Hospital District: Safety Officer Lubbock County WCID#1: General Manager Lubbock Reese Redevelopment Authority: Director of Operations SPAG: Program Specialist	
Capital Improvement Plans	Lubbock County: EMC Village of Buffalo Springs: City Administrator City of Idalou: Chief of Police City of Lubbock: Director of OEM Town of New Deal: Chief of Police Town of Ransom Canyon: EMC City of Shallowater: EMC City of Slaton: City Administrator City of Wolfforth: Deputy EMC Lubbock-Cooper ISD: Director of Student Services New Deal ISD: Superintendent Roosevelt ISD: District Police Chief TTU Systems: EM Director TTU Health Sciences Center: EM Director	Several participating jurisdictions within Lubbock County have a Capital Improvement Plan (CIP) in place. Prior to any revisions to the CIP, County, City, Town, Village, ISD and special district departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Lubbock County Hospital District: Safety Officer Lubbock County WCID#1: General Manager Lubbock Reese Redevelopment Authority: Director of Operations	
Comprehensive Plans	City of Lubbock: Director of OEM Town of Ransom Canyon: EMC City of Shallowater: EMC City of Slaton: City Administrator City of Wolfforth: Deputy EMC Lubbock-Cooper ISD: Director of Student Services New Deal ISD: Superintendent Roosevelt ISD: District Police Chief Lubbock Reese Redevelopment Authority: Director of Operations	Several participating jurisdictions within Lubbock County have Long-term Comprehensive Development Plans in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	Lubbock County: Floodplain Administrator Village of Buffalo Springs: Floodplain Administrator City of Idalou: Floodplain Administrator City of Lubbock: Floodplain Administrator Town of New Deal: Floodplain Administrator Town of Ransom Canyon: Floodplain Administrator City of Shallowater: Floodplain Administrator City of Slaton: Floodplain Administrator City of Wolfforth: Floodplain Administrator	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 13 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when participating jurisdictions within Lubbock County update their management plans or develops new plans.
Grant Applications	Lubbock County: EMC Village of Buffalo Springs: City Administrator City of Idalou: Chief of Police City of Lubbock: Director of OEM Town of New Deal: Chief of Police	The Plan will be evaluated by participating jurisdictions within Lubbock County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Town of Ransom Canyon: EMC City of Shallowater: EMC City of Slaton: City Administrator City of Wolfforth: Deputy EMC Abernathy ISD: Director of Curriculum and Instruction Frenship ISD: Director of Student Services Idalou ISD: Superintendent Lubbock ISD: Director of School Safety and Security Lubbock-Cooper ISD: Director of Student Services New Deal ISD: Superintendent Roosevelt ISD: District Police Chief Shallowater ISD: Assistant Superintendent of Curriculum and Instruction Slaton ISD: ISD Chief of Police Betty M. Condra: Superintendent South Plains College: Executive Director of Admin Services TTU Systems: EM Director TTU Health Sciences Center: EM Director Lubbock County Hospital District: Safety Officer Lubbock County WCID#1: General Manager Lubbock Reese Redevelopment Authority: Director of Operations SPAG: Program Specialist	Revision may be necessary to include the action in the Plan.
Regulatory Plans	Lubbock County: EMC Village of Buffalo Springs: City Administrator City of Idalou: Chief of Police City of Lubbock: Director of OEM Town of New Deal: Chief of Police Town of Ransom Canyon: EMC City of Shallowater: EMC City of Slaton: City Administrator City of Wolfforth: Deputy EMC	Currently, several participating jurisdictions within Lubbock County have regulatory plans in place, such as Emergency Management Plans, Continuity of Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when County, City, Town, Village, ISD, and special district departments review or revise their current regulatory planning mechanisms, or in the development of

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Abernathy ISD: Director of Curriculum and Instruction Frenship ISD: Director of Student Services Idalou ISD: Superintendent Lubbock ISD: Director of School Safety and Security Lubbock-Cooper ISD: Director of Student Services New Deal ISD: Superintendent Roosevelt ISD: District Police Chief Slaton ISD: ISD Chief of Police TTU Systems: EM Director TTU Health Sciences Center: EM Director Lubbock County Hospital District: Safety Officer Lubbock County WCID#1: General Manager Lubbock Reese Redevelopment Authority: Director of Operations	regulatory plans that are not currently in place.

MONITORING AND EVALUATION

Periodic revisions of the Plan are required to ensure that goals, objectives, and mitigation actions are kept current. When the plan is discussed in these sections it includes the risk assessment and mitigation actions as a part of the monitoring, evaluating, updating and review process. Revisions may be required to ensure the Plan is in compliance with federal and state statutes and regulations. This section outlines the procedures for completing Plan revisions, updates, and review. Table 18-2 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and review of the Plan.

Table 18-2. Team Members Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan

JURISDICTION	TITLE
Lubbock County	Emergency Management Coordinator
Village of Buffalo Springs	City Administrator
City of Idalou	Chief of Police
City of Lubbock	Director of the Office of Emergency Management
Town of New Deal	Chief of Police

JURISDICTION	TITLE
Town of Ransom Canyon	Emergency Management Coordinator / Chief of Police
City of Shallowater	Emergency Management Coordinator / Fire Chief
City of Slaton	City Administrator
City of Wolfforth	Deputy Emergency Management Coordinator
Abernathy ISD	Director of Curriculum and Instruction
Frenship ISD	Director of Student Services
Idalou ISD	Superintendent
Lubbock ISD	Director of School Safety and Security
Lubbock-Cooper ISD	Director of Student Services
New Deal ISD	Superintendent
Roosevelt ISD	District Police Chief
Shallowater ISD	Assistant Superintendent of Curriculum and Instruction
Slaton ISD	ISD Chief of Police
Betty M. Condra School for Education Innovation	Superintendent / CEO
South Plains College	Executive Director of Administrative Services
Texas Tech University Systems	Emergency Management Director
Texas Tech University Health Sciences Center	Emergency Management Coordinator
Lubbock Reese Redevelopment Authority	Safety Officer
Lubbock County Hospital District	General Manager
Lubbock County WCID #1	Director of Operations
South Plain Association of Governments	Program Specialist

MONITORING

Designated Planning Team members are responsible for monitoring, evaluating, updating, and reviewing the Plan, as shown in Table 18-2. Individuals holding the title listed in Table 18-2 will be responsible for monitoring the Plan on an annual basis. Plan monitoring includes reviewing and incorporating into the Plan other existing planning mechanisms that relate or support goals and objectives of the Plan; monitoring the incorporation of the Plan into future updates of other existing planning mechanisms as appropriate; reviewing mitigation actions submitted and

coordinating with various County, City, Town, Village, ISD, and special district departments to determine if mitigation actions need to be re-evaluated and updated; evaluating and updating the Plan as necessary; and monitoring plan maintenance to ensure that the process described is being followed, on an annual basis, throughout the planning process. The Planning Team will develop a brief report that identifies policies and actions in the plan that have been successfully implemented and any changes in the implementation process needed for continued success. A summary of meeting notes will report the particulars involved in developing an action into a project. In addition to the annual monitoring, the Plan will be similarly reviewed immediately after extreme weather events include but not limited to state and federally declared disasters.

EVALUATION

As part of the evaluation process, the Planning Team will assess changes in risk; determine whether the implementation of mitigation actions is on schedule; determine whether there are any implementation problems, such as technical, political, legal, or coordination issues; and identify changes in land development or programs that affect mitigation priorities for each respective department or organization.

The Planning Team will meet on an annual basis to evaluate the Plan and identify any needed changes and assess the effectiveness of the plan achieving its stated purpose and goals. The team will evaluate the number of mitigation actions implemented along with the loss-reduction associated with each action. Actions that have not been implemented will be evaluated to determine if any social, political, or financial barriers are impeding implementation and if any changes are necessary to improve the viability of an action. The team will evaluate changes in land development and/or programs that affect mitigation priorities in their respective jurisdictions. The annual evaluation process will help to determine if any changes are necessary. In addition, the Plan will be similarly evaluated immediately after extreme weather events including but not limited to state and federally declared disasters.

UPDATING

PLAN REVISIONS

At any time, minor technical changes may be made to update the Lubbock County Hazard Mitigation Action Plan Update 2022. Material changes to mitigation actions or major changes in the overall direction of the Plan or the policies contained within it, must be subject to formal adoption by the participating jurisdictions.

The participating jurisdictions within Lubbock County will review proposed revisions and vote to accept, reject, or amend the proposed change. Upon ratification, the Revision will be transmitted to TDEM.

In determining whether to recommend approval or denial of a Plan Revision request, participating jurisdictions will consider the following factors:

- Errors or omissions made in the identification of issues or needs during the preparation of the Plan Update;
- New issues or needs that were not adequately addressed in the Plan Update; and
- Changes in information, data, or assumptions from those on which the Plan Update was based.

SECTION 18: PLAN MAINTENANCE

FIVE (5) YEAR REVIEW

The Plan will be thoroughly reviewed by the Planning Team at the end of three years from the approval date, to determine whether there have been significant changes in the planning area that necessitate changes in the types of mitigation actions proposed. Factors that may affect the content of the Plan include new development in identified hazard areas, increased exposure to hazards, disaster declarations, increase or decrease in capability to address hazards, and changes to federal or state legislation.

The Plan review process provides the participating jurisdictions within Lubbock County an opportunity to evaluate mitigation actions that have been successful, identify losses avoided due to the implementation of specific mitigation measures, and address mitigation actions that may not have been successfully implemented as assigned.

It is recommended that the full Executive and Advisory Planning Team (Section 2, Tables 2-1 and 2-2) meet to review the Plan at the end of three years because grant funds may be necessary for the development of a five-year update. Reviewing planning grant options in advance of the five-year Plan update deadline is recommended considering the timelines for grant and planning cycles can be in excess of a year.

Following the Plan review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and Plan Revision process outlined herein. Upon completion of the review, update, and revision process the revised Plan will be submitted to TDEM for final review and approval in coordination with FEMA.

CONTINUED PUBLIC INVOLVEMENT

Public input was an integral part of the preparation of this Plan and will continue to be essential for Plan updates. The Public will be directly involved in the annual evaluation, monitoring, reviews and cyclical updates. Changes or suggestions to improve or update the Plan will provide opportunities for additional public input.

The public can review the Plan on the participating jurisdictions' websites, where officials and the public are invited to provide ongoing feedback, via email.

The Planning Team may also designate voluntary citizens from the planning area or willing stakeholder members from the private sector businesses that were involved in the Plan's development to provide feedback on an annual basis. It is important that stakeholders and the immediate community maintain a vested interest in preserving the functionality of the planning area as it pertains to the overall goals of the mitigation plan. The Planning team is responsible for notifying stakeholders and community members on an annual basis and maintaining the Plan.

Media, including local newspaper and radio stations, will be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media will be contacted to cover information regarding Plan updates, status of grant applications, and project implementation. Local and social media outlets, such as Facebook and Twitter, will keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.

APPENDIX A: PLANNING TEAM

PLANNING TEAM MEMBERS

The Lubbock County Hazard Mitigation Action Plan 2022 was organized using a direct representative model. An Executive Planning Team from the participating jurisdictions, shown in Table A-1, was formed to coordinate planning efforts and request input and participation in the planning process. Table A-2 reflects the Advisory Planning Team, consisting of area organizations and departments that participated throughout the planning process. Table A-3 is comprised of stakeholders who were invited to provide Plan input. Public outreach efforts and meeting documentation is provided in Appendix E.

Table A-1. Executive Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Lubbock County	Emergency Management Coordinator
Village of Buffalo Springs	City Administrator
City of Idalou	Chief of Police
City of Lubbock	Director of the Office of Emergency Management
Town of New Deal	Chief of Police
Town of Ransom Canyon	Emergency Management Coordinator / Chief of Police
City of Shallowater	Emergency Management Coordinator / Fire Chief
City of Slaton	City Administrator
City of Wolfforth	Deputy Emergency Management Coordinator
Abernathy Independent School District	Director of Curriculum and Instruction
Frenship Independent School District	Director of Student Services
Idalou Independent School District	Superintendent
Lubbock Independent School District	Director of School Safety and Security
Lubbock-Cooper Independent School District	Director of Student Services
New Deal Independent School District	Superintendent
Roosevelt Independent School District	District Police Chief

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Shallowater Independent School District	Assistant Superintendent of Curriculum and Instruction
Slaton Independent School District	ISD Chief of Police
Betty M. Condra School of Education Innovation	Superintendent / CEO
South Plains College	Executive Director of Administrative Services
Texas Tech University Systems	Emergency Management Director
Texas Tech University Health Sciences Center	Emergency Management Coordinator
Lubbock County Hospital District	Safety Officer
Lubbock County Water Control District #1	General Manager
Lubbock Reese Redevelopment Authority	Director of Operations
South Plains Association of Governments	Program Specialist

Table A-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Lubbock County	County Judge
Lubbock County	Department Director of Public Works
Lubbock County	Deputy Emergency Management Coordinator
Lubbock County	Director of Facilities
Lubbock County	Director of IT
Lubbock County	Director of Public Works
Lubbock County	Director of Purchasing
Lubbock County	Lead Civil Attorney
Village of Buffalo Springs	Mayor
City of Idalou	City Administrator
City of Lubbock	Deputy Director of Office of Emergency Management
Town of New Deal	Mayor
Town of Ransom Canyon	Police Lieutenant

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
City of Shallowater	City Administrator
City of Slaton	Chief of Police
City of Slaton	Mayor
City of Wolfforth	Fire Chief
Abernathy Independent School District	Superintendent
Frenship Independent School District	Chief of Police
Idalou Independent School District	Chief of Police
Lubbock Independent School District	Chief of Police
Lubbock- Cooper Independent School District	Assistant Superintendent of Business and Personnel
New Deal Independent School District	Chief Financial Officer
Roosevelt Independent School District	Superintendent
Shallowater Independent School District	Chief of Police
Slaton Independent School District	Assistant Emergency Management Coordinator / Human Resources
Slaton Independent School District	Superintendent
South Plains College	Chief of Police
South Plains College	Dean of the South Plains College Reese Center
South Plains College	Police Lieutenant
Texas Tech University Systems	Associate Managing Director
Lubbock County Hospital District	Assistant Director
Lubbock County Hospital District	Director of Trauma / Burn Services
Lubbock County Water Control District #1	Board Member
Lubbock Reese Redevelopment Authority	Executive Director
South Plains Association of Governments	Regional Director

STAKEHOLDERS

The following groups listed in Table A-3 represent a list of organizations invited to stakeholder meetings, public meetings, and workshops throughout the planning process and include: non-profit organizations, private businesses, universities, and legislators. The public were also invited to participate via e-mail throughout the planning process. Many of the invited organizations and

stakeholders participated and were integral to providing comments and data for the Plan. For a list of attendees at meetings, please see Appendix E[1].

Table A-3. Stakeholders

AGENCY	TITLE
Abernathy (City of)	Emergency Management Coordinator
Abernathy Volunteer Fire Department (VFD)	Fire Chief
Aerocare Ambulance	Program Director
American Red Cross	Lubbock Location, Interim Executive Director
American Red Cross	Lubbock Disaster Program Manager
American Red Cross	Representative
ATMOS Energy	Operations Manager
ATMOS Energy	Operations Manager
ATMOS Energy	Vice President of Public Affairs
Bailey County	Emergency Management Coordinator
Breedlove Foods	Representative
Breedlove Foods	Representative
Buffalo Springs Volunteer Fire Department (VFD)	Fire Chief
Capital Area Council of Governments	Director of Regional Planning & Services
Capital Area Council of Governments	Regional Service Program Specialist
Citibus	Representative
Cochran County	Emergency Management Coordinator
Covenant / Grace Systems (Medical Facility)	Emergency Management Coordinator / Safety Officer
Crosby County	Emergency Management Coordinator
Daily Toreador	New Editor
Department of Homeland Security	General Staff
Dickens County	Emergency Management Coordinator
El Editor	Publisher

[1] Information contained in Appendix E is exempt from public release under the Freedom of Information Act (FOIA).

APPENDIX A: PLANNING TEAM

AGENCY	TITLE
Environmental Protection Agency, Region 6	Regional Administrator
Floyd County	Emergency Management Coordinator
Floyd County (Floydada)	Emergency Management Coordinator
Floyd County (Lockney)	Emergency Management Coordinator
Garza County	Emergency Management Coordinator
Hale County	Emergency Management Coordinator
Hale County (Plainview)	Emergency Management Coordinator
Hockley County	Emergency Management Coordinator
Idalou Volunteer Fire Department (VFD)	Fire Department
KAMC	General Manager
KBTE / KLLL / KMMX	Senior Vice President
KBZO	General Manager
KCBD / KJTV	Assistant News Director
KCBD / KJTV	Assistant News Director
KFYO News Talk Radio	Brand Manager
KFYO News Talk Radio	Digital Managing Editor
KFYO News Talk Radio	Market President
King County	Emergency Management Coordinator
KLBK	General Manager
KRBL	Station Manager
KRFE AM 580	Owner
KSSL	Station Manager
KWBF 98.7 / 1420	Owner
KWBF 98.7 / 1420	Station Manager
Lamb County	Emergency Management Coordinator
Lamb County (Littlefield)	Emergency Management Coordinator
Lation Lubbock	Publisher

APPENDIX A: PLANNING TEAM

AGENCY	TITLE
Lubbock Avalanche Journal	Managing Editor
Lubbock Heart Hospital	Emergency Management Coordinator
Lubbock National Weather Service (NWS)	Meteorologist In Charge (MIC)
Lubbock National Weather Service (NWS)	Warning Coordination Meteorologist
Lubbock Power & Light	Representative
Lubbock State Supported Living Center	Risk Manager
Lynn County	Emergency Management Coordinator
Motley County	Emergency Management Coordinator
My Slaton	Editor
New Deal Volunteer Fire Department (VFD)	Fire Chief
NOAA	Chief of Policy, Planning & Communications
Ransom Canyon Volunteer Fire Department (VFD)	Fire Chief
Rise Academy	Director of Operations
Roosevelt Volunteer Fire Department (VFD)	Fire Chief
Salvation Army	Disaster Service Coordinator
Salvation Army	Major
Shallowater Volunteer Fire Department (VFD)	Fire Chief
Slaton Volunteer Fire Department (VFD)	Fire Chief
Slatonite News	General Manager
South Plains Electric Cooperative	Emergency Management Coordinator
South Plains Electric Cooperative	Risk Manager
Starcare Specialty Health System	Risk Management Coordinator
Terry County	Emergency Management Coordinator
Terry County (Brownfield)	Emergency Management Coordinator
Texas A&M Agrilife Extension	District 02- South Plains
Texas A&M Agrilife Extension	District 02- South Plains

APPENDIX A: PLANNING TEAM

AGENCY	TITLE
Texas A&M Forest Service	Regional Fire Coordinator
Texas A&M Forest Service	Regional Fire Coordinator
Texas A&M Forest Service	Branch Fire Coordinator
Texas Commission on Environmental Quality, Region 11	Regional Director
Texas Commission on Environmental Quality, Region 11	ERC
Texas Commission on Environmental Quality	Regional Representative
Texas Department of Transportation	District Engineer
TEEX	Regional Coordinator
Texas Department of Emergency Management (TDEM)	Region 5, DC 2 Coordinator
Texas Department of Emergency Management (TDEM)	Mitigation Coordinator
Texas Department of Emergency Management (TDEM)	Regional Representative
Texas Department of Emergency Management (TDEM)	Unit Chief
Texas Department of Emergency Management (TDEM)	Assistant Chief
Texas House District 28	Senator
Texas House District 83	Legislative Representative
Texas House District 84	Legislative Representative
Texas Parks and Wildlife	Park Superintendent
Texas State Guard	Sergeant
Texas Water Board	Outreach Specialist
UMC Emergency Medical Service (EMS)	Director
United Methodist	Disaster Response Coordinator
U.S. Army Corps of Engineers	Southwest Division Representative
U.S. Fish and Wildlife	Public Affairs for Texas
U.S. Fish and Wildlife	Regional Outreach Coordinator
West Carlisle Volunteer Fire Department (VFD)	Fire Chief
Wolfforth Volunteer Fire Department (VFD)	Fire Chief

APPENDIX A: PLANNING TEAM

AGENCY	TITLE
Woodrow Volunteer Fire Department (VFD)	Fire Chief
XCEL Energy	Regional Community Manager
Yoakum County	Emergency Management Coordinator

APPENDIX B: PUBLIC SURVEY RESULTS

OVERVIEW

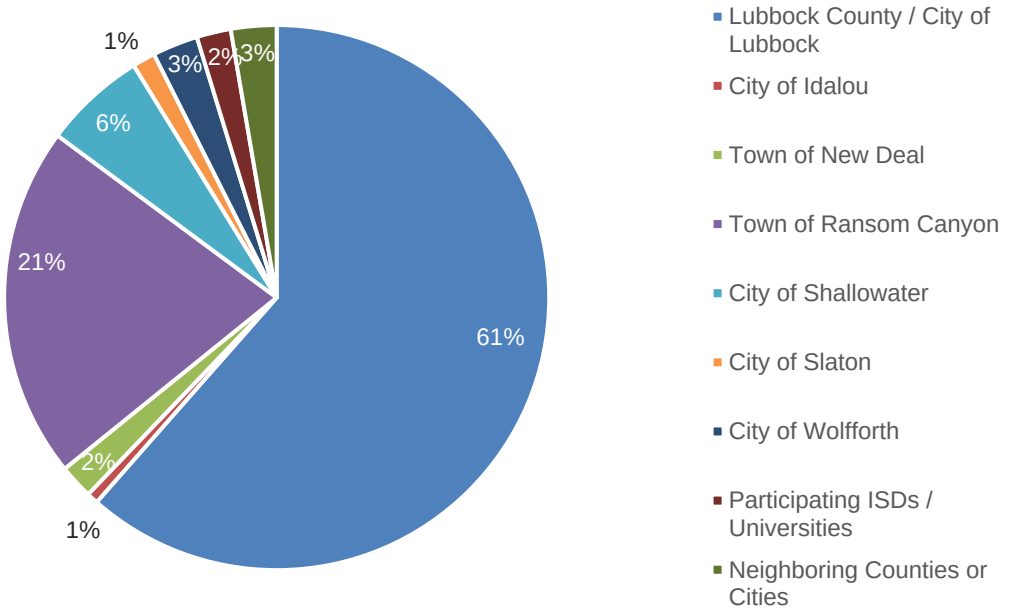
Lubbock County prepared a public survey that requested public opinion on a wide range of questions relating to natural hazards. The survey was made available via the County's websites, along with participating jurisdictions. This survey link was also distributed at public meetings and stakeholder events throughout the planning process.

A total of 149 surveys were collected, the results of which are analyzed in Appendix B. The purpose of the survey was twofold: 1) to solicit public input during the planning process, and 2) to help the jurisdictions identify any potential actions or problem areas.

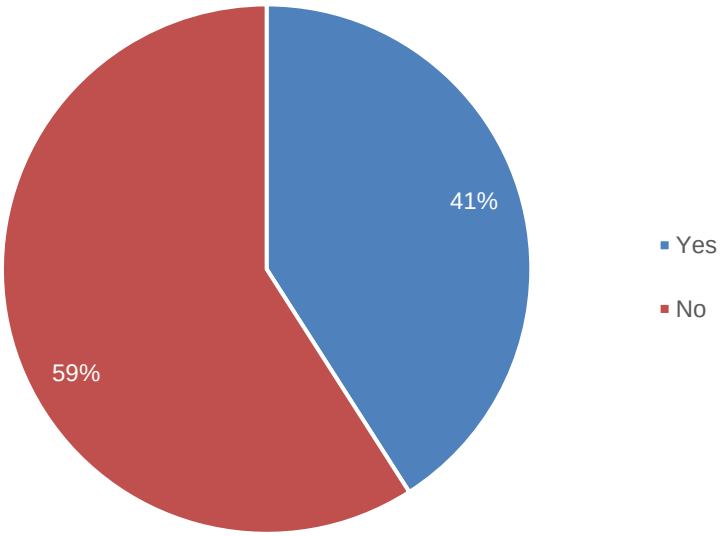
The following survey results depict the percentage of responses for each answer. Similar responses have been summarized for questions that did not provide a multiple-choice answer or that required an explanation.

PUBLIC SURVEY RESULTS

1. Please state the jurisdiction (city or community) where you reside.[1]

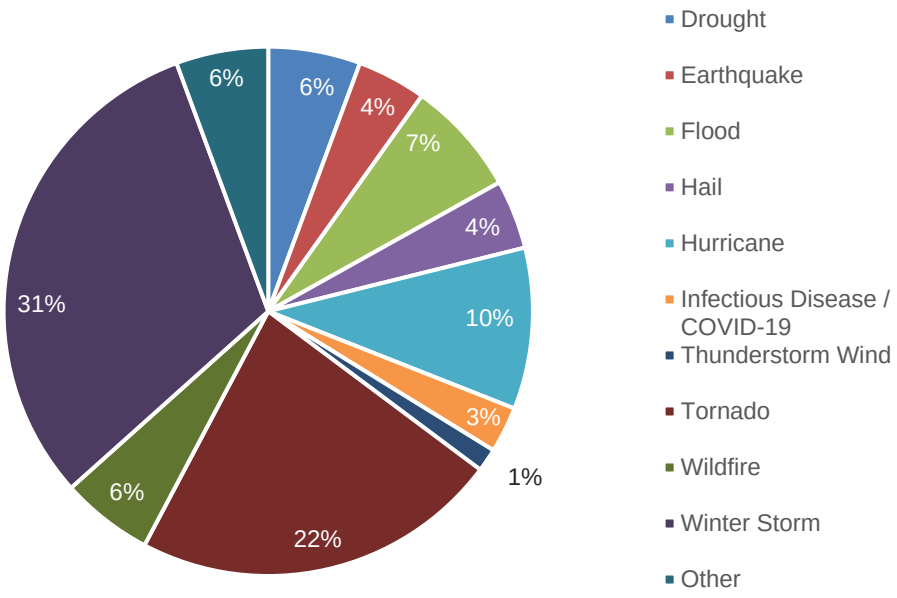


2. Have you ever experienced or been impacted by a disaster?

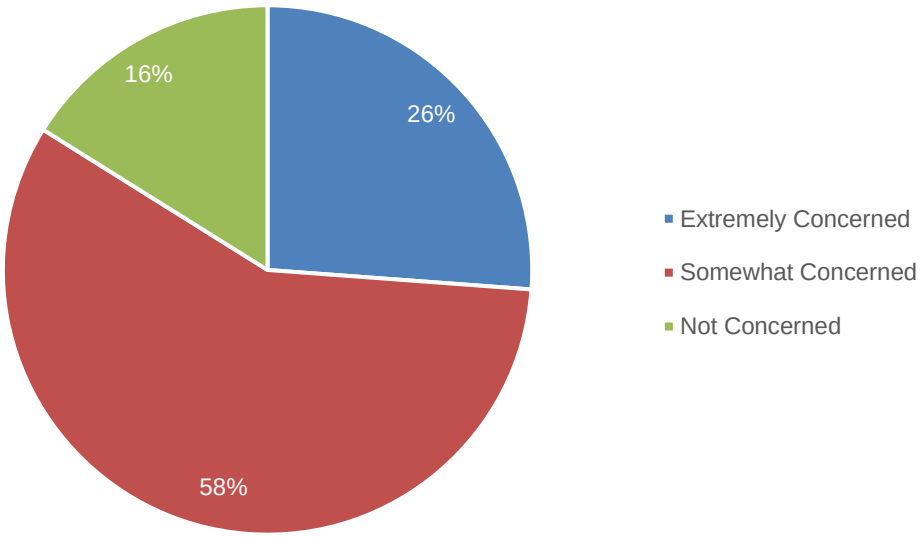


[1] Some respondents were in neighboring counties, however due to their proximity to Lubbock County, their responses were included in the survey results.

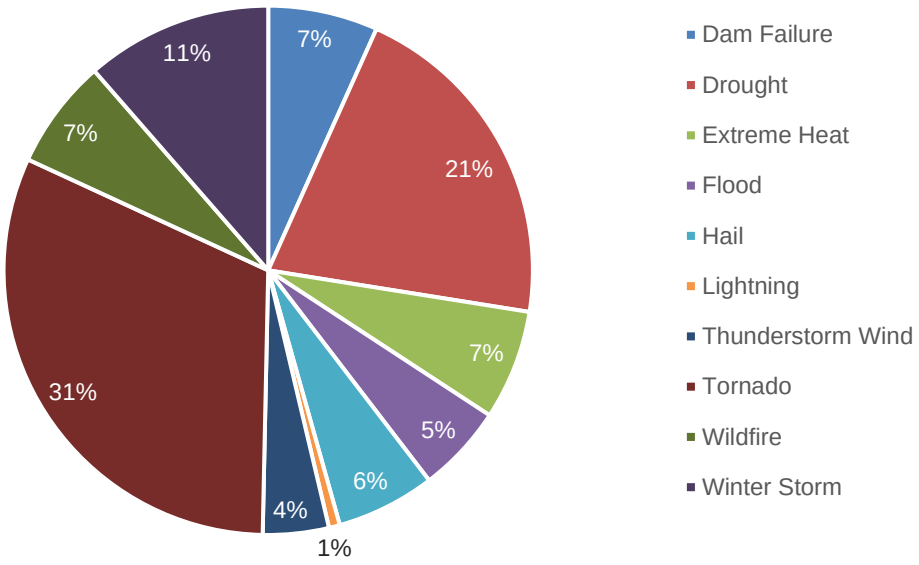
3. If you answered “Yes” to Question #2, please explain.



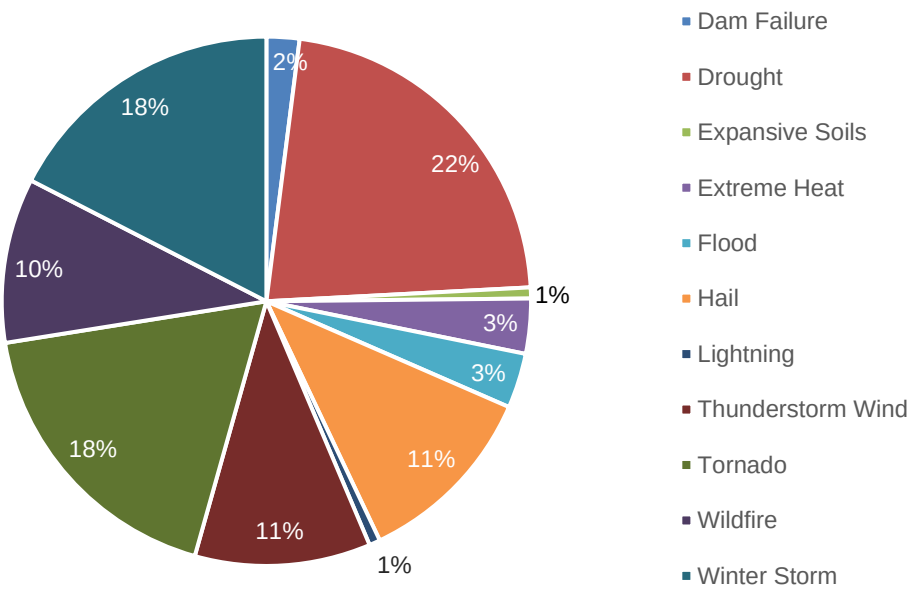
4. How concerned are you about the possibility of your community being impacted by a disaster?



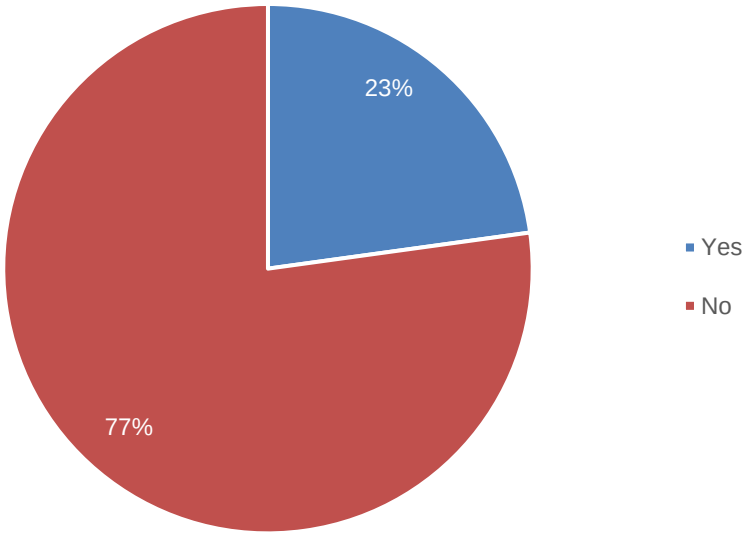
5. Please select the one hazard you think is the highest threat to your neighborhood:



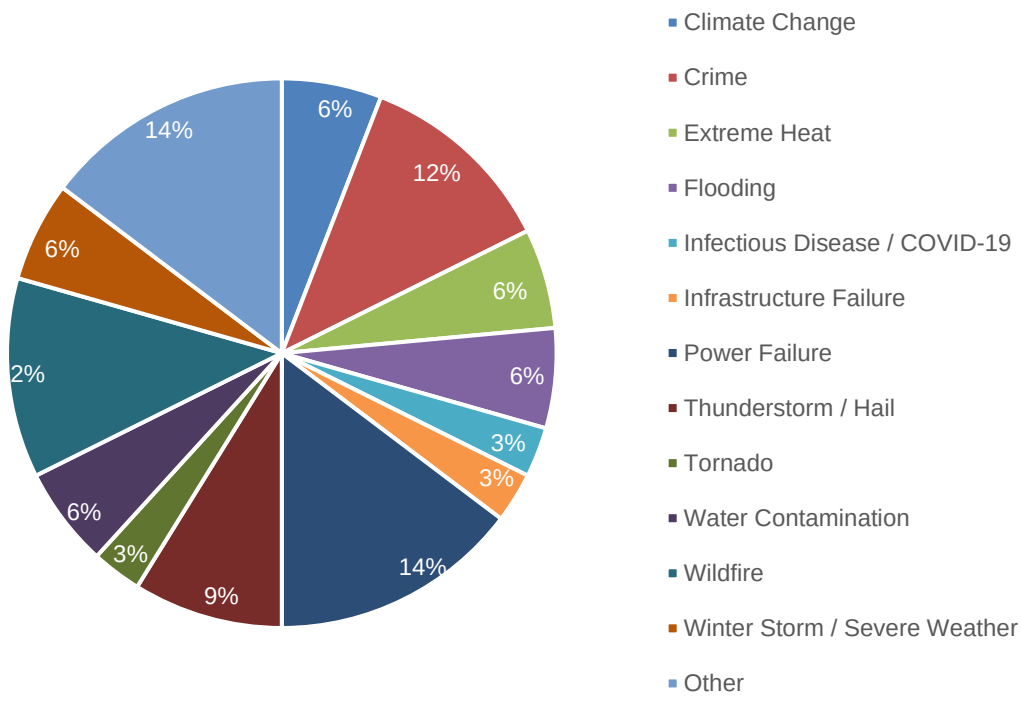
6. Please select the one hazard you think is the second highest threat to your neighborhood:



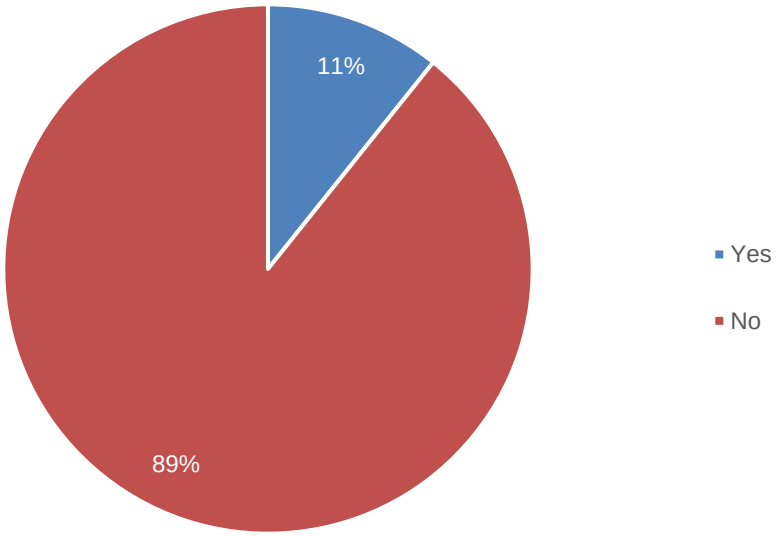
7. Is there another hazard not listed above that you this is a wide-scale threat to your neighborhood?



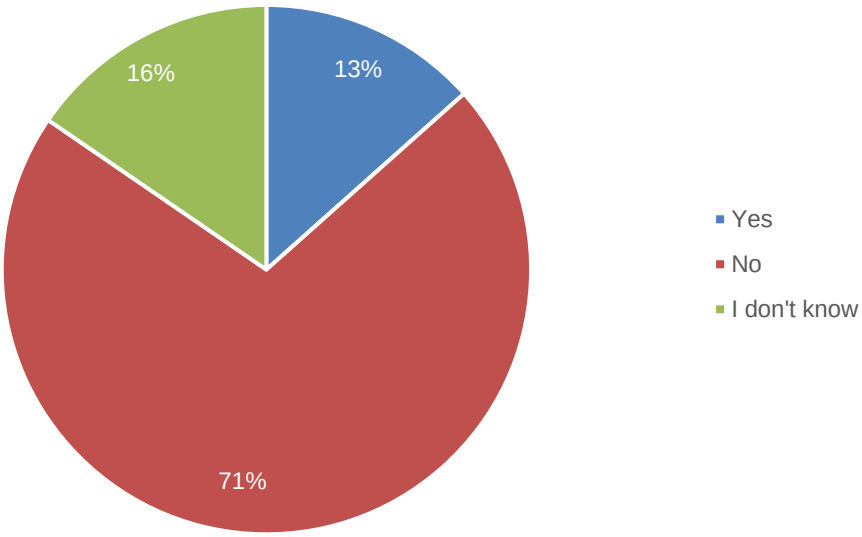
8. If you answered “Yes” to Question #7, please explain.



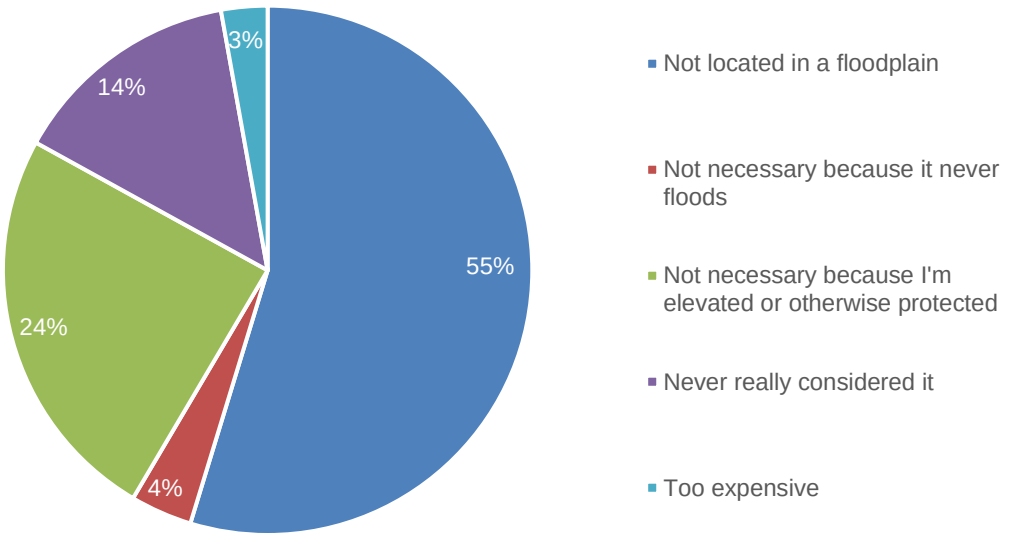
9. Is your home located in a floodplain?



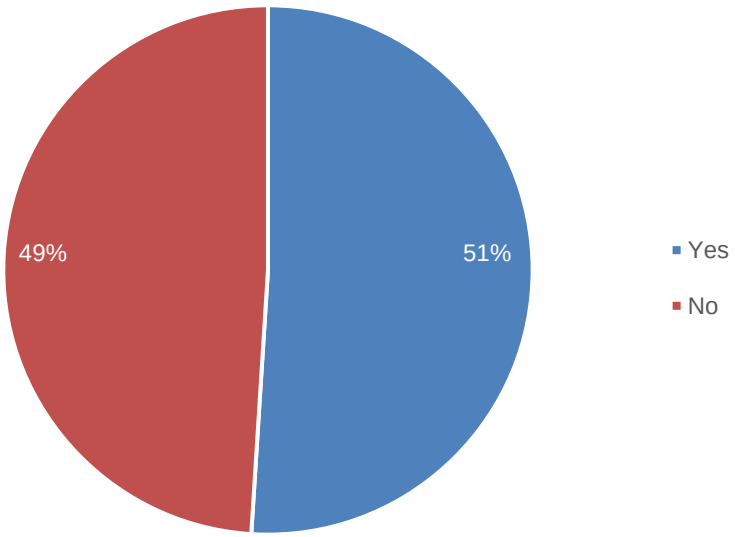
10. Do you have flood insurance?



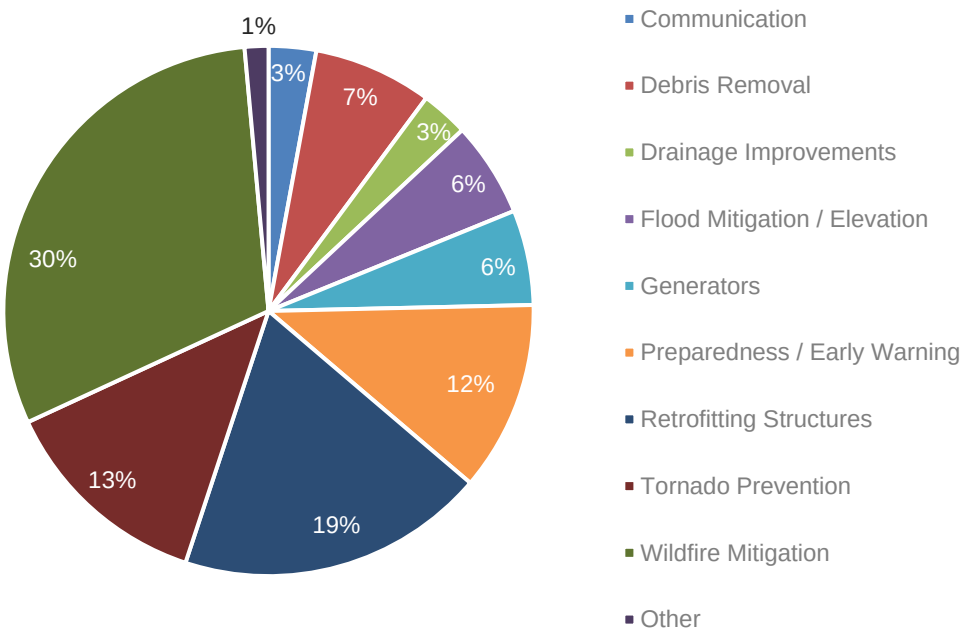
11. If you do not have flood insurance, why not?



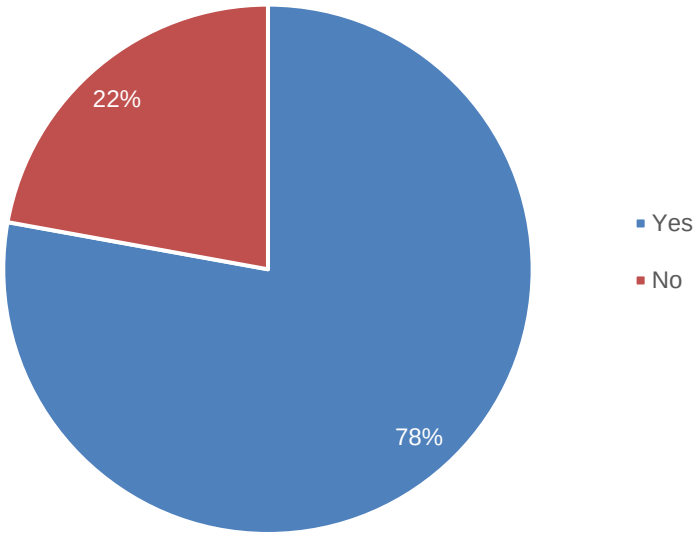
12. Have you taken any actions to make your home or neighborhood more resistant to hazards?



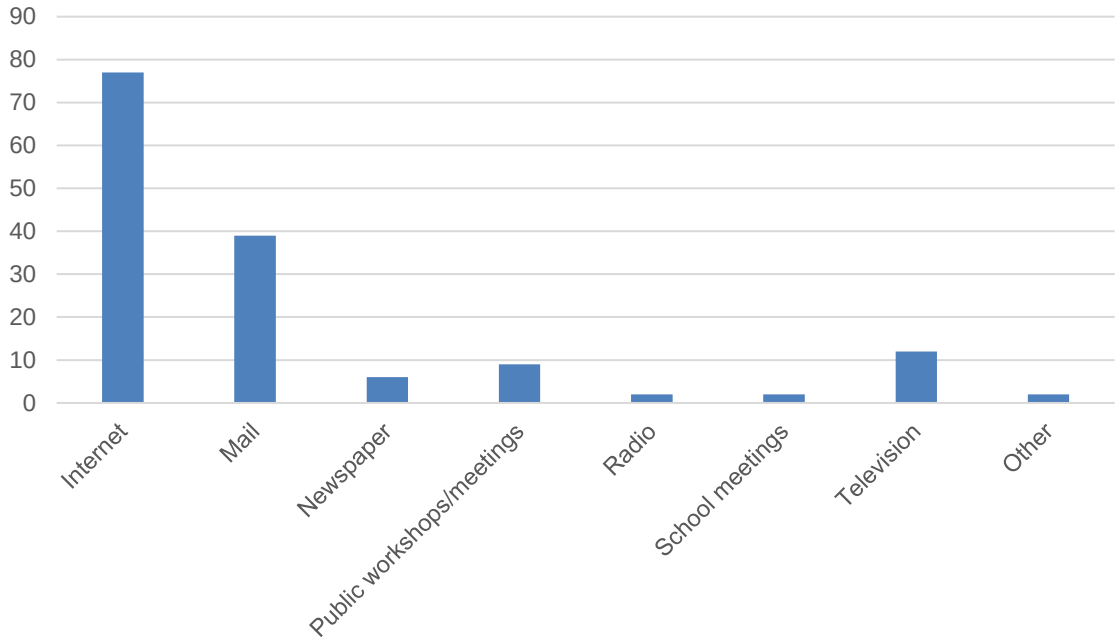
13. If you answered “Yes” to Question #12, please explain.



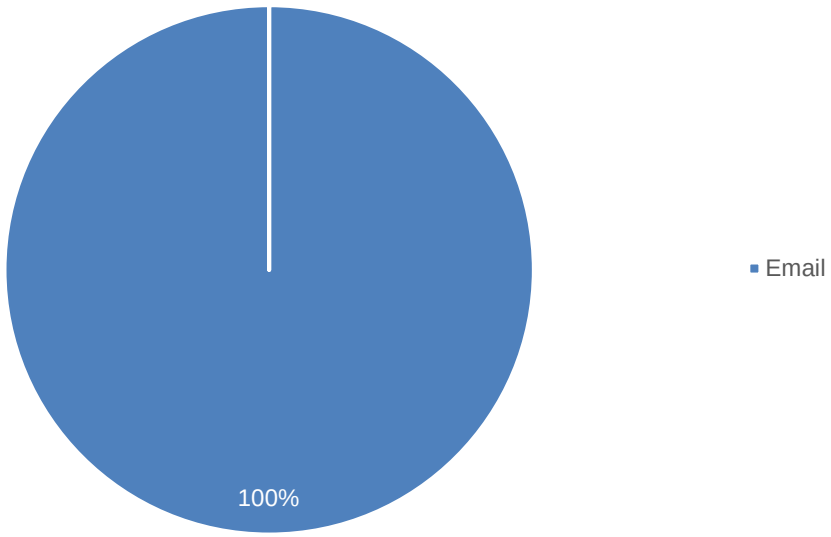
14. Are you interested in making your home or neighborhood more resistant to hazards?



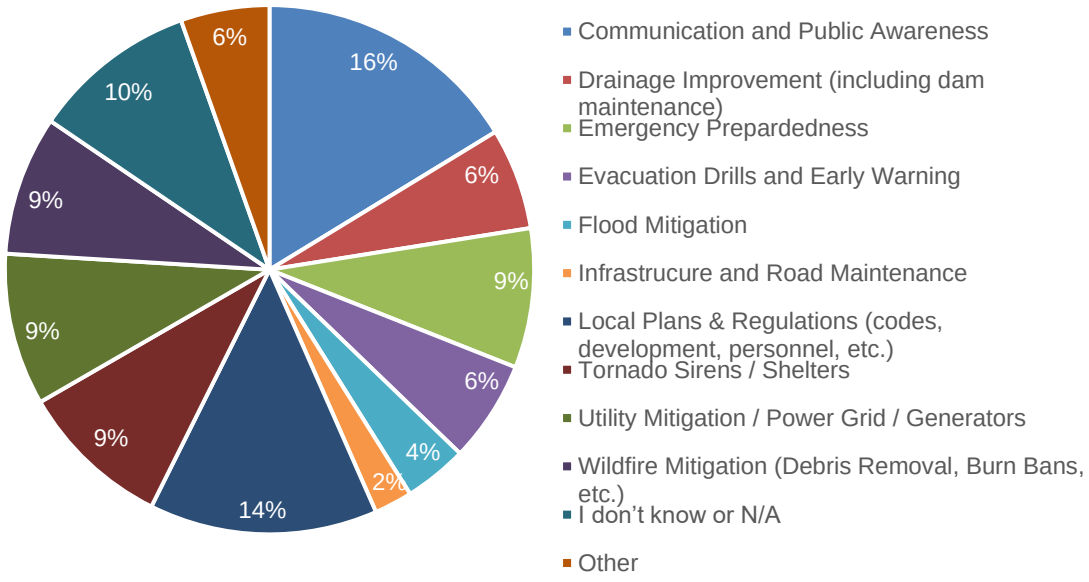
15. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?



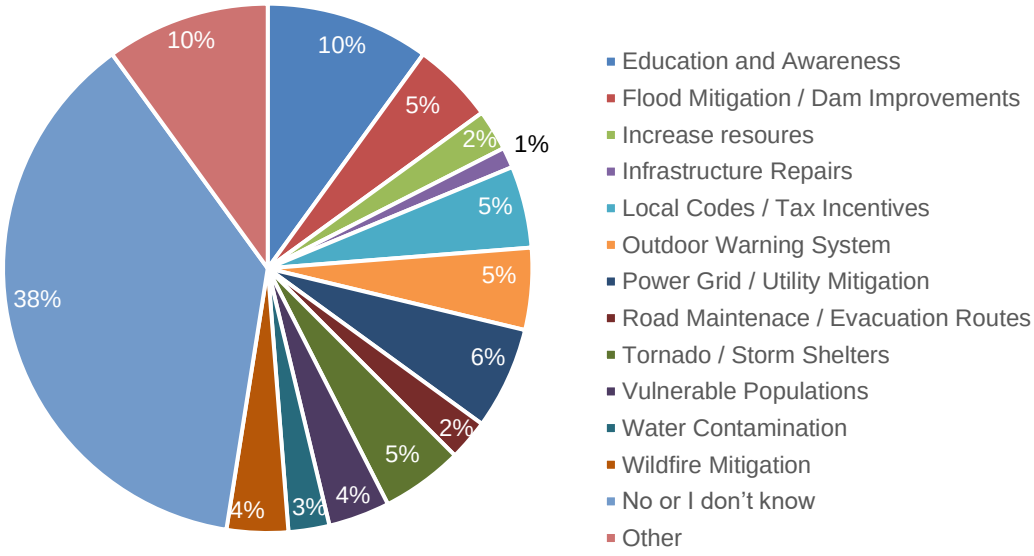
16. If you answered “Other” to Question #15, please explain.



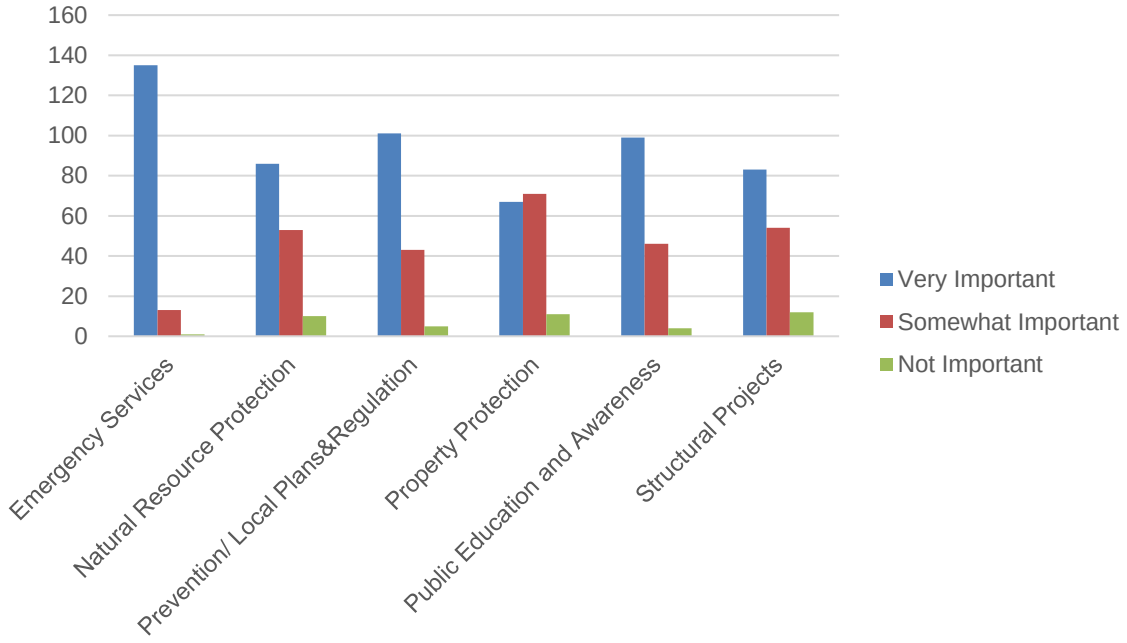
17. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?



18. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important?



19. A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important you think each one is for your community to consider pursuing.



Emergency Services - Actions that protect people and property during and immediately after a hazard event. Examples include warning systems, evacuation planning, emergency response training, and protection of critical facilities or systems.

Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.

Prevention / Local Plans & Regulations - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.

Public Education and Awareness - Actions to inform citizens about hazards and techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials, and demonstration events.

Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, seawalls detention / retention basins, channel modification, retaining walls, and storm sewers.

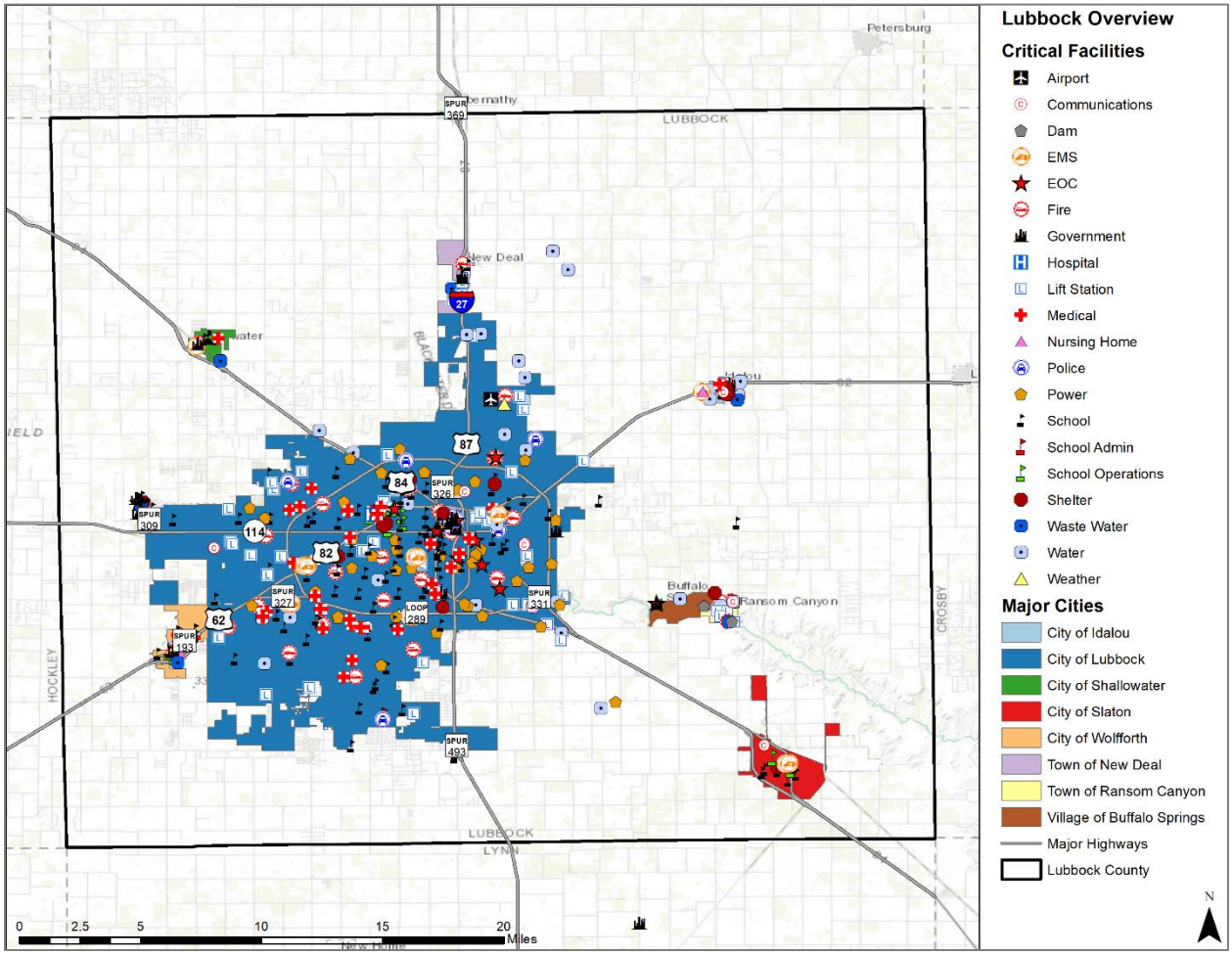
APPENDIX C: CRITICAL FACILITIES

OVERVIEW

This Appendix is **For Official Use Only (FOUO)** and may be exempt from public release under FOIA. Figures C-1 through C-26 locate all critical facilities that were included in the risk assessment. Mapped facilities were provided by Planning Team members. Tables C-1 through C-26 note the critical facilities by type.

CRITICAL FACILITIES

Figure C-1. Critical Facilities in Lubbock County



APPENDIX C: CRITICAL FACILITIES

Table C-1. Critical Facilities by Type in Lubbock County

TYPE	NUMBER
Community / Evacuation Center	5
Courthouse	1
County Annex Building	1
Detention Center	2
Emergency Management Operations	1
Radio Tower	9
Sheriff's Office	1

Figure C-2. Critical Facilities in the Village of Buffalo Springs

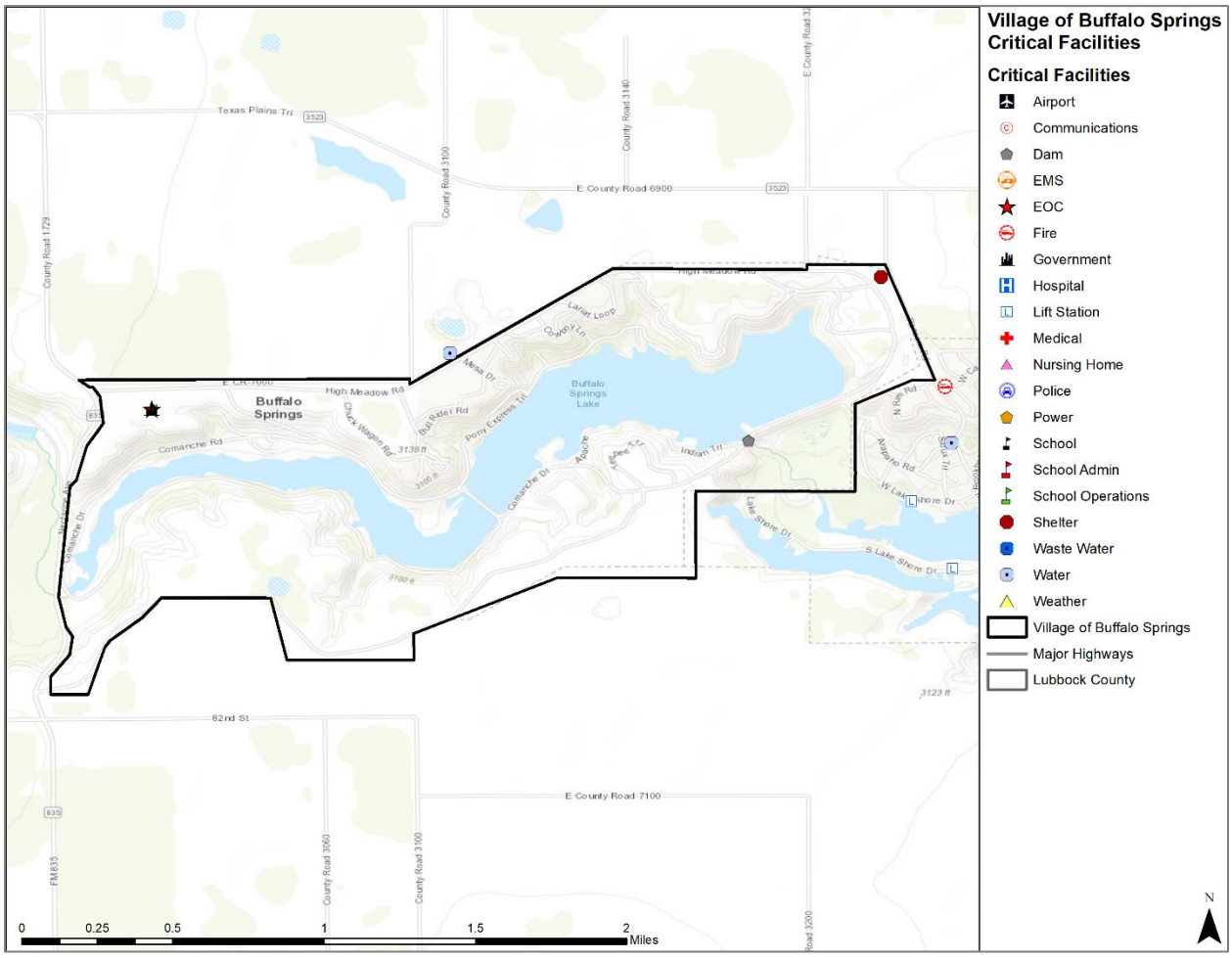


Table C-2. Critical Facilities by Type in the Village of Buffalo Springs

TYPE	NUMBER
Dam	1
Emergency Management Center	1
Sewage Facility/Infrastructure	1
Water Facility/Infrastructure	1

Figure C-3. Critical Facilities in the City of Idalou

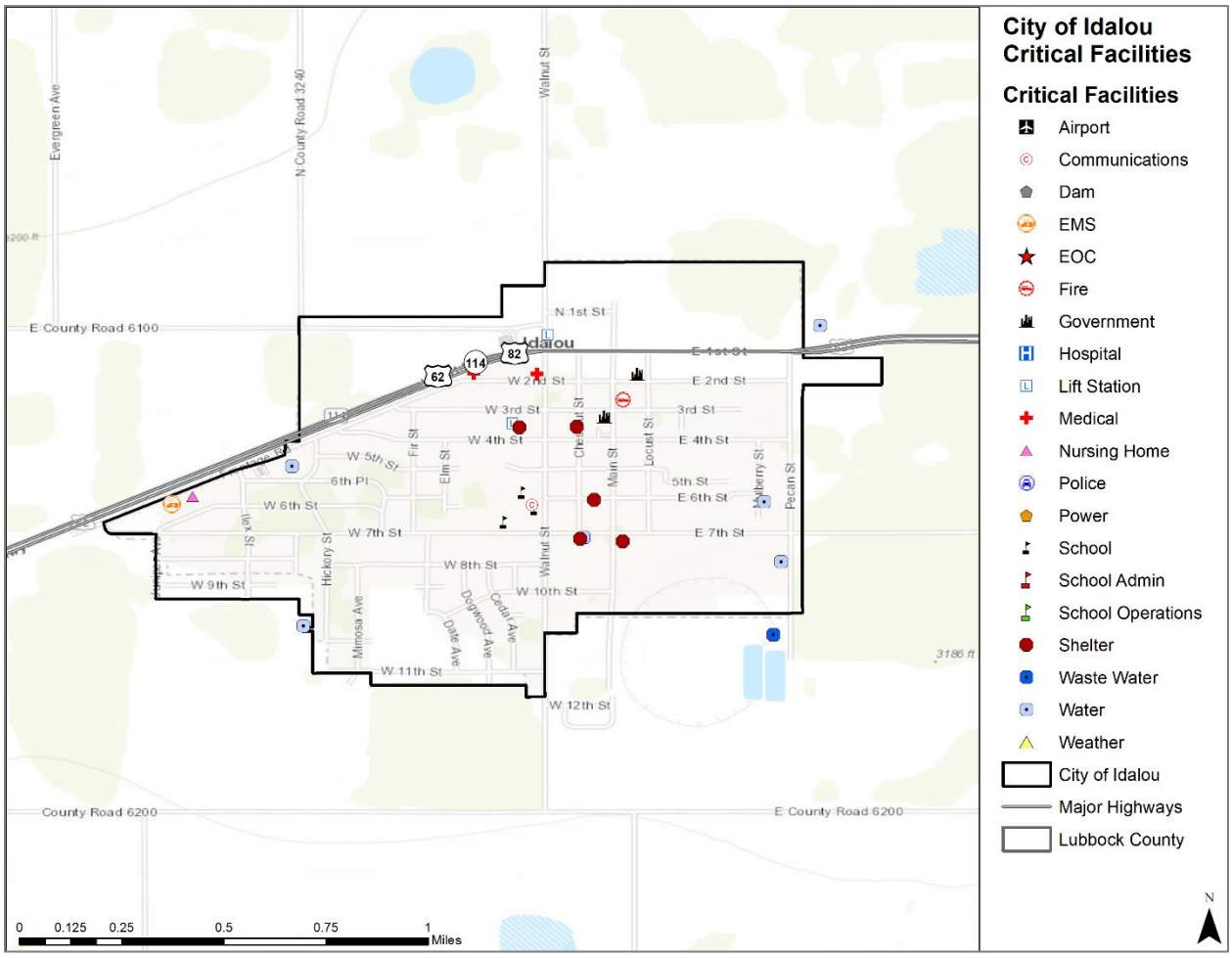


Table C-3. Critical Facilities by Type in the City of Idalou

TYPE	NUMBER
City Hall	1
Emergency Operations Center	1
Fire Department	1
Lift Station	2
Maintenance Facility	1
Medical Facility/Clinic	1
Nursing Home	1
Shelter	4
Wastewater Treatment Plant	1

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Water Tower	2
Well	4

Figure C-4. Critical Facilities in the City of Lubbock

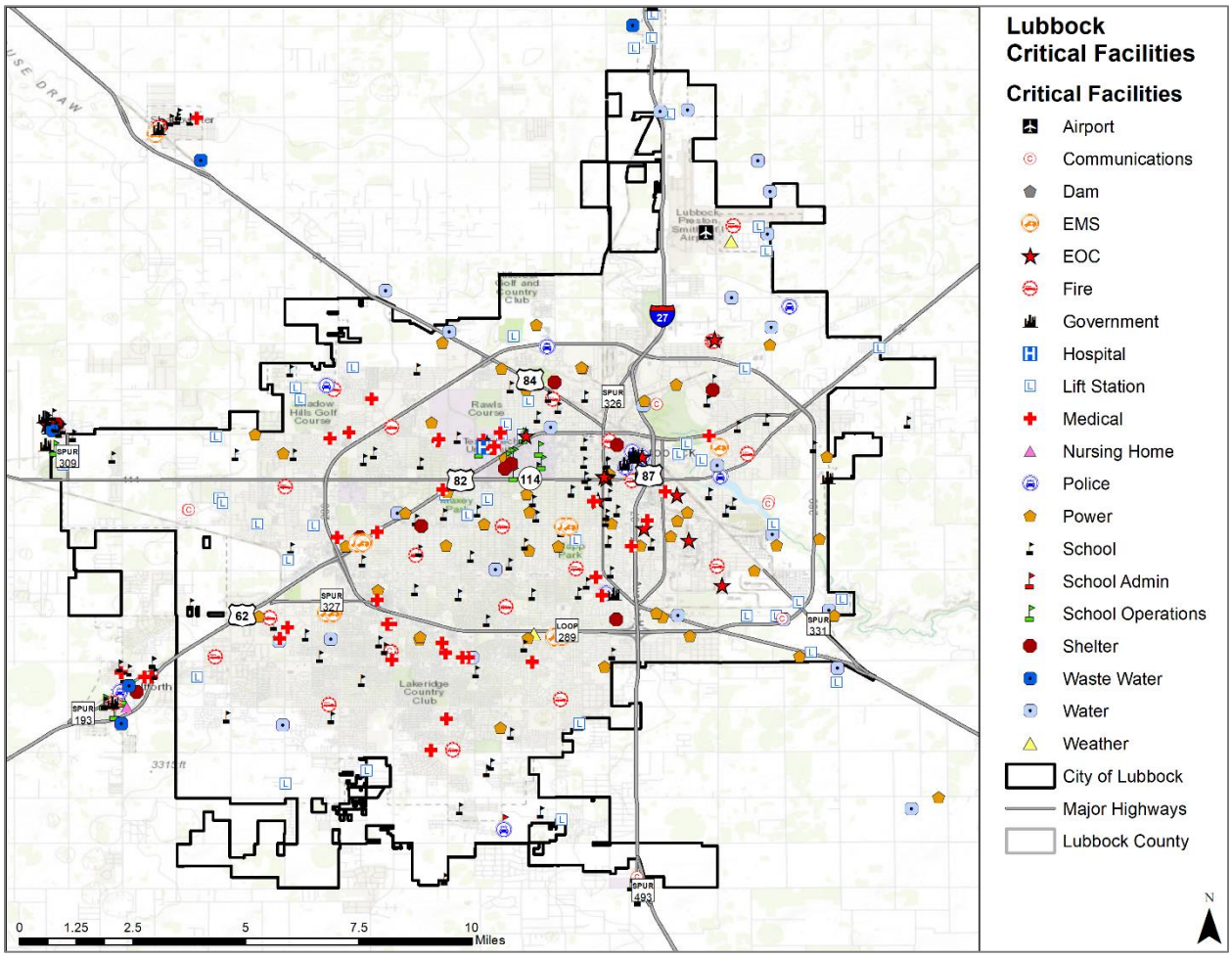


Table C-4. Critical Facilities by Type in the City of Lubbock

TYPE	NUMBER
Airport	1
Canadian River Authority Facility and Infrastructure	5
Civic Center / Evacuation Shelter	1
Emergency Operations Center	1
Fire Administration Building	1

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Fire Department / Station	19
Fire Marshall's Office	1
Government Administration Tower / IT	1
Health Department	1
Land Application Facility/Site	2
Lift Station	38
LP&L Substation	46
National Weather Service Facility and Infrastructure	2
Police Department / Station	4
Police Headquarters	1
Pump Station	15
Radio Tower	4
Reservoir	1
Water Plant	2
Water Reclamation Facility	2
Water Tower/Storage	4
Well Field	1

Figure C-5. Critical Facilities in the Town of New Deal

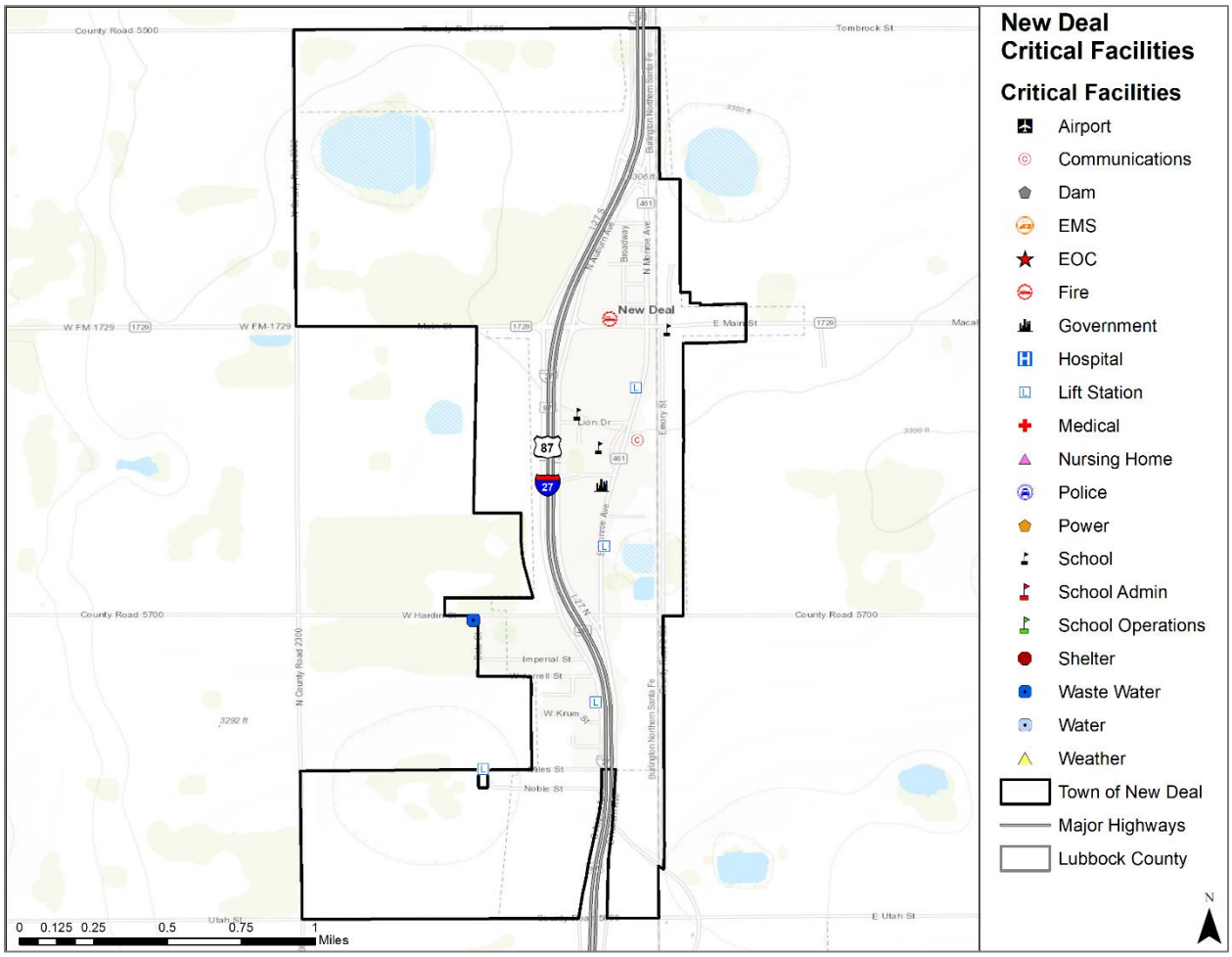


Table C-5. Critical Facilities by Type in the Town of New Deal

TYPE	NUMBER
City Hall / Police Department	1
Fire Department	1
Lift Station	4
Pump Station	2
Sewage Pond	1
Wastewater Facility	1
Water Storage	2
Water Well	1

Figure C-6. Critical Facilities in the Town of Ransom Canyon

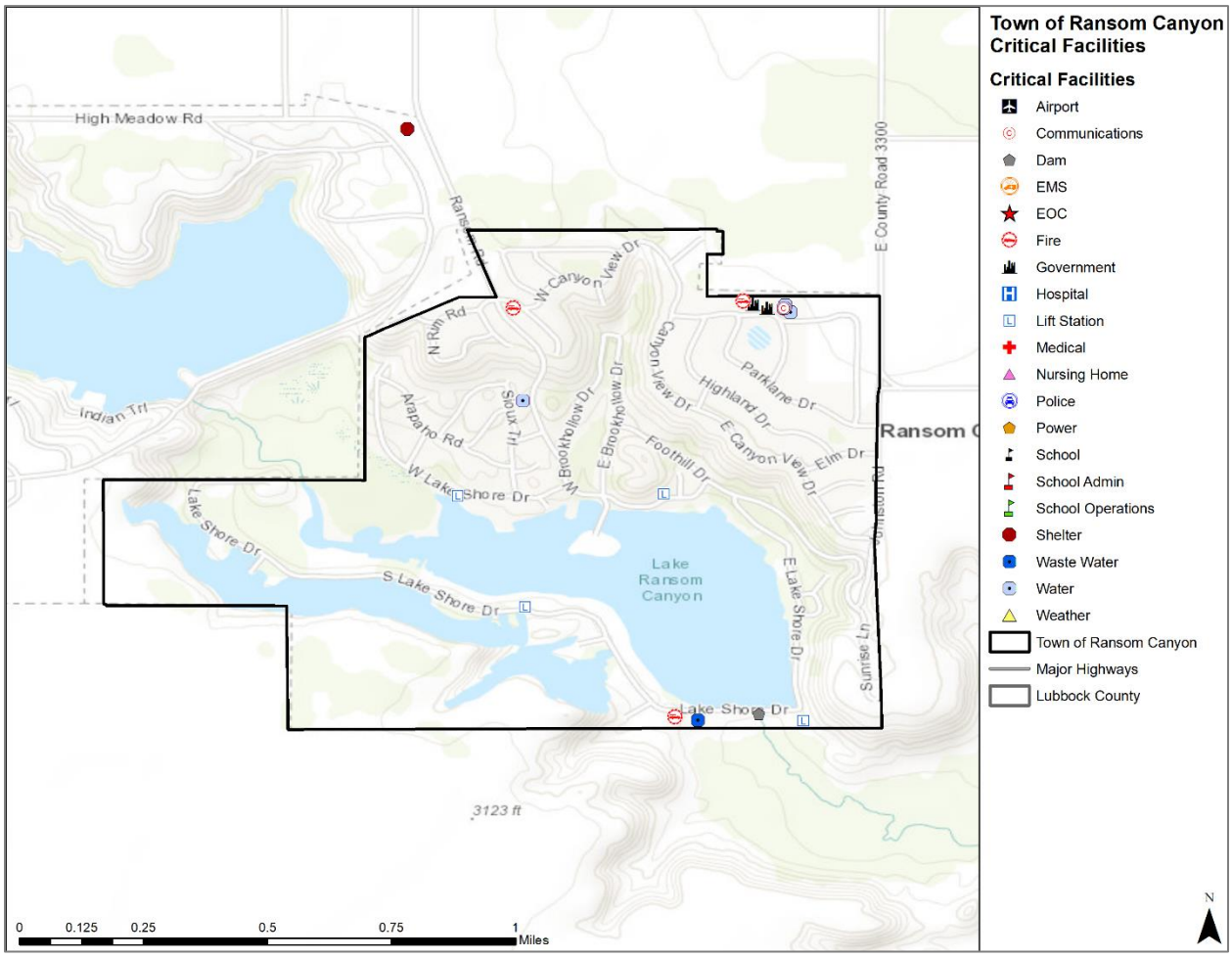


Table C-6. Critical Facilities by Type in the Town of Ransom Canyon

TYPE	NUMBER
Church / Evacuation Shelter	1
City Hall / Police Department	1
Communications Building	1
Dam	1
Fire Department	3
Lift Station	4
Operations Building	1
Pump Station	2
Wastewater Plant	1

TYPE	NUMBER
Water Supply	1
Water Tanks	3
Water Tower	1

Figure C-7. Critical Facilities in the City of Shallowater

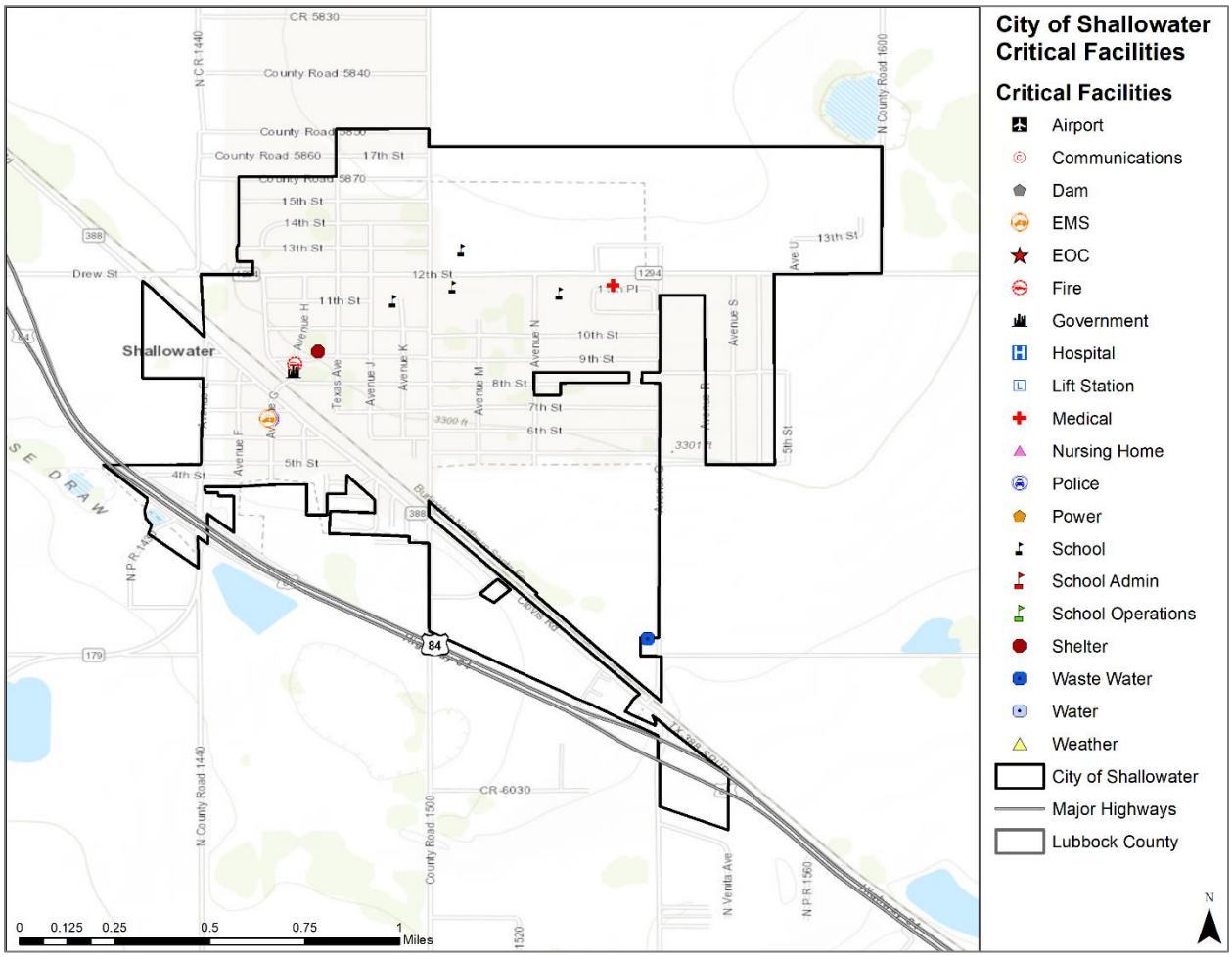


Table C-7. Critical Facilities by Type in the City of Shallowater

TYPE	NUMBER
City Hall	1
EMS Station	1
Fire Department	1
Police Department	1
Water Treatment Plant	1

Figure C-8. Critical Facilities in the City of Slaton

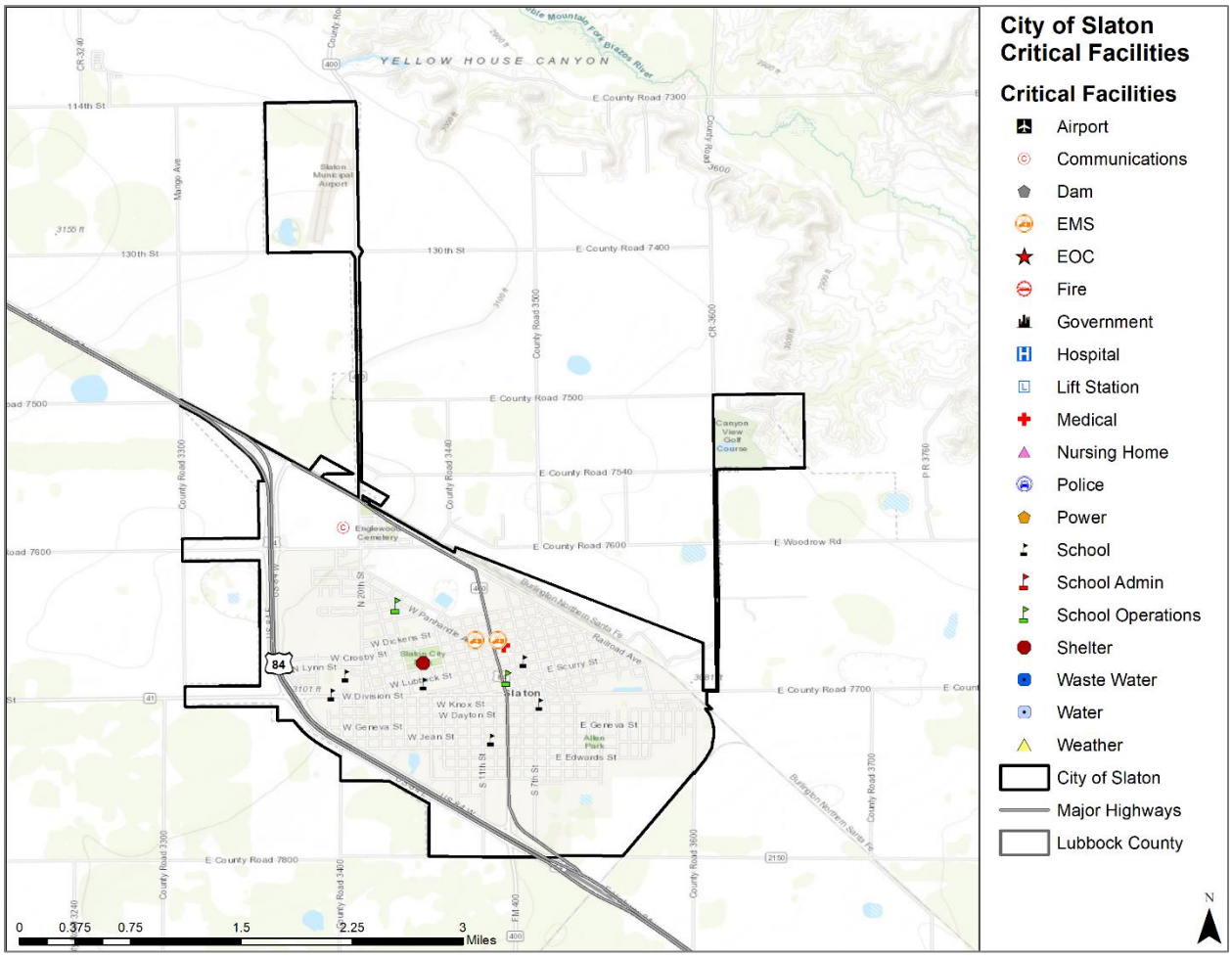


Table C-8. Critical Facilities by Type in the City of Slaton

TYPE	NUMBER
Airport	1
City Hall	1
EMS Station	1
Fire Department	1
Lift Station	6
Medical Center / Clinic	2
Police Department / 911 Center	1
Pump Station	2
School	4

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Sewer Pond	1
Street Department	1
Tornado Shelter	4
Water Department	1
Water Tower	2

Figure C-9. Critical Facilities in the City of Wolfforth

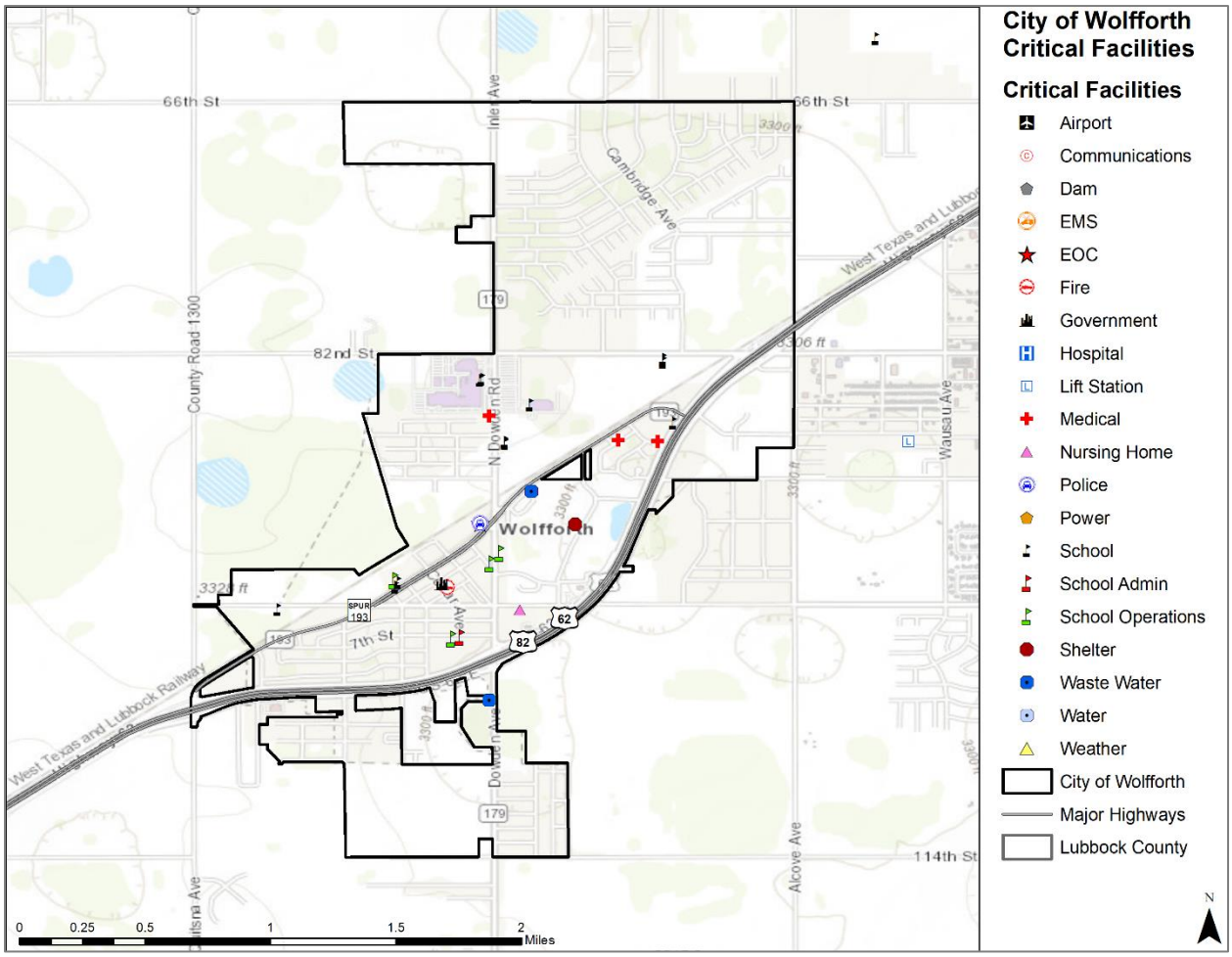


Table C-9. Critical Facilities by Type in the City of Wolfforth

TYPE	NUMBER
Assisted Living Facility	1
City Hall / Emergency Operations Center	1

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Daycare Facility	2
Fire Department	1
Maintenance Building	1
Medical Clinic	2
Police Department	1
School	4
School Administration Building	1
Sewage Plant	1
Water Treatment Plant	1

Figure C-10. Critical Facilities in Abernathy Independent School District

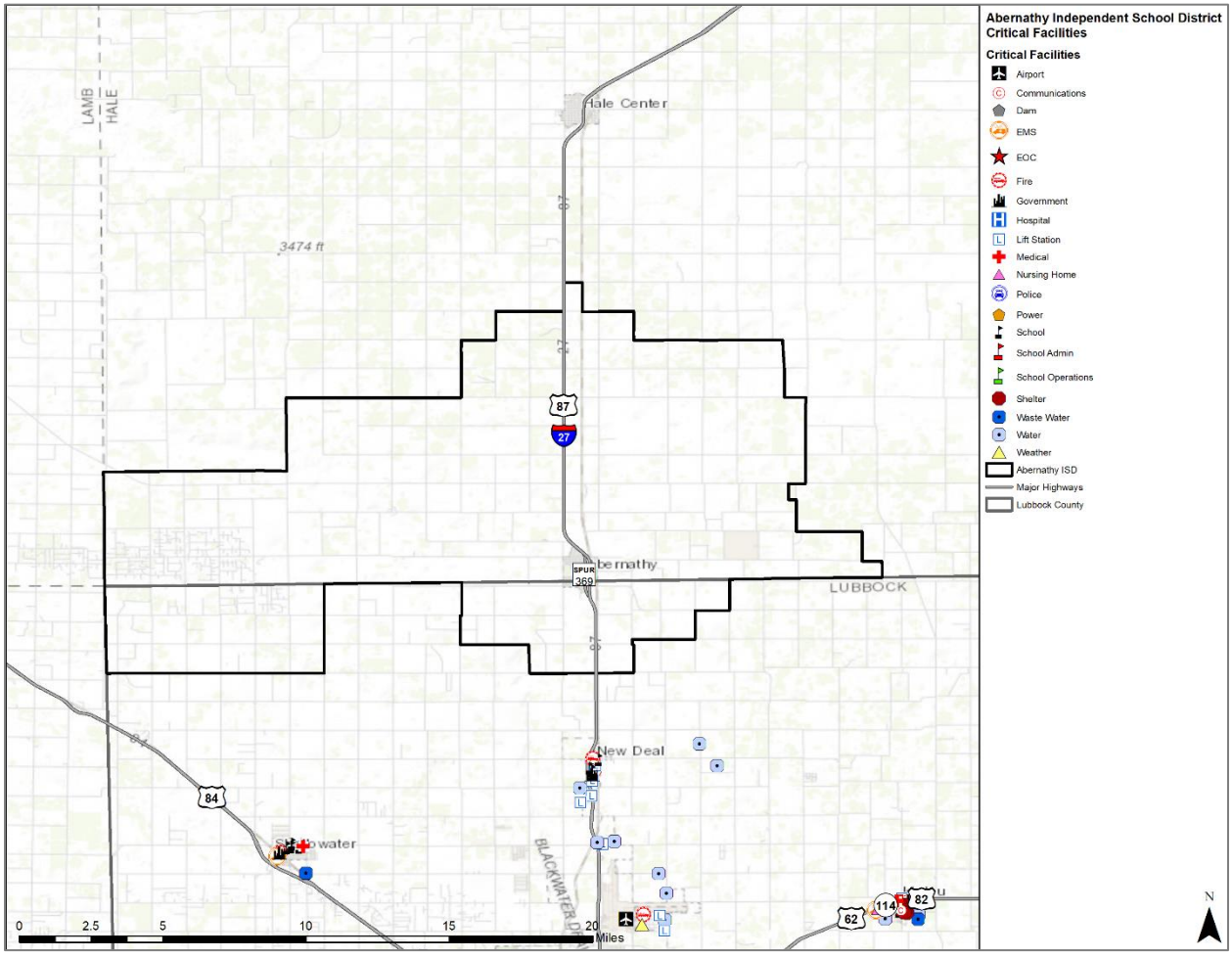


Table C-10. Critical Facilities by Type in Abernathy Independent School District

TYPE	NUMBER
Administration Building	1
Elementary School	1
High School	1
Middle School	1

Figure C-11. Critical Facilities in Frenship Independent School District

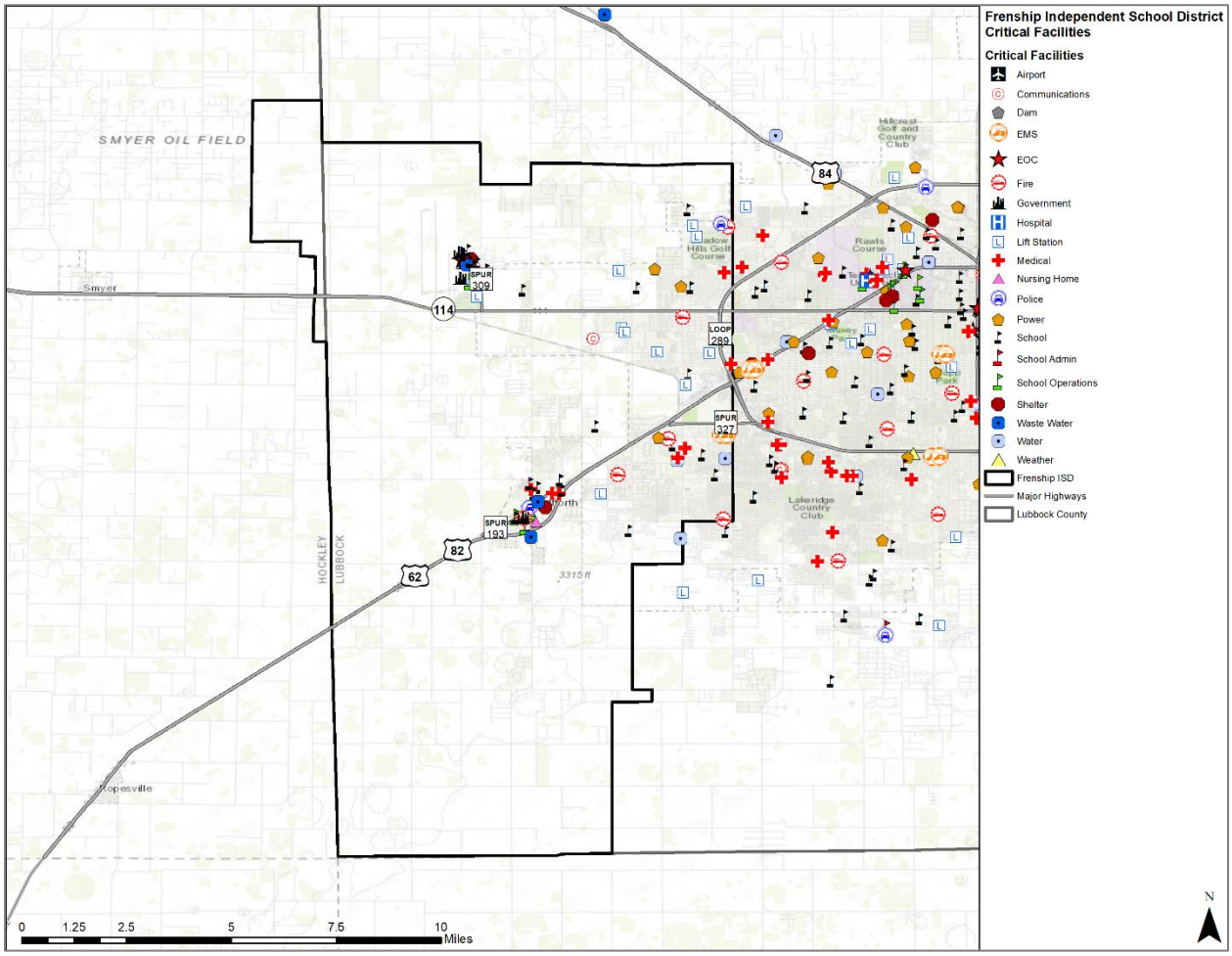


Table C-11. Critical Facilities by Type in Frenship Independent School District

TYPE	NUMBER
Administrative Building	1
Central Operations Facility	1
Education Center	1

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Elementary School	9
Field House	1
Grade Center / School	1
High School	2
Maintenance Facility/Headquarters	1
Middle School	4
Transportation Operations Facility	1

Figure C-12. Critical Facilities in Idalou Independent School District

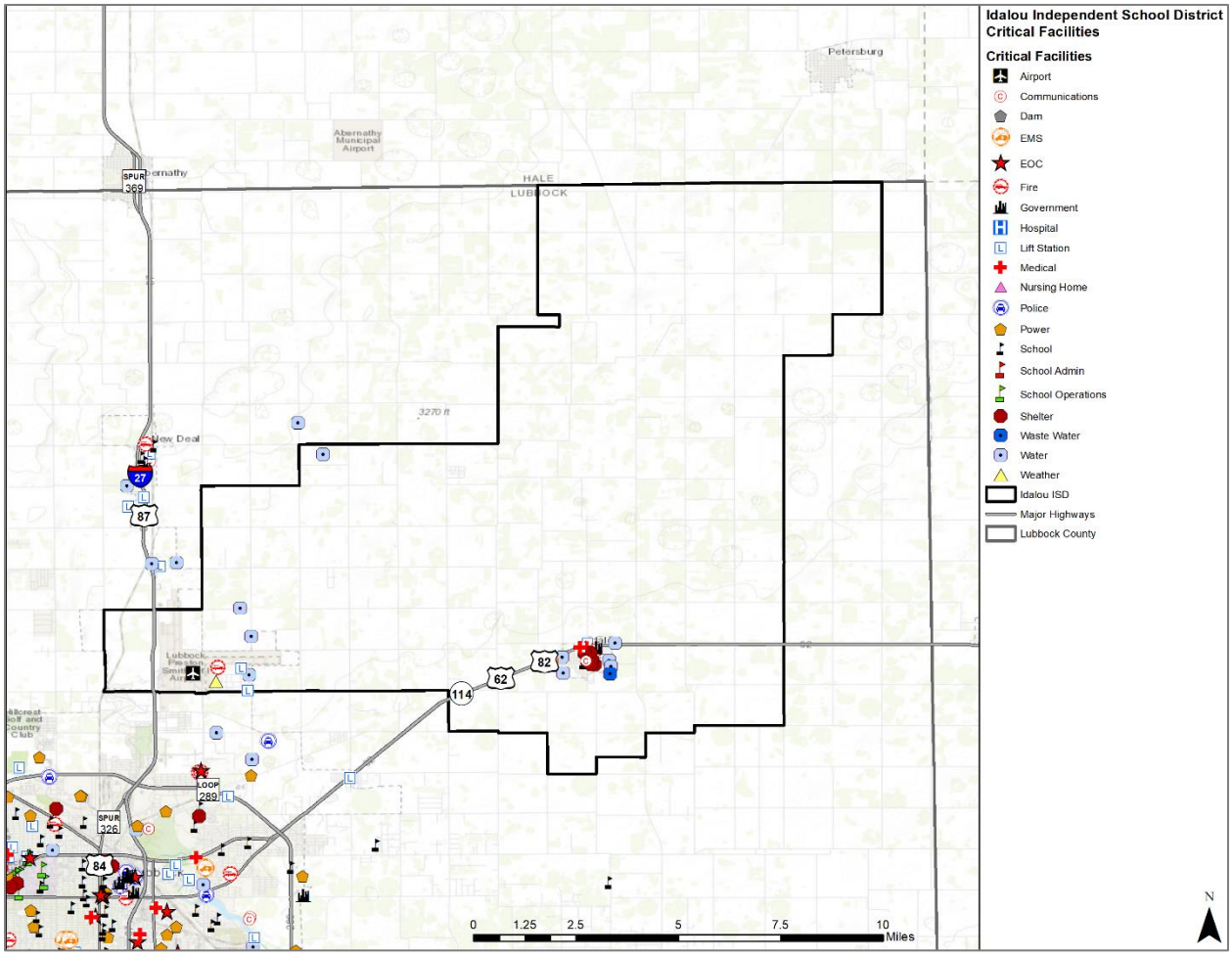


Table C-12. Critical Facilities by Type in Idalou Independent School District

TYPE	NUMBER
Elementary School	1
High School	1
Middle School	1

Figure C-13. Critical Facilities in Lubbock Independent School District

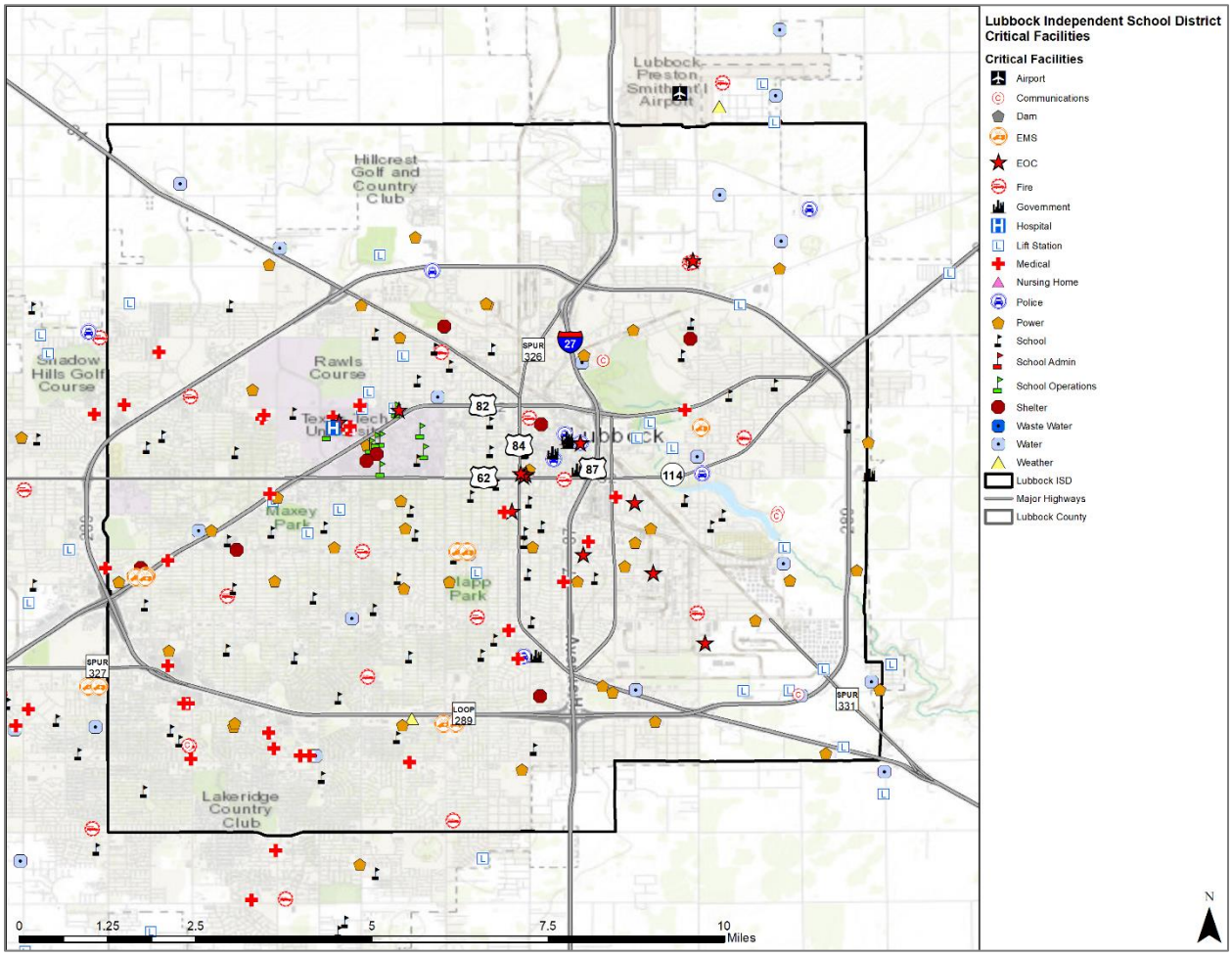


Table C-13. Critical Facilities by Type in Lubbock Independent School District

TYPE	NUMBER
Academy	3
Aquatic Center	1
Educational Support Center	1
Elementary School	29

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Emergency Operation Centers	3
Fields / Evacuation Center	7
High School	5
Maintenance Facility	1
Middle School	7
Specialized School / Program	3
Technology Center	1
Transport Center / Bus Services	1
Vocational Transition Center	1
Warehouse	2

Figure C-14. Critical Facilities in Lubbock-Cooper Independent School District

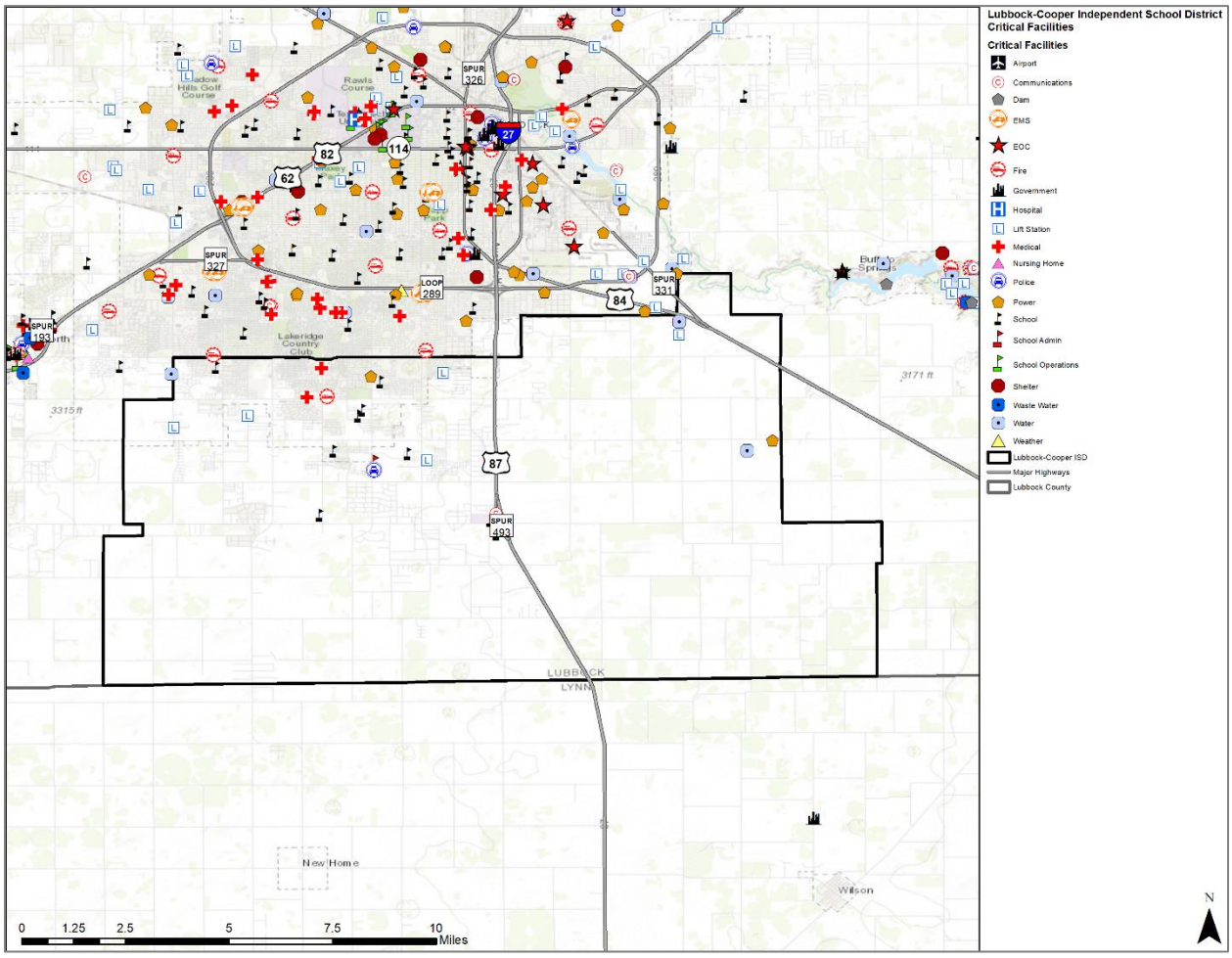


Table C-14. Critical Facilities by Type in Lubbock-Cooper Independent School District

TYPE	NUMBER
Administrative Office	1
Academy / DAEP	1
Elementary School	5
High School	2
Middle School	2
Special Education Building	1

Figure C-15. Critical Facilities in New Deal Independent School District

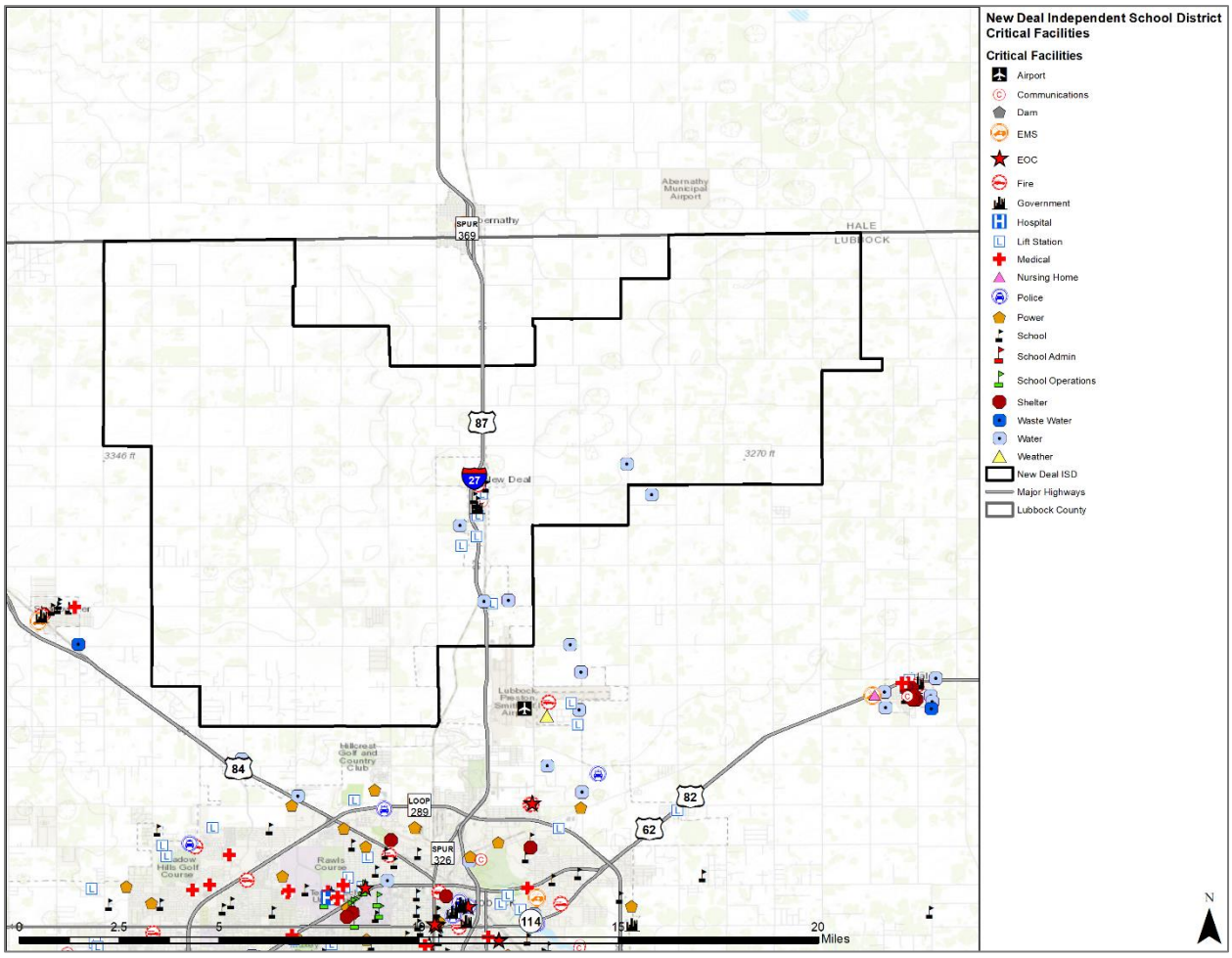


Table C-15. Critical Facilities by Type in New Deal Independent School District

TYPE	NUMBER
Administrative/Aramark Building	1
High School	1
Middle School	1

Figure C-16. Critical Facilities in Roosevelt Independent School District

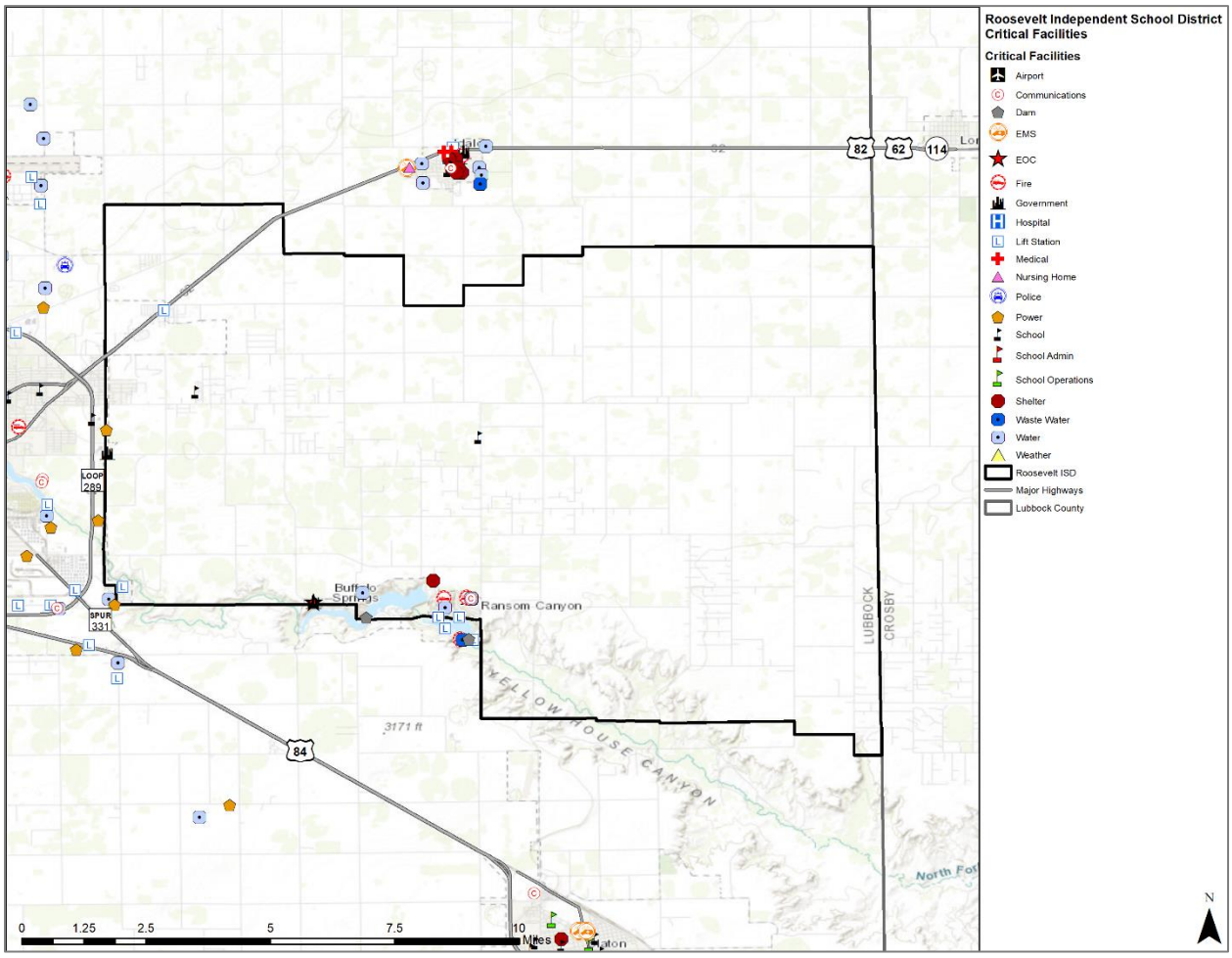


Table C-16. Critical Facilities by Type in Roosevelt Independent School District

TYPE	NUMBER
Administration Campus	1
AG Show Barn / Building	1
Community Center	1
CTE Building	1
Day Care Facility	1
Elementary School	1
Fields/Athletic Facility	6
Gymnasium	1
Maintenance Building	1

TYPE	NUMBER
School House	7
Secondary School	1
Storage Facility / Stand	2
Transportation / Bus Facility	1
Vocational Trade Building	1
Water Tower	1

Figure C-17. Critical Facilities in Shallowater Independent School District

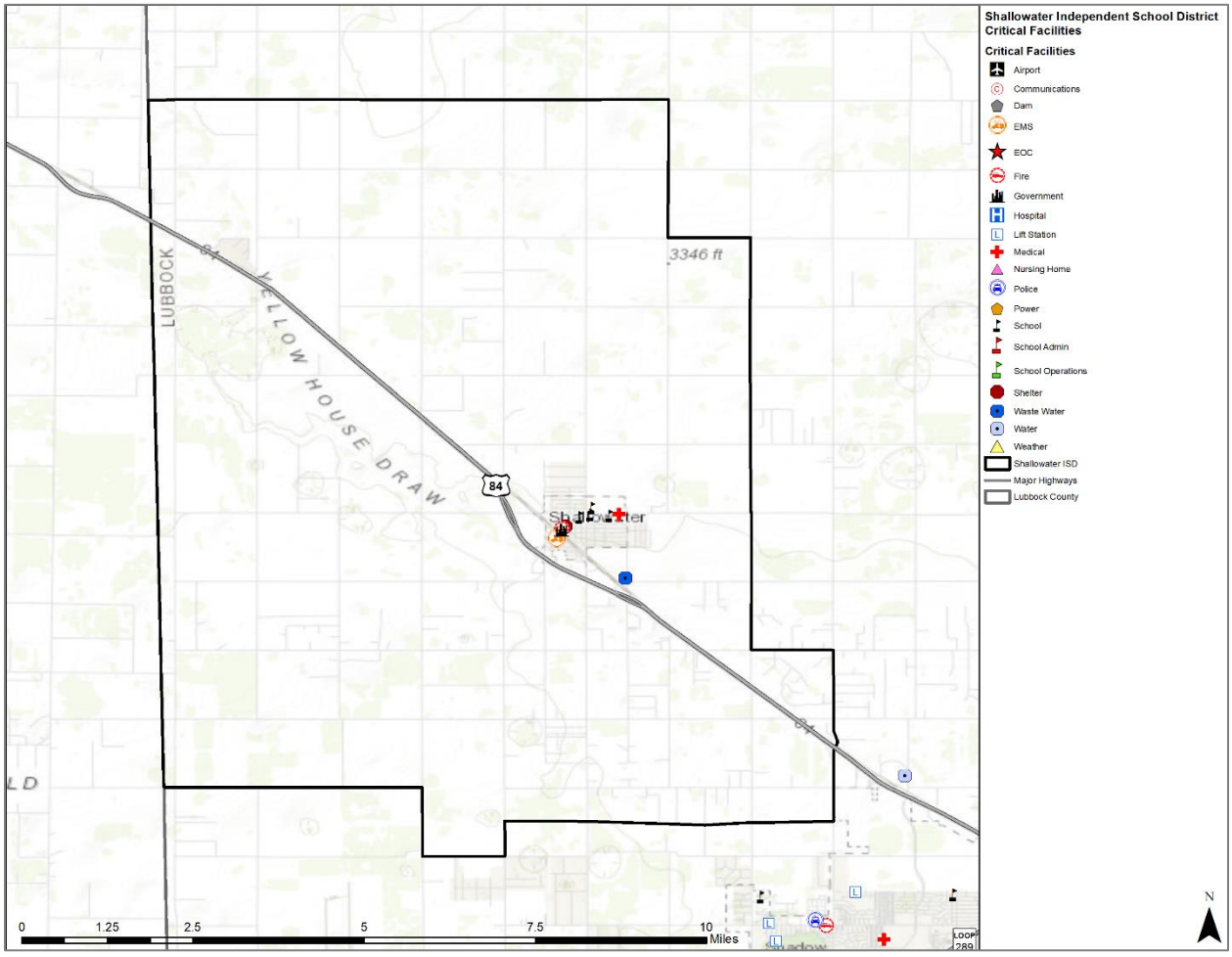


Table C-17. Critical Facilities by Type in Shallowater Independent School District

TYPE	NUMBER
Elementary School	1

TYPE	NUMBER
High School	1
Intermediate School	1
Middle School	1

Figure C-18. Critical Facilities in Slaton Independent School District

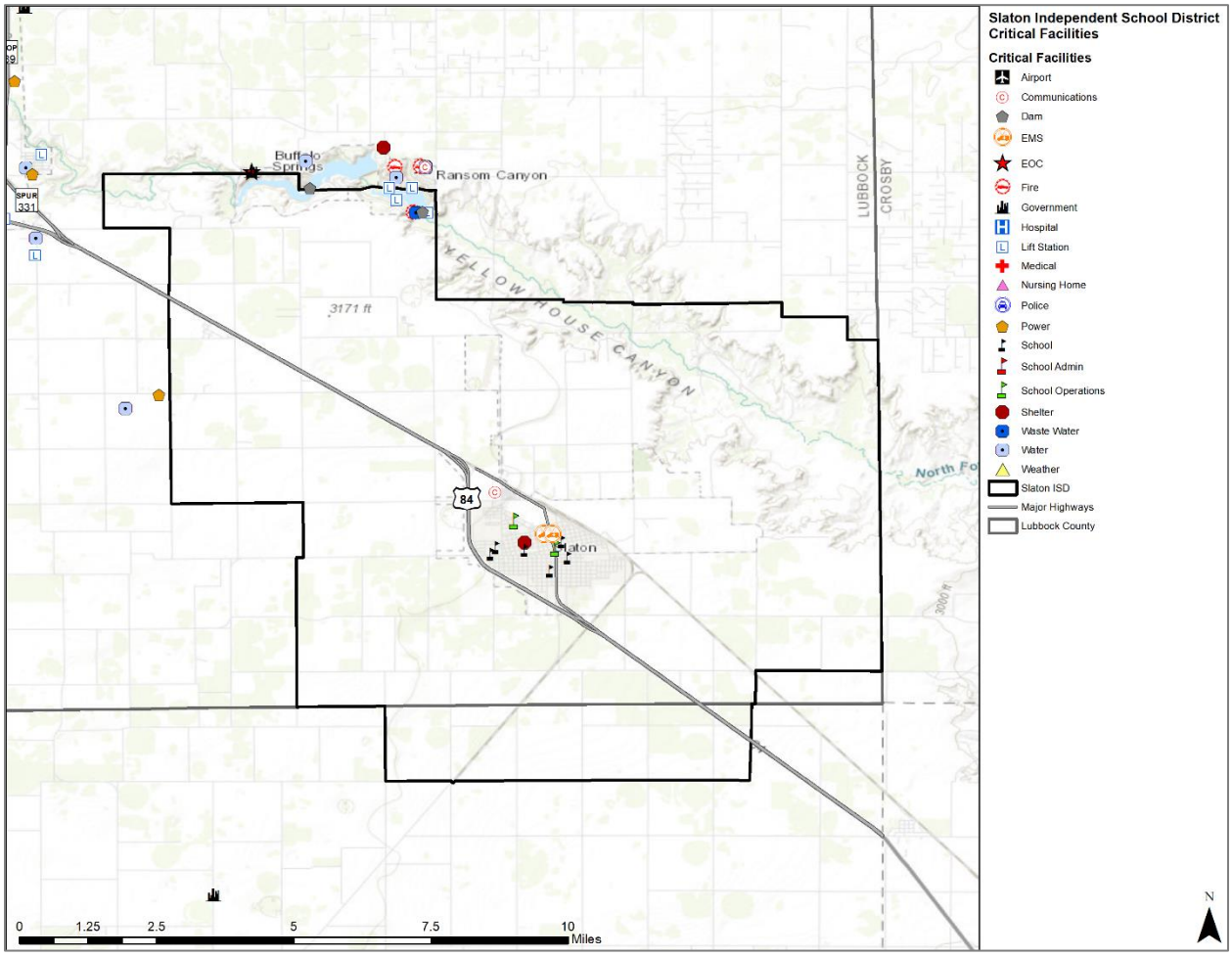


Table C-18. Critical Facilities by Type in Slaton ISD

TYPE	NUMBER
Administration / Central Office	1
Campus Center Facility	1
Elementary / Primary School	2
High School	1

APPENDIX C: CRITICAL FACILITIES

TYPE	NUMBER
Junior High / Middle School	1
Maintenance Facility	1
Transportation Facility	1

Figure C-19. Critical Facilities in the Betty M. Condra School for Education Innovation

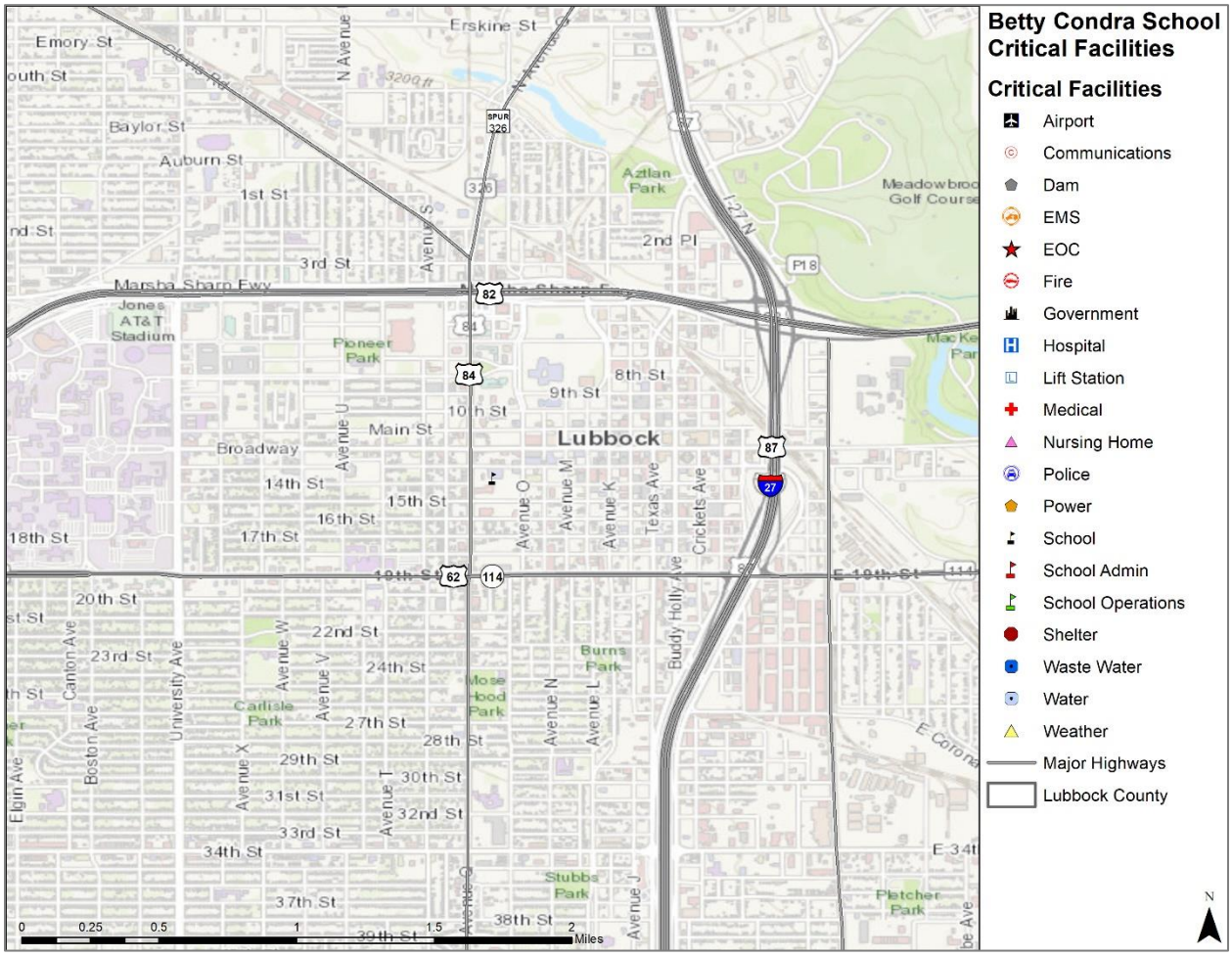


Table C-19. Critical Facilities by Type in the Betty M. Condra School for Education Innovation

TYPE	NUMBER
Main Campus	1

Figure C-20. Critical Facilities in South Plains College

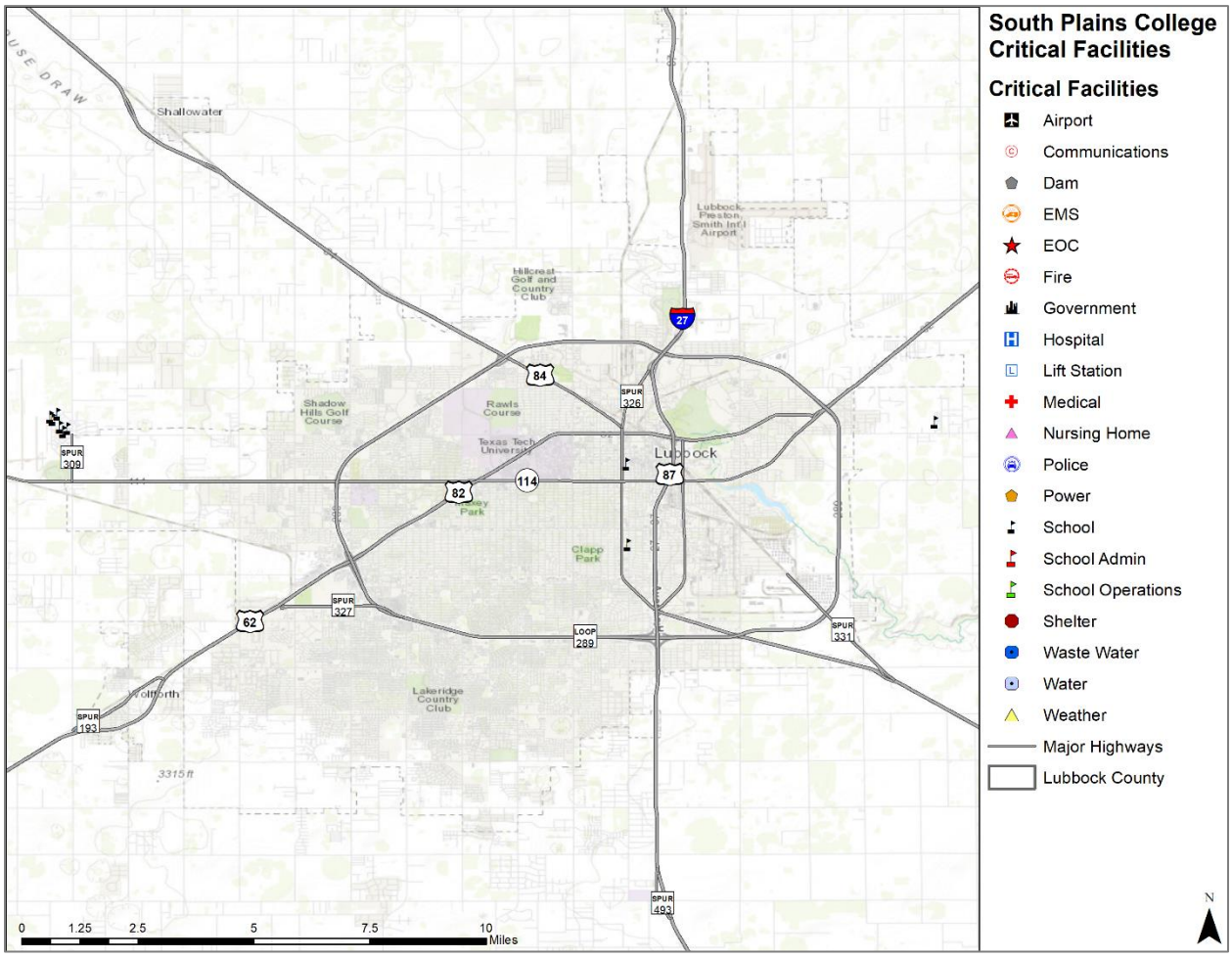


Table C-20. Critical Facilities by Type in South Plains College

TYPE	NUMBER
Career and Technical Center	1
Classroom Facility / Building	7
Downtown / Central Campus	1
Internet Building	1

Figure C-21. Critical Facilities in Texas Tech University System

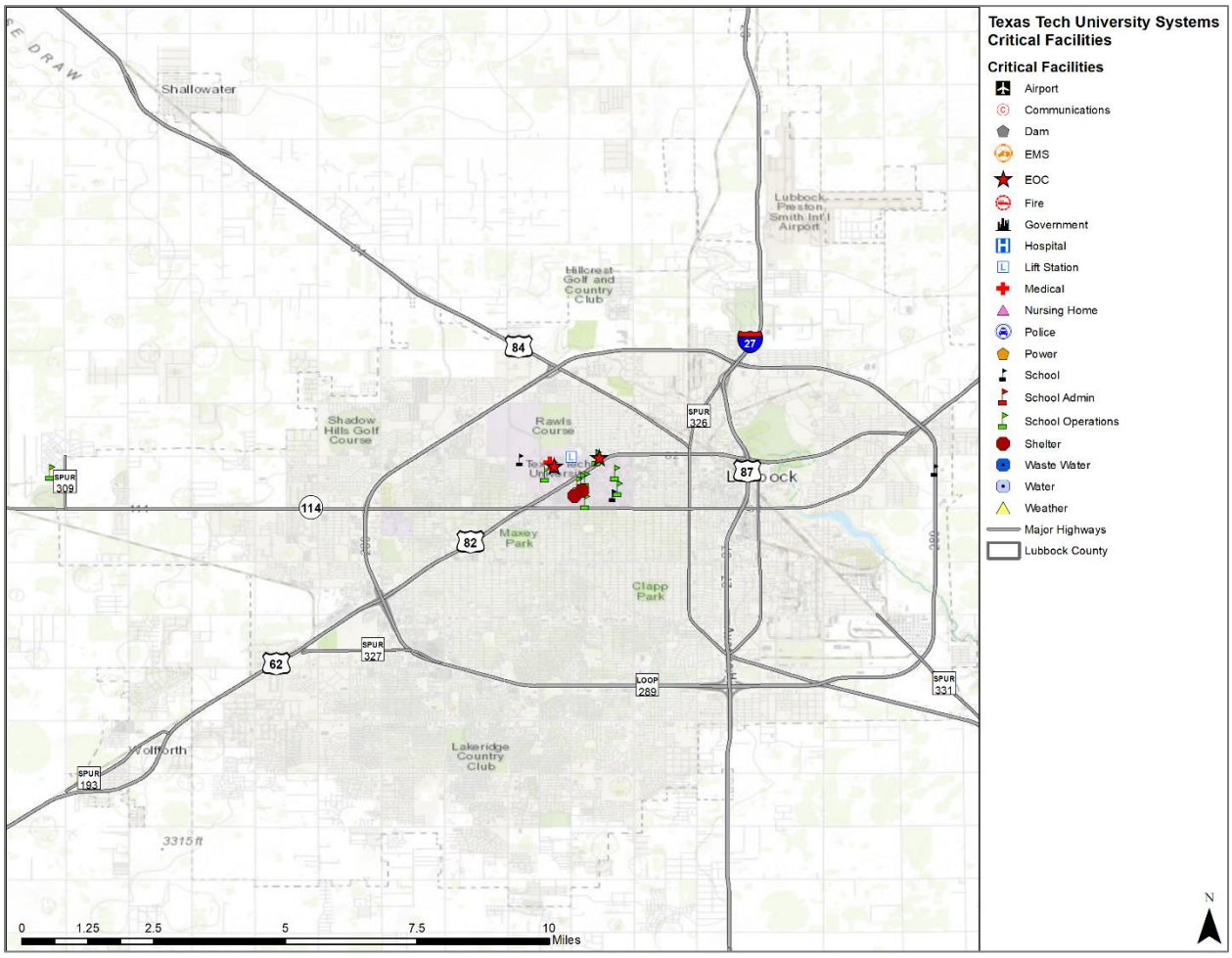


Table C-21. Critical Facilities by Type in Texas Tech University System

TYPE	NUMBER
Administration Building	1
Administration Support Center	1
Campus Dinning Facility	1
Computer / Engineering Center	1
Emergency Operations / Campus Police	1
Evacuation Center	1
Heating and Cooling Plant	2
Housing Service	1
Lab	1

TYPE	NUMBER
Library	1
Lift Station	1
Plant Annex and Infrastructure	2
Recreation Center	1
Research Center	2

Figure C-22. Critical Facilities in Texas Tech University Health Sciences Center

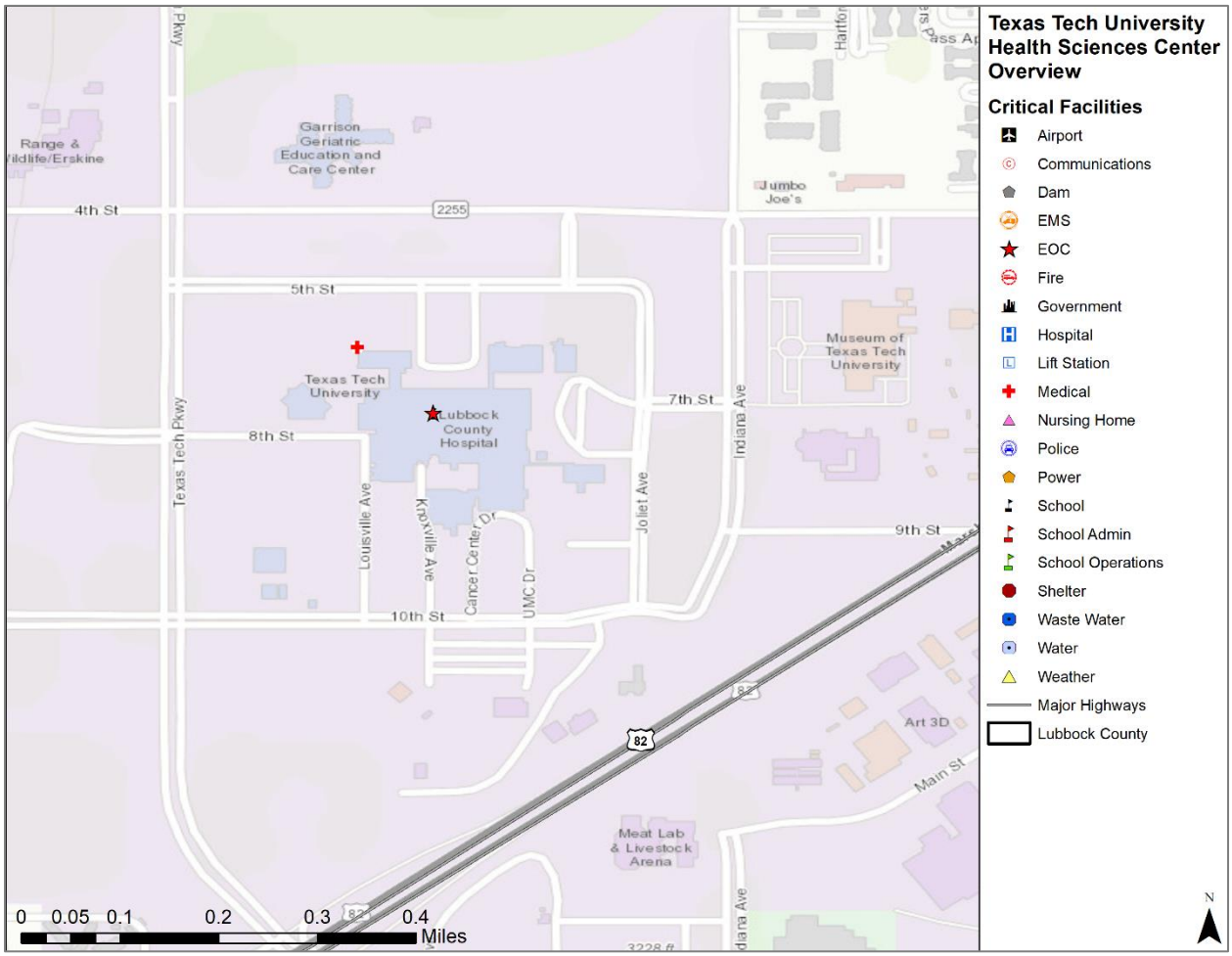


Table C-22. Critical Facilities by Type in Texas Tech Health Sciences Center

TYPE	NUMBER
Emergency Operations Center	1
Health Science Center / Central Campus	1

TYPE	NUMBER
Medical Pavilion	1

Figure C-23. Critical Facilities in Lubbock County Hospital District

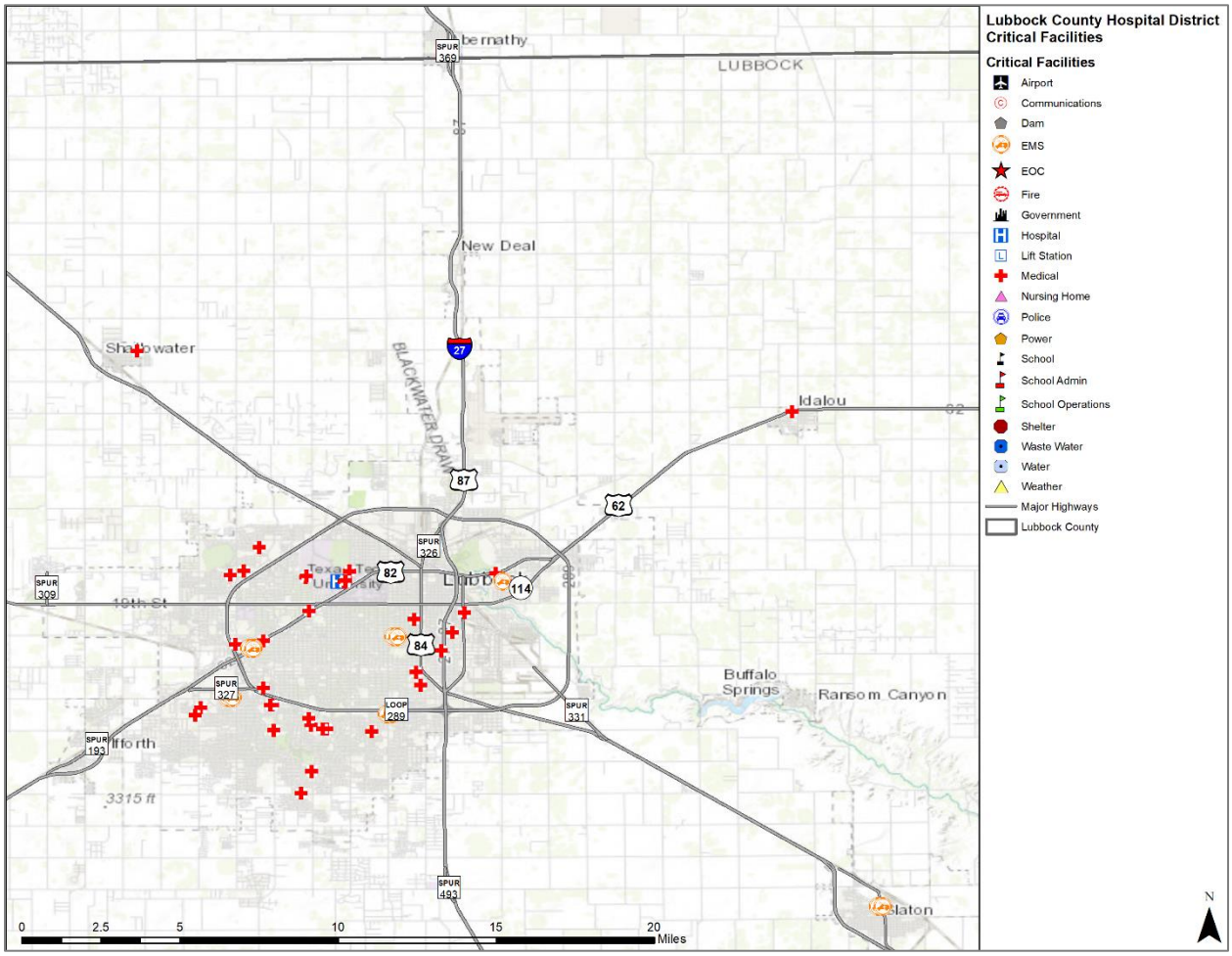


Table C-23. Critical Facilities by Type in Lubbock County Hospital District

TYPE	NUMBER
Clinic	38
Emergency Management Center	1
EMS Stations	7
EMS Warehouse	1
Hospital Warehouse	1
Main Hospital Campus	1

TYPE	NUMBER
Medical/Administrative Office	7
Rehabilitation Center	5

Figure C-24. Critical Facilities in Lubbock County Water Control and Improvement District (WCID #1)

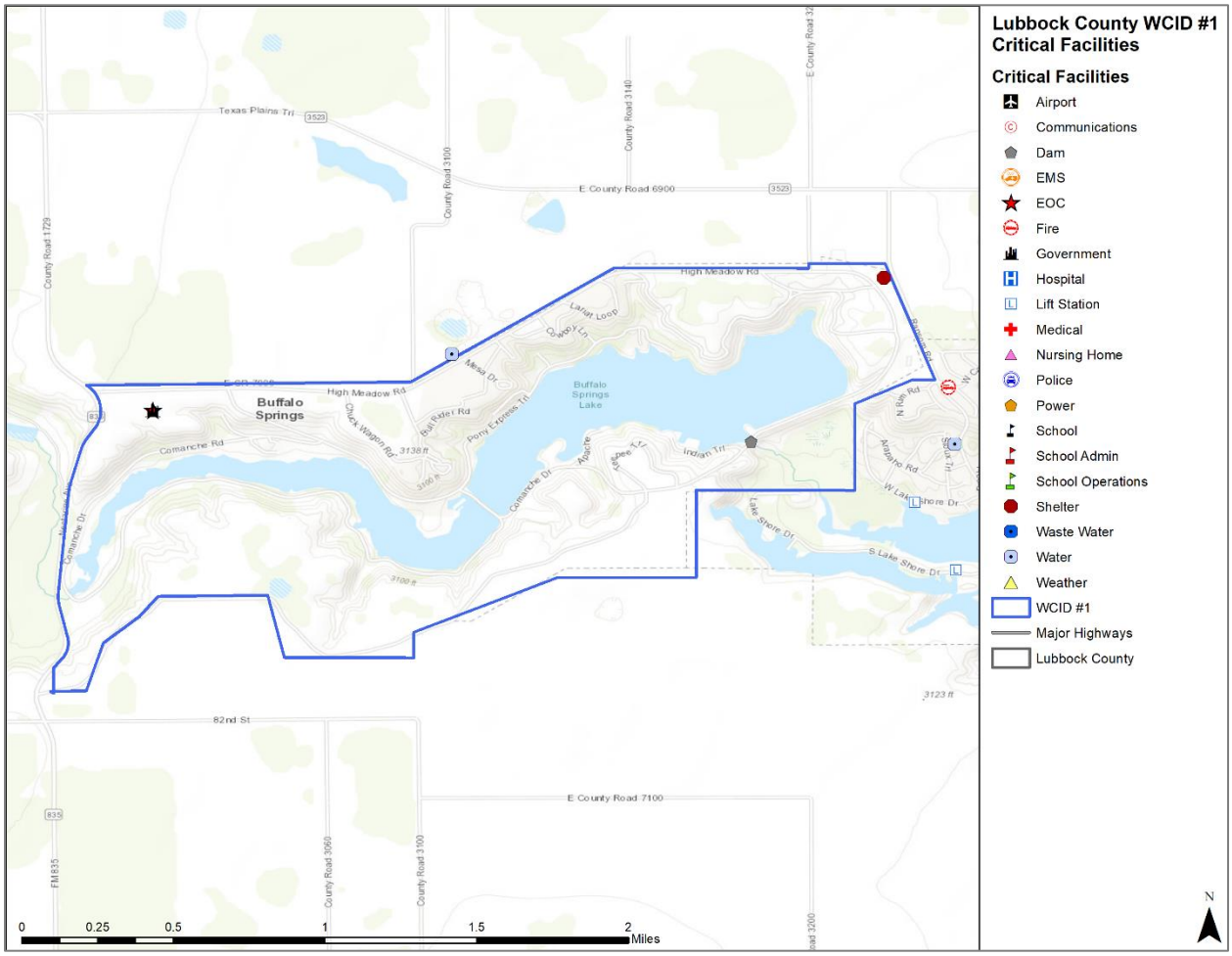


Table C-24. Critical Facilities by Type in Lubbock County Water Control and Improvement District (WCID #1)

TYPE	NUMBER
Administration Building	1
Sewage Infrastructure	2
Water Infrastructure	1

Figure C-25. Critical Facilities in Lubbock County Reese Technology Center

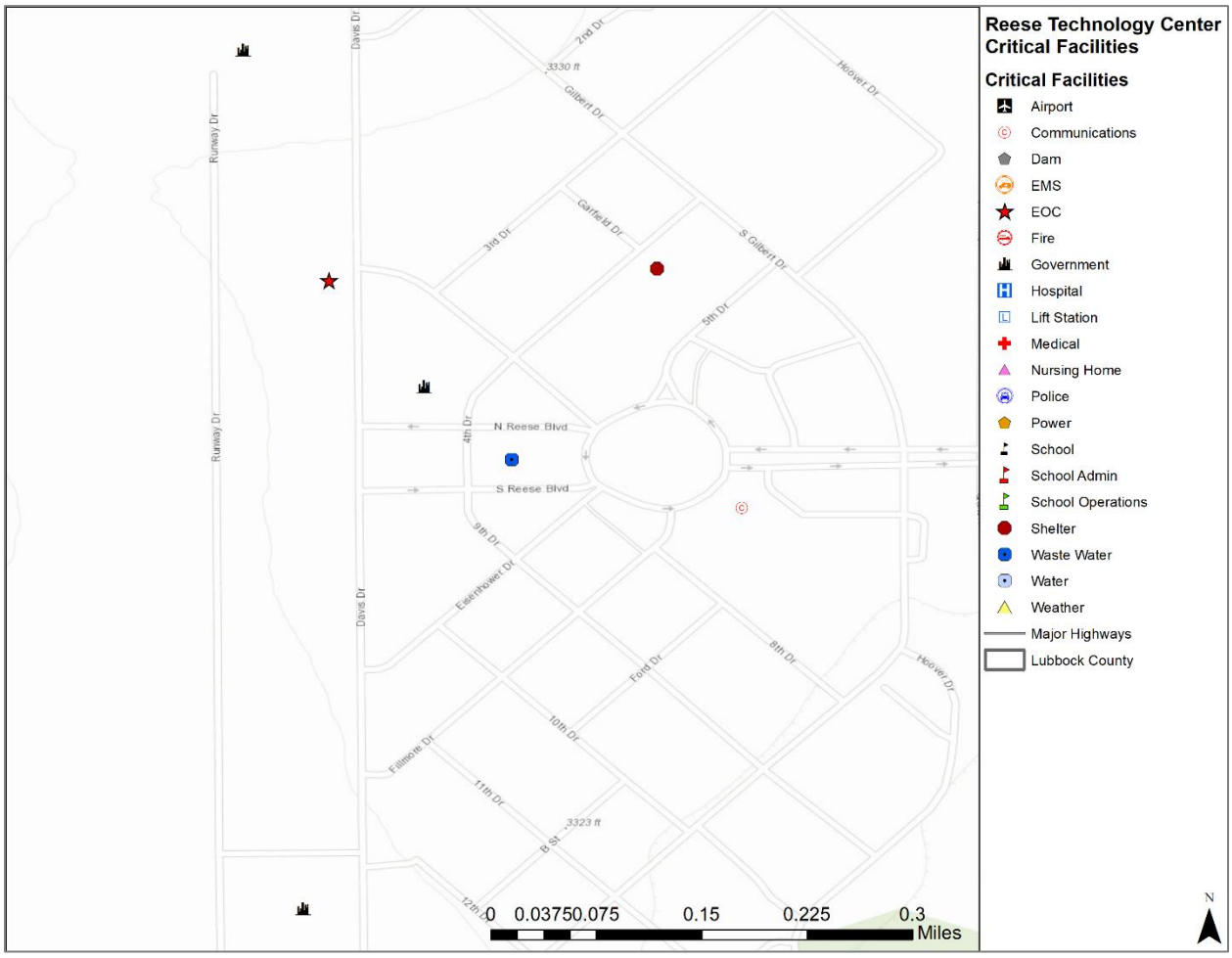


Table C-25. Critical Facilities by Type in Lubbock County Reese Technology Center

TYPE	NUMBER
Airfield Tower	1
Communication Building	1
Data Center	1
Emergency Operations Center	1
Evacuation Center	1
Maintenance Operations Facility	1
Water Treatment and Pump	1

Figure C-26. Critical Facilities in South Plains Association of Governments (SPAG)

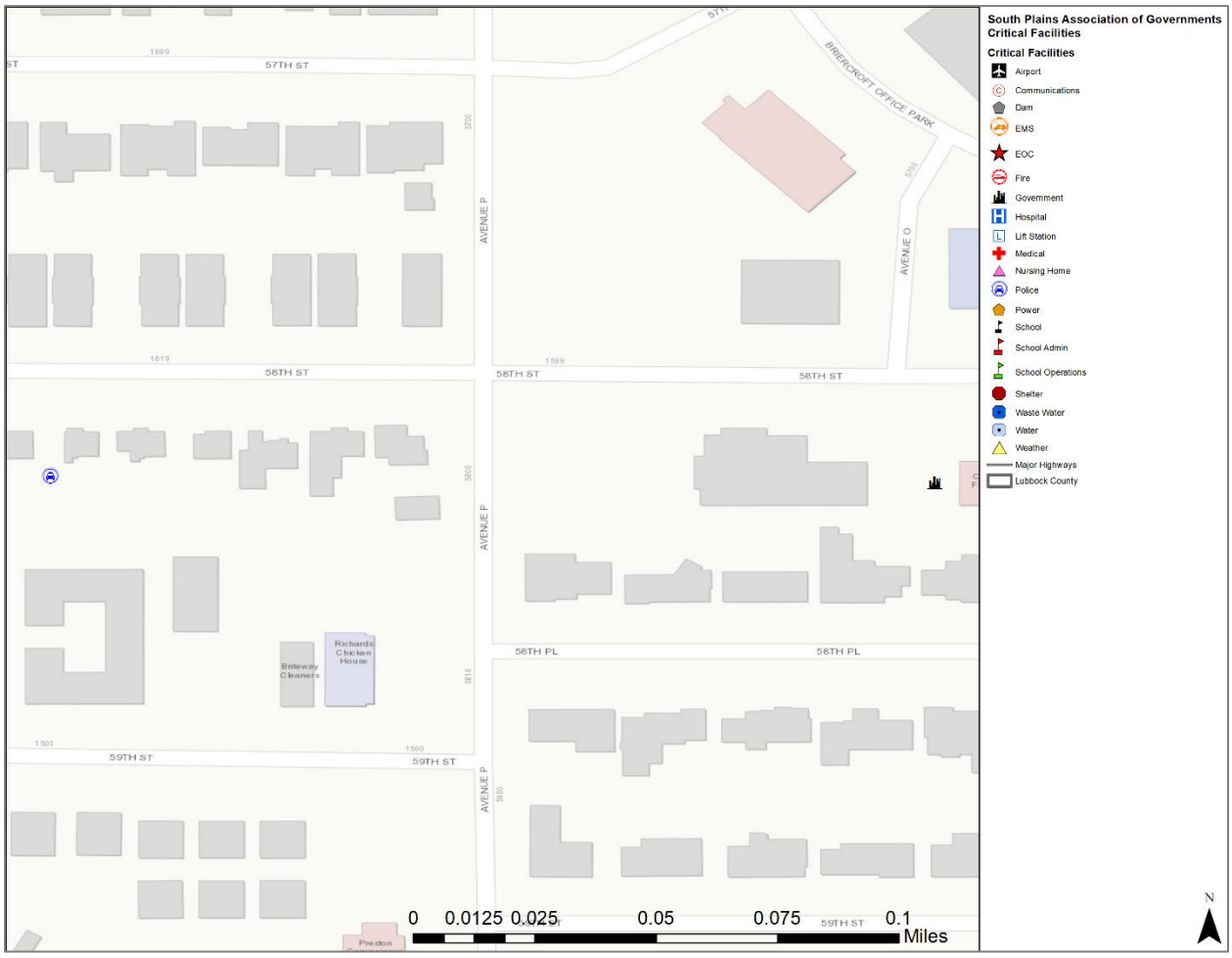


Table C-26. Critical Facilities by Type in South Plains Association of Governments (SPAG)

TYPE	NUMBER
Central Office Building	1
Law Enforcement Building	1

APPENDIX D: DAM LOCATIONS

OVERVIEW

Appendix D is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).

DAM LOCATIONS

Table D-1 below reflects all dams that are located in the participating jurisdictions within the Lubbock County Hazard Mitigation Action Plan Update. This list includes High, Significant, and Low Hazard Dams. Section 14 of the Plan doesn't profile dams that were deemed to pose no past, current, or future risk to the planning area as no loss of life or impact to critical facilities or infrastructure is expected in the event of a breach. The asterisk denotes those that were profiled in the hazard assessment.

Table D-1. List of Dam Locations and Storage Capacities

JURISDICTION	LATITUDE	LONGITUDE	HEIGHT (Feet)	STORAGE (Acre Feet)
Lubbock County*	33.533582	-101.694823	76	8280
Lubbock County	33.524463	-101.678137	26	1620
Lubbock County	33.608096	-101.863157	12	50
Lubbock County	33.600601	-101.848476	9	73
Lubbock County	33.528608	-101.741097	17	243
City of Lubbock	33.565537	-101.802297	18	345
City of Lubbock*	33.673178	-101.802411	15	590
[1]City of Lubbock /Garza County*	33.061526	-101.04209	141	115,937

[1] The John T. Montford dam is located outside of the Lubbock County planning area in Garza County. However, it is owned and operated by the City of Lubbock; therefore, it is included in the analysis.

APPENDIX E: MEETING DOCUMENTATION

WORKSHOP DOCUMENTATION

Appendix E is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).

Lubbock County held a series of Planning Team workshops: a Kickoff Workshop on January 13th, 2022, a Risk Assessment Workshop March 31st, 2022, and a Mitigation Strategy Workshop on May 19th, 2022. At each of these workshops members of the Planning Team were informed of the planning process, expressed opinions, and volunteered information. Lubbock County hosted public meetings. The sign-in sheets for each workshop and public meeting are included below. For more details on the workshops and planning process, see Section 2.

Figure E-1. Lubbock County Kickoff Workshop, January 13th, 2022

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
JAMES SHAVERS	Lubbock PD	DEPUTY CHIEF	JSHAVERS@MYLUBBOCK.US	775-2766
CHRIS WINN	LUBBOCK CO	TREASURER	CWINN@LUBBOCKCOUNTY.GOV	806-831-3586
CHRIS EVANS	Reese Tech	Operations Mg	CEVANS@REESECENTER.COM	806-885-6592
Travis Ward	Lubbock OEM	Planner	travis.ward@mylubbock.us	806 686-7717
Jacquie Bober	City of Lubbock	Dir. Municipal Museums	jbober@mylubbock.us	806 775 3569
Jason Skrabanek	Lubbock PD	DEPUTY CHIEF	JSKRABANEK@mylubbock.us	775-2766
Charles Jensen	Ransom Canyon PD	Lieutenant	cjensenrcpd@sptc.net	806-786-9201
Rebecca Wilson	Lubbock	Grant Writer	rwilson@mylubbock.us	806 775 2421
Kathryn K Jones	Buffalo Springs	Chief of Police	kjones@buffalosprings.com	806 885 7523
Erik Rejino	City of Lubbock	Asst. City Mgr	erejino@mylubbock.us	806 478 0188

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Nikolas Foit	City of Lubbock	Deputy Dir. OEM	nfoit@mylubbock.us	806-775-3402
John Turpin	City of Lubbock	Asst D. of R&I	jturpin@mylubbock.us	806 775-2742
Jill Lonvick	"	Mgt Asst	jlonvick@mylubbock.us	806 775 3424
DANNY DAVIS	LCISD	Acct. Supt.	ddavis@lcisd.net	806-863-7138
James Hill	Ransom Canyon	Chief	police@townofransomcanyon.org	806 786 8513
Meredith Ines	Texas Tech	Asso. Director EM	Meredith.ines@ttu.edu	806- 834-4963
Eric Williams	Idalou PD	Chief of Police	ewilliams@cityofidalou.com	806-892-2531
Lainey Morrison	City of Lubbock	Park Manager	LMORRISON@mylubbock.us	806 775-2316
Malcolm Laing	City of Lubbock	WATER RESOURCES	MLAING@mylubbock.us	806 775 3513
Krishna Handley	Lubbock Co.	Assistant Purchasing Agent	khandley@lubbockcounty.gov	806-775-1047 → Lubbock County.gov
Michael Hobson	New Deal	Chief of Police	newdeal.police@gmail.com	8066832608
Dominic Esperat	City of Lubbock	Ass. Director	desperat@mylubbock.us	806-775-2370

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
HENRY PERRY	TEEX	TRAINING MANAGER	henry.perry@teex.tamus.edu	512-848-7319
Paige Purvis	TAMFS	Task Force Coord.	ppurvis@tfs.tamu.edu	806-401-7280
Woody Franzalin	City Lubbock	Dir Public Wks	WFranzalin@mylubbock.us	806-775-2343
Gary Frye	Lubbock	Dir of Special Projects	gtfrye@gmail.com	806 787-6137
Gilbert Quant	Lubbock	ASSISTANT BLDG OFFICIAL	gquant@mylubbock.us	806-775-2090
Greg Zielinski	Lubbock	Building Official	gzielinski@mylubbock.us	806-775-2208
STEVEN NELSON	LUBBOCK	FLOODPLAIN OFFICIAL	SNELSON@MYLUBBOCK.US	806-775-2331
Jennifer Jurbeck	Lubbock County	Assistant Dir-Civil	jjurbeck@lubbockcounty.gov	806-775-1148
Steven Moore	TAMFS	Branch Fire Coord.	SMOORE@TFS.TAMU.EDU	979-587-9081
Gene Valentine	LC	Director	gvalentine	806 775 7120
CLINTON THETFORD	LUBBOCK CO	EMC	cthetford@LUBBOCKCOUNTY.GOV	806-775-7380
Melissa Reddin	NewDeal fire	Member	melissa.reddin@newdealfire dept.org	806 781-4954

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Kick-Off Workshop

Lubbock Civic Center

1501 Mac Davis Lane, Lubbock TX 79401

January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Ray Mendoza	Lubbock ISD	Chief	ray.mendoza@lubbockisd.org	219-0200
Natalie Davis	TDEM	Mitigation Coord	natalie.davis@tdem.texas.gov	737-262-4830
Kelly Davila	SPAG	Director	kdavila@spag.org	806-773-7971
H. David Jones	LMPO	Ex Dir	djones@mylubbock.us	8067751671
Jay Whitefield	LCISD	Director	jwhitefield@lcisd.net	806-863-7100
Lisa Thomason	City	CC Director	lthomason@mylubbock.us	806-775-2236
Jon Caspell	LPD	Asst. Chief	JCaspell@mylubbock.us	806 775-2752
Nathan White	LPD	Asst. Chief	NWhite@mylubbock.us	806-775-2759
Rockhadi Moore	Lubbock County	Asst Director	rmoore@lubbockcounty.gov	806 775-1662
Eddy Grigsby	City of Lubb	Asst Manager	egrigsby@mail.ci.lubbock.tx.us	806-775-3300
Matt Reed	NewDeal ISD	Superintendent	MattR@NDISD.NET	806 746-5833

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Kick-Off Workshop

Lubbock Civic Center

1501 Mac Davis Lane, Lubbock TX 79401

January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Stacy Carter	Lubbock ISD LISD	Director	stacy.carter@lubbockisd.org	806-577-8359
Erin Gregg	Lubbock ISD	communications director	erin.gregg@lubbockisd.org	806-928-5824
Davi Frerichs	SAI Army	Disc Board	DAvid.Frerichs@uss.salvation army.org	806 765 9434
Brandon Powell	LBK CTY	City Manager	bpowell@buffalospringslake.net	806-939-8088
Aaron Pitillo	Wolfforth	Deputy chief EMO	Apittillo@wolfforthtx.us	806.679.0659
Bill Curnow	LCPC		bcurnow@kcurnow.com	
Courtney McNeely	SPAG		cmcneely@spag.org	806 767-8721
Joseph Jacquez	OEM	OVS/Log tech	Jacquez1974@hotmail.com	806-445-3076
Clifton Shaw	Slaton	Mayor	CSHAW@CityofSlaton.com	806500-1351
Tracy Hix	Shallowater ISD	Chief	thix@shallowaterisd.net	806-441-1769

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Kick-Off Workshop

Lubbock Civic Center

1501 Mac Davis Lane, Lubbock TX 79401

January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Michael Brooks	Frenship ISD	Student Services	mbrooks@frenship.us	806-866-9541
Tye Wood	City of Lubbock	Risk management	TLWood@mylubbock.us	806 777 6506
Chandini Revanna	Texas Tech	Associate Director	c.revanna@ttu.edu	806 834 3204
Rachael Foster	LBK Cnty	Asst DA	rfoster@lubbockcounty.org	806 775-1193
Wendell Bostwick	Buffalo Springs	Board Member	wendellbostwick@gmail.com	575-799-3835
Trenia Harris	City of Lubbock	Stormwater Eng. Mgr.	tharris@mylubbock.us	806-775-3173

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Kick-Off Workshop

Lubbock Civic Center

1501 Mac Davis Lane, Lubbock TX 79401

January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
CHARLIE BROWN	NORTHWEST TEXAS	DISASTER RELIEF COORDINATOR	charlie.m.brown@gmail.com	806-789-0791
~~Jeff Watson~~		~~Key Accts Mgr.~~	~~jwatson~~	
Benny Green	Lubbock	Dir. Risk Mgmt	bgreen@spec.coop	~~806~~ 940 585-6277
Stuart Walker	City of Lubbock	Codes Director	swalker@mylubbock.us	806-775-3195
Clint Wehrman	Lubbock County	Dir. of Purchasing	cwehrman@lubbockcounty.gov	806-775-1015

APPENDIX E: MEETING DOCUMENTATION

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Ben Greene	Lubbock, Childress, Dickens	Director Risk mgmt	bgreene@spec.coop	(806)252-8087

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Tommy Murillo	431	Planner	tmurillo@spag.org	806-454-1284
Rhonda Murphy	H2O Partners	Mitigation Planner	rmurphy@H2OPartnersusa.com	512-571-2088

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Natalie Harvill	Lubbock County	Director of Facilities	nharvill@lubbockcounty.gov	806-775-1003
Lindsey David	Lubbock County	Unknown	Ldavid@lubbockcounty.gov	806-775-1330
Ronald Keister	Lubbock County	Tax Office	rkeister@lubbockcounty.gov	n/a
Terence Kovar	Lubbock County	Commissioner Pct 1	tkovar@lubbockcounty.gov	n/a
Amber Layton	Lubbock County	County Tax Assessor	alayton@lubbockcounty.gov	n/a
Mande Reeves	Lubbock County	Contract Manager	mnreeves@lubbockcounty.gov	n/a
Kathi Williams	Lubbock County	County Auditor	kwilliams@lubbockcounty.gov	n/a
Greg Jackson	Lubbock County	IT	gjackson@lubbockcounty.gov	n/a
Rebekah Mitchell	Lubbock County	Pct 1	rmitchell@lubbockcounty.gov	n/a
Alan Martin	City of Lubbock	COL-FMO	Amartin@mylubbock.us	806-775-2645
Aubrey Spear	City of Lubbock	Director of Water Utilities	aspear@mylubbock.us	806-775-2585
Brianna Gerardi	City of Lubbock	Business Development Director	bgerardi@mylubbock.us	806-775-3082
Joe Moudy	City of Lubbock	Director of OEM	jmoudy@mylubbock.us	806-775-3401

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
David Bragg	City of Lubbock	Traffic Management	dbragg@mylubbock.us	806-775-2135
Keith Palmer	City of Lubbock	Radio Communication Manager	kpalmer@mylubbock.us	806-775-2375
Mary Gonzales	City of Lubbock	Wastewater Supervisor	mgonzales@mylubbock.us	806-775-3229
Mike Gilliland	City of Lubbock	Public Works	mgilliland@mylubbock.us	
Neal Barron	City of Lubbock	Police Department	nbarron@mylubbock.us	
Rachel Dolson	City of Lubbock	Health Department	rdolson@mylubbock.us	806-775-2917
Susan Nagihara	City of Lubbock	GIS	snagihara@mylubbock.us	806-775-3163
Nick Wilson	City of Lubbock	Fire Rescue	nwilson@mylubbock.us	806-775-2633
Katherine Wells	City of Lubbock	Director of Public Health	kwells@mylubbock.us	806-775-2941
Raquel Mullen	City of Lubbock	Water Utilities Customer Relations	rmullen@mylubbock.us	806-775-3745
M Lowe	City of Lubbock	Unknown	mlowe@mylubbock.us	806-831-6014

APPENDIX E: MEETING DOCUMENTATION

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Suzette Williams	City of Idalou	City Administrator	swilliams@cityofidalou.com	806-892-2531
Brittany Moore	Town of New Deal	City Secretary	cnewdeal@sbcglobal.net	806-746-6399
Brian Williams	City of Shallowater	Chief of Police	bwilliams@shallowatertx.us	n/a
Cory Buck	City of Shallowater	EMC/Fire Chief	cbuck@shallowatertx.us	806-632-8901
Aaron Waldrip	Abernathy ISD	Superintendent	awaldrip@abernathyisd.com	806-298-2563
Ritchie Thornton	Abernathy ISD	Director of Curriculum	rthornton@abernathyisd.com	806-298-2563
Roy Bassett	Frenship ISD	Chief of Police	rbassett@frenship.us	806-866-9541
Qynn McCann	Roosevelt ISD	District Police Chief	qmccann@risdtx.us	806-842-3282 ext. 800
May Hughes	Shallowater ISD	Unknown	mhughes@shallowaterisd.net	806-832-4531
Betty Driver	Slaton ISD	Assistant EMC	bdriver@slatonisd.net	806-828-6591 ext. 4
Darren Walters	Slaton ISD	Chief of ISD	dwalters@slatonisd.net	806-828-6591
Jim Andrus	Slaton ISD	Superintendent	jandrus@slatonisd.net	806-828-6591

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Kara Martinez	South Plains College	Dean of Reese Center	kmartinez@southplainscollege.edu	806-716-4711
Nickolis Castillo	South Plains College	Executive Director of Administrative Services	ncastillo@southplainscollege.edu	806-716-2246
Jerry Gray	South Plains College	Lt. of Police Department	jgray@southplainscollege.edu	806-716-2923
Hermes Vaca	Lubbock County Hospital District	Safety Officer	Hermes.Vaca-Valencia@umchealthsystem.com	806-775-9288
Amber Tucker	Lubbock County Hospital District	Director of Trauma/Burn Services	amber.tucker@umchealthsystem.com	806-775-9315
Matthew Troxel	Lubbock County Hospital District	Assistant Director	matthew.troxel@umchealthsystem.com	714-396-7059
Vanessa Martinez	SPAG	Unknown	vmartinez@spag.org	806-762-8721
Ayda Chapa	SPAG	Unknown	achapa@spag.org	n/a
Brandi Ashby	TDEM	Assistant Chief	Brandi.ashby@tdem.texas.gov	806-517-0581
Monika Koenig	American Red Cross	Unknown	monika.koenig@redcross.org	n/a

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Erin Miles	Texas A&M Forest Service	Regional Fire Coordinator	Erin.Miles@tfs.tamu.edu	806- 329-8665
Angela Hill	Ransom Canyon VFD	Asst. Fire Chief	Rcvfd79366@gmail.com	806-778-7918
Cindi Kenady	Covenant Systems	EMC	ckenady@covhs.org	806-725-3449
Debie Martin	Starcare Specialty Health System	Risk Management Coordinator	dmartin@starcarelubbock.org	806-790-6911
Stacy Saultz	Breedlove Foods	Representative	stacysaultz@breedlove.org	n/a
Bill Miller	Breedlove Foods	Representative	n/a	n/a
Michele Logan	Representative	Representative	n/a	n/a
Chris Sims	Lubbock Power & Light	Representative	csims@lpandl.com	n/a
Chris Mandrell	Citibus	Representative	cmandrell@citibus.com	n/a
Travis Crow	Texas State Guard	Representative	Travis.crow@txsg.state.tx.us	806-787-8707
Chad Seay	Unknown	Unknown	n/a	n/a
Floyd Mitchell	Unknown	Chief	n/a	n/a
Floyd Mitchell (guest)	Unknown	Unknown	n/a	n/a

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Workshop
Microsoft Team Virtual Attendance
January 13th, 2022 @ 1:30 p.m.

Name	Jurisdiction	Title	Email	Phone
Craig Williams	Unknown	Unknown	n/a	n/a
Stevie-Ann O'Donnell	H2O Partners Inc	Mitigation Outreach Specialist	shodgson@h2opartnersusa.com	631-921-2460
Heather Ferrara	H2O Partners Inc	Mitigation Program Manager	heather@h2opartnersusa.com	205-586-6616

APPENDIX E: MEETING DOCUMENTATION

Figure E-2. Lubbock County Risk Assessment Workshop, March 31st, 2022

LUBBOCK COUNTY
HAZARD MITIGATION PLAN
Risk Assessment Workshop
Lubbock County Sheriff's Academy
801 Main Street, Lubbock, TX
March 31th, 2022

Name	Jurisdiction	Title	Email	Phone
Laura Haverlah	H2O Partners	Mitigation Specialist	lhaverlah@h2o.partnersusa.com	512 293 1333
Rhonda Murphy	H2O Partners	mitigation Planner	RMurphy@H2OpartnersUSA.COM	512-571-2088
Michael Hobson	New Deal	Police Chief	newdeal.police@gmail.com	806-683-2608
Jim Tye	LLb	consultant	jimtye@breedlove.org	741-0464 breedlove
Rachel Dolan	City of Lubbock	Epi & Prep Manager	rdolan@mylubbock.us	775-2917
MONIKA KOENIG	REDCROSS	Disaster Progm Mgr	monika.Koenig@redcross.org	806 549 8574
Meredith Imes	TTU	Asso. Dir EM	Meredith.imes@ttu.edu	806-742-3940
Chris Miles	TTU	EM Director	chris.miles@TTu.edu	806-742-3940
Greg Ziolinski	City of Lubbock	Building Official	gziolinski@mylubbock.us	775-2208
James Hill	Ransom Canyon	EM/Police Chief	police@townofransomcanyon.org	786-9513
Charles Jensen	Ransom Canyon PD	Police Lt.	cjensenrcpd@sptcnet	806-786-9202
Jill Lonvick	City of Lubbock	Mgt Asst	jlonvick@mylubbock.us	806 775 3464
Joe Moudy	City of Lubbock	DIR OF EM	jmoudy@mylubbock.us	806-775-3401
Travis Ward	City of Lubbock	EM Planner	travisward@mylubbock.us	806 775 3713
Neal Barron	CITY of LUBBOCK	POLICE DEPT	nbarron@mylubbock.us	806 775 2751
Latoya Jackson	Rise Academy	Dir. of Operations	l.jackson@riseacademy.us	806-928-3584
TREVOR BARNES	CITY OF SLATON	CHIEF OF POLICE	TBARNES@CITYOFSLATON.COM	806-241-3603

LUBBOCK COUNTY
HAZARD MITIGATION PLAN
Risk Assessment Workshop
Lubbock County Sheriff's Academy
801 Main Street, Lubbock, TX
March 31th, 2022

Name	Jurisdiction	Title	Email	Phone
Tammy Murillo	SPAG	Program Specialist	tmurillo@spag.org	806-454-1284
Tracy Hix	Shallowater ISD	Chief	thix@shallowaterisd.net	806-441-1767
CHRIS EVANS	Reese Tech	Operations MGR	cEvans@Reesecenter.com	805-885-6592
Terence Kovar	Lubb County	Commissioner	tkovar@lubbockcounty.org	806-775-1331
Stuart Walker	City of Lubbock	Code Admin Director	swalker@mylubbock.us	806 775 [illegible]
GREG JACKSON	Lubbock County	Support and Services Manager	GJackson@lubbockcounty.gov	806-775-1391
Kristina Handley	Lubbock County	Assist. Purchasing agent	khandley@lubbockcounty.gov	806 775 1014
Jennifer Irlbeck	Lubbock County	Assistant DA	jirlbeck@lubbockcounty.gov	806-775-1148
Clint Wehrman	Lubbock County	Purchasing Director	cwehrman@lubbockcounty.gov	806 775-1015
Melissa Redding	NewDeal Fire	Grant Writer	melissa.redding@newdealfiredept.org	806 781-4954

LUBBOCK COUNTY
HAZARD MITIGATION PLAN
Risk Assessment Workshop
Lubbock County Sheriff's Academy
801 Main Street, Lubbock, TX
March 31th, 2022

Name	Jurisdiction	Title	Email	Phone
CLAYTON THETFORD	LUBBOCK CO.	EMC	athetford@LUBBOCKCOUNTY.COM	806.775.7500
Melinda Condra	Condra School	Superintendent	mcondra@condraschool	806 893-4040
Ben Greene	SPEC	Risk Mgr	bgreene@spec.coop	806 252 8087

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Risk Assessment Workshop
Microsoft Team Virtual Attendance
March 31st, 2022 @ 2:00 p.m.

Name	Jurisdiction	Title	Email	Phone
Amanda Wolfenbarger	Lubbock ISD	Unknown	amanda.wolfenbarger@lubbockisd.org	806-473-7871
Eric Williams	City of Idalou	Chief of Police	ewilliams@cityofidalou.com	806-892-2531
Esteban Garcia	Idalou ISD	Chief of Police	egarcia@idalouisd.net	
Michael Brooks	Frenship ISD	Director of Student Services	mbrooks@frenship.us	806-696-5006
Jennifer Davidson	Lubbock County	Public Works/ Roads	jdavidson@lubbockcounty.gov	806-775-1664
Jodie Terrazas	TDEM	Regional Representative	Jodie.terrazas@tdem.texas.gov	n/a
Tye Wood	City of Lubbock	Risk Management	Tlwood@mylubbock.us	n/a
Brant Baugh	Unknown	Unknown	n/a	n/a
David Bragg	City of Lubbock	Traffic Management	dbragg@mylubbock.us	806-775-2135
Chandler Fields	Unknown	Unknown	n/a	n/a
Debie Martin	StarCare Specialty Health System	Risk Management Coordinator	dmartin@starcarelubbock.org	806-790-6911
Chris Mandrell	Citibus	Unknown	cmandrell@citibus.com	n/a
Trenia Harris	City of Lubbock	Stormwater Manager	tharris@mylubbock.us	806-775-3173

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Risk Assessment Workshop
Microsoft Team Virtual Attendance
March 31st, 2022 @ 2:00 p.m.

Name	Jurisdiction	Title	Email	Phone
Aaron Pittillo	City of Wolfforth	Deputy EMC	apittillo@wolfforthtx.us	806-679-0659
Aubrey Spear	City of Lubbock	Director of Water Utilities	aspear@mylubbock.us	806-775-2585
Roy Bassett	Frenship ISD	Chief of Police	rbassett@frenship.us	806-866-9541
Matt Troxell	Lubbock Hospital District	UMC Assistant Director	matthew.troxel@umchealthsystem.com	714-396-7059
Lisa Thomason	City of Lubbock	CC Director	lthomason@mylubbock.us	806-775-2236
Aaron Waldrip	Abernathy ISD	Superintendent	amwaldrip@abernathyisd.com	806-441-4222
Ritchie Thornton	Abernathy ISD	Director of Curriculum and Inst.	rthornton@abernathyisd.com	806-298-2563 ext. 1
Nickolas Fort	City of Lubbock	Deputy Director of OEM	nfort@mylubbock.us	806-775-3402
Rebecca Webb	City of Lubbock	Grant Writer	rwebb@mylubbock.us	806-775-2421
Steven Nelson	City of Lubbock	Floodplain Administrator	sknelson@mylubbock.us	806-775-2331
Qynn McCann	Roosevelt ISD	District Police Chief	qmccann@risdtx.us	806-842-3282 ext. 800

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LUBBOCK COUNTY HAZARD MITIGATION PLAN
Risk Assessment Workshop
Microsoft Team Virtual Attendance
March 31st, 2022 @ 2:00 p.m.

Name	Jurisdiction	Title	Email	Phone
Joe Marnell	Unknown	Unknown	n/a	n/a
Katherine Wells	City of Lubbock	Director of Public Health	kwells@mylubbock.us	n/a
Stevie-Ann O'Donnell	H2O Partners Inc	Mitigation Outreach Specialist	shodgson@h2opartnersusa.com	631-921-2460

APPENDIX E: MEETING DOCUMENTATION

Figure E-3. Lubbock County Mitigation Strategy Workshop, May 19th, 2022

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Mitigation Strategy Workshop

Lubbock County Sheriff's Academy

Main St. and Avenue G in Lubbock

May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Clifton Shaw	Slaton	Mayor	CShaw@cityofslaton.com	806-500-1351
Wade Willson	Slaton	City Manager	wwillson@cityofslaton.com	806-777-1923
Laura Haverlah	H2O Partners	Mitigation Specialist	lhaverlah@h2opartnersusa.com	512 293 1333
Rhonda Murphy	H2O Partners	Mitigation Planner	Rmurphy@H2opartnersusa.com	512-517-2093
Tracy Hix	Shallowater isd	Chief	thix@shallowaterisd.net	806-441-2767
Aron Strickland	Shallowater	Asst. Supt.	astrickland@shallowaterisd.net	806-832-4531
Rachael Foster	LBK	Asst. DA	rfoster@lubbockcounty.gov	806-775-1193
Monika Koenig	LBK Redcross	DPM	monika.koenig@redcross.org	8065498574
Thomas Kupfer	LBK Redcross	VP DPM	thomas.kupfer@redcross.org	8065498574
Michael Hobson	New Deal PD	Chief	newdeal.police@gmail.com	806 683-2608
Meredith Imes	TTU	Assoc. EM	meredith.imes@ttu.edu	806-742-3940
Neal Barron	Lubbock PD	Asst. Chief	nbarron@mylubbock.us	806-775-2251

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Mitigation Strategy Workshop

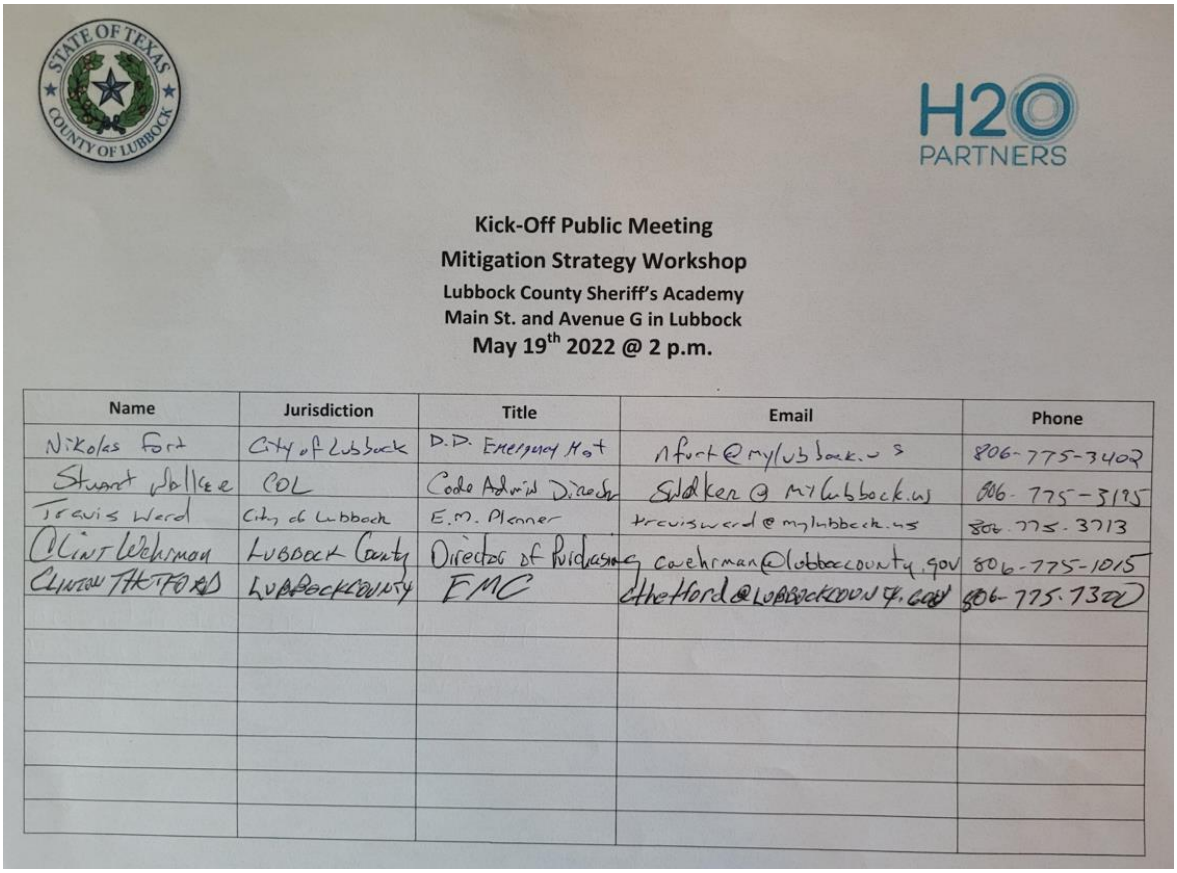
Lubbock County Sheriff's Academy

Main St. and Avenue G in Lubbock

May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Danny Davis	LCISD	Asst. Supt.	ddavis@lcisd.net	806-863-7138

APPENDIX E: MEETING DOCUMENTATION



Kick-Off Public Meeting
Mitigation Strategy Workshop
Lubbock County Sheriff's Academy
Main St. and Avenue G in Lubbock
May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Nikolas Fort	City of Lubbock	D.D. Emergency Mgt	nfort@mylubbock.us	806-775-3402
Stuart Walker	COL	Code Admin Director	Swalker@MyLubbock.us	806-775-3195
Travis Ward	City of Lubbock	E.M. Planner	travisward@mylubbock.us	806-775-3713
Clint Wehrman	Lubbock County	Director of Purchasing	cwehrman@lubbockcounty.gov	806-775-1015
Clinton Thetford	Lubbock County	EMC	cthetford@lubbockcounty.gov	806-775-7320

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Mitigation Strategy Workshop
Lubbock County Sheriff's Academy
Main St. and Avenue G in Lubbock
May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Merinda K Condra	Betty M. Condra	CEO/Superintendent	mcondra@condraschool.com	n/a
Amanda Romo	City of Lubbock	Lubbock GIS and Data Services	ARomo@mylubbock.us	n/a
Anthony Shaun Fogerson	Unknown	Unknown	n/a	n/a
Nickolis Castillo	South Plains College	Executive Director of Admin Services	ncastillo@southplainscollege.edu	806-716-2246
Cory Buck	City of Shallowater	EMC/ Fire Chief	cbuck@shallowatertx.us	806-632-8901
Dallas Grimes	Roosevelt ISD	Superintendent	dgrimes@risdtx.us	806-786-5880
Michael Brooks	Frenship ISD	Director of Student Services	mbrooks@frenship.us	806-696-5006
Qynn McCann	Roosevelt ISD	District Police Chief	qmccann@risdtx.us	806-842-3282 ext. 800
Chandi Revanna	Texas Tech	Associate Managing Director	c.revanna@ttu.edu	c.revanna@ttu.edu

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Mitigation Strategy Workshop

Lubbock County Sheriff's Academy
Main St. and Avenue G in Lubbock
May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Ritchie Thornton	Abernathy ISD	Director of Curriculum and Inst.	rthornton@abernathyisd.com	806-298-2563 ext. 1
Roy Bassett	Frenship ISD	Chief of Police	rbassett@frenship.us	806-866-9541
Steve Nelson	City of Lubbock	Floodplain Administrator	sknelson@mylubbock.us	806-775-2331
Stacy Carter	Lubbock ISD	Director of School Safety and Security	stacy.carter@lubbockisd.org	806-219-0216
Suzette Williams	City of Idalou	City Administrator	swilliams@cityofidalou.com	806-892-2531
Amber Tucker	Lubbock County Hospital District	UMC Director Trauma/Burn Services	amber.tucker@umchealthsystem.com	806-775-9315
Tye Wood	City of Lubbock	Risk Management	tlwood@mylubbock.us	806-777-6506

LUBBOCK COUNTY HAZARD MITIGATION PLAN

Mitigation Strategy Workshop

Lubbock County Sheriff's Academy
Main St. and Avenue G in Lubbock
May 19th 2022 @ 2 p.m.

Name	Jurisdiction	Title	Email	Phone
Hermes Vaca-Valencia	Lubbock County Hospital District	UMC Safety Officer	Hermes.Vaca-Valencia@umchealthsystem.com	806-466-6681
Stevie-Ann O'Donnell	H2O Partners Inc	Mitigation Outreach Specialist	shodgson@h2opartnersusa.com	631-921-2460

PUBLIC MEETING DOCUMENTATION

As discussed in Section 2, public meetings were held in Lubbock County. Documentation in the form of sign-in sheets for each of the meetings follows.

Figure E-4. Lubbock County Kickoff Public Meeting, January 13th, 2022

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Public Meeting
Lubbock Civic Center
1501 Mac Davis Lane, Lubbock TX 79401
January 13th, 2022 @ 6 p.m.

Name	Jurisdiction	Title	Email	Phone
Laura Haverlah	H2O Partners	Mitigation Specialist	lhaverlah@h2opartnersusa.com	512 293 1337
Rhonda Murphy	H2O Partners	Mitigation Planner	RMurphy@H2OPartnersUSA.com	512-571-2088
CHRISTEN THETFORD	LUBBOCK COUNTY	EMC	cthetford@lubbockcounty.gov	806-775-7500
Neal Burt	LBK CO.	Asst. Dist. Atty.	nburt@lubbockcounty.gov	806·548·6181 (cell)
Bill Curran	LEPC		Scurran@k-rman.com	

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Kick-Off Public Meeting
Microsoft Team Virtual Attendance
January 13th, 2022 @ 6 p.m.

Name	Jurisdiction	Title	Email	Phone
Monika Koenig	American Red Cross	Unknown	monika.koenig@redcross.org	n/a
Jerri Beth Dunlap	American Red Cross	Disaster Program Manager	jerribeth.dunlap@redcross.org	806-765-8534
Debie Martin	Starcare Specialty Health System	Risk Management Coordinator	dmartin@starcarelubbock.org	806-790-6911
Chris Mandrell	Citibus	Representative	cmandrell@citibus.com	n/a
Alexander (guest)	Unknown	Unknown	n/a	n/a
Stevie-Ann O'Donnell	H2O Partners Inc	Mitigation Outreach Specialist	shodgson@h2opartnersusa.com	631-921-2460

Figure E-5. Lubbock County Risk Assessment Public Meeting, March 31st, 2022

LUBBOCK COUNTY
HAZARD MITIGATION PLAN
Risk Assessment Public Meeting
Lubbock County Sheriff's Academy
801 Main Street, Lubbock, TX
March 31th, 2022

Name	Jurisdiction	Title	Email	Phone
CLINTON THETFORD	LUBBOCK COUNTY	EMC	cthetford@lubbockcounty.gov	806 775 7300
Laura Havenar	H2O Partners	Mitigation Specialist	lhavenar@h2opartnersusa.com	512 293 1333
Neal BURT	LBK CO	DA's OFFICE	nburt@lubbockcounty.gov	806.548.6181 (cell)
Jennifer Ilbeck	Lubbock County	DA's office	jilbecke lubbockcounty.gov	806-775-1112
JOE MOODY	City of Lubbock	DIR OF OEM	jmoody@mylubbock.us	806-775-3401

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Risk Assessment Public Meeting
Microsoft Team Virtual Attendance
March 31st, 2022 @ 6:00 p.m.

Name	Jurisdiction	Title	Email	Phone
Christopher Mayben	TCEQ	Regional Rep.	christopher.mayben@tceq.texas.gov	806-796-7092
Stevie-Ann O'Donnell	H2O Partners Inc	Mitigation Outreach Specialist	shodgson@h2opartnersusa.com	631-921-2460

Figure E-6. Lubbock County Mitigation Strategy Public Meeting, May 19th, 2022

LUBBOCK COUNTY HAZARD MITIGATION PLAN
Mitigation Strategy Public Meeting
Lubbock County Sheriff's Academy
Main St. and Avenue G in Lubbock
May 19th 2022 @ 6 p.m.

Name	Jurisdiction	Title	Email	Phone
CLINTON THETFORD	LUBBOCK CO	EMC	cthetford@lubbockcounty.gov	806-775-7300
Jennifer Ulbeck	Lubbock Co	Assistant District Atty	julbeck@lubbockcounty.gov	806-775-1112
Melissa Redding	New Deal FD	Grant writer	melissa.redding@newdealfiredept.org	806-781-4954

PUBLIC NOTICES

Public notices to announce Lubbock County's participation in the Plan Update development process were posted on their website, on social media sources including Facebook and Twitter, through the local media, and/or posting the information on bulletin boards in public facilities.

Figure E-7. Lubbock County Public Notice, County Website

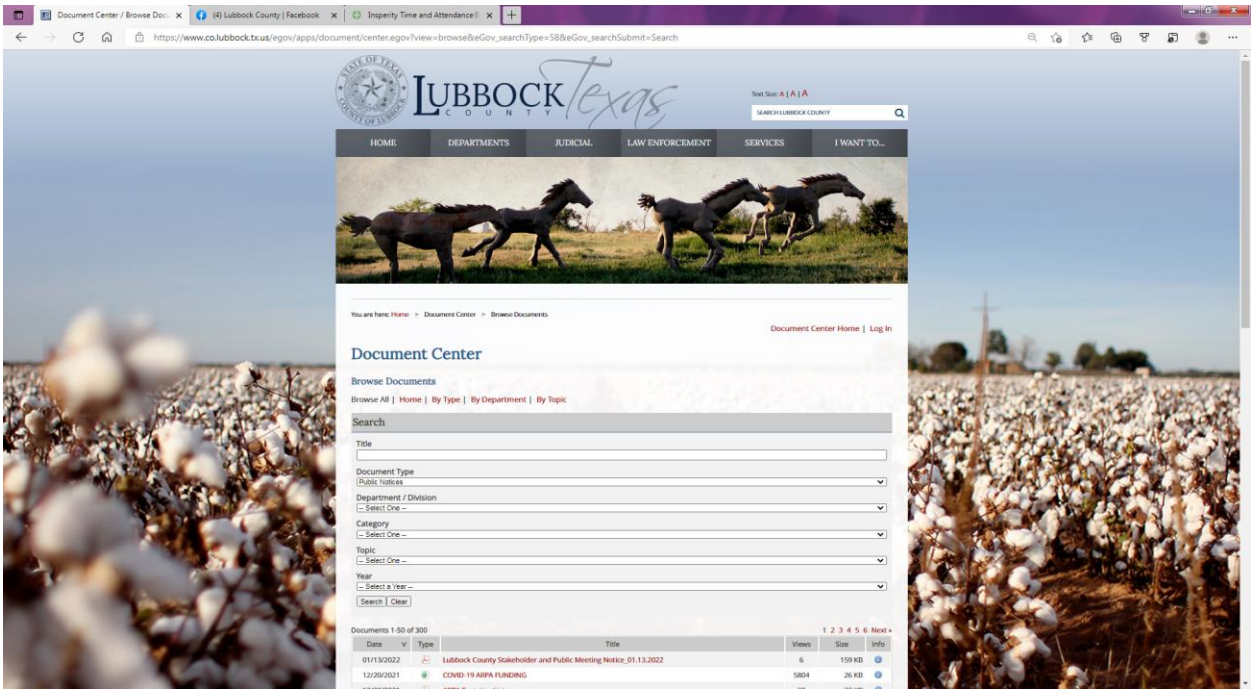


Figure E-8. City of Idalou Public Notice, Police Department Bulletin

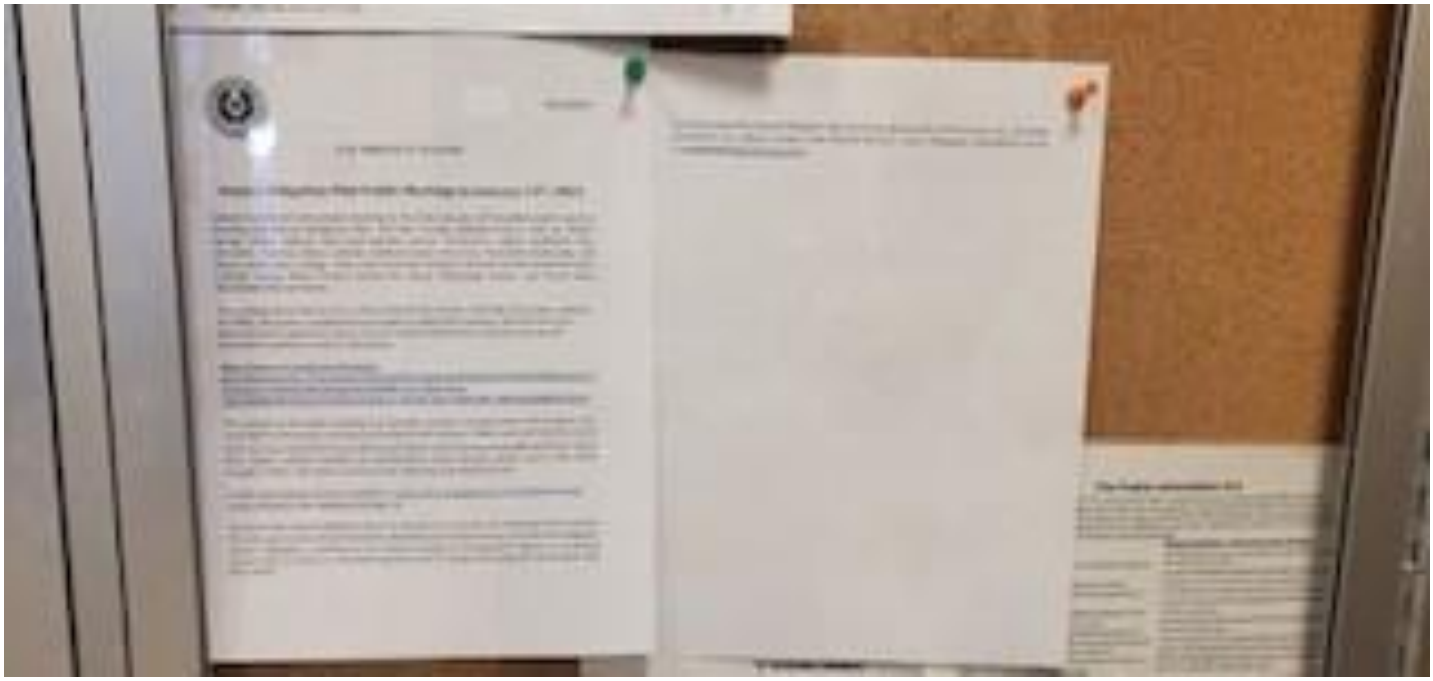


Figure E-9. Town of New Deal Public Notice, Town Website

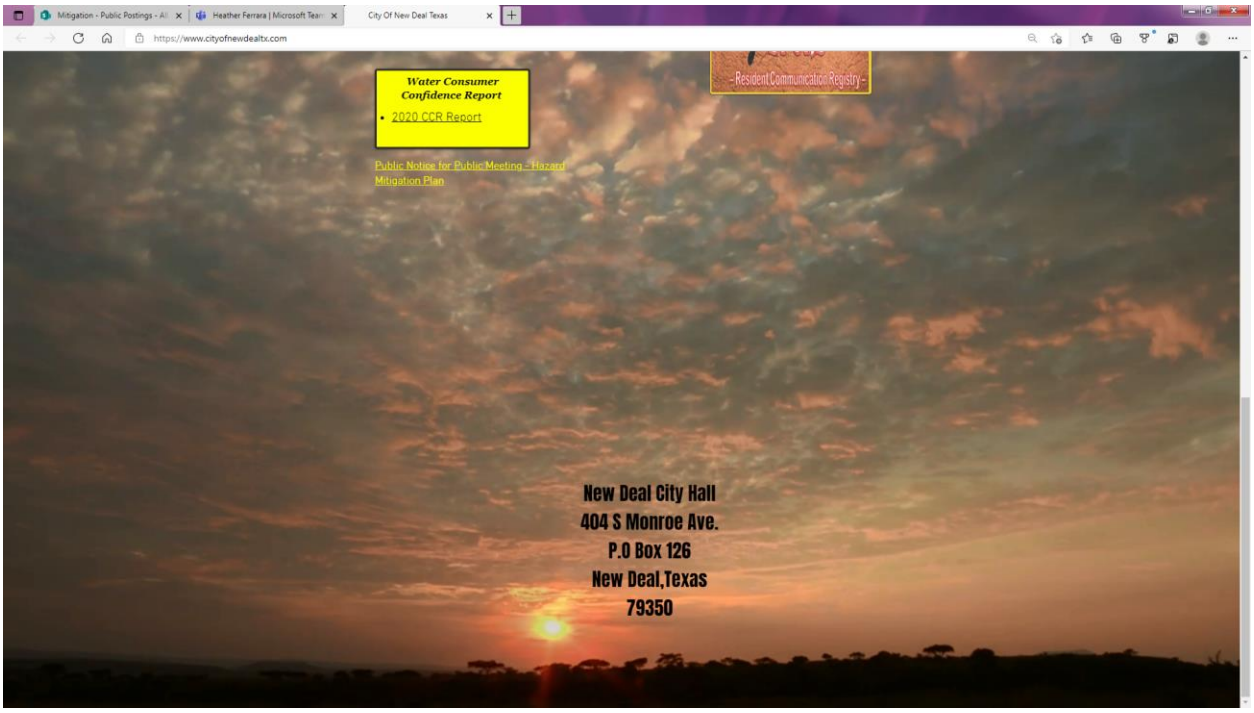


Figure E-10. Town of Ransom Canyon Public Notice, Police Department Facebook

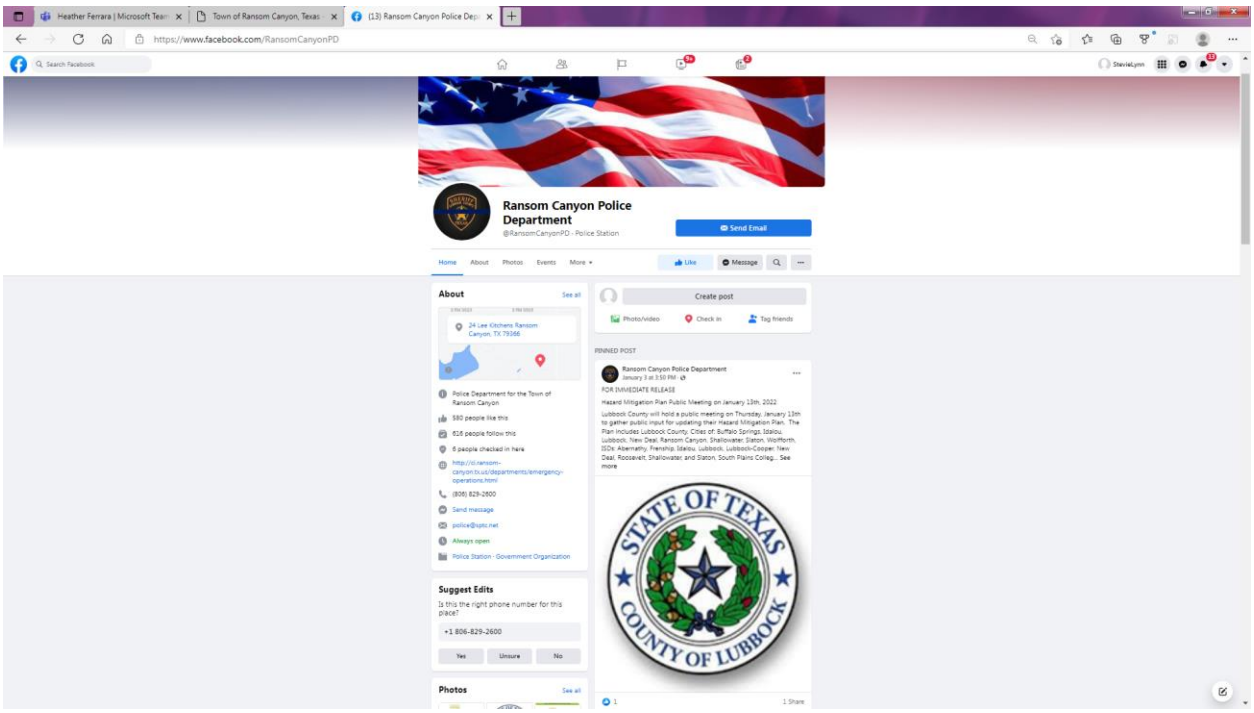


Figure E-11. City of Shallowater Public Notice, City Website

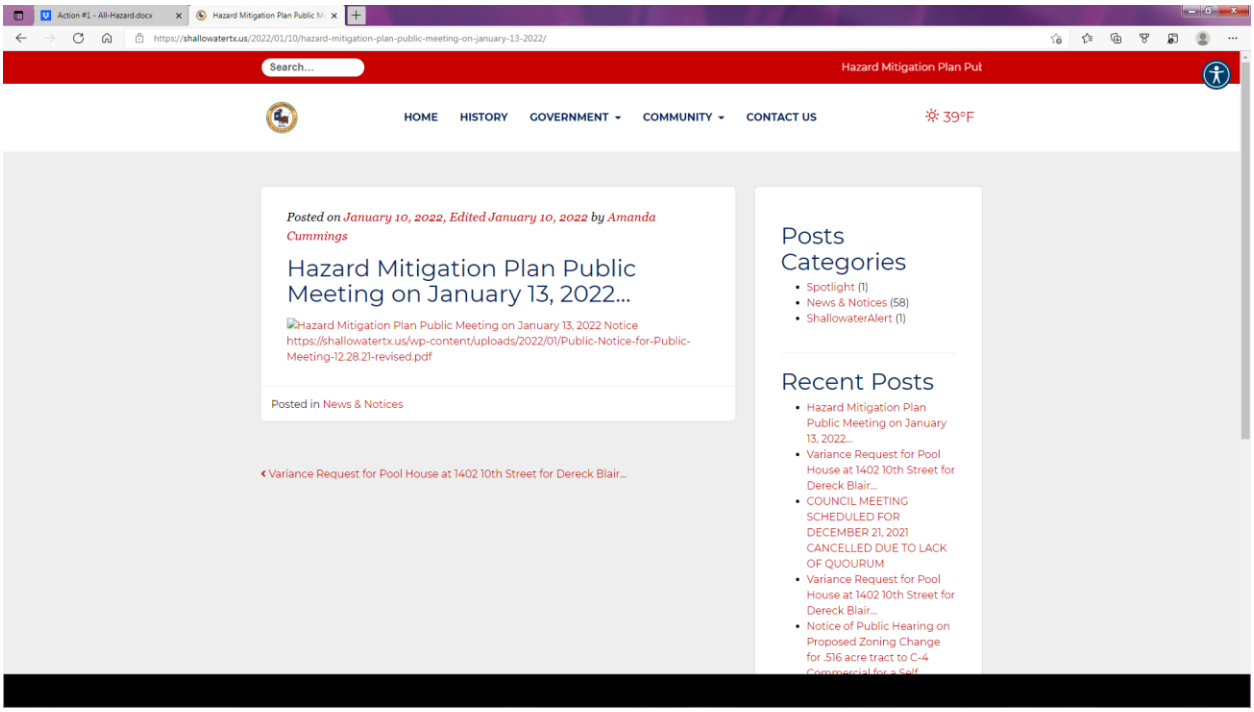


Figure E-12. City of Wolfforth Public Notice, City Website

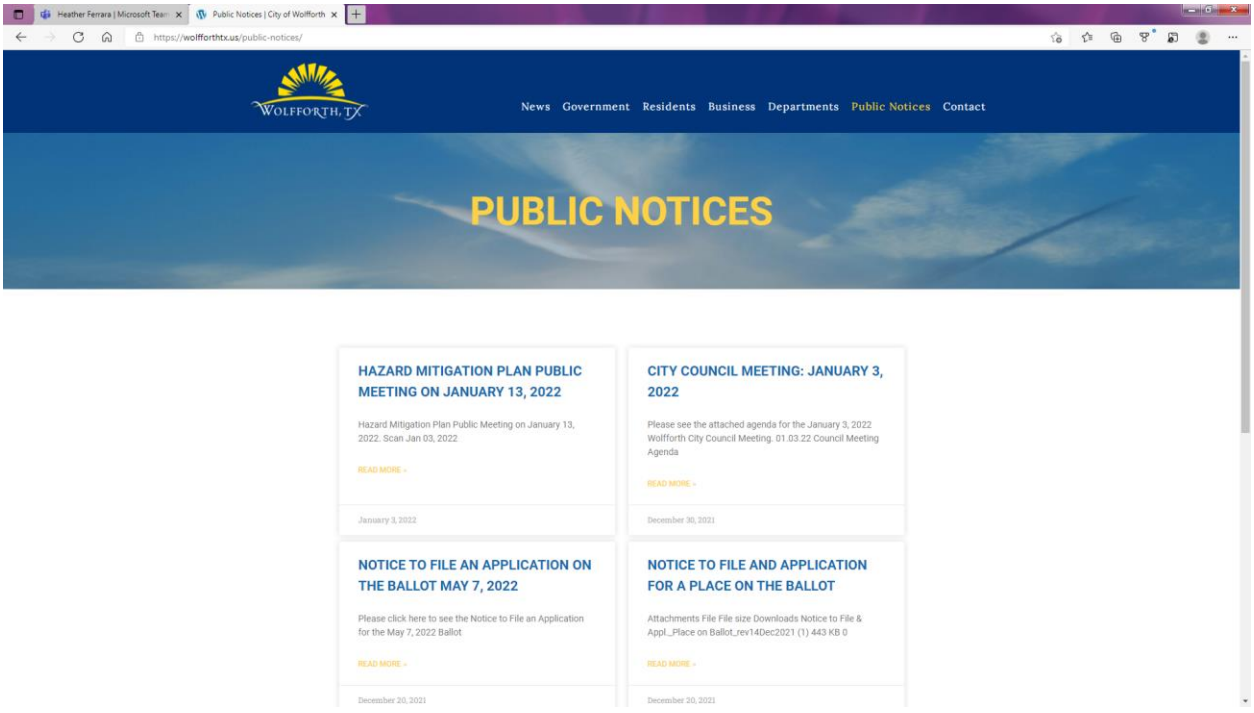


Figure E-13. Roosevelt ISD Public Notice, Facebook

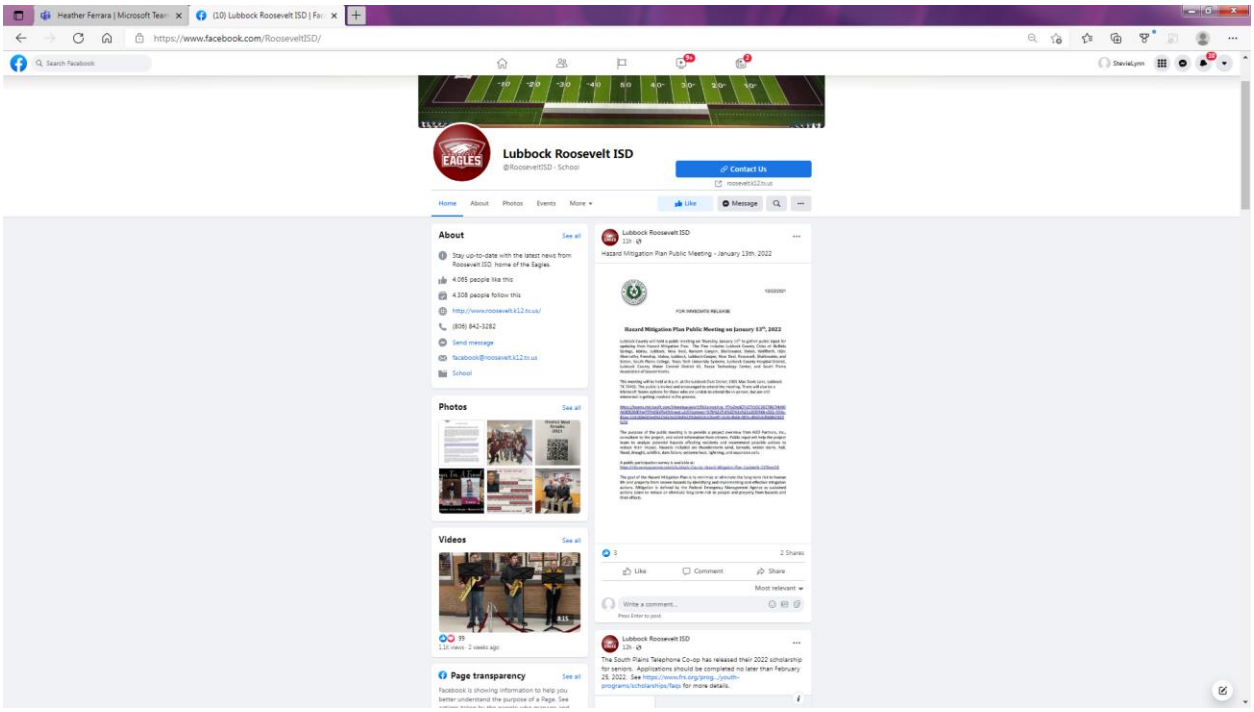


Figure E-14. Lubbock County Public Notice, County Website

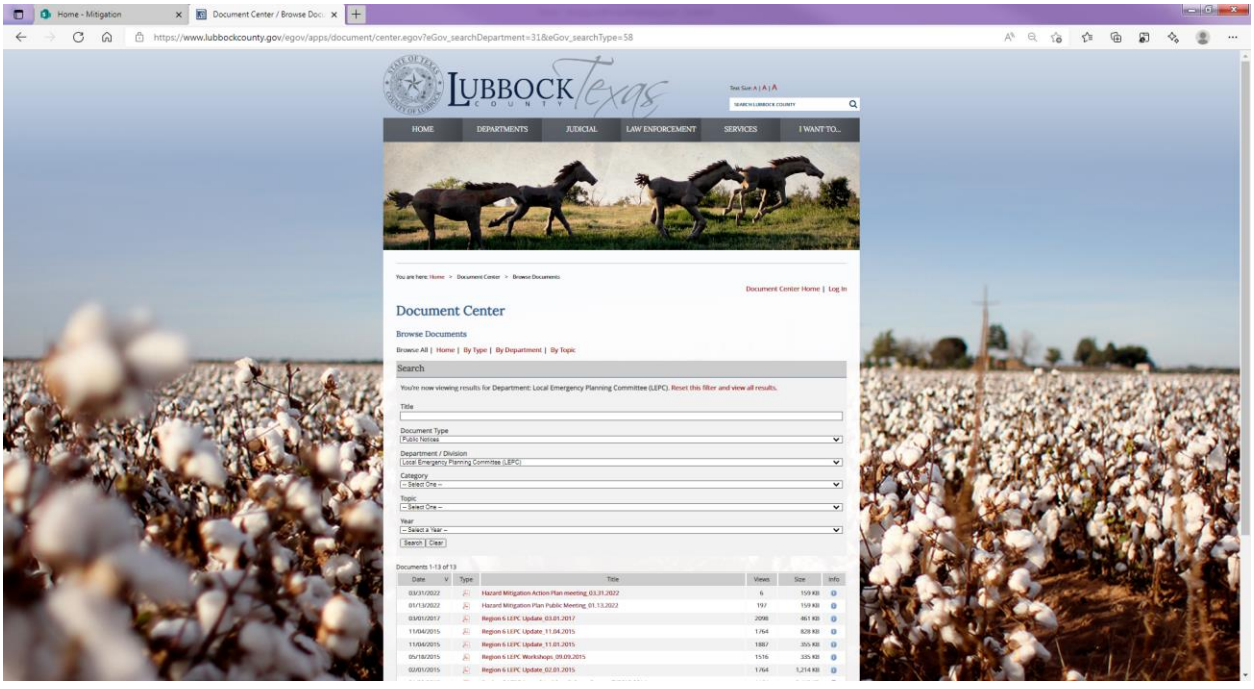


Figure E-15. City of Idalou Public Notice, City Website

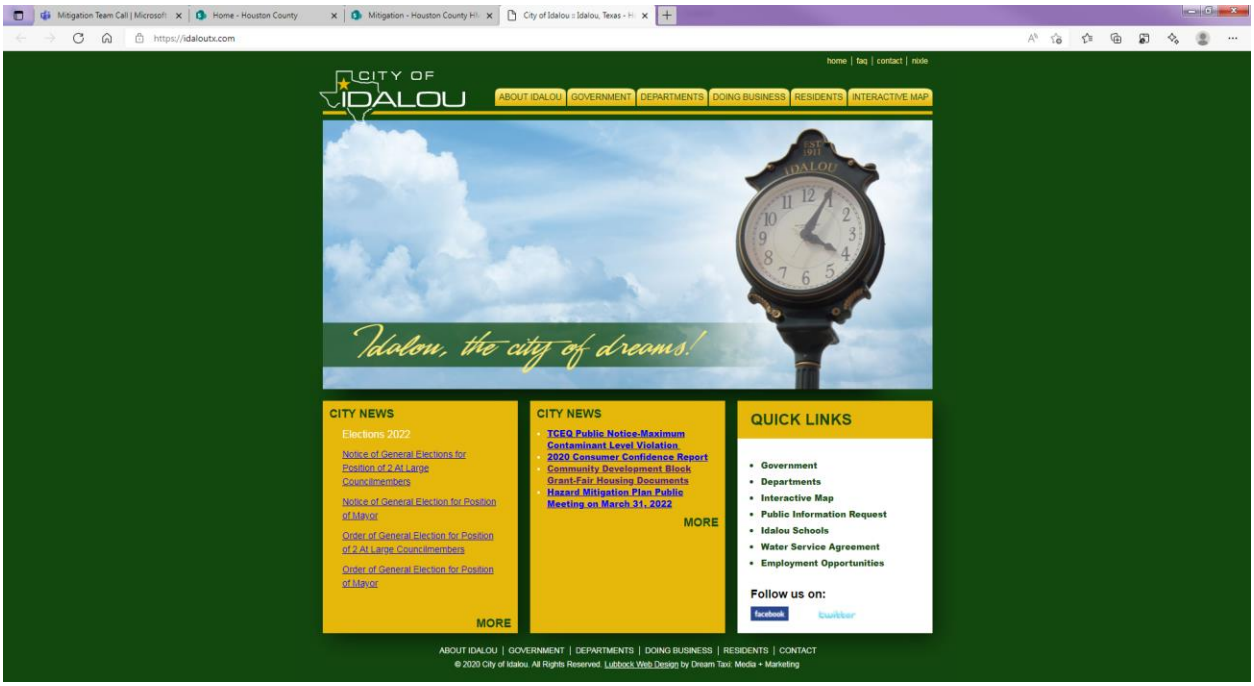


Figure E-16. City of Idalou Public Notice, Facebook

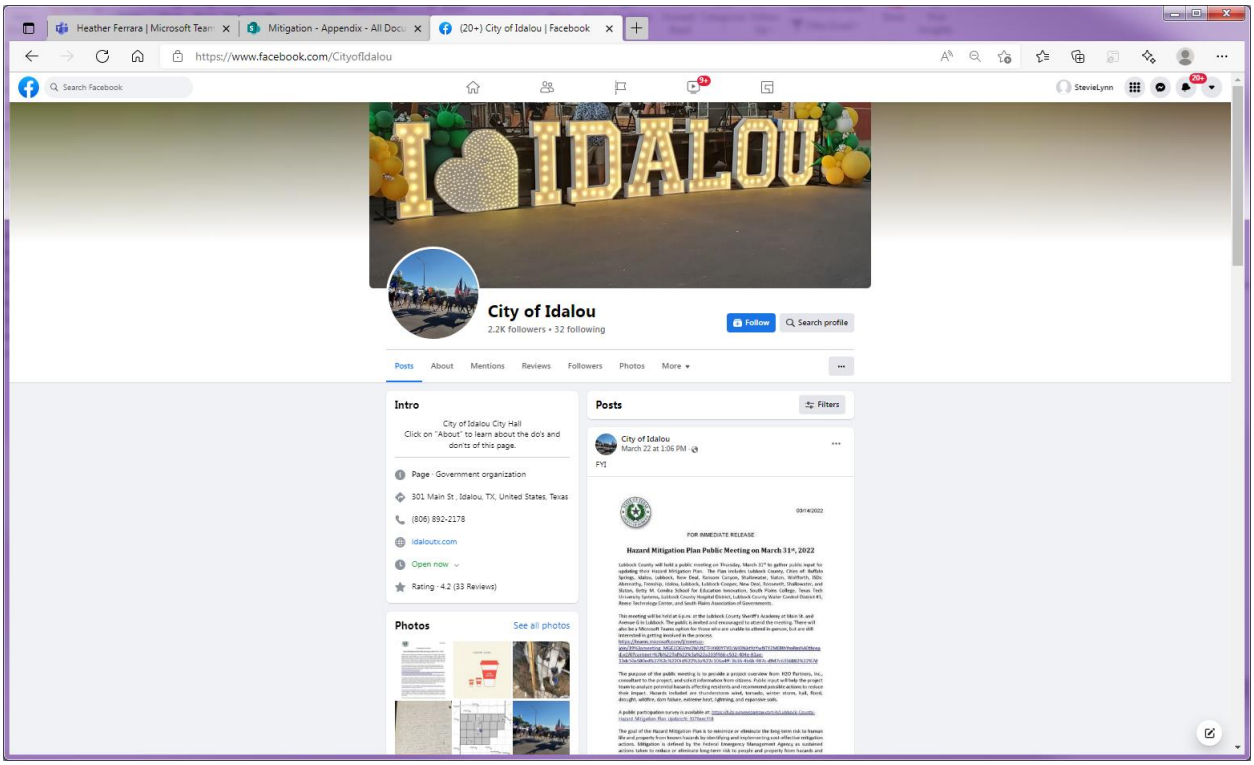


Figure E-17. City of Lubbock Public Notice, City Website

Figure E-18. City of Lubbock Public Notice, Facebook

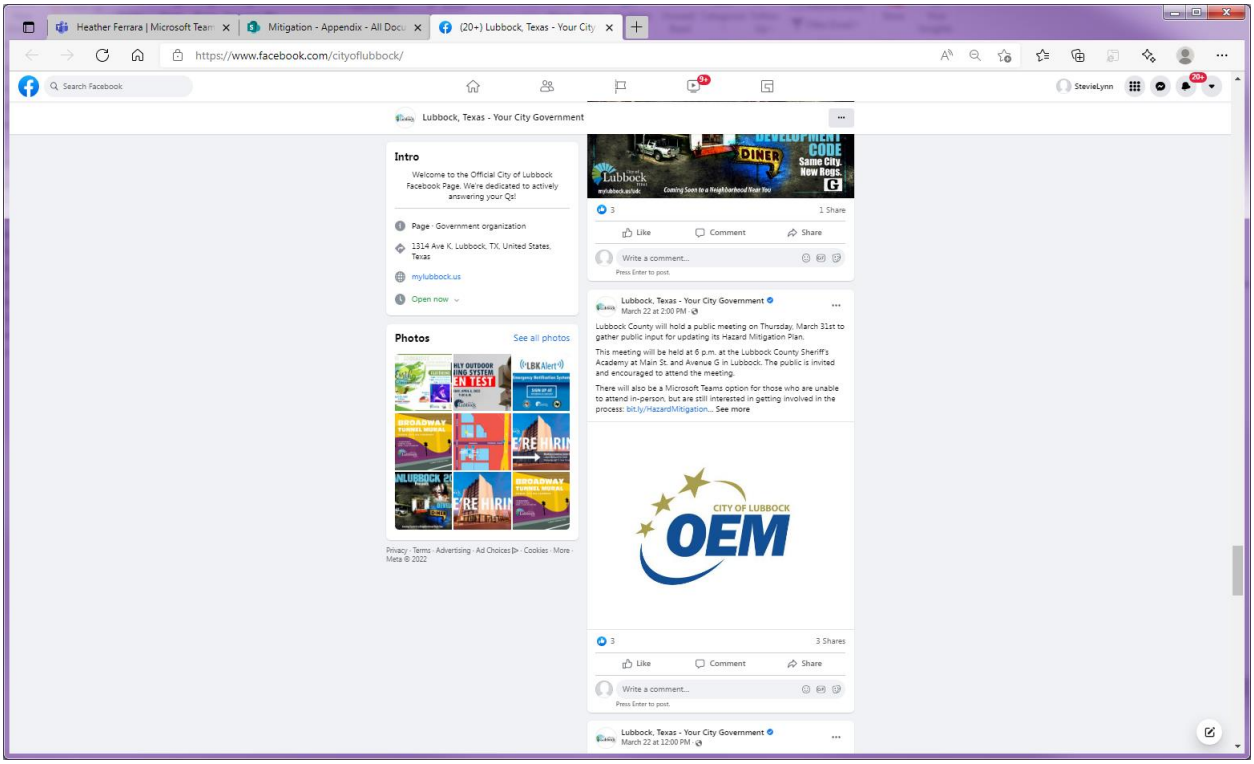


Figure E-19. Town of New Deal Public Notice, Town Website

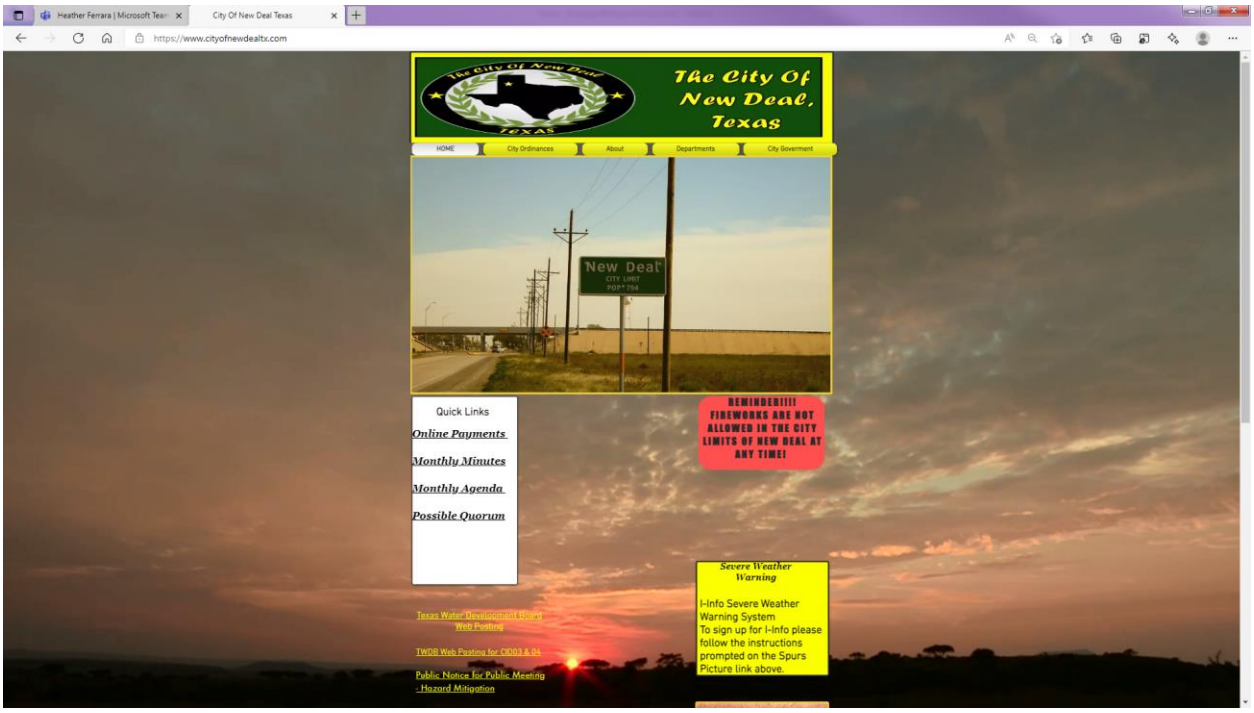


Figure E-20. Town of Ransom Canyon Public Notice, Police Department Facebook

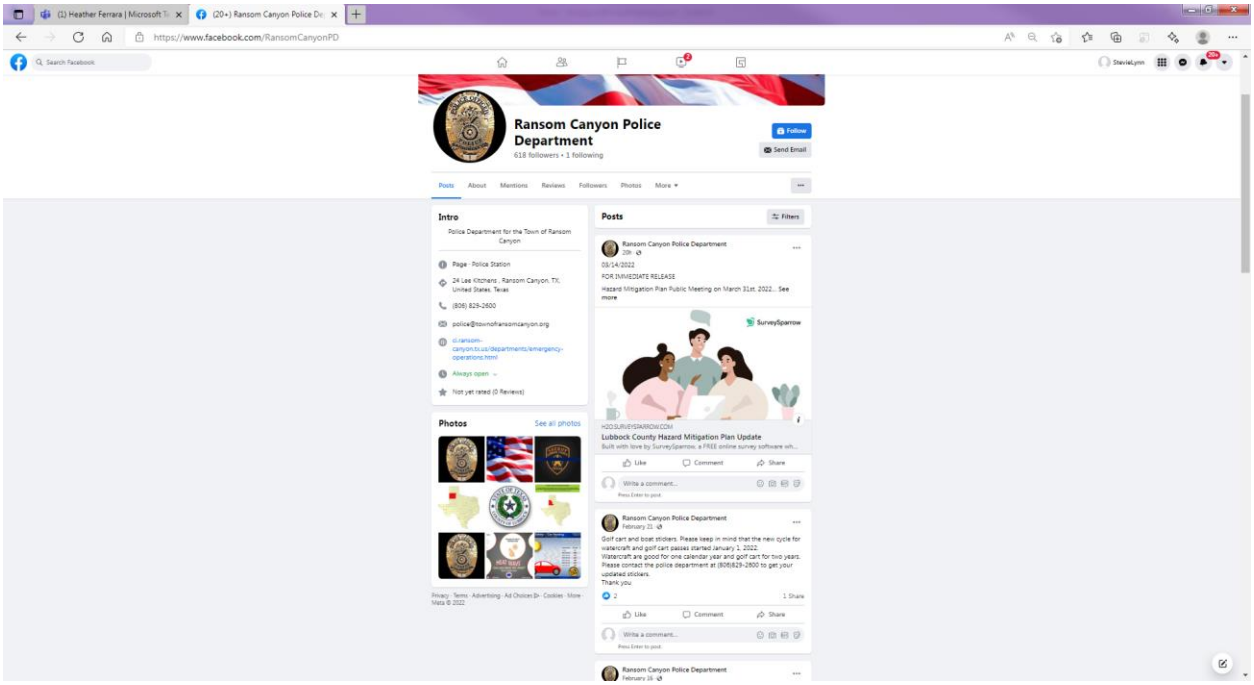


Figure E-21. City of Shallowater Public Notice, City Website

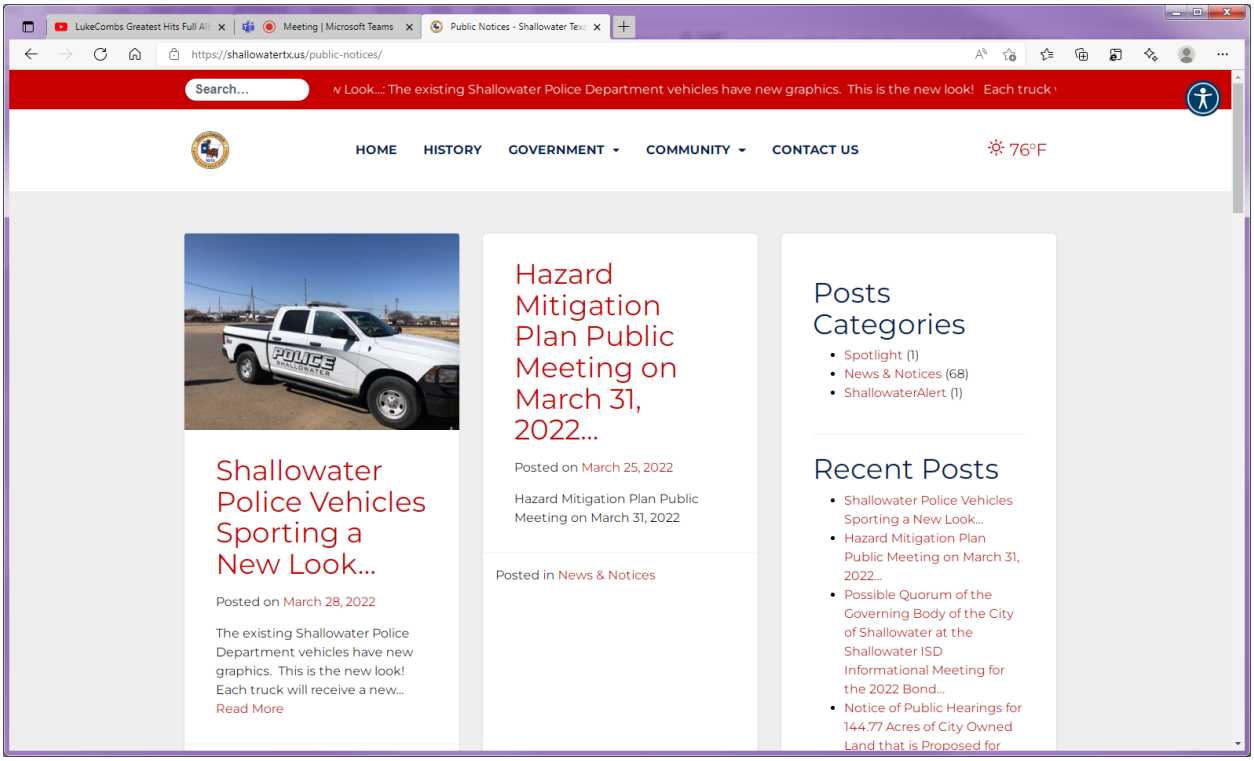


Figure E-22. Abernathy Independent School District Public Notice, School Website

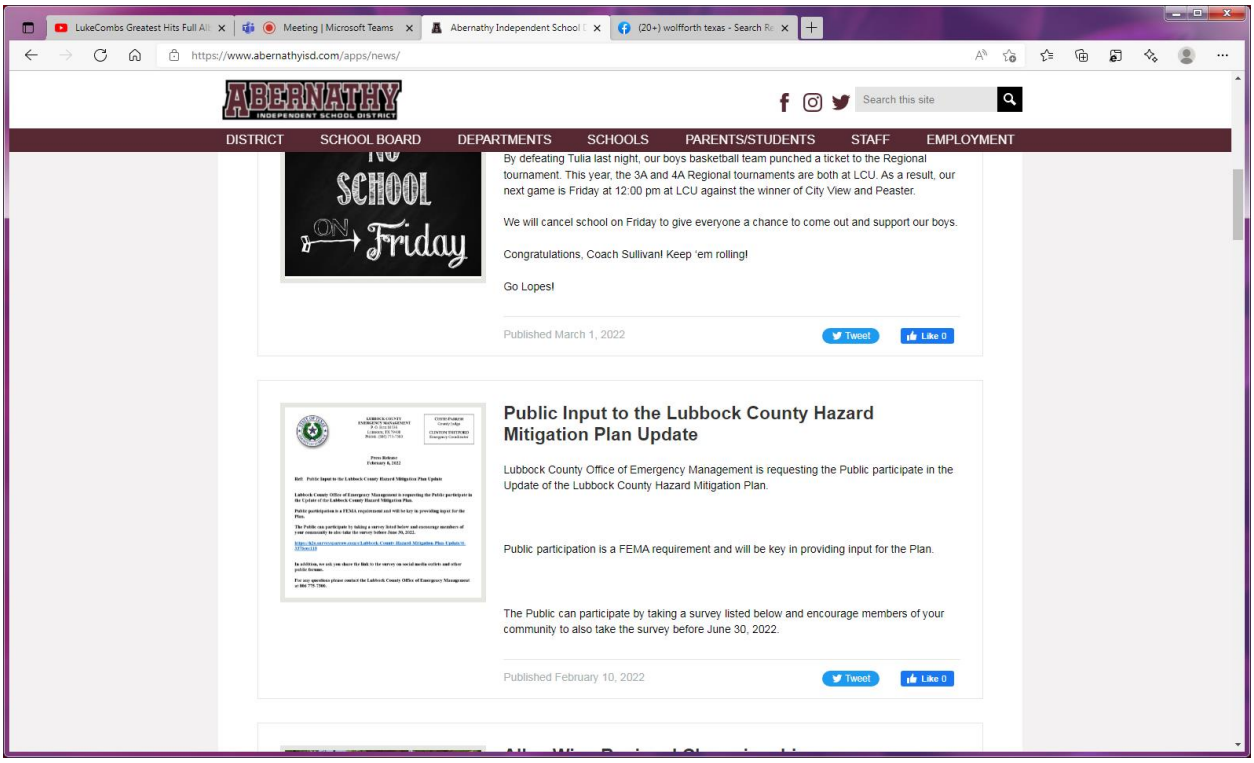


Figure E-23. Betty M. Condra School for Education Innovation Public Notice, School Facebook

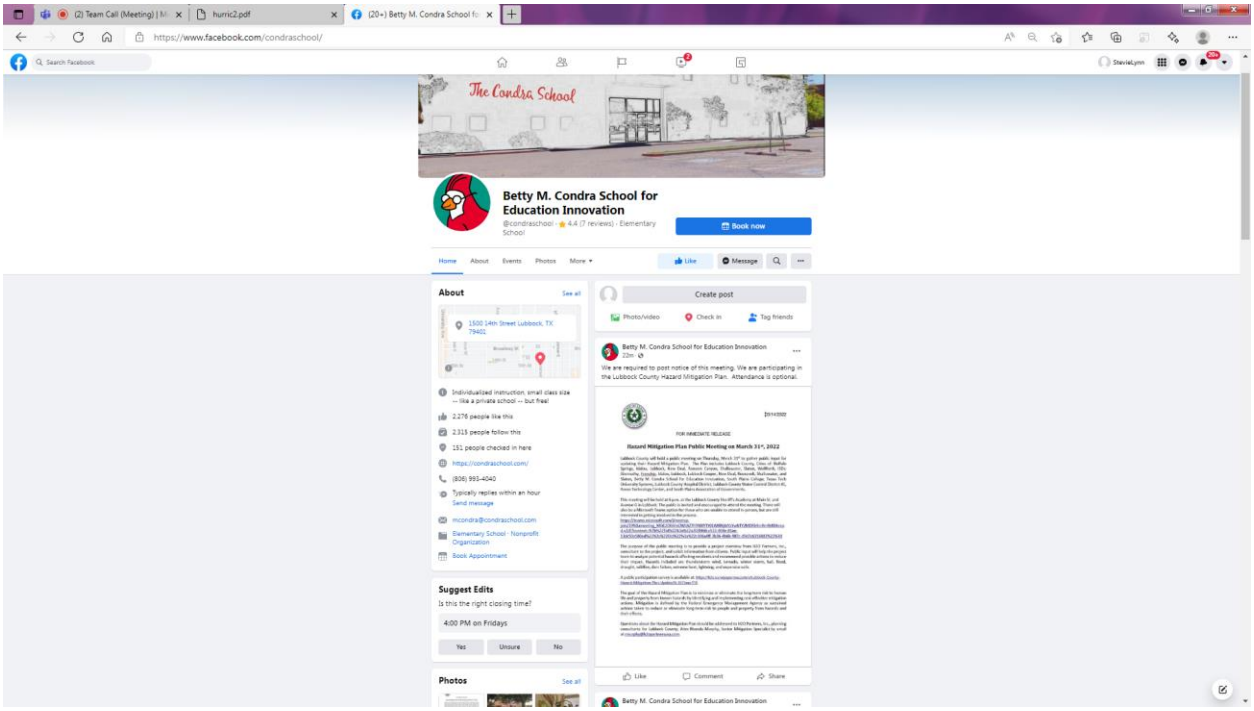


Figure E-24. Frenship Independent School District Public Notice, School Website

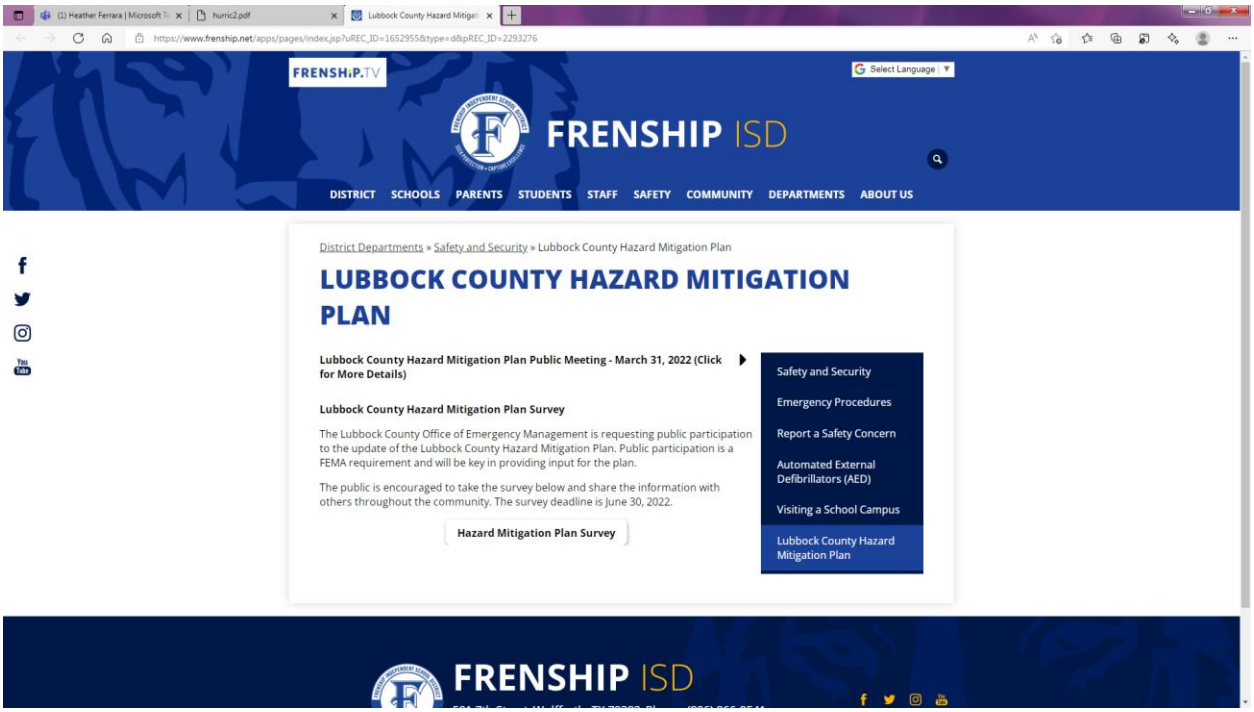


Figure E-25. New Deal Independent School District Public Notice, School Website

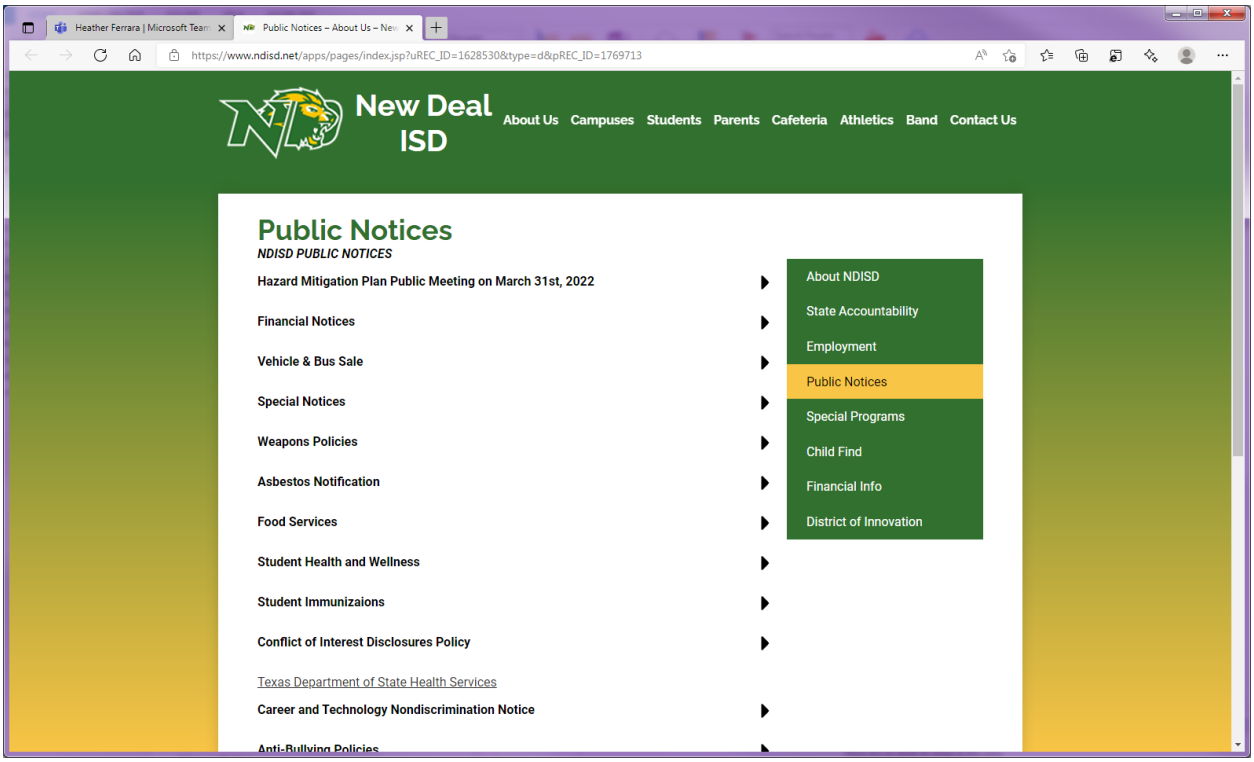


Figure E-26. Roosevelt Independent School District Public Notice, School Facebook

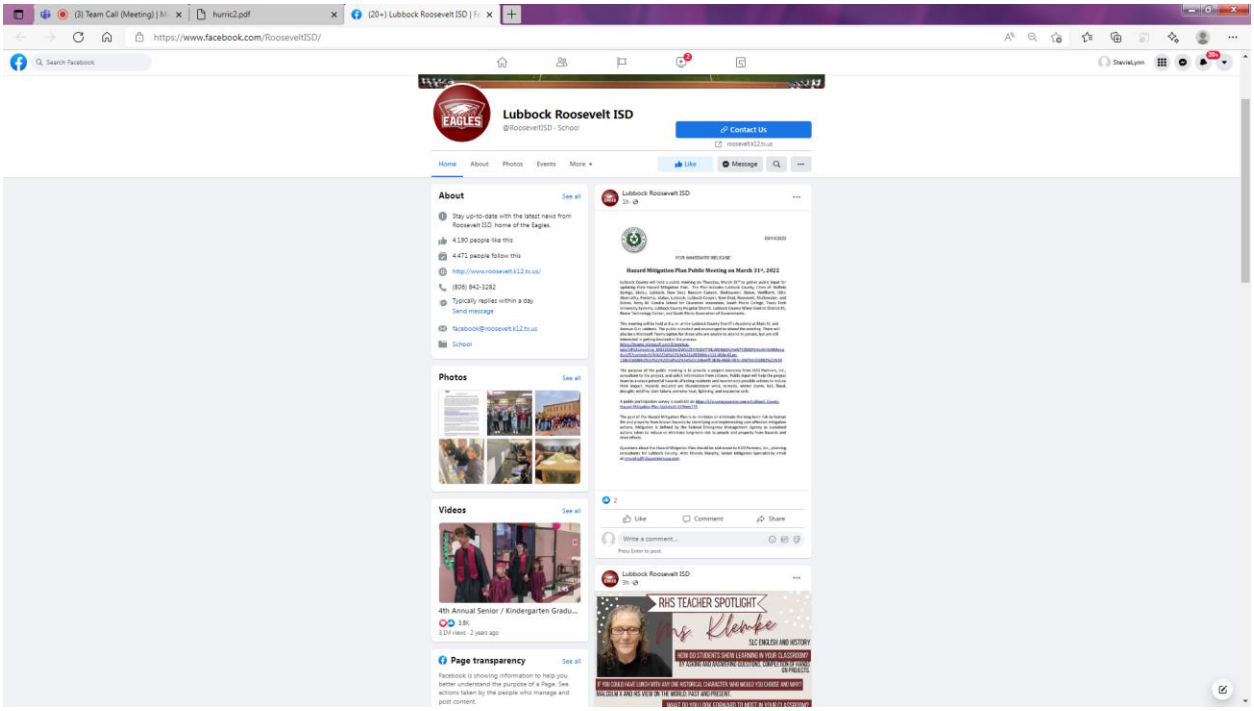


Figure E-27. Roosevelt Independent School District Public Notice, School Website

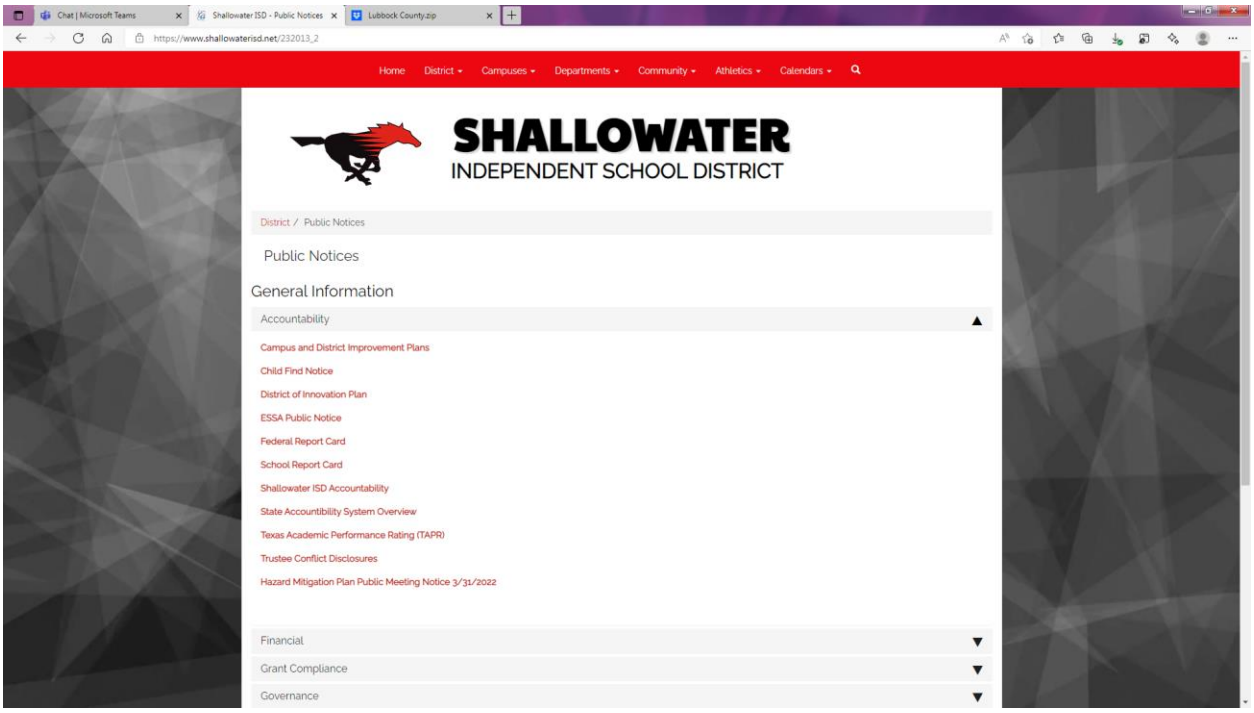


Figure E-28. Roosevelt Independent School District Public Notice, School Bulletin

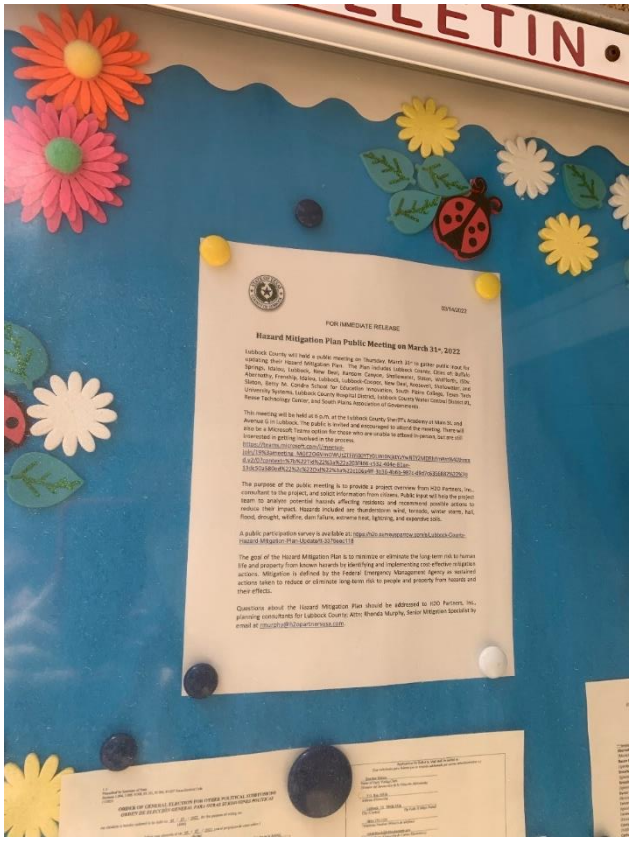


Figure E-29. Lubbock Reese Redevelopment Authority Public Notice, Website

Figure E-30. Lubbock Reese Redevelopment Authority Public Notice, LinkedIn

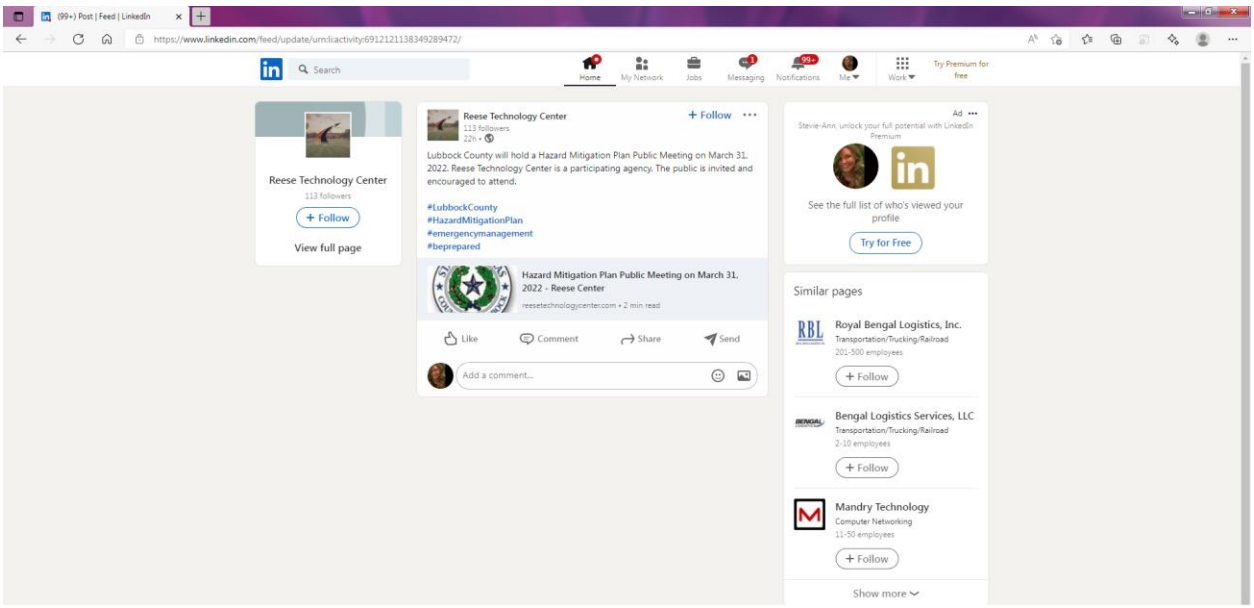


Figure E-31. Lubbock County KFYO Radio Public Notice, Website

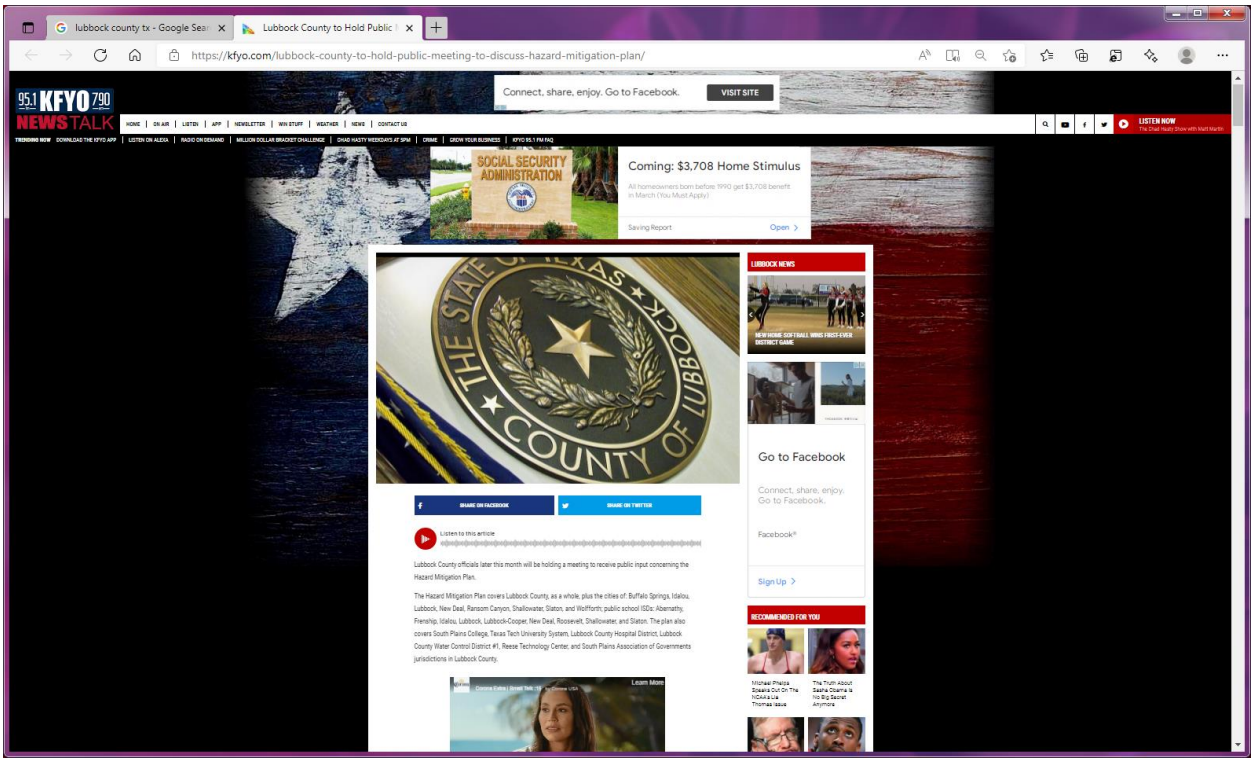


Figure E-32. Lubbock County KISS Radio Public Notice, Website

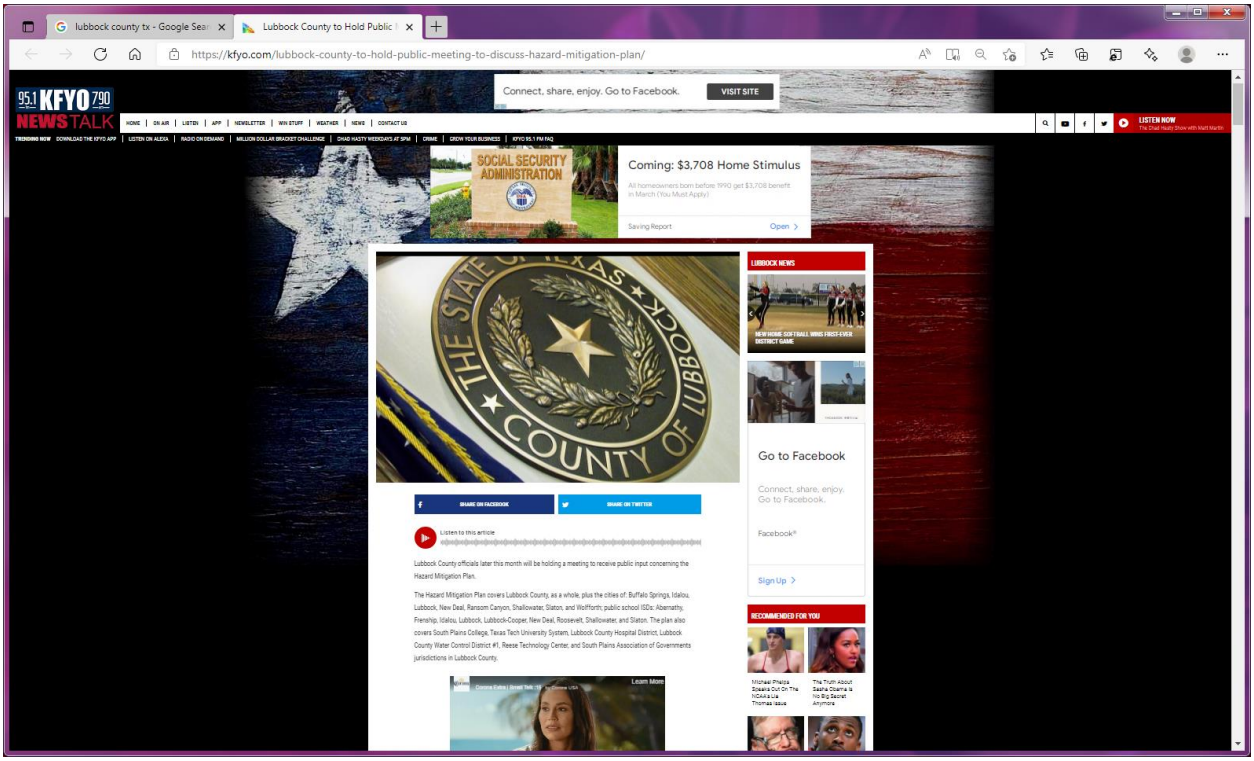


Figure E-33. Lubbock County Lonestar Radio Public Notice, Website

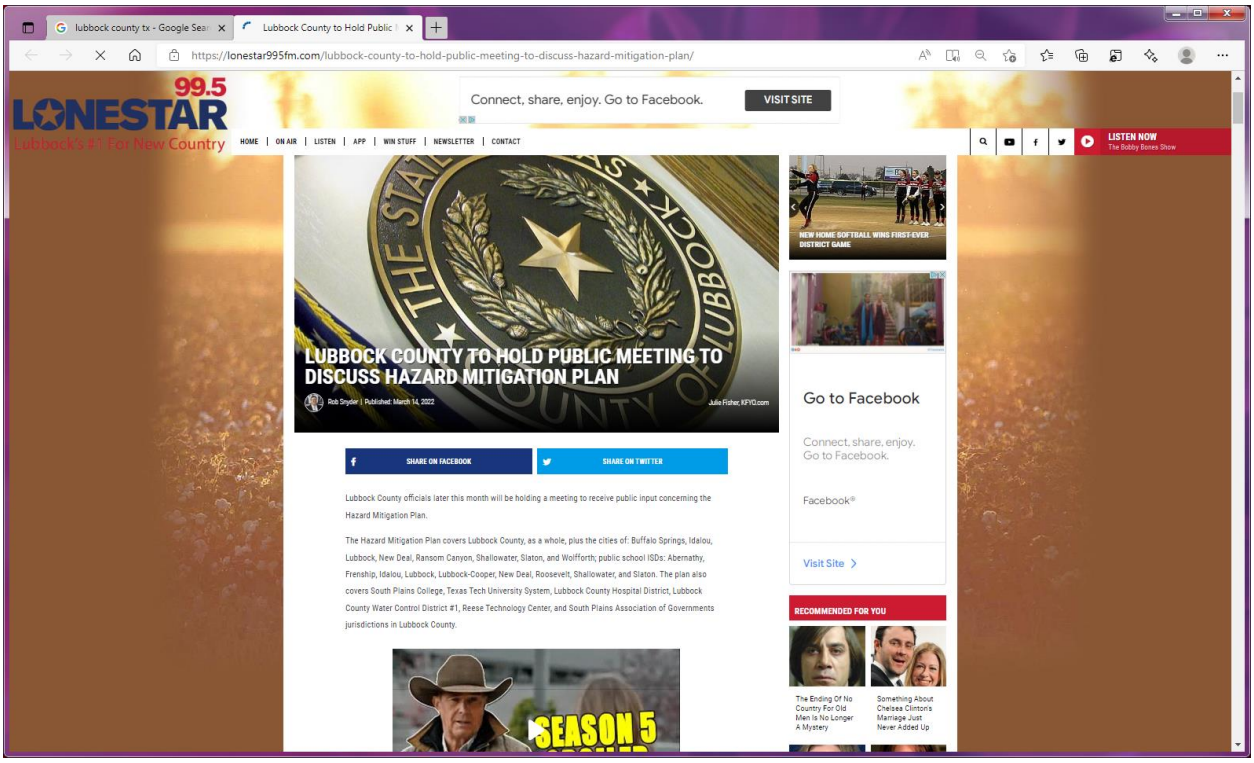


Figure E-34. Lubbock County Awesome 98 Radio Public Notice, Website

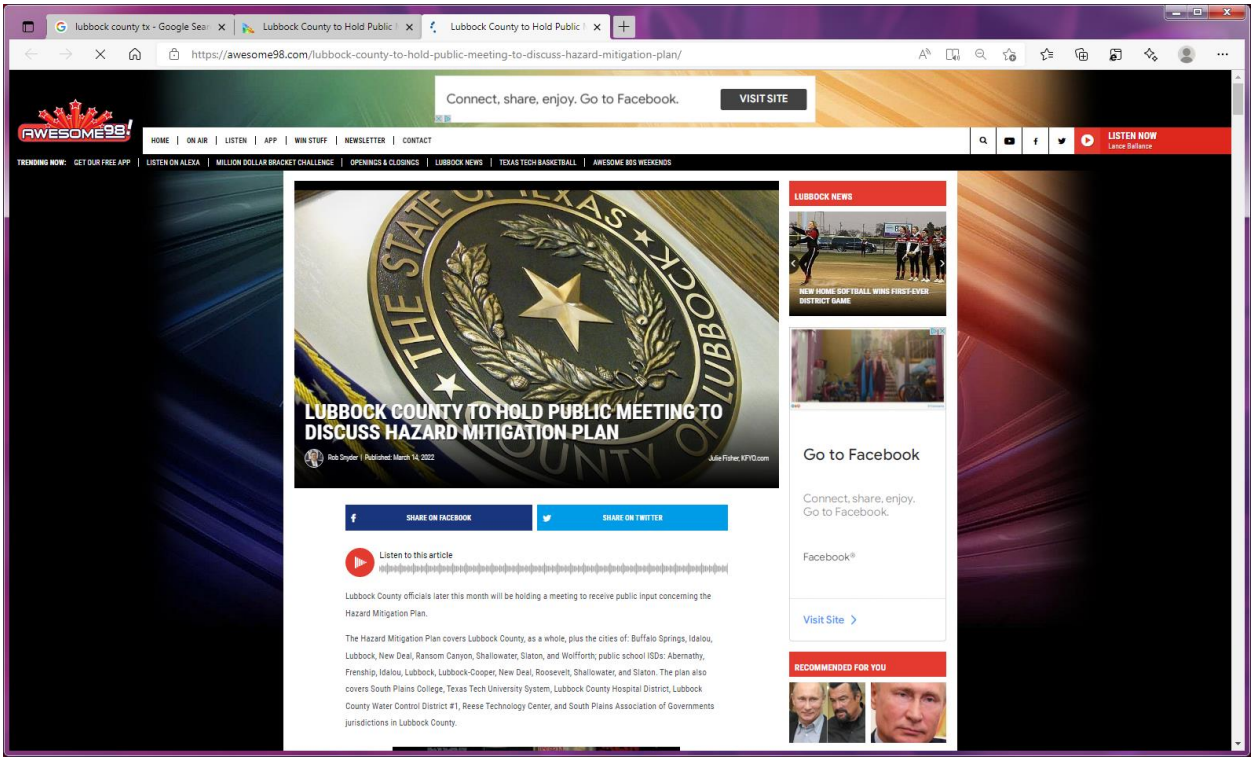


Figure E-35. Lubbock County KKAM Radio Public Notice, Website

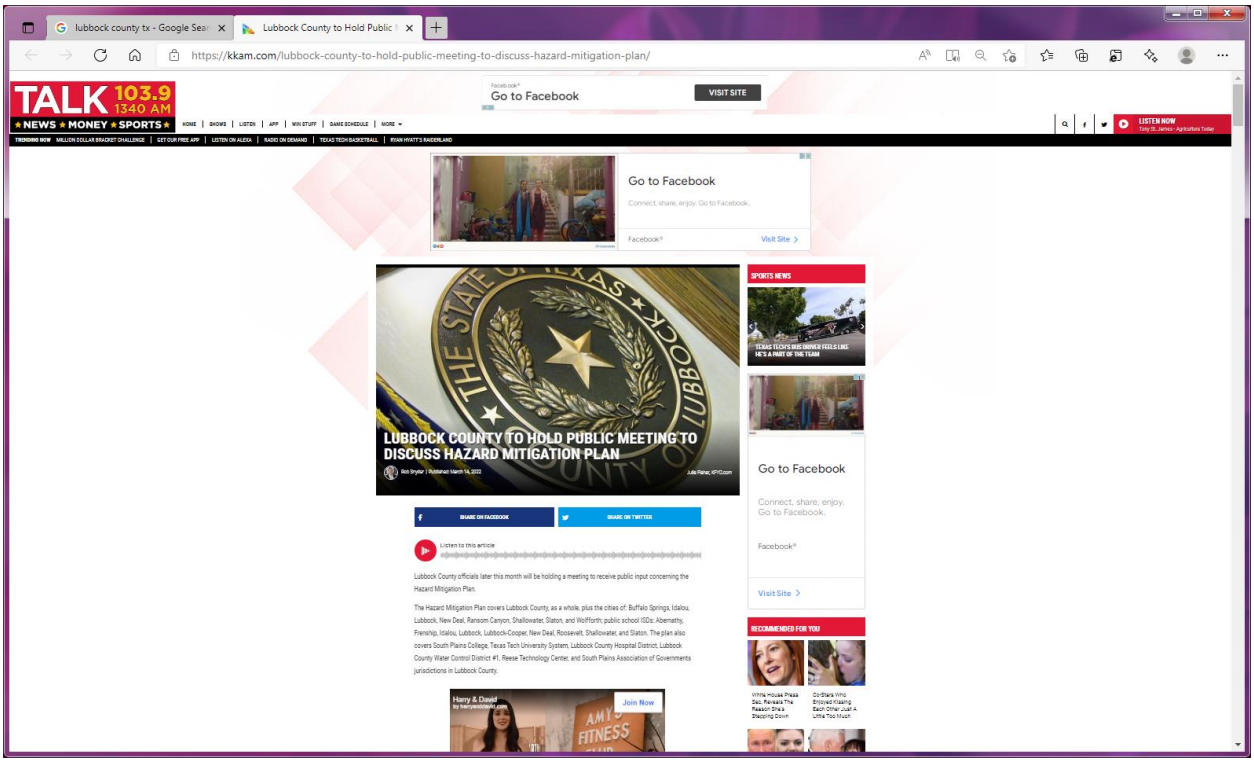


Figure E-36. "Everything Lubbock" Public Notice, News Article

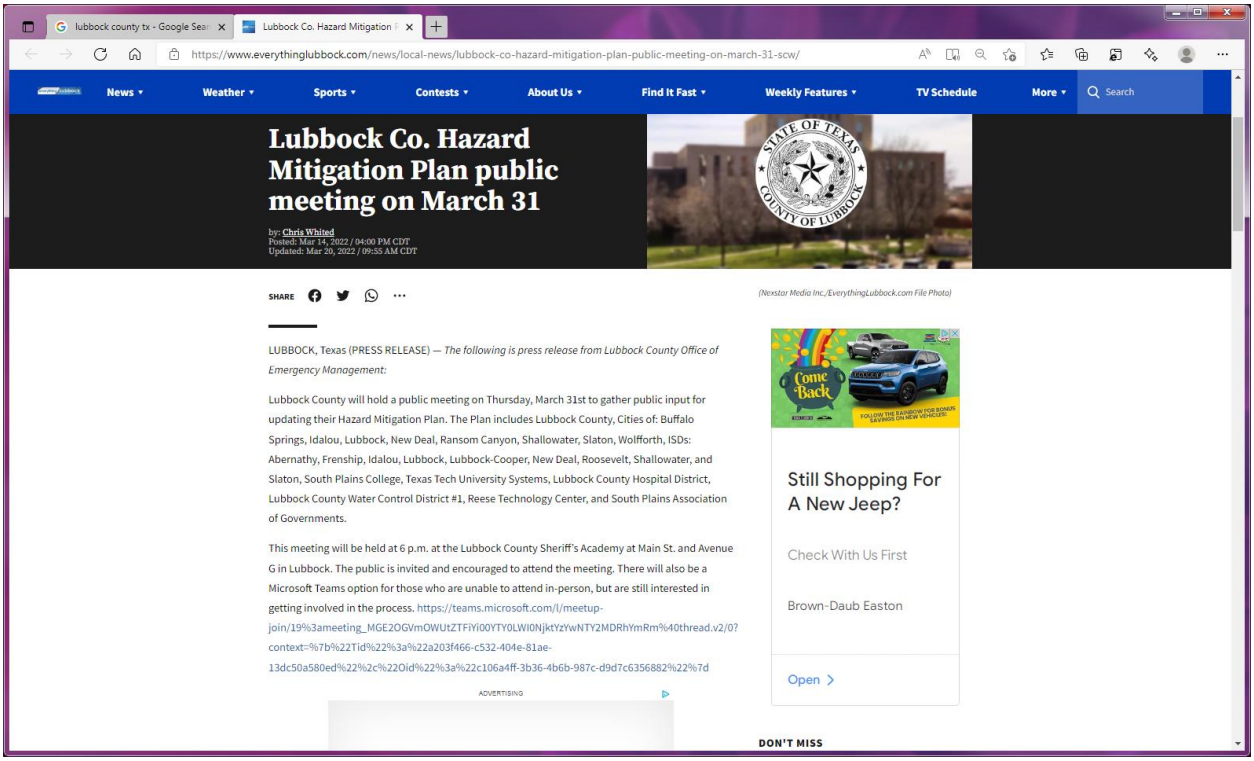


Figure E-37. Lubbock County Public Notice, County Website

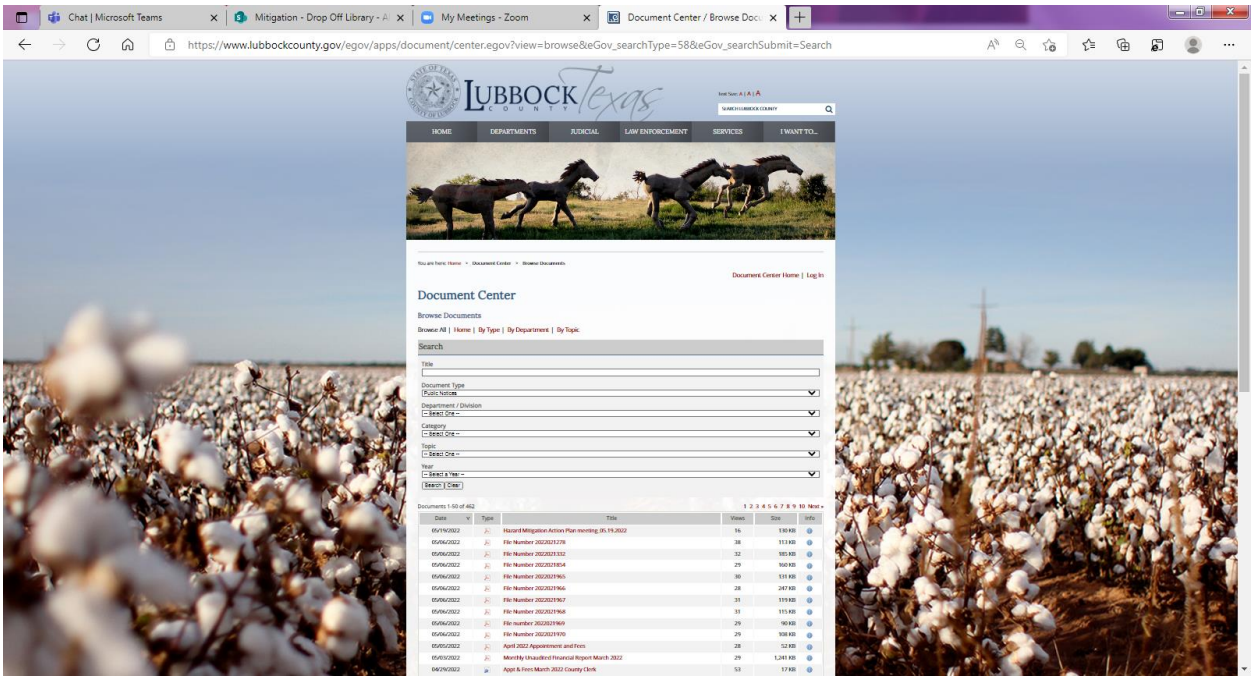


Figure E-38. City of Idalou Public Notice, Facebook

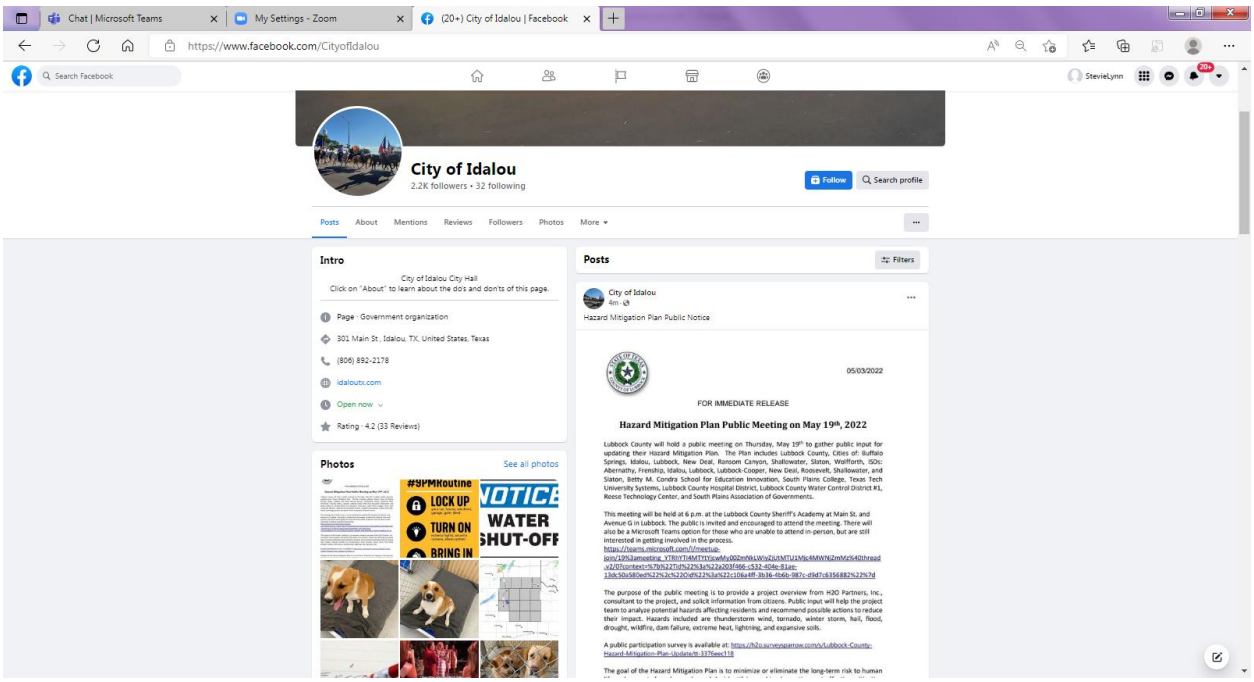


Figure E-39. City of New Deal Public Notice, City Website

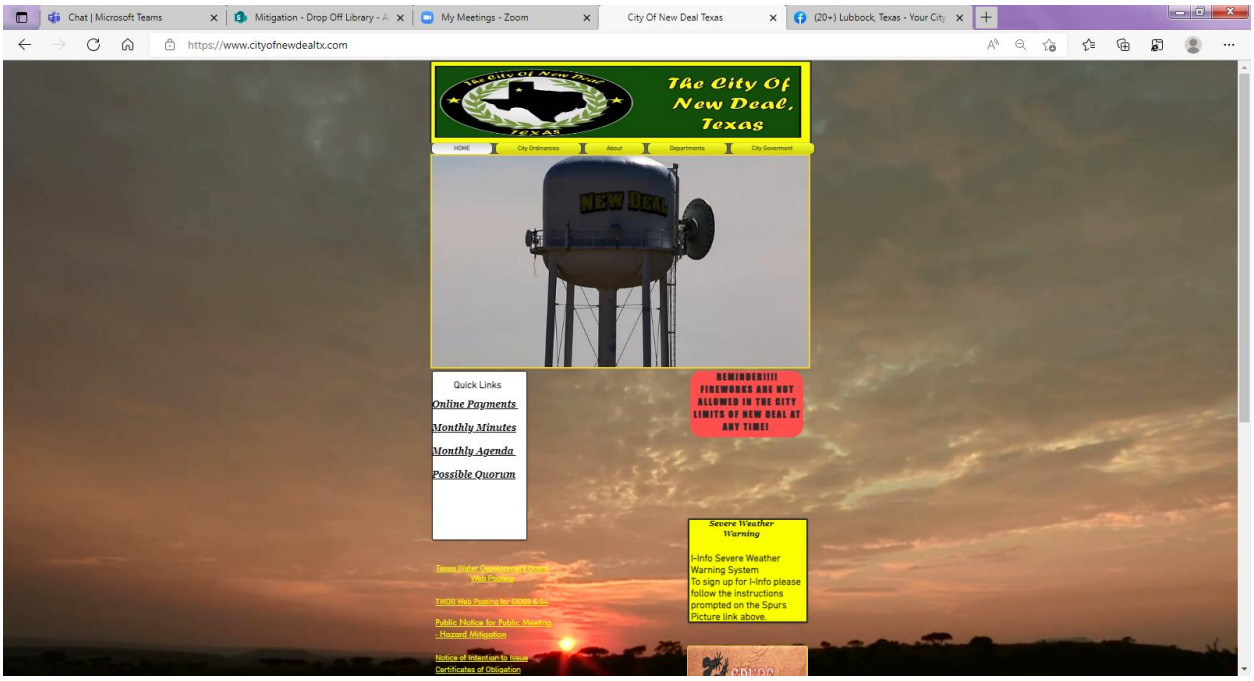


Figure E-40. Town of Ransom Canyon Public Notice, Facebook

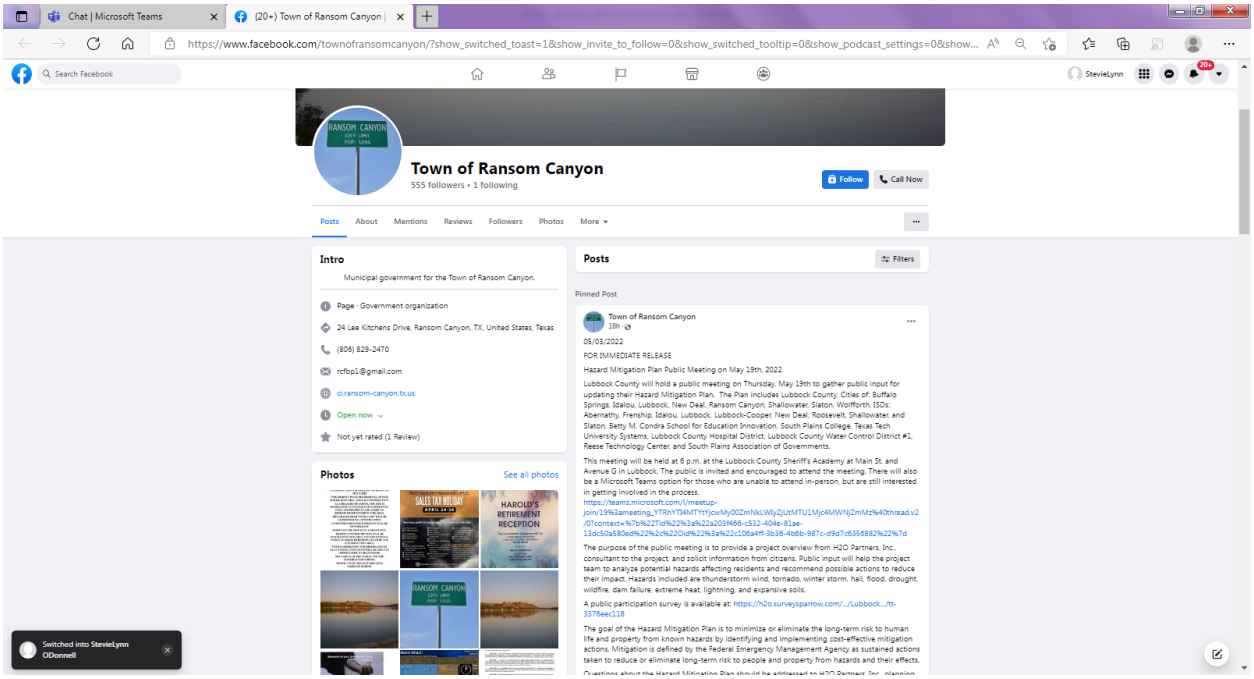


Figure E-41. City of Shallowater Public Notice, City Website

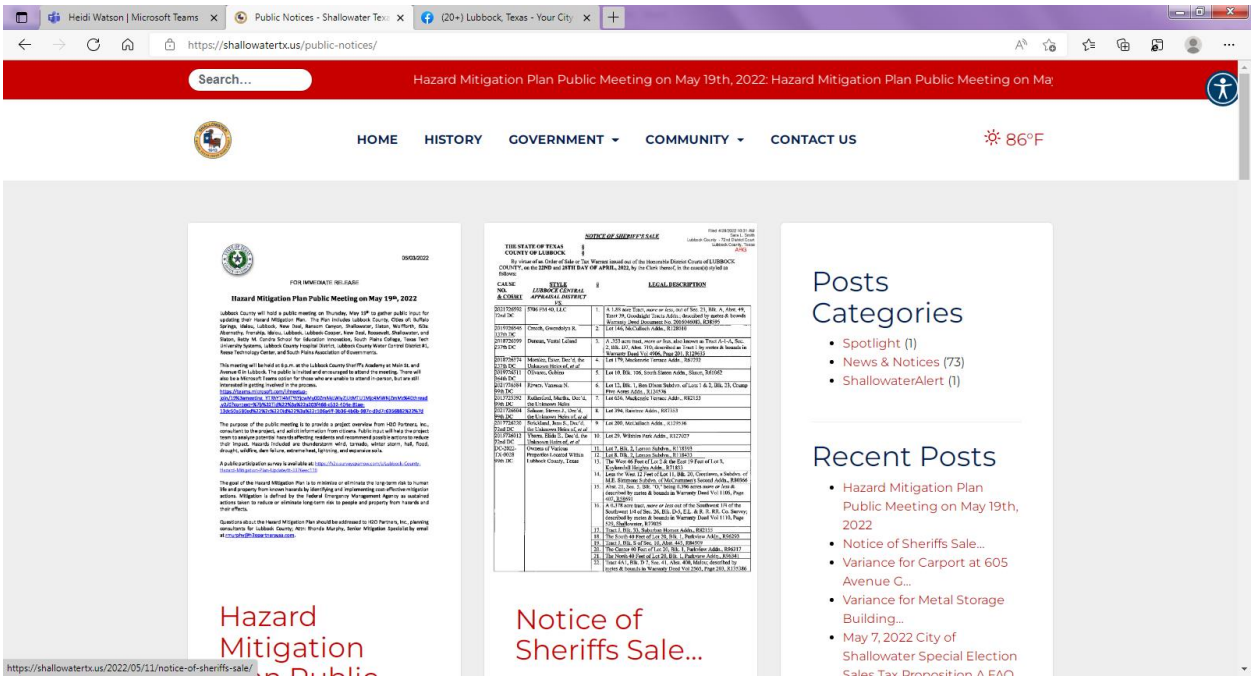


Figure E-42. City of Slaton Public Notice, Bulletin

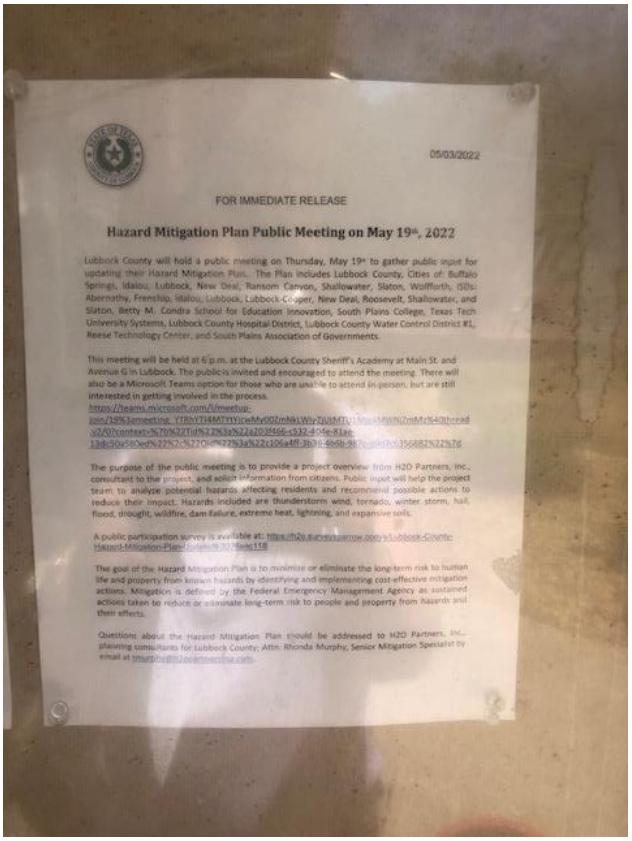


Figure E-43. City of Slaton Public Notice, City Hall

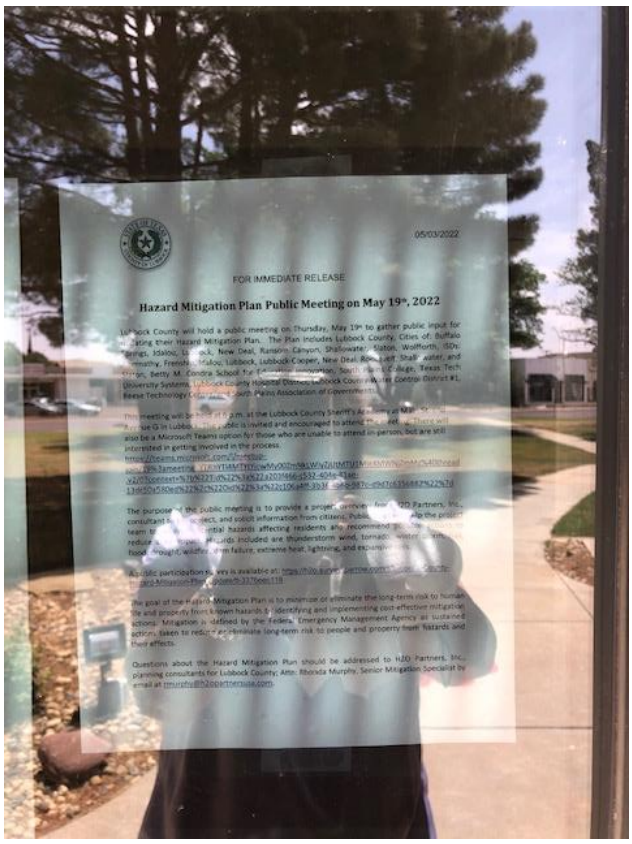


Figure E-44. City of Wolfforth Public Notice, City Website

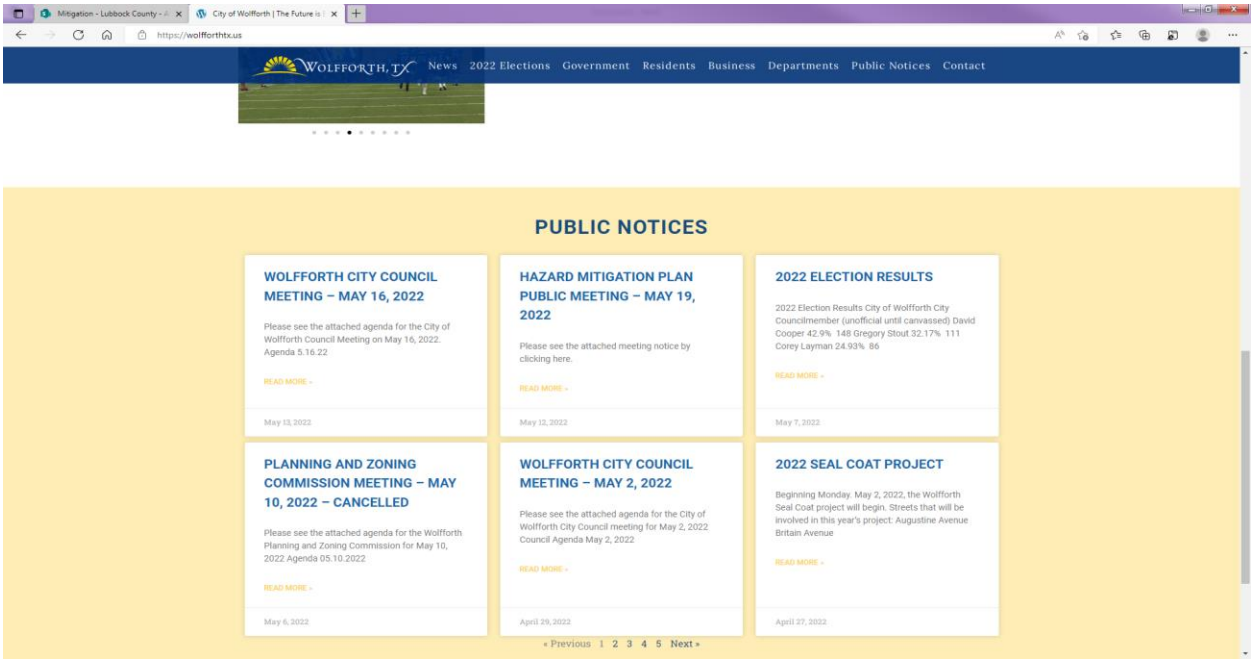


Figure E-45. Abernathy Independent School District Public Notice, School Website

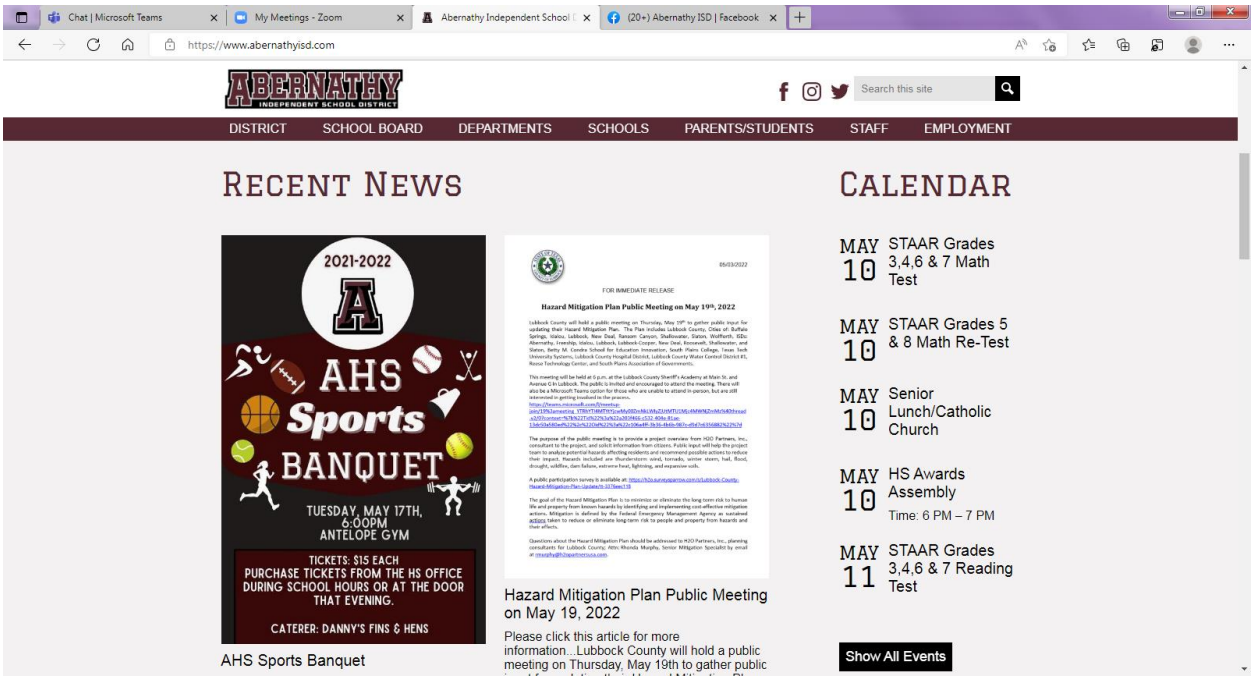


Figure E-46. Lubbock Independent School District Public Notice, School Website

Figure E-47. New Deal Independent School District Public Notice, School Website

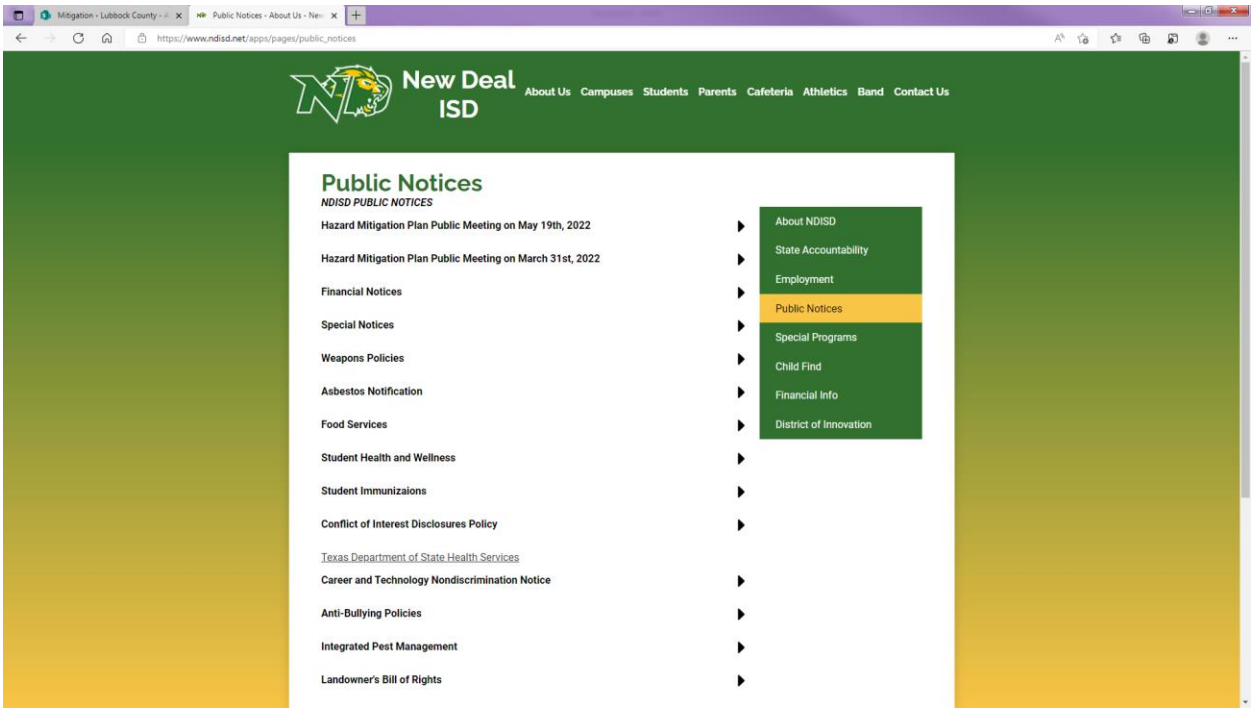


Figure E-48. Roosevelt Independent School District Public Notice, School Facebook

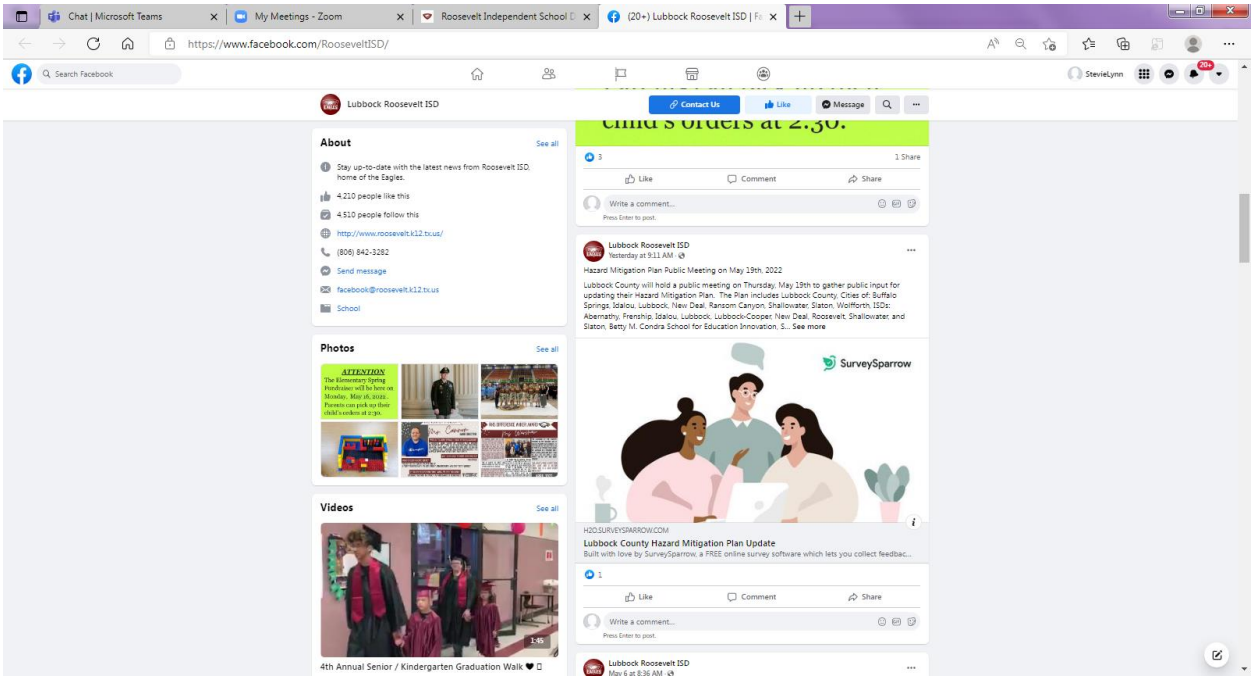
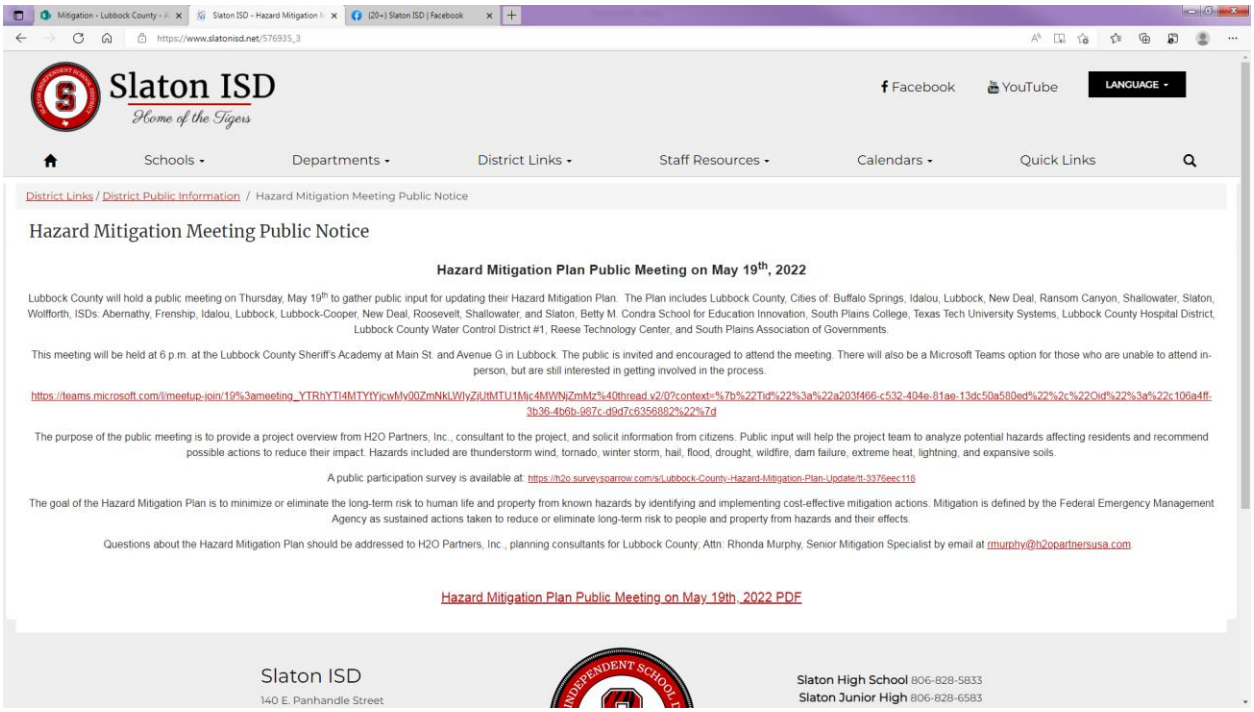


Figure E-49. Slaton Independent School District Public Notice, School Website



Slaton ISD
Home of the Tigers

Facebook YouTube LANGUAGE

Schools Departments District Links Staff Resources Calendars Quick Links

District Links / District Public Information / Hazard Mitigation Meeting Public Notice

Hazard Mitigation Meeting Public Notice

Hazard Mitigation Plan Public Meeting on May 19th, 2022

Lubbock County will hold a public meeting on Thursday, May 19th to gather public input for updating their Hazard Mitigation Plan. The Plan includes Lubbock County, Cities of: Buffalo Springs, Idalou, Lubbock, New Deal, Ransom Canyon, Shallowater, Slaton, Wolfforth, ISDs: Abernathy, Frenship, Idalou, Lubbock, Lubbock-Cooper, New Deal, Roosevelt, Shallowater, and Slaton, Betty M. Condra School for Education Innovation, South Plains College, Texas Tech University Systems, Lubbock County Hospital District, Lubbock County Water Control District #1, Reese Technology Center, and South Plains Association of Governments.

This meeting will be held at 6 p.m. at the Lubbock County Sheriff's Academy at Main St. and Avenue G in Lubbock. The public is invited and encouraged to attend the meeting. There will also be a Microsoft Teams option for those who are unable to attend in-person, but are still interested in getting involved in the process.

https://teams.microsoft.com/l/meetup-join/19%3ameeting_YTRhYTI4MTYtYjcwMy00ZmNkLWIyZjUtMTU1Mjc4MWNjZmMz%40thread.v2/0?context=%7b%22Tid%22%3a%22a203f466-c532-404e-81ae-13dc50a580ed%22%2c%22Oid%22%3a%22c106a4ff-3b36-4b6b-987c-d9d7c6356882%22%7d

The purpose of the public meeting is to provide a project overview from H2O Partners, Inc., consultant to the project, and solicit information from citizens. Public input will help the project team to analyze potential hazards affecting residents and recommend possible actions to reduce their impact. Hazards included are thunderstorm wind, tornado, winter storm, hail, flood, drought, wildfire, dam failure, extreme heat, lightning, and expansive soils.

A public participation survey is available at: https://h2o.surveysparrow.com/s/Lubbock-County-Hazard-Mitigation-Plan-Update/tt-3376eec118

The goal of the Hazard Mitigation Plan is to minimize or eliminate the long-term risk to human life and property from known hazards by identifying and implementing cost-effective mitigation actions. Mitigation is defined by the Federal Emergency Management Agency as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects.

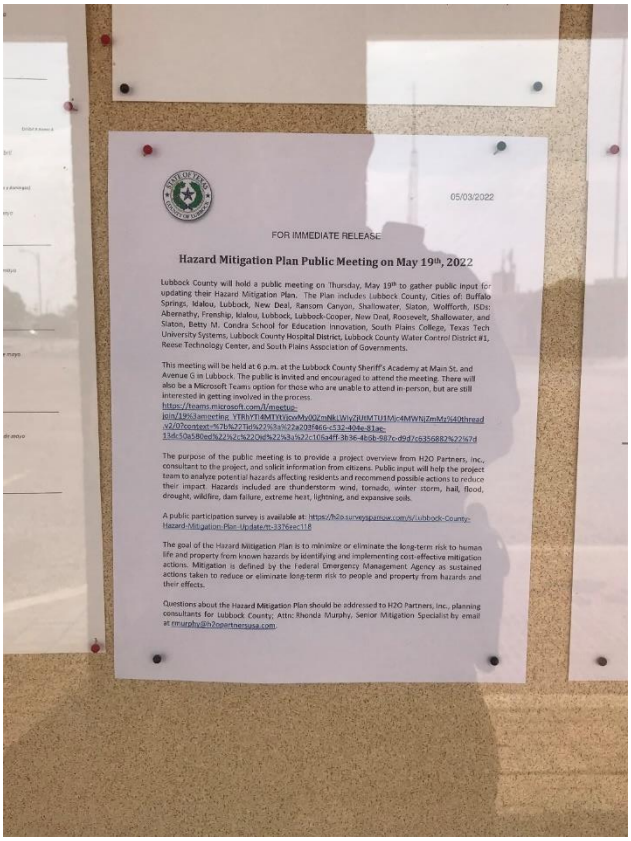
Questions about the Hazard Mitigation Plan should be addressed to H2O Partners, Inc., planning consultants for Lubbock County; Attn: Rhonda Murphy, Senior Mitigation Specialist by email at rmurphy@h2opartnersusa.com.

Hazard Mitigation Plan Public Meeting on May 19th, 2022 PDF

Slaton ISD
140 E. Panhandle Street

Slaton High School 806-828-5833
Slaton Junior High 806-828-6583

Figure E-50. Slaton Independent School District Public Notice, School Bulletin



05/03/2022

FOR IMMEDIATE RELEASE

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https://teams.microsoft.com/l/meetup-join/19%3ameeting_YTRhYTI4MTYtYjcwMy00ZmNkLWIyZjUtMTU1Mjc4MWNjZmMz%40thread.v2/0?context=%7b%22Tid%22%3a%22a203f466-c532-404e-81ae-13dc50a580ed%22%2c%22Oid%22%3a%22c106a4ff-3b36-4b6b-987c-d9d7c6356882%22%7d

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Questions about the Hazard Mitigation Plan should be addressed to H2O Partners, Inc., planning consultants for Lubbock County; Attn: Rhonda Murphy, Senior Mitigation Specialist by email at rmurphy@h2opartnersusa.com.

Figure E-51. Betty M. Condra School for Education Innovation Public Notice, School Facebook

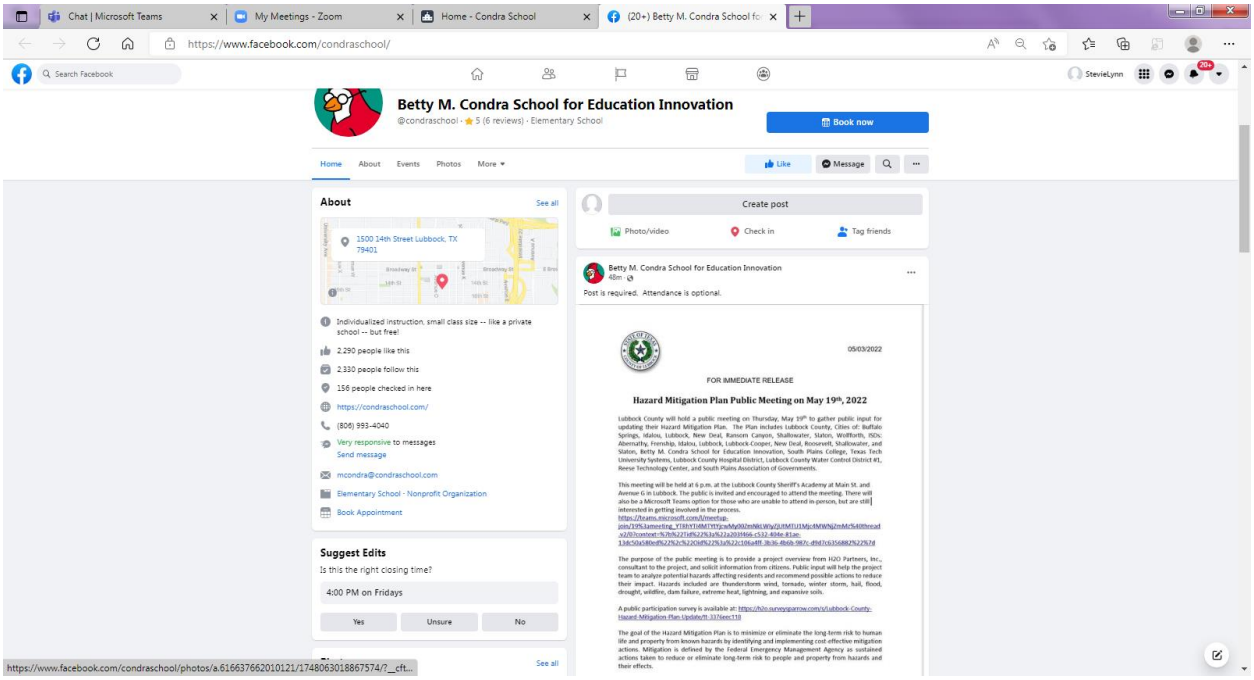

Figure E-52. Lubbock County Public Notice, Press Release

LUBBOCK COUNTY
EMERGENCY MANAGEMENT
P. O. Box 10536
Lubbock, TX 79408
Phone: (806) 775-7300

Curtis Parrish
County Judge

CLINTON THETFORD
Emergency Coordinator

Press Release
February 8, 2022

Ref: Public Input to the Lubbock County Hazard Mitigation Plan Update

Lubbock County Office of Emergency Management is requesting the Public participate in the Update of the Lubbock County Hazard Mitigation Plan.

Public participation is a FEMA requirement and will be key in providing input for the Plan.

The Public can participate by taking a survey listed below and encourage members of your community to also take the survey before June 30, 2022.

https://h2o.surveysparrow.com/s/Lubbock-County-Hazard-Mitigation-Plan-Update/tt-3376eec118

In addition, we ask you share the link to the survey on social media outlets and other public forums.

For any questions, please contact the Lubbock County Office of Emergency Management at 806 775-7300.

APPENDIX F: CAPABILITY ASSESSMENT

OVERVIEW

A Community Capability Assessment is an integral component of the Hazard Mitigation Planning Process. It is an invaluable tool in assessing a community's existing planning and regulatory capabilities to support implementation of mitigation strategy objectives.

Beginning on Page 2, a completed Capability Assessment Checklist provides information on existing policies, plans, and regulations in place for Planning Team members at the local level or that may be provided by the County on an as-needed basis. ***Participation is denoted with an "x" on the Checklist.***

COMMUNITY CAPABILITY ASSESSMENTS

COMMUNITY CAPABILITY CHECKLIST	*Lubbock County*	*Village of Buffalo Springs*	*City of Idalou*	*City of Lubbock*	*Town of New Deal*
Plans					
Capital Improvements Plan	X	X	X	X	X
Community Wildfire Protection Plan		X		X	X
Comprehensive / Master Plan / Land Use Plan				X	
Continuity of Operations	X	X	X	X	X
Emergency Operations Plan	X	X	X	X	X
Evacuation Plan	X	X	X	X	X
Hazard Mitigation Plan	X	X	X	X	X
Stormwater Management Plan	X	X		X	
Policies / Ordinances					
Building Codes			X	X	X
Fire Code			X	X	X
Floodplain Ordinance	X	X	X	X	X
Stormwater Ordinance				X	
Subdivision Regulations	X		X	X	X
Wildfire Ordinance		X		X	
Zoning Ordinance/Land Use Restrictions		X	X	X	X
Programs					
Floodplain Maps/Flood Insurance Studies	X	X	X	X	X
Hydrologic/Hydraulic Studies				X	
Mutual Aid Agreement	X	X	X	X	X

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Lubbock County*	*Village of Buffalo Springs*	*City of Idalou*	*City of Lubbock*	*Town of New Deal*
National Flood Insurance Program Participant	X	X	X	X	X
NFIP Community Rating System Participant				X	
Property Acquisition Program			X	X	
Public Education/Awareness Programs	X		X	X	
Storm Drainage Systems Maintenance Program	X			X	
Stream Maintenance Program				X	
Warning Systems/Services	X		X	X	X
Staff / Departments					
Building Code Official			X	X	X
Emergency Manager	X	X	X	X	X
Engineer	X		X	X	X
Environmental Conservation Specialist				X	
Floodplain Administrator	X	X	X	X	X
Geographic Information Systems (GIS) Coordinator	X		X	X	
Personnel with Hazard Knowledge	X	X	X	X	X
Planner	X		X	X	
Public Information Official	X	X	X	X	X
Resource Development/Grant Writer	X	X	X	X	X

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Town of Ransom Canyon*	*City of Shallowater*	*City of Slaton*	*City of Wolfforth*	*Abernathy ISD*
Plans					
Capital Improvements Plan	X	X	X	X	
Community Wildfire Protection Plan	X	X	X	X	
Comprehensive / Master Plan / Land Use Plan	X	X	X	X	
Continuity of Operations		X	X	X	
Emergency Operations Plan		X	X	X	X
Evacuation Plan		X	X	X	X
Hazard Mitigation Plan	X	X	X	X	X
Stormwater Management Plan		X	X	X	
Policies / Ordinances					
Building Codes		X	X	X	
Fire Code		X	X	X	
Floodplain Ordinance	X	X	X	X	
Stormwater Ordinance		X	X	X	
Subdivision Regulations		X	X	X	
Wildfire Ordinance		X	X	X	
Zoning Ordinance/Land Use Restrictions		X	X	X	
Programs					
Floodplain Maps/Flood Insurance Studies	X	X	X	X	
Hydrologic/Hydraulic Studies		X	X	X	
Mutual Aid Agreement	X	X	X	X	
National Flood Insurance Program Participant	X	X	X	X	

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Town of Ransom Canyon*	*City of Shallowater*	*City of Slaton*	*City of Wolfforth*	*Abernathy ISD*
NFIP Community Rating System Participant		X		X	
Property Acquisition Program		X	X		
Public Education/Awareness Programs		X	X	X	
Storm Drainage Systems Maintenance Program		X	X	X	
Stream Maintenance Program		X	X		
Warning Systems/Services	X	X	X	X	
Staff / Departments					
Building Code Official	X	X	X	X	
Emergency Manager	X	X	X	X	
Engineer		X	X	X	
Environmental Conservation Specialist			X		
Floodplain Administrator	X	X	X	X	
Geographic Information Systems (GIS) Coordinator		X	X	X	
Personnel with Hazard Knowledge		X	X		
Planner		X	X	X	
Public Information Official	X	X	X	X	
Resource Development/Grant Writer	X	X	X	X	

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Frenship ISD*	*Idalou ISD*	*Lubbock ISD*	*Lubbock-Cooper ISD*	*New Deal ISD*
Plans					
Capital Improvements Plan				X	X
Community Wildfire Protection Plan				X	
Comprehensive / Master Plan / Land Use Plan				X	X
Continuity of Operations	X		X	X	
Emergency Operations Plan	X	X	X	X	X
Evacuation Plan		X	X	X	X
Hazard Mitigation Plan	X	X	X	X	
Stormwater Management Plan				X	
Drought Contingency & Emergency Water Plan				X	
Policies / Ordinances					
Building Codes				X	
Fire Code				X	
Floodplain Ordinance				X	
Stormwater Ordinance				X	
Subdivision Regulations				X	
Wildfire Ordinance				X	
Zoning Ordinance/Land Use Restrictions				X	
Programs					
Floodplain Maps/Flood Insurance Studies				X	
Hydrologic/Hydraulic Studies				X	
Mutual Aid Agreement			X	X	

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Frenship ISD*	*Idalou ISD*	*Lubbock ISD*	*Lubbock-Cooper ISD*	*New Deal ISD*
National Flood Insurance Program Participant				X	
NFIP Community Rating System Participant				X	
Property Acquisition Program				X	
Public Education/Awareness Programs			X	X	
Storm Drainage Systems Maintenance Program				X	
Stream Maintenance Program				X	
Warning Systems/Services			X	X	
Staff / Departments					
Building Code Official				X	
Emergency Manager			X	X	
Engineer					
Environmental Conservation Specialist					
Floodplain Administrator					
Geographic Information Systems (GIS) Coordinator	X				
Personnel with Hazard Knowledge	X		X	X	X
Planner				X	
Public Information Official	X		X	X	X
Resource Development/Grant Writer			X	X	X

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Roosevelt ISD*	*Shallowater ISD*	*Slaton ISD*	*Betty M. Condra School for Edu. Innovation*	*South Plains College*
Plans					
Capital Improvements Plan	X				
Community Wildfire Protection Plan					
Comprehensive / Master Plan / Land Use Plan	X				
Continuity of Operations	X		X		X
Emergency Operations Plan	X		X		X
Evacuation Plan	X		X		X
Hazard Mitigation Plan	X	X	X		X
Stormwater Management Plan	X				
Drought Contingency & Emergency Water Plan					
Polices / Ordinances					
Building Codes	X		X		
Fire Code	X		X		
Floodplain Ordinance			X		
Stormwater Ordinance			X		
Subdivision Regulations			X		
Wildfire Ordinance			X		
Zoning Ordinance/Land Use Restrictions			X		
Programs					
Floodplain Maps/Flood Insurance Studies					
Hydrologic/Hydraulic Studies					

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Roosevelt ISD*	*Shallowater ISD*	*Slaton ISD*	*Betty M. Condra School for Edu. Innovation*	*South Plains College*
Mutual Aid Agreement					X
National Flood Insurance Program Participant					
NFIP Community Rating System Participant					
Property Acquisition Program					
Public Education/Awareness Programs	X				X
Storm Drainage Systems Maintenance Program					
Stream Maintenance Program					
Warning Systems/Services					X
Staff / Departments					
Building Code Official					
Emergency Manager	X				X
Engineer					
Environmental Conservation Specialist					
Floodplain Administrator					
Geographic Information Systems (GIS) Coordinator					
Personnel with Hazard Knowledge					X
Planner					
Public Information Official	X	X	X		X
Resource Development/Grant Writer	X				X

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Texas Tech University System*	*TTU Health Sciences Center*	*Lubbock County Hospital District*	*Lubbock County WCID #1*	*Lubbock County Reese Redevel-opment Authority*	*South Plains Association of Government*
Plans						
Capital Improvements Plan	X	X	X	X	X	
Community Wildfire Protection Plan						
Comprehensive / Master Plan / Land Use Plan	X				X	
Continuity of Operations	X	X	X	X		
Emergency Operations Plan	X	X	X	X	X	
Evacuation Plan	X	X	X	X	X	
Hazard Mitigation Plan	X	X	X	X	X	X
Stormwater Management Plan	X	X				
Policies / Ordinances						
Building Codes	X			X	X	
Fire Code	X			X	X	
Floodplain Ordinance	X					
Stormwater Ordinance	X					
Subdivision Regulations	X					
Wildfire Ordinance	X			X		
Zoning Ordinance/Land Use Restrictions	X			X		
Programs						
Floodplain Maps/Flood Insurance Studies	X				X	
Hydrologic/Hydraulic Studies					X	
Mutual Aid Agreement	X	X	X	X	X	

APPENDIX F: CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	*Texas Tech University System*	*TTU Health Sciences Center*	*Lubbock County Hospital District*	*Lubbock County WCID #1*	*Lubbock County Reese Redevel-opment Authority*	*South Plains Association of Government*
National Flood Insurance Program Participant						
NFIP Community Rating System Participant						
Property Acquisition Program	X					
Public Education/Awareness Programs	X	X	X		X	
Storm Drainage Systems Maintenance Program	X				X	
Stream Maintenance Program			X			
Warning Systems/Services	X	X	X		X	
Staff / Departments						
Building Code Official	X		X		X	
Emergency Manager	X	X	X	X	X	
Engineer	X		X			
Environmental Conservation Specialist			X			
Floodplain Administrator						
Geographic Information Systems (GIS) Coordinator	X					
Personnel with Hazard Knowledge	X		X	X	X	
Planner	X	X	X			
Public Information Official	X	X	X	X	X	
Resource Development/Grant Writer	X	X	X	X	X	