

Lamb and Lynn Counties Multi-Hazard Mitigation Plan 2020

"Under the Federal Disaster Mitigation Act of 2000 (DMA 2000 or "the Act"), the participating jurisdictions (Jurisdictions) are required to have a Federal Emergency Management Agency ("FEMA") - approved Local Hazard Mitigation Plan ("the Plan") in order to be eligible for certain pre- and post-disaster mitigation funds. Adoption of this Plan by the Jurisdictions and approval by FEMA will serve the dual objectives of providing direction and guidance on implementing hazard mitigation in the Jurisdictions, and qualify the Jurisdictions to obtain federal assistance for hazard mitigation. Solely to help achieve these objectives, the Plan attempts to systematically identify and address hazards that can affect the Jurisdictions. Nothing in this Plan is intended to be an admission, either expressed or implied, by or on behalf of the Jurisdictions, of any obligation, responsibility, duty, fault or liability for any particular hazard or hazardous condition, and no such obligation, responsibility, duty, fault or liability should be inferred or implied from the Plan, except where expressly stated."

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1. Introduction and Background

1) Participating Jurisdictions

The Lamb and Lynn Counties Multi-Hazard Mitigation plan includes the following 22 participating jurisdictions listed in alphabetical order: Amherst, Earth, Lamb County, Lamb County Healthcare Center, Littlefield, Littlefield ISD, Lynn County Hospital District, New Home, New Home ISD, O'Donnell, O'Donnell ISD, Olton, Olton ISD, Springlake, Springlake-Earth ISD, Sudan, Sudan ISD, Tahoka, Tahoka ISD, Wilson, and Wilson ISD.

2) Hazard Mitigation Plan History

The participating jurisdictions have never participated in the creation of a Hazard Mitigation Action Plan.

The mitigation planning regulation of the Disaster Mitigation Act requires that mitigation plans be reviewed and updated every five years to maintain eligibility for mitigation grant funding.

The participating jurisdictions chose to address the following hazards:

Table 1: Hazards Addressed

Hazard	Lamb County and Participating Jurisdictions in County											
	Lamb County	Amherst	Earth	Lamb County Healthcare Center	Littlefield	Littlefield ISD	Olton	Olton ISD	Springlake	Springlake-Earth ISD	Sudan	Sudan ISD
Flood	X	X	X	X	X	X	X	X	X	X	X	X
Hurricanes / Tropical Storms and Depressions												
Wildfire	X	X	X	X	X	X	X	X	X	X	X	X
Tornados	X	X	X	X	X	X	X	X	X	X	X	X
Drought	X	X	X	X	X	X	X	X	X	X	X	X
Inland Erosion	X	X	X	X	X	X	X	X	X	X	X	X
Dam / Levee Failure												
Earthquakes												
Extreme heat	X	X	X	X	X	X	X	X	X	X	X	X
Hailstorms	X	X	X	X	X	X	X	X	X	X	X	X
Extreme Cold/ Winter Weather	X	X	X	X	X	X	X	X	X	X	X	X
Windstorms	X	X	X	X	X	X	X	X	X	X	X	X
Lightning	X	X	X	X	X	X	X	X	X	X	X	X
Land Subsidence												
Expansive soils												

Hazard	Lynn County and Participating Jurisdictions in County									
	Lynn County	Lynn County Hospital District	New Home	New Home ISD	O'Donnell	O'Donnell ISD	Tahoka	Tahoka ISD	Wilson	Wilson ISD
Flood	X	X	X	X	X	X	X	X	X	X
Hurricanes / Tropical Storms and Depressions										
Wildfire	X	X	X	X	X	X	X	X	X	X
Tornados	X	X	X	X	X	X	X	X	X	X
Drought	X	X	X	X	X	X	X	X	X	X
Riverine Erosion	X	X	X	X	X	X	X	X	X	X
Dam / Levee Failure										
Earthquakes										
Extreme heat	X	X	X	X	X	X	X	X	X	X
Hailstorms	X	X	X	X	X	X	X	X	X	X
Extreme Cold/ Winter Weather	X	X	X	X	X	X	X	X	X	X
Windstorms	X	X	X	X	X	X	X	X	X	X
Lightning	X	X	X	X	X	X	X	X	X	X
Land Subsidence										
Expansive soils										

Omission Statements

2. Planning Process

The Lamb and Lynn Counties Hazard Mitigation Plan is a multi-jurisdiction plan. Representatives to the local planning team were selected by each jurisdiction.

Table 2: Local Planning Team Members

Title	Jurisdiction	Agency or Department
Emergency Management Coordinator	Lamb County	Office of Emergency Management
Mayor	Amherst	Mayor's Office
Mayor	Earth	Mayor's Office
Executive Director	Lamb County Healthcare Center	Administration
Mayor; City Manager	Littlefield	Mayor's Office; Administration
Superintendent	Littlefield ISD	Administration
Mayor	Olton	Mayor's Office
Superintendent	Olton ISD	Administration
Mayor	Springlake	Mayor's Office
Superintendent	Springlake-Earth ISD	Administration
Mayor	Sudan	Mayor's Office
Superintendent	Sudan ISD	Administration
Emergency Management Coordinator	Lynn County	Office of Emergency Management
Executive Director	Lynn County Hospital District	Administration
Mayor	New Home	Mayor's Office
Superintendent	New Home ISD	Administration
Mayor; Mayor Pro-Tem	O'Donnell	Mayor's Office; City Council
Superintendent	O'Donnell ISD	Administration
City Administrator	Tahoka	Administration
Superintendent	Tahoka ISD	Administration
Mayor	Wilson	Mayor's Office
Superintendent	Wilson ISD	Administration

Once the planning team was established, members developed a schedule with specific goals and proposed meeting dates over the planning period.

Hazard mitigation planning team (HMPT) members contributed to the following activities throughout the planning process:

1. Providing technical assistance and necessary data to the HMPT.
2. Scheduling, coordinating, and facilitating community meetings.
3. Providing necessary materials for public planning meetings.
4. Collecting and analyzing data.
5. Developing mitigation goals and implementation strategies.
6. Preparing the first draft of the plan and providing technical writing assistance for review, editing, and formatting.

Each member of the HMPT participated in the following activities associated with development of the plan:

1. Identifying, contacting, coordinating, and implementing input from stakeholders.
2. Attending, conferencing in, or providing meeting support and information for regular HMPT meetings.
3. Identifying hazards and estimating potential losses from future hazard events.

4. Developing and prioritizing mitigation actions to address identified risks.
5. Coordinating public meetings to develop the plan.
6. Identifying community resources available to support planning effort.
7. Submitting proposed plan to all appropriate departments for review and comment, and working to incorporate the resulting comments into the proposed plan.

Table 3: Plan Schedule

Proposed Timeline	May	June	July	August	September	October	November	December	January	February	March	April	May	Completion
Organize Resources and Identify Planning Team														Jun-19
Create Outreach Strategy														Jun-19
Review Community Capabilities														Dec-19
Conduct Risk Assessment														Feb-20
Identify Mitigation Goals and Actions														Apr-20
Develop Action Plan for Implementation														Apr-20
Identify Plan Maintenance Procedures														Apr-20
Review Final Draft														Apr-20
Submit Plan to State and FEMA														May-20
Adopt Plan														Nov-20

Meetings	May	June	July	August	September	October	November	December	January	February	March	April	May	Completion
Local Contact														June 2019
Planning Team														8/12/2019 11/4/2019 Jan. 2020
Public Outreach														1/2020 2.2020
Stakeholder Outreach														Jan. to Feb. 2020

1) Existing Plans, Reports, Ordinances, and Technical Information Sources

Each planning team member worked to collect and provide the input and information necessary to develop the hazard mitigation strategy. Research was coordinated and conducted by local planning team members. The local planning team reviewed the following documents during the planning process:

Table 4: Plan Data Sources and Incorporation

Data Source	Data Incorporation	Purpose
Littlefield Weeds, Rubbish, and other Unsanitary or Unsanitary Conditions	Flood damage prevention and fire prevention requirements	Review the measures already being taken to address the flood and wildfire hazards as well as opportunities for additional measures
Littlefield Minimum Building and Dwelling Standards; Abatement of Nuisance or Dangerous Structures	Unsafe building definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Littlefield Flood Hazard Prevention	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Littlefield Mobile Homes and Mobile Home Parks	Requirements for mobile homes	Identifying existing requirements and restrictions for mobile homes as well as opportunities for additional measures
Littlefield Streets and Sidewalks	Rules for trees, shrubs, and other landscaping materials in right-of-way	Identifying existing requirements that may change the impact of natural hazard events
Littlefield Fire Prevention and Protection	Fire prevention requirements	Review the measures already being taken to address the wildfire hazard and opportunities for additional measures
Littlefield Abandoned Properties other than Motor Vehicles	Flood damage prevention and fire prevention requirements	Review the measures already being taken to address the flood and wildfire hazards as well as opportunities for additional measures
Littlefield Junked Vehicles	Abandoned and junked vehicles definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Littlefield Subdivision Ordinance	Subdivision requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Littlefield Zoning Ordinance	Zoning requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Littlefield Flood Damage Prevention Ordinance	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Tahoka Unsafe Buildings	Unsafe building definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Tahoka Stagnant Water, Carrion, Filth, Tall Weeds and Grass	Flood damage prevention and fire prevention requirements	Review the measures already being taken to address the flood and wildfire hazards as well as opportunities for additional measures
Tahoka Junked Vehicles	Abandoned and junked vehicles definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Tahoka Fire Prevention and Protection	Fire prevention requirements	Review the measures already being taken to address the wildfire hazard and opportunities for additional measures
Tahoka Subdivision Ordinance	Subdivision requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Tahoka Zoning Ordinance	Zoning requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Tahoka Flood Damage Prevention Ordinance	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Sudan Improper Disposal or Accumulation of Waste Materials	Flood damage prevention and fire prevention requirements	Review the measures already being taken to address the flood and wildfire hazards as well as opportunities for additional measures

Sudan Junked or Abandoned Vehicles	Abandoned and junked vehicles definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Sudan Substandard Buildings and Other Structures	Unsafe building definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Sudan Flood Damage Prevention Ordinance	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Lynn County Flood Damage Prevention Ordinance	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Lynn County Subdivision Ordinance	Subdivision requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Wilson Zoning Ordinance	Zoning requirements and restrictions	Identifying development restrictions to limit future hazard exposure
Wilson Flood Damage Prevention Ordinance	Flood damage prevention building requirements	Identifying building requirements and restrictions for structures in the floodplain
Wilson Substandard Buildings and Other Structures	Unsafe building definitions and methods for remedy	Identifying measures permitted by an existing ordinance to address issues that may change the impact of natural hazard events
Lamb and Lynn Counties 2018 CHAMPS Reports	Natural hazard data	Review previously compiled natural hazard histories.
Federal Emergency Management Agency (FEMA) DFIRM Flood Zones	Flood zone maps	GIS mapping of flood zones
Lamb and Lynn Counties Appraisal District Data	Property values and parcel counts	Population counts, parcel data, and land use data
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences, damage dollars, and mapping for all hazards
National Inventory of Dams	Dam information	High-hazard dam list
Region O 2016 Water Plan	Determining changing drought impacts	Review expected changes in type / volume of local water demands
State of Texas Hazard Mitigation Plan 2018 Update	Hazard Descriptions	Official descriptions of hazards and their potential impacts
Texas Forest Service-Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and wildfire vulnerability data
Federal Emergency Management Agency (FEMA) DFIRM Flood Zones	Flood zone maps	GIS mapping of flood zones
Lamb and Lynn Counties 2018 CHAMPS Report	Natural hazard data	Review previously compiled natural hazard histories.
Lamb and Lynn Counties Appraisal District Data	Property values and parcel counts	Population counts, parcel data, and land use data
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences, damage dollars, and mapping for all hazards
National Inventory of Dams	Dam information	High-hazard dam list
Region O 2016 Water Plan	Determining changing drought impacts	Review expected changes in type / volume of local water demands
State of Texas Hazard Mitigation Plan 2018 Update	Hazard Descriptions	Official descriptions of hazards and their potential impacts
Texas Forest Service-Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and wildfire vulnerability data

Additional information sources included: FEMA, the National Centers for Environmental Information, formerly the National Climatic Data Center, the Texas State Data Center, the Texas A&M Wildfire Risk Assessment Portal, USDA Census of Agriculture, United States Geological Survey, Vaisala, and specific details about previous natural hazard events from planning team participants, the Emergency Management Coordinators of Lamb and Lynn Counties in particular. Sources are noted throughout the document. Report titles and links to the most recently accessed websites hosting the related information are also noted, where appropriate. Area stakeholders contacted to participate in the planning process included the following offices and departments within the participating jurisdictions and neighboring jurisdictions:

Table 5: Local Stakeholders Contacted

Agency or Department	Title	Participated
Bailey County	Emergency Management Coordinator	
Borden County	Emergency Management Coordinator	
Castro County	Emergency Management Coordinator	
Cochran County	Emergency Management Coordinator	
Crosby County	Emergency Management Coordinator	
Dawson County	Emergency Management Coordinator	
Garza County	Emergency Management Coordinator	
Hale County	Emergency Management Coordinator	
Hockley County	Emergency Management Coordinator	
Lubbock County	Emergency Management Coordinator	
Parmer County	Emergency Management Coordinator	
Swisher County	Emergency Management Coordinator	
Terry County	Emergency Management Coordinator	

Area stakeholders were contacted by phone and email. In an effort to increase participation, each stakeholder was contacted at least twice. **The planning team wasn't able to collect any information relevant to the planning process.**

2) Project Meetings

The planning team met on three separate occasions. Additional communication was regularly carried out via email and over the phone.

The first Lynn County planning team meeting was held on August 12, 2019. During this meeting, the planning team decided which hazards needed to be addressed in the mitigation plan and which were not relevant. To make these decisions, a hazard handout was produced to show previous occurrences of each hazard, associated deaths and injuries, and total dollar damages. The planning team members provided additional knowledge and input to help the decision-making process.

The team agreed to use the collected hazard data, as the foundation for its hazard risk assessment and ongoing research into hazard extent, impact, and vulnerability.

At the end of the meeting, Planning team members were tasked with coming up with lists of their critical facilities and to start thinking about Mitigation Actions. Planning team members agreed to begin identifying critical facilities.

The second set of planning team meetings were held on November 4, 2019 in Lynn and Lamb Counties. In Lynn County, the EMC met with the plan writer one-on-one to discuss progress on the plan. At this meeting, the Lynn County EMC indicated that he and the Lynn County Judge carefully reviewed the plan draft that was provided prior to the meeting. The EMC indicated that he and the Judge were impressed and satisfied with the draft and that they felt the County and the participating jurisdictions within Lynn County would not likely have revisions to the draft. He also indicated at that time that it was his and the County Judge's wish to not schedule further Planning Team Meetings for the plan as they felt they were unnecessary given the fact that the plan was already very near to complete.

In Lamb County, the plan writer met at the Lamb County Courthouse with the Lamb County EMC and representatives from several participating jurisdictions from within Lamb County. At this meeting, the Lamb County planning team agreed with the hazards that had been chosen for Lynn County already. Also at this meeting, planning team members were tasked with revising the Critical Facilities list if needed and with revising their specific Mitigation Actions if needed. The participants added facilities to the Critical Facilities list.

After this second set of meetings, it was agreed upon by the participants that the plan was far enough along that further physical meetings would not be needed and that contacts and discussions could continue over the phone and email as needed.

The planning team reviewed the completed document, discussed final changes and reviewed the plan submission process in preparation of submitting the plan for official review on May 7, 2018.

3) Public Input

Members of the public in all jurisdictions were invited to review the plan to provide input and feedback during the planning process. In January and February of 2020, advertisements were posted in area newspapers notifying the public of the plan's availability for review at the County EMC offices in both counties.

In an effort to provide an open process and collect any missing information related to hazard history, vulnerability, and impact, members of the public were given the opportunity to review an in-progress draft of the plan at the following locations before the second meeting: the Kerr

County Courthouse with the Commissioners’ Court Coordinator and County Clerk, the Butt-Holdsworth Memorial Library, and the City of Kerrville Clerk’s Office.

The public was also given an opportunity to review and comment on the completed draft before the third public hearing. The draft was available at the following locations: the Kerr County Courthouse with the Commissioners’ Court Coordinator and County Clerk, the Butt-Holdsworth Memorial Library, and the City of Kerrville Clerk’s Office.

Members of the public attended the public hearings, offered comments on the plan drafts made available during the planning process, and provided valuable information that helped planning team members locate important information about previous hazard events and their impacts, as well as identifying specific mitigation actions.

4) Plan Maintenance

The hazard mitigation plan is not a static document. As conditions change and mitigation actions are implemented, the plan will need to be updated to reflect new and changing conditions in each jurisdiction.

The planning team has identified specific departments to oversee action implementation in each jurisdiction. The planning team has also identified potential funding sources and an implementation timeframe for each mitigation action. The expected timeframes will be an important component in determining whether or not actions are implemented efficiently. The departments or persons identified for each jurisdiction include but are not limited to:

Table 6: Maintenance Responsibility

Title	Jurisdiction	Agency or Department
Emergency Management Coordinator	Lamb County	Office of Emergency Management
Mayor	Amherst	Mayor’s Office
Mayor	Earth	Mayor’s Office
Executive Director	Lamb County Healthcare Center	Administration
Mayor; City Manager	Littlefield	Mayor’s Office; Administration
Superintendent	Littlefield ISD	Administration
Mayor	Olton	Mayor’s Office
Superintendent	Olton ISD	Administration
Mayor	Springlake	Mayor’s Office
Superintendent	Springlake-Earth ISD	Administration
Mayor	Sudan	Mayor’s Office
Superintendent	Sudan ISD	Administration
Emergency Management Coordinator	Lynn County	Office of Emergency Management
Executive Director	Lynn County Hospital District	Administration
Mayor	New Home	Mayor’s Office
Superintendent	New Home ISD	Administration
Mayor; Mayor Pro-Tem	O’Donnell	Mayor’s Office; City Council
Superintendent	O’Donnell ISD	Administration
City Administrator	Tahoka	Administration
Superintendent	Tahoka ISD	Administration
Mayor	Wilson	Mayor’s Office
Superintendent	Wilson ISD	Administration

Within one year of adoption of this plan, each department or agency will review and, as appropriate, integrate implementation of their respective mitigation actions with their existing internal plans and policies relating to capital improvements, land use, design and construction, and emergency management.

On a biannual basis, representatives from each jurisdiction serving as the planning team will evaluate progress on implementing the plan's mitigation actions. The planning team will review departmental / agency findings, public input, and future development plans to evaluate the effectiveness and appropriateness of the plan.

In light of changing funding sources, hazard vulnerability, and local mitigation priorities, the planning team will identify changes to plan goals and priorities for their respective jurisdictions, and they will report their findings to the rest of the planning team. It will be the planning team's responsibility to identify relevant reasons for delay or obstacles to completing the plan's mitigation actions, along with recommended strategies to overcome any deficiencies.

Any significant change to the plan, including but not limited to changing mitigation actions, abandoning mitigation actions, or pursuing new mitigation actions, will require the Counties and participating jurisdictions to provide opportunities for the public to make its views and concerns known. Lamb and Lynn Counties and the participating jurisdictions will provide notice to the public through announcements in local papers. Paper fliers and digital notifications will be posted as appropriate in each jurisdiction making changes to its plan components.

5) Plan Monitoring

The counties' Emergency Management Coordinators (EMCs) will be responsible for the overall continued coordination and monitoring of the mitigation plan and the actions assigned for each hazard. The agency or department identified above in Table 6 shall serve as the responsible party for each respective jurisdiction. The plan monitoring worksheet outlined below will serve as the basis for revision of the plan.

At a minimum, the mitigation plan will be reviewed by the EMCs and planning team representatives from each jurisdiction quarterly, during budget workshops, and as other plans are being developed or revised including: comprehensive plans, capital improvement project plans, and emergency plans.

To execute the monitoring requirement, the EMCs will produce a plan monitoring worksheet to be completed by each jurisdiction's representative. The worksheet will identify and track the following for each plan element:

Planning Process Monitoring

Planning team members will identify the expected implementation schedule for prioritized mitigation actions, as well as any setbacks or delays. They will identify opportunities to incorporate new information. They will track continued stakeholder outreach and public input.

Hazard Identification and Risk Assessment Monitoring

Planning team members will track changes to local hazard vulnerabilities. When necessary they will amend the plan by including newly identified vulnerabilities and/or removing those vulnerabilities that have been successfully mitigated. They will reassess vulnerability as new information becomes available, including but not limited to updated FEMA FIRM maps and TxWRAP WUI maps. They will maintain a record of hazard events, and will use that information to update the plan, especially when new events alter a hazard's extent by exceeding previously known worst-case events.

Mitigation Strategy Monitoring

Planning team members will assess the effectiveness of implemented mitigation actions. They will use those assessments to affirm or amend the prioritization of remaining actions. They will update the mitigation strategy to reflect any changes in local regulatory capacity, including but not limited to the adoption of new ordinances, the enhancement of existing ordinances, or changes in ordinance enforcement. They will also take into account changes in information, technology, and other resources that may create opportunities to identify and pursue better mitigation actions than those identified during the initial planning process.

Plan Review, Evaluation, and Implementation Monitoring

Planning team members will measure the capacity of their review, evaluation, and implementation monitoring efforts to provide them with the information they need to make informed decisions. In particular, they will identify opportunities to refine how each element is being tracked and whether or not the proposed tracking methods create blind spots or other shortcomings that may prevent the planning team from fully evaluating the plan's efficacy. Regularly monitoring the plan implementation process in each participating jurisdiction will ensure that every component of the plan gets reviewed for potential amendments. After adoption of this plan, it will be posted to each participating jurisdiction's website or Facebook page, and a printed copy will be available for review in the Offices of Emergency Management for Lamb and Lynn Counties. The goal is to create the opportunity for constant and continued feedback from local officials, stakeholders, and the general public.

6) Plan Evaluation

Proper evaluation will measure the progress and effectiveness of the mitigation actions identified in the plan. On a bi-annual basis the Emergency Management Coordinators along with the planning team representatives from each jurisdiction will use the following criteria, along with additional metrics as necessary, to assess the effectiveness of the plan:

- Do the specified goals and objectives still address current and expected conditions?
- Has the nature, magnitude, and/or risk of any hazard changed?
- Have there been changes in land development that the plan needs to address?
- Are available resources suitable for implementing the plan?
- Is funding budgeted or available to successfully implement prioritized mitigation actions?
- Are there opportunities in the local budgeting process or local, state, and national grant funding cycles to increase funding to implement mitigation actions?

Other steps will include site visits to completed mitigation projects in each jurisdiction to measure and ensure their success. In the event that a mitigation project fails to meet its goal, the planning team will evaluate the causes of the shortcoming. The planning team will use their assessment to amend the project and related projects in other jurisdictions, allocate additional resources to achieve the desired outcome for the project and related projects in other jurisdictions, or replace the project and similar projects in other jurisdictions with better projects. The EMCs and planning team members will also work to implement any additional revisions required to ensure that the plan and their respective jurisdiction is in full compliance with federal regulations and state statutes.

7) Plan Update

The plan is designed to address a five-year period. In accordance with 44CFR Section 201.6, it will be updated every five years to maintain compliance with State and Federal regulations.

However, at least every two years from the date of approval, and quarterly on the fifth and final year of the plan, the EMCs and planning team representatives from each participating jurisdiction will thoroughly review any significant changes in their respective jurisdictions that might impact the plan update.

During the update process, planning team representatives will do the following for their respective jurisdictions: collect data on recent occurrences of each natural hazard identified in the plan, record how each natural hazard impacted their jurisdiction during the preceding years, determine whether or not implemented mitigation actions produced the desired outcomes in their jurisdiction, and determine whether or not to modify their jurisdiction's list of hazards to be addressed in the update.

Additional considerations to address on a jurisdictional level include but are not limited to: changes in local development, changes in exposure to natural hazards, the development of new mitigation capabilities or techniques, and revisions to state or federal legislation.

The update process will provide continued opportunity for the public and elected officials to determine which actions succeeded, failed, or are no longer relevant. It is also an opportunity for each jurisdiction to identify recent losses due to natural hazards and to consider whether or not any of those losses could have been avoided.

3. Determining Risk

1) Risk Assessment

Throughout the plan, each hazard addressed will be considered in light of its history, likelihood of future occurrence, extent, jurisdictional vulnerability, location and impact.

Likelihood of Future Occurrence is measured based on a hazard's expected frequency of occurrence in light of its previous frequency. Each hazard's likelihood of occurrence will be considered using the following standardized parameters:

- **Highly likely** – event probable in the next year
- **Likely** – event probable in the next three years
- **Occasional** – event possible in the next five years
- **Unlikely** – event possible in the next 10 years

Given this plan's five-year duration, hazards likely to occur during that period will be given priority when selecting and prioritizing mitigation actions.

2) Distribution of Property by Market Value

Table 7: Estimated Potential Damage Values in Each Jurisdiction¹

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570
Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880
New Home ISD	916	\$100,075,260
City of O'Donnell	548	\$16,945,540

¹ Property values and parcel counts based on Lamb and Lynn Counties Central Appraisal District Data, unless otherwise noted.

O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

3) Distribution of Vulnerable Populations

For planning purposes, the vulnerable populations of each jurisdiction were mapped using Census information that indicated concentrations of populations that were elderly, young, did not have High School degrees, were not proficient speaking English, had low incomes, or lived in structures over 50 years old. This data was aggregated into one condition called “vulnerability” and is mapped in Figures 1 and 2 below. Residents falling into these categories were deemed most likely to suffer disproportionate losses due to natural hazards because of their potentially limited means to prepare for and recover from a hazard event. The following table details for the participating cities and counties three of these vulnerability fields: young, elderly, and low income populations.

Table 8: Vulnerable Populations by Jurisdiction

Jurisdiction	Estimated Vulnerable Population Totals		
	Young ²	Elderly ³	Low Income (≤ \$25,000 Annually) ⁴
Lamb County	5859	2227	3715
City of Amherst	308	134	175
City of Earth	581	159	265
City of Littlefield	2721	911	1781
City of Olton	712	381	643
City of Springlake	26	24	13
City of Sudan	458	143	297
Lynn County	2329	933	1710
City of New Home	316	42	96
City of O’Donnell	417	140	276
City of Tahoka	896	414	1020
City of Wilson	111	60	117

In addition to identifying vulnerable population categories, the planning team worked to identify specific locations that are likely home to high concentrations of vulnerable residents.

There are 131⁵ affordable apartments in Lamb County and 74 in Lynn County that set rent based on income. Residents of low-income housing and/or subsidized housing facilities are expected to suffer disproportionate losses due to natural hazards because of their potentially limited means to prepare for and recover from a hazard event. The following apartment complexes offer affordable units in Lamb and Lynn Counties:

College Heights – 934 E. 14th St., Littlefield, TX

² Table S1401, 2013-2017 ACS, nursery school through high school totals.

³ Table DP-1, 2010 Census, used to estimate current 65+ population

⁴ Table S1901, 2013-2017 ACS. Average household sizes from Table B25010, 2013-2017 ACS

⁵ <https://affordablehousingonline.com>

Texas – 13th B, Olton, TX

Littlefield Manor – 1601A S. Wicker Ave., Littlefield, TX

Earth Housing Development Corp – 101 SW 2nd St., Earth, TX

Amherst Capital Apartments, 1st St. and Madison Ave., Amherst, TX

2109 S. 1st St. – 2109 S. 1st St., Tahoka, TX

West Gates Apartments – 2100 N. 7th St., Tahoka, TX

In addition there are two Public Housing Authorities that serve Lamb County (South Plains Regional Housing Authority and Housing Authority of Olton) and three that serve Lynn County (South Plains Regional Housing Authority, Tahoka Housing Authority, and the O'Donnell Housing Authority).

The participating jurisdictions have used housing type and housing conditions to identify additional vulnerable areas and concentrations of vulnerable residents.

Mobile and manufactured homes can be found throughout Lamb and Lynn Counties. Mostly these are scattered throughout the cities and rural areas although there is a small concentration of them at the Sunset Slope Mobile Home Park in Littlefield.

There are also some RV parks in Lamb and Lynn Counties: Sudan RV Park in Sudan, Waylon Jennings RV Park and Molly's RV Park in Littlefield, and the Twin Pines RV Park in Wilson. These parks' populations fluctuate on a seasonal basis. Due to the express portability of RVs, the majority of these structures are expected to evacuate ahead of hazard events with significant warning times. However, RVs probably won't have time to evacuate ahead of less predictable hazard events like tornados.

The jurisdictions have determined that homes in sub-standard condition may indicate that residents are low-income or otherwise means-limited and thus more vulnerable to certain hazards.

To be considered standard condition, a home must show few or no minor visible exterior defects such as:

- cracked, peeling, or missing paint
- cracked, sagging, rotting, or missing siding, steps, porch planks, or other wooden surfaces
- cracked or broken window panes
- cracked masonry, brick, or mortar surfaces
- missing or damaged roof shingles
- small rust spots on mobile homes

The home must generally meet building codes, and there can't be any detriment to health and safety present.

Structures in sub-standard condition may provide less protection to residents during certain hazard events like tropical storms, tornados, or hurricanes. Furthermore, because they're already in a state of disrepair, additional damages due to hazard events may compound existing ones and potentially make these homes uninhabitable.

**Vulnerability Index
Lamb County, TX**

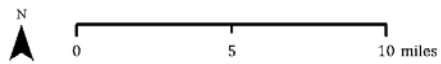
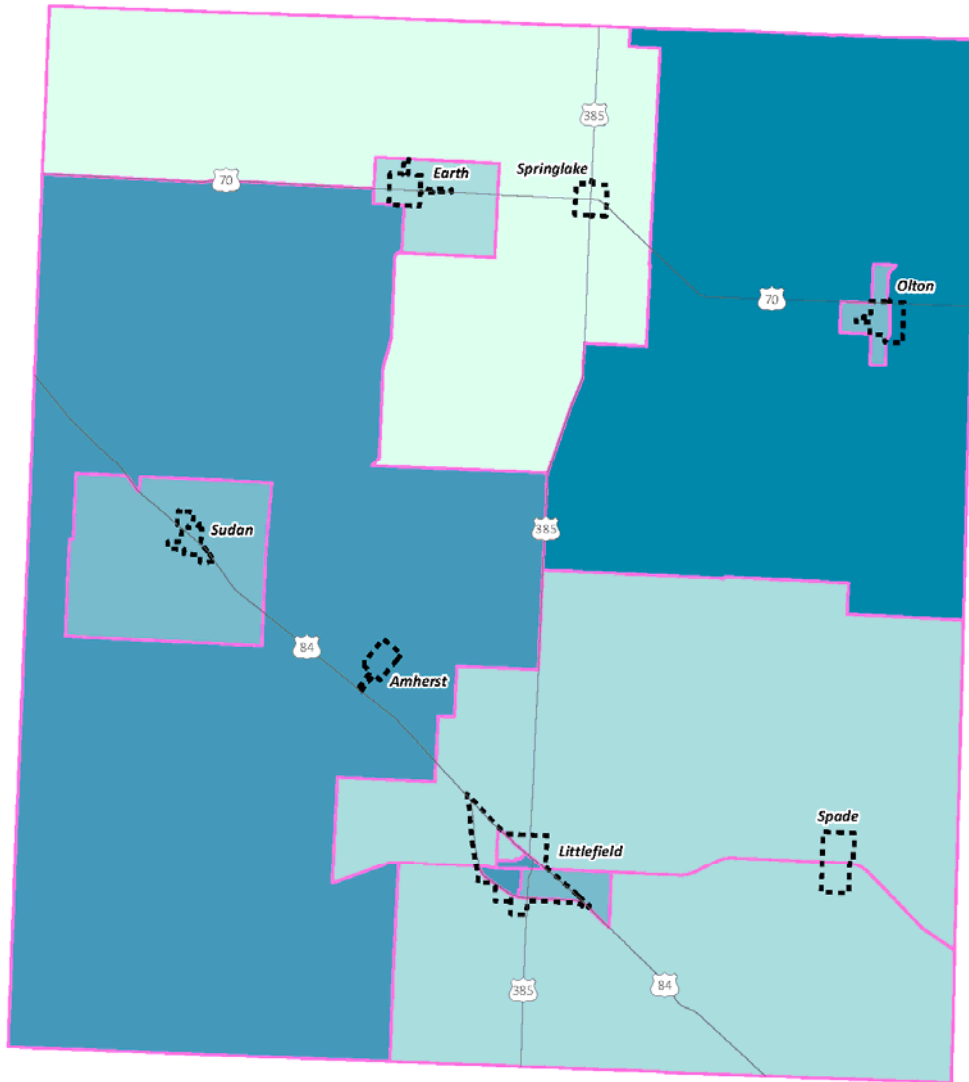


Figure 1: Lamb County Concentrations of Vulnerable Populations

**Vulnerability Index
Lynn County, TX**

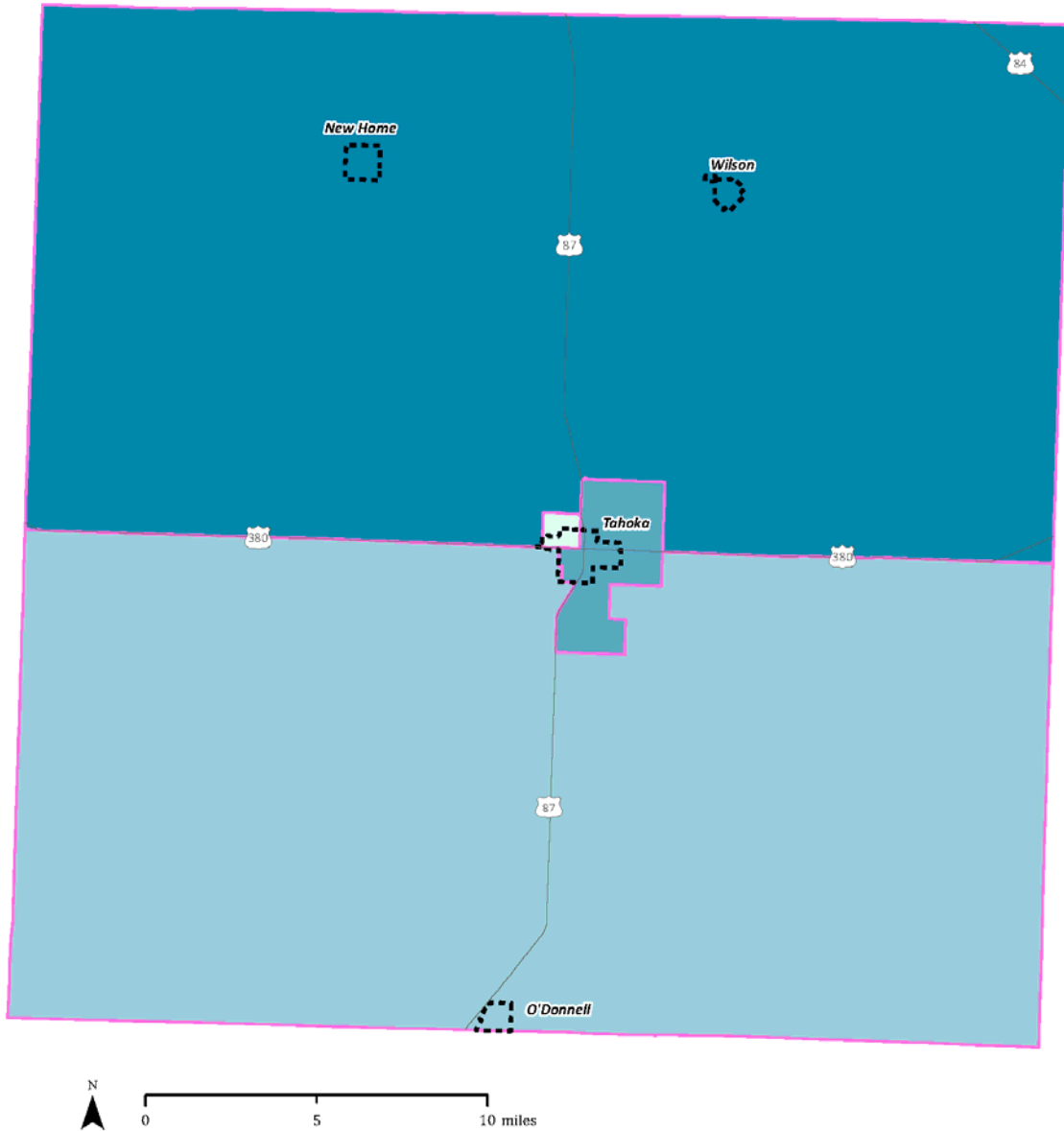


Figure 2: Lynn County Concentrations of Vulnerable Populations

4. Flood

According to the Texas State Hazard Mitigation Plan, Floods are defined as:

[T]he accumulation of water within a water body and the overflow of excess water into adjacent floodplain lands.

In hydrologic analysis, runoff is that portion of rainfall which, in combination with other factors, contributes to the stream flow of any surface drainage way. When runoff exceeds the carrying capacity of the stream or drainage, flooding occurs. Runoff is a product of two major groups of factors, climatic and physiographic. Climatic factors may include precipitation, evaporation, transpiration and interception. Physiographic factors would include the characteristics of the watershed such as size, shape and slope of the basin's drainage area, the general land use within the basin. Average annual runoff decreases unevenly moving east to west across Texas, the localized variations based on these factors listed above.

When surface water runoff enters into streams, rivers, or dry creek beds, riverine flooding conditions occur whenever the water carrying capacity of the water channel is compromised by excess runoff.

If the local basin drainage area is relatively flat, shallow, slow-moving floodwater can last for days. In drainage areas with substantial slope, or the channel is narrow and confined, rapidly moving and extreme high water conditions, called a flash flood, can occur.

1) Flood History

The planning team relied on data from the National Centers for Environmental Information (NCEI), formerly the National Center for Climatic Data, and the Lamb and Lynn Counties 2018 CHAMPS reports to develop a flood history for the County and each participating jurisdiction. The data gathered reflects the most up-to-date flood data available for each jurisdiction at the time of writing.

A) Lamb County

Table 9: Lamb County Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
LAMB	6/14/1996 14:45	Flash Flood	0	0				
LAMB	6/24/1997 21:45	Flash Flood	0	0				
LAMB	4/30/1999 17:35	Flash Flood	0	0				
LAMB	6/21/1999 19:50	Flash Flood	0	0	\$100,000		\$152,736	
LAMB	6/1/2000 15:00	Heavy Rain	0	0				
LAMB	6/1/2000 18:28	Flash Flood	0	0				
LAMB	6/11/2000 14:00	Flash Flood	0	0		\$250,000		\$369,421

LAMB	6/17/2000 4:45	Flash Flood	0	0	\$10,000	\$250,000	\$14,777	\$369,421
LAMB	5/3/2001 19:40	Flash Flood	0	0				
LAMB	5/4/2001 1:00	Flash Flood	0	0				
LAMB	4/2/2004 17:21	Flash Flood	0	0	\$30,000		\$40,411	
LAMB	4/8/2004 19:35	Flash Flood	0	0	\$30,000		\$40,411	
LAMB	8/27/2005 21:30	Flash Flood	0	0				
LAMB	8/17/2008 9:00	Heavy Rain	0	0				
LAMB	9/18/2014 6:30	Flood	0	0				
LAMB	6/1/2016 9:30	Flood	0	0		\$350,000		\$371,858

B) City of Amherst

Table 10: City of Amherst Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
AMHERST	8/27/2005 21:30	Flash Flood	0	0	\$0	\$0	\$0	\$0

C) City of Earth

Table 11: City of Earth Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
EARTH	6/24/1997 21:45	Flash Flood	0	0				
EARTH	8/17/2008 9:00	Heavy Rain	0	0				
EARTH	6/1/2016 9:30	Flood	0	0		\$350,000		\$371,858

D) Lamb County Healthcare Center

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Lamb County Healthcare Center property. Moreover, the Center’s property is located outside of any FEMA Special Flood Hazard Area. However, given the Center’s location within the planning area, its flood history is known to be similar to the City of Littlefield’s and the Center is still vulnerable to flooding’s indirect effects.

E) City of Littlefield

Table 12: City of Littlefield Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
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								\$2,019	\$2,019
LITTLEFIELD	6/11/2000 14:00	Flash Flood	0	0		\$250,000		\$369,421	
LITTLEFIELD	6/17/2000 4:45	Flash Flood	0	0	\$10,000	\$250,000	\$14,777	\$369,421	

F) Littlefield ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Littlefield ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area, its flood history is known to be similar to the City of Littlefield’s and the ISD is still vulnerable to flooding’s indirect effects.

G) City of Olton

Table 13: City of Olton Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
OLTON	4/30/1999 17:35	Flash Flood	0	0	\$0	\$0	\$0	\$0
OLTON	9/18/2014 6:30	Flood	0	0	\$0	\$0	\$0	\$0

H) Olton ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Olton ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area, its flood history is known to be similar to the City of Olton’s and the ISD is still vulnerable to flooding’s indirect effects.

I) City of Springlake

No flood history data was found for the City of Springlake. However, the City does have a small FEMA Special Flood Hazard Area within its corporate boundary although no development was found to be located within this flood hazard area.

J) Springlake-Earth ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Springlake-Earth ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area and is not located in either the City of Springlake or the City of Earth. However, the ISD is still vulnerable to flooding’s indirect effects.

K) City of Sudan

Table 14: City of Sudan Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019

SUDAN	6/14/1996 14:45	Flash Flood	0	0				
SUDAN	6/1/2000 18:28	Flash Flood	0	0				
SUDAN	4/2/2004 17:21	Flash Flood	0	0	\$30,000	\$38,036	\$40,774	\$51,696
SUDAN	4/8/2004 19:35	Flash Flood	0	0	\$30,000	\$38,036	\$40,774	\$51,696

L) Sudan ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Sudan ISD property. Moreover, the ISD's property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD's locations within the planning area, its flood history is known to be similar to the City of Sudan's and the ISD is still vulnerable to flooding's indirect effects.

M) Lynn County

Table 15: Lynn County Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
LYNN	8/24/1996 11:30	Flash Flood	0	0				
LYNN	8/28/1996 14:30	Flash Flood	0	0				
LYNN	6/11/1999 19:45	Flash Flood	0	0				
LYNN	6/22/1999 3:30	Flash Flood	0	0				
LYNN	5/25/2000 17:15	Flash Flood	0	0				
LYNN	6/1/2000 15:00	Heavy Rain	0	0				
LYNN	6/25/2000 20:30	Flash Flood	0	0				
LYNN	6/28/2000 19:38	Flash Flood	0	0				
LYNN	6/29/2000 0:00	Flash Flood	0	0				
LYNN	10/25/2000 10:00	Flash Flood	0	0				
LYNN	8/20/2002 20:05	Flash Flood	0	0				
LYNN	6/17/2004 18:00	Flash Flood	0	0				
LYNN	7/28/2004 5:30	Flash Flood	0	0				
LYNN	9/30/2004 18:55	Flash Flood	0	0				
LYNN	9/30/2004 19:05	Flash Flood	0	0				
LYNN	8/5/2005 0:00	Flash Flood	0	0				
LYNN	8/12/2006 23:00	Flash Flood	0	0				
LYNN	8/26/2006 14:43	Flash Flood	0	0				
LYNN	3/25/2007 19:23	Flash Flood	0	0	\$30,000		\$36,825	
LYNN	5/8/2007 11:00	Flood	0	0				
LYNN	5/28/2007 21:25	Flash Flood	0	0	\$30,000		\$36,825	
LYNN	6/3/2007 0:30	Flash Flood	0	0				
LYNN	9/11/2008 15:00	Flood	0	0	\$10,000		\$11,819	

LYNN	4/16/2009 21:10	Flash Flood	0	0				
LYNN	4/22/2010 20:56	Flood	0	0				
LYNN	6/14/2010 13:20	Heavy Rain	0	0				
LYNN	7/1/2010 12:00	Heavy Rain	0	0				
LYNN	7/4/2010 1:58	Flash Flood	0	0	\$2,500,000		\$2,916,751	
LYNN	7/4/2010 10:00	Flood	0	0		\$2,500,000		\$2,916,751
LYNN	6/16/2012 16:30	Flood	0	0		\$200,000		\$221,653
LYNN	6/17/2013 19:46	Flood	0	0	\$2,000		\$2,184	
LYNN	9/11/2014 8:30	Heavy Rain	0	0				
LYNN	9/21/2014 12:45	Flood	0	0				
LYNN	5/4/2015 18:00	Flash Flood	0	1	\$300,000	\$250,000,000	\$322,098	\$268,414,922
LYNN	5/4/2015 21:00	Flood	0	0				
LYNN	6/12/2015 18:40	Flood	0	0		\$2,500,000		\$2,684,149
LYNN	7/7/2015 1:00	Flood	0	0		\$500,000		\$536,830
LYNN	8/3/2015 18:30	Flood	0	0		\$250,000		\$268,415
LYNN		FLOODING			\$185,053		\$198,684	

N) Lynn County Hospital District

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Lynn County Hospital District property. Moreover, the District’s property is located outside of any FEMA Special Flood Hazard Area. However, given the District’s location within the planning area, its flood history is known to be similar to the City of Tahoka’s and the District is still vulnerable to flooding’s indirect effects.

O) City of New Home

Table 16: City of New Home Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
NEW HOME	6/25/2000 20:30	Flash Flood	0	0				
NEW HOME	5/28/2007 21:25	Flash Flood	0	0	\$30,000		\$36,825	
NEW HOME ARPT	4/22/2010 20:56	Flood	0	0				
NEW HOME	7/1/2010 12:00	Heavy Rain	0	0				
NEW HOME ARPT	5/4/2015 18:00	Flash Flood	0	1	\$300,000	\$250,000,000	\$322,098	\$268,414,922

P) New Home ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on New Home ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area,

its flood history is known to be similar to the City of New Home’s and the ISD is still vulnerable to flooding’s indirect effects.

Q) City of O’Donnell

Table 17: City of O’Donnell Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
ODONNELL	5/25/2000 17:15	Flash Flood	0	0				
ODONNELL	10/25/2000 10:00	Flash Flood	0	0				
ODONNELL	6/17/2004 18:00	Flash Flood	0	0				
ODONNELL	8/12/2006 23:00	Flash Flood	0	0				
ODONNELL	7/4/2010 10:00	Flood	0	0		\$2,500,000		\$2,916,751
ODONNELL	7/4/2010 1:58	Flash Flood	0	0	\$2,500,000		\$2,916,751	

R) O’Donnell ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on O’Donnell ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area, its flood history is known to be similar to the City of O’Donnell’s and the ISD is still vulnerable to flooding’s indirect effects.

S) City of Tahoka

Table 18: City of Tahoka Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
TAHOKA	8/24/1996 11:30	Flash Flood	0	0				
TAHOKA	8/28/1996 14:30	Flash Flood	0	0				
TAHOKA	6/22/1999 3:30	Flash Flood	0	0				
TAHOKA	7/28/2004 5:30	Flash Flood	0	0				
TAHOKA	9/30/2004 18:55	Flash Flood	0	0				
TAHOKA	9/30/2004 19:05	Flash Flood	0	0				
TAHOKA	8/5/2005 0:00	Flash Flood	0	0				
TAHOKA	8/26/2006 14:43	Flash Flood	0	0				
TAHOKA	3/25/2007 19:23	Flash Flood	0	0	\$30,000		\$36,825	
TAHOKA	5/8/2007 11:00	Flood	0	0				
TAHOKA	6/3/2007 0:30	Flash Flood	0	0				
TAHOKA	4/16/2009 21:10	Flash Flood	0	0				
TAHOKA	6/14/2010 13:20	Heavy Rain	0	0				
TAHOKA	9/11/2014 8:30	Heavy Rain	0	0				
TAHOKA	9/21/2014 12:45	Flood	0	0				

TAHOKA T BAR ARPT	6/17/2013 19:46	Flood	0	0	\$2,000		\$2,184
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T) Tahoka ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Tahoka ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area, its flood history is known to be similar to the City of Tahoka’s and the ISD is still vulnerable to flooding’s indirect effects.

U) City of Wilson

Table 19: City of Wilson Flood History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
							\$2,019	\$2,019
WILSON	5/4/2015 21:00	Flood	0	0				
WILSON	7/7/2015 1:00	Flood	0	0		\$500,000		\$536,829

V) Wilson ISD

Flood data is generally recorded at the county level, so there is no specific information regarding flood events on Wilson ISD property. Moreover, the ISD’s property is located outside of any FEMA Special Flood Hazard Area. However, given the ISD’s locations within the planning area, its flood history is known to be similar to the City of Wilson’s and the ISD is still vulnerable to flooding’s indirect effects.

W) National Flood Insurance Program

The National Flood Insurance Program (NFIP) is administered by FEMA to provide flood insurance coverage to then nation.

A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling ten-year period, since 1978. No participating jurisdictions in Lamb or Lynn Counties contain RL properties.

A severe repetitive loss property is: “a single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding \$5,000 and with cumulative amount of such claims payments exceeding \$20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property. There are no severe repetitive loss properties in Lamb or Lynn Counties or any of the participating jurisdictions.

Flood Damage Prevention

Lamb County has adopted and enforces a flood damage prevention ordinance that requires building permits and approval of the County’s floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The County’s floodplain administrator is responsible for enforcing floodplain

regulations and ensuring regulations meet or exceed the minimum NFIP requirements in unincorporated Lamb County.

The City of Earth has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Earth.

The City of Littlefield has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Littlefield.

The City of Olton has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Olton.

The City of Springlake has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Springlake.

In Lynn County, the City of New Home has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of New Home.

The City of Tahoka has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Tahoka.

The City of Wilson has adopted and enforces a floodplain management ordinance that requires building permits and approval of the City's floodplain administrator before new construction or substantial improvements can begin on any structure located within FEMA special flood hazard areas. The City's floodplain administrator is responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements in the City of Wilson.

None of the other participating jurisdictions are NFIP-eligible communities. All of them are required to pursue floodplain permitting through the three floodplain administrators listed above, depending on which has jurisdiction over the proposed project area. The relevant floodplain administrator will be responsible for enforcing floodplain regulations and ensuring regulations meet or exceed the minimum NFIP requirements.

Floodplain management ordinances and any future updates will guide each regulating jurisdiction as it continues to comply with NFIP requirements through permitting, inspection, and recordkeeping, especially for new and substantially redeveloped construction. Each regulating jurisdiction will continue to encourage its citizens to purchase flood insurance to reduce their flood risk.

The flood mitigation actions outlined in Chapter 17 below were developed with flood mitigation and NFIP compliance in mind. Public awareness in particular will be an ongoing effort in each participating jurisdiction to reduce future losses due to flooding, and it will continue even after recommended corrective actions have been implemented.

2) Likelihood of Future Occurrence

Typically, events with less than a 1% probability of occurrence in the next year or a recurrence interval of greater than every 100 years are classified as unlikely. Events with a 1% to 10% probability of occurrence in the next year or a recurrence interval of 11 to 100 years are classified as occasional. Events with a 10% to 90% probability of occurrence in the next year or a recurrence interval of 1 to 10 years are classified as likely. Events with a 90% to 100% probability of occurrence in the next year or a recurrence interval of less than 1 year are classified as highly likely.

In the case of the FEMA 100-year flood, there's a 1% chance of an event in the next year. The probability of a 100-year flood event in any of the participating jurisdictions is therefore occasional.

3) Extent

Extent is the strength or magnitude of a hazard. The magnitude of a flood event is typically designated by its depth. For this analysis, the primary focus is the FEMA 100-year floodplain because it's the standard used by the NFIP.

The worst floods in Lamb and Lynn Counties and the participating jurisdictions have caused street closures and inflicted physical damages. They have inflicted the \$2019 equivalent of nearly \$3 million in property damages and nearly \$268 million in crop damages. Floods have injured one person.

Floodwater has been as deep as 6' in certain homes, covered bridges spanning the Guadalupe River in over 10' of water, and covered local roads in over 8' of water. The Guadalupe River's highest-ever crest was recorded in August 1978 at 40.9'. During flood events the river has expanded to nearly a mile wide.

Future flood events in the participating jurisdictions may be as deep at 10' (40.9' on the river).

4) Location and Impact

A) Location

Thirteen of the participating jurisdictions (City of Earth, Lamb County Healthcare Center, Littlefield ISD, Olton ISD, Springlake-Earth ISD, City of Sudan, Sudan ISD, Lynn County Hospital District, City of New Home, New Home ISD, O'Donnell ISD, Tahoka ISD, and Wilson ISD) are located outside of any FEMA Special Flood Hazard Area. However, given their proximity to FEMA Special Flood Hazard Areas, and flooding's potential indirect effects, they've chosen to address the hazard.

The following figures detail the location of FEMA Special Flood Hazard Areas in the participating jurisdictions that have them. The figures also illustrate the location and primary land use type of each parcel located within a FEMA Special Flood Hazard Area.

The only floodplains that FEMA has mapped in Lamb and Lynn Counties are all within the boundaries of incorporated cities, so no data exists in the extraterritorial areas of the cities or in the county at large outside of the cities' boundaries.

Lamb County

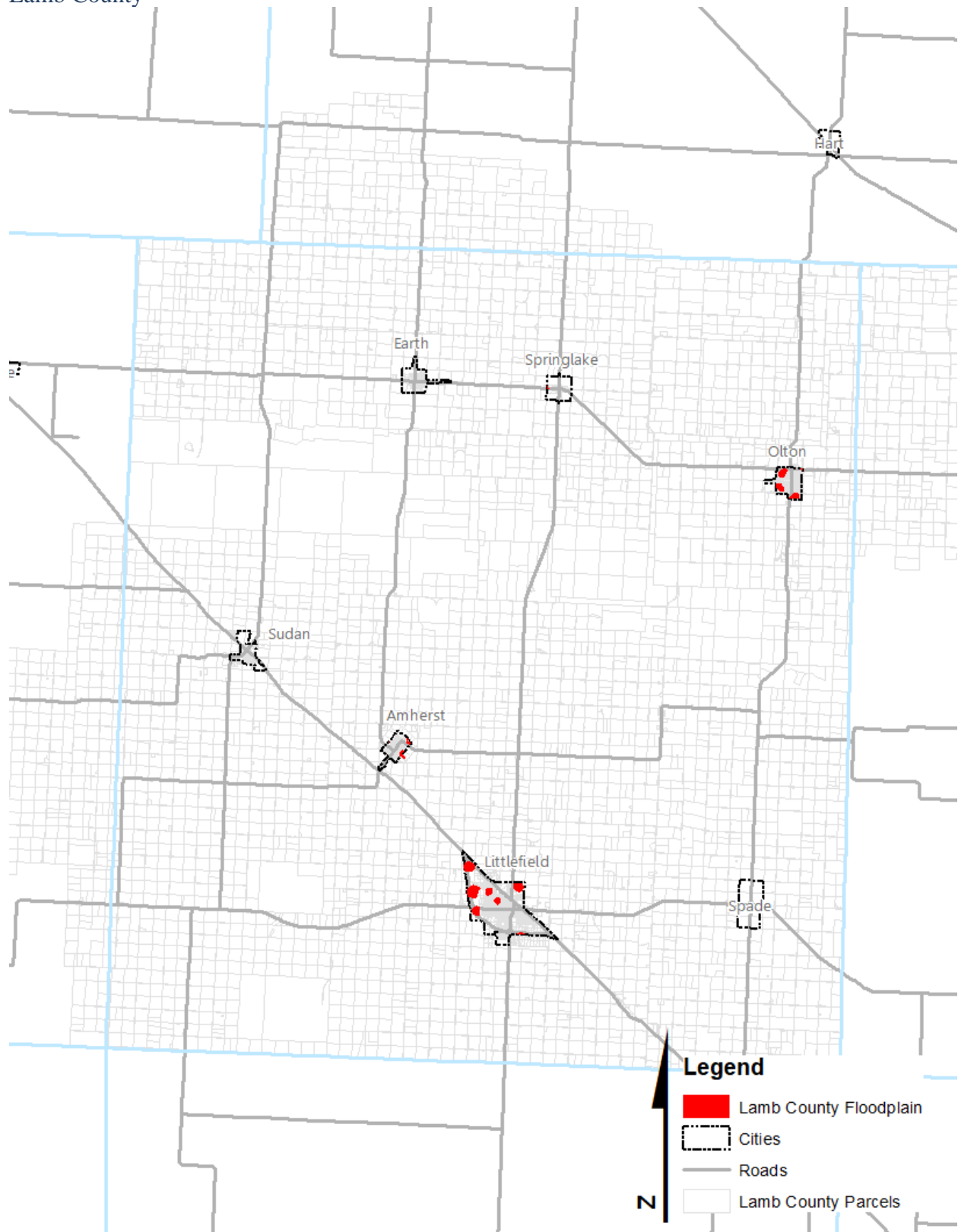


Figure 3: Lamb County FEMA Special Flood Hazard Areas

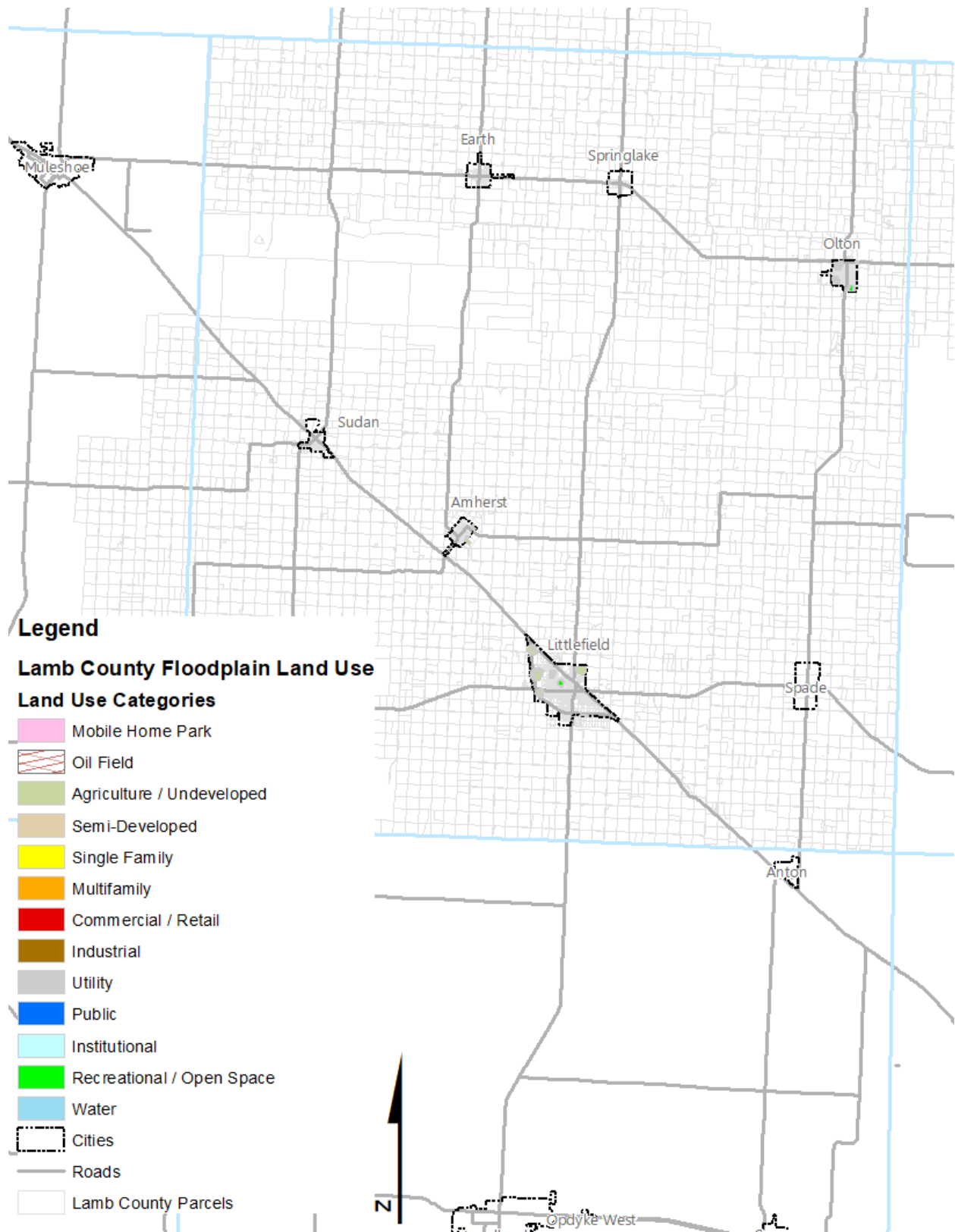


Figure 4: Lamb County Floodplain Land Use

City of Amherst



Figure 5: City of Amherst FEMA Special Flood Hazard Areas

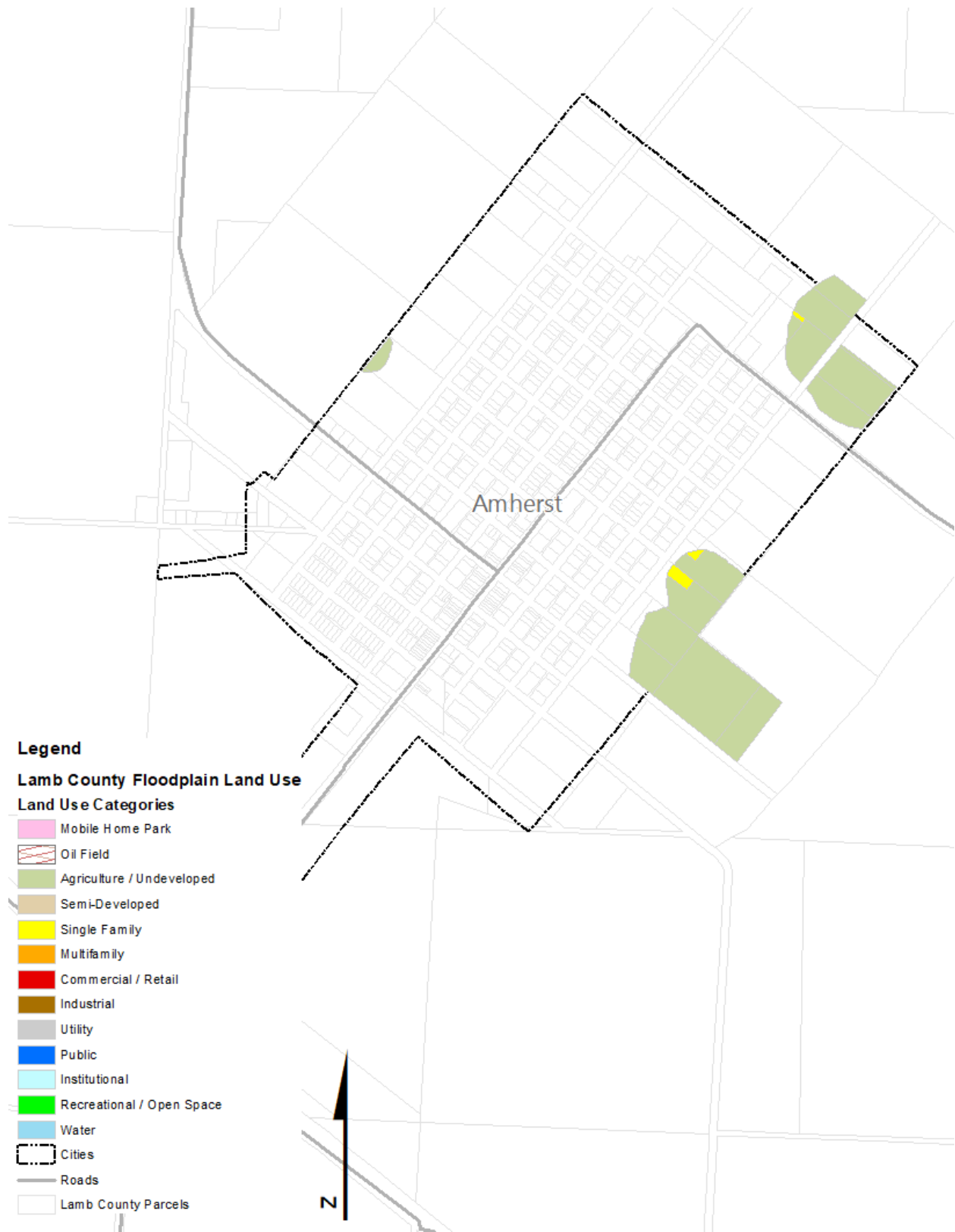


Figure 6: City of Amherst Floodplain Land Use

City of Littlefield



Figure 7: City of Littlefield FEMA Special Flood Hazard Areas

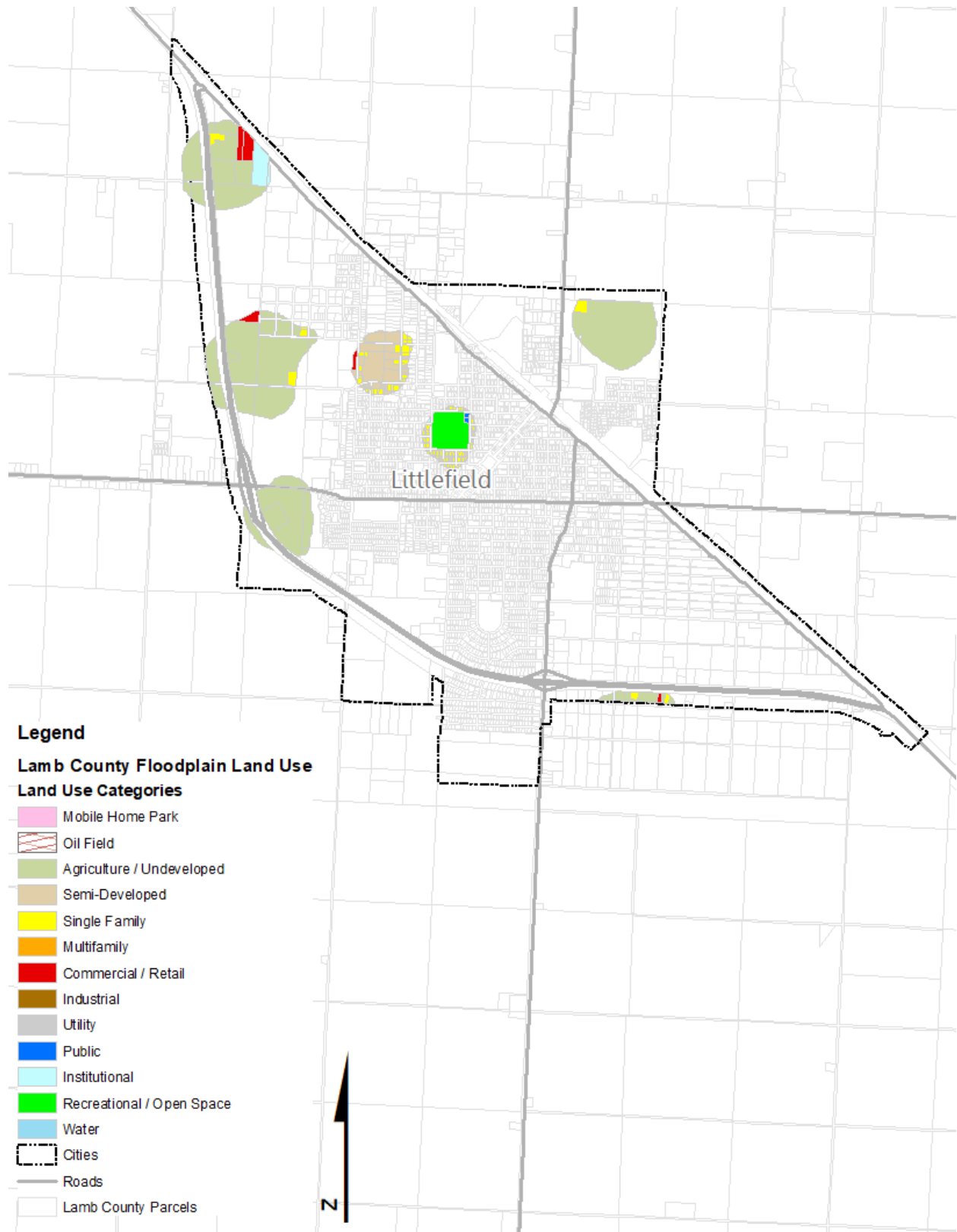


Figure 8: City of Littlefield Floodplain Land Use

City of Olton

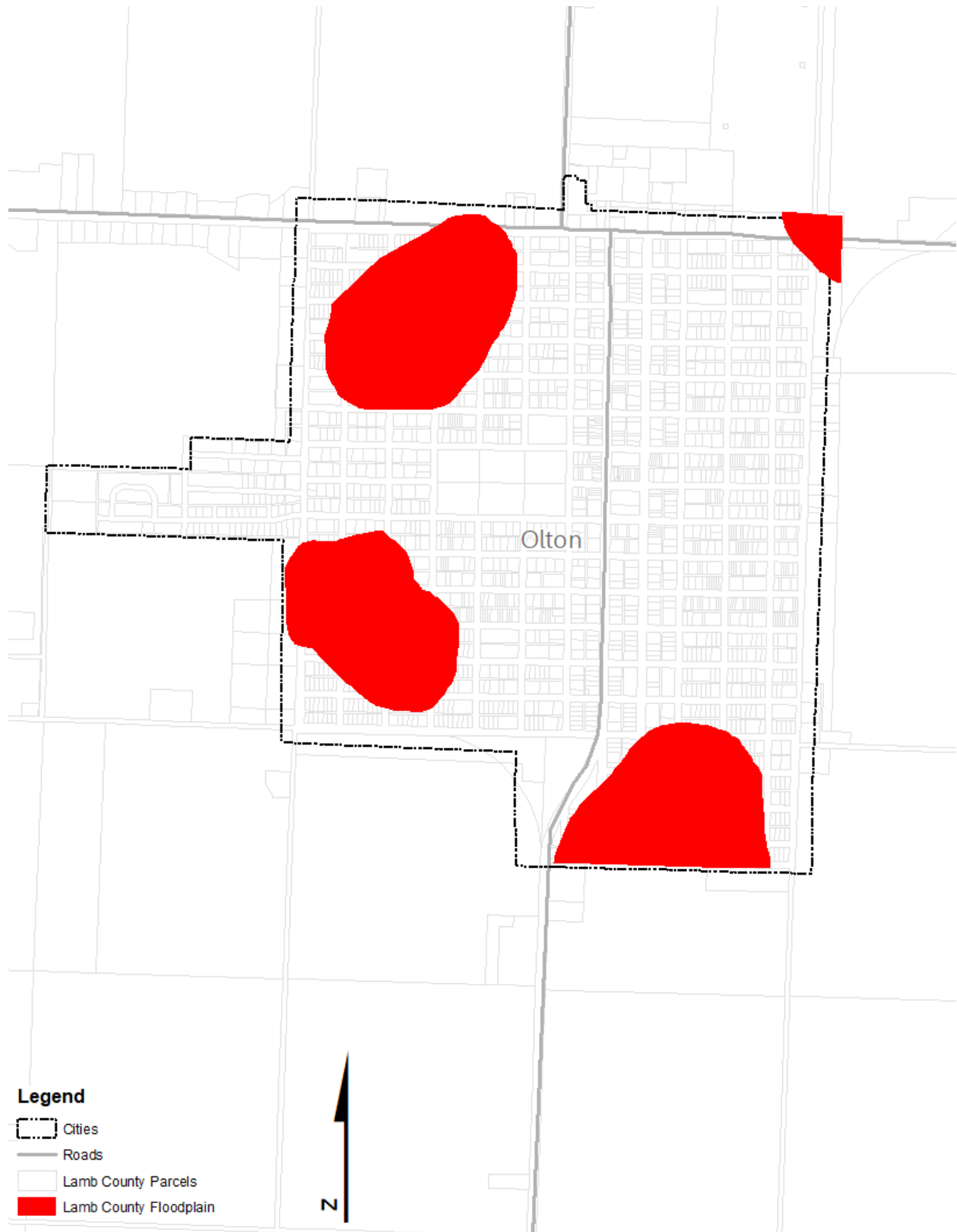


Figure 9: City of Olton FEMA Special Flood Hazard Areas

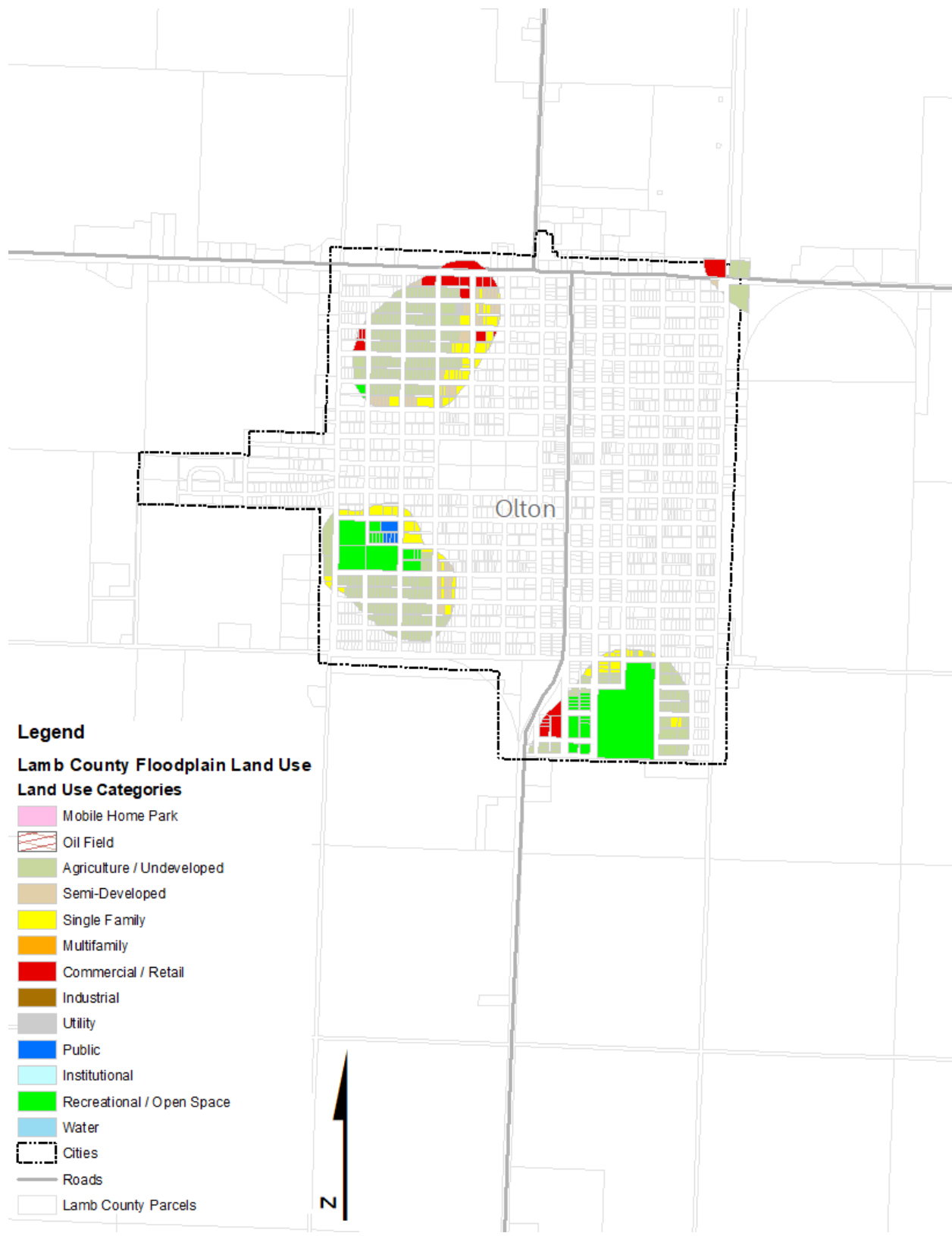


Figure 10: City of Olton Floodplain Land Use

City of Springlake



Figure 11: City of Springlake FEMA Special Flood Hazard Areas

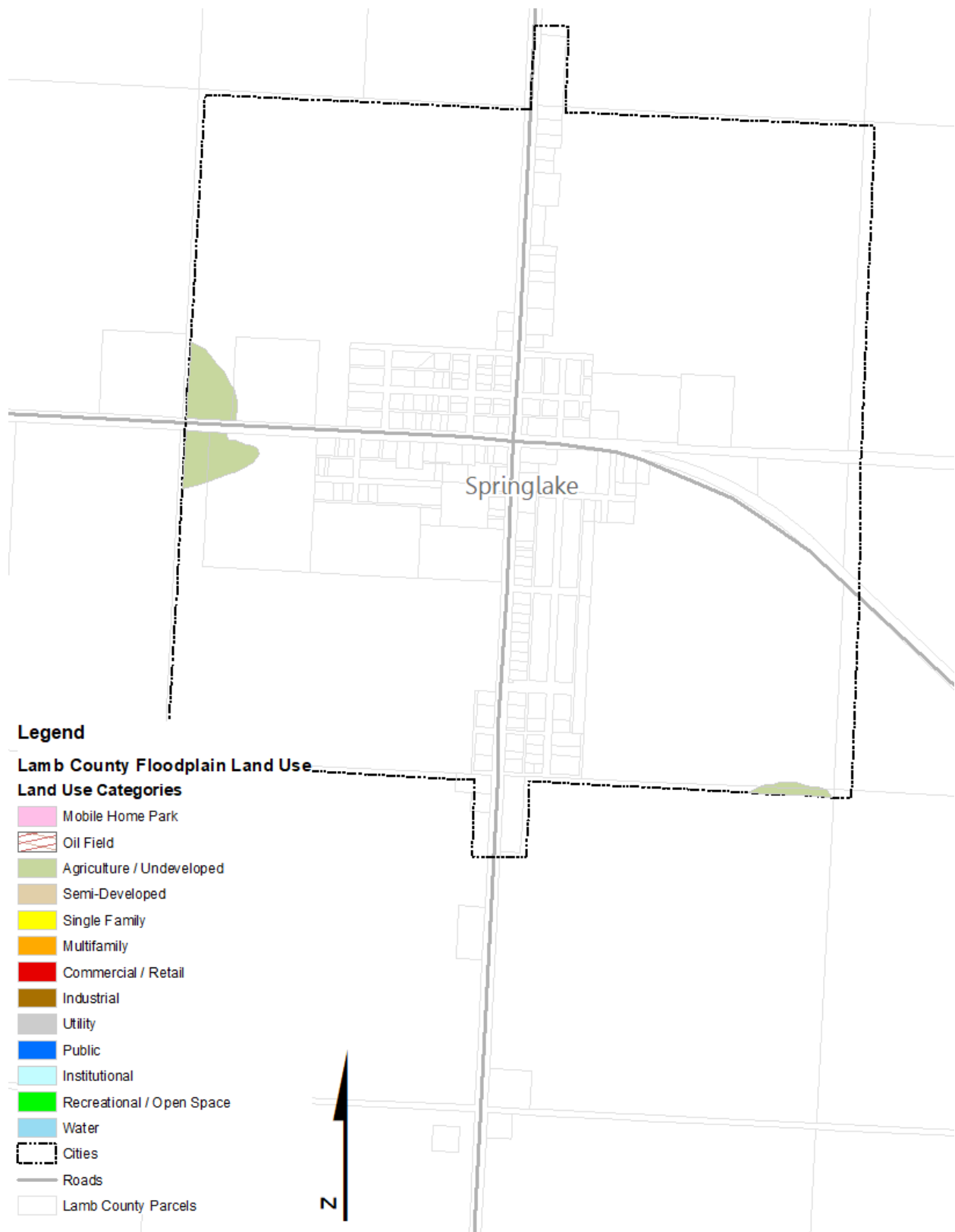


Figure 12: City of Springlake Floodplain Land Use

Lynn County

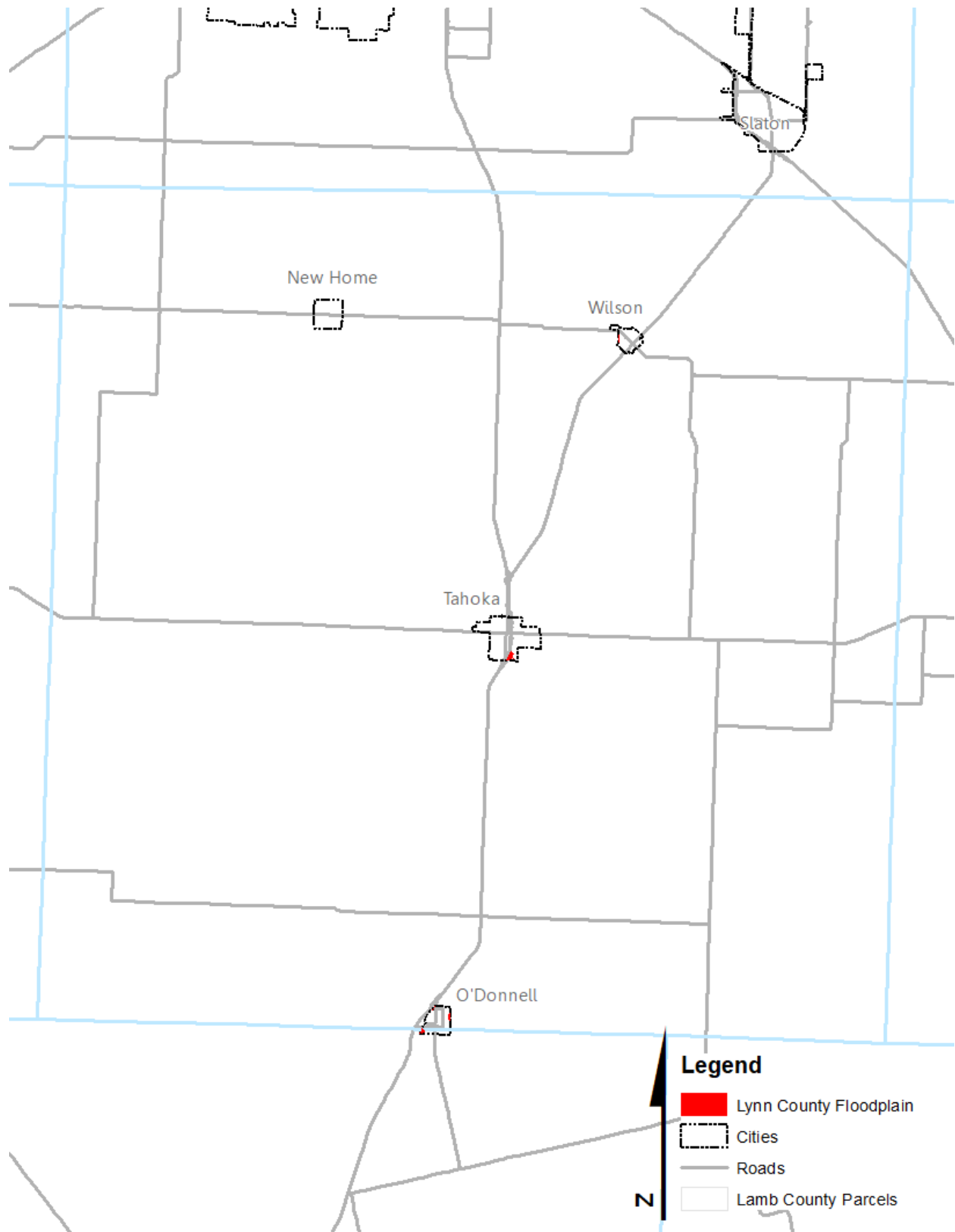


Figure 13: Lynn County FEMA Special Flood Hazard Areas

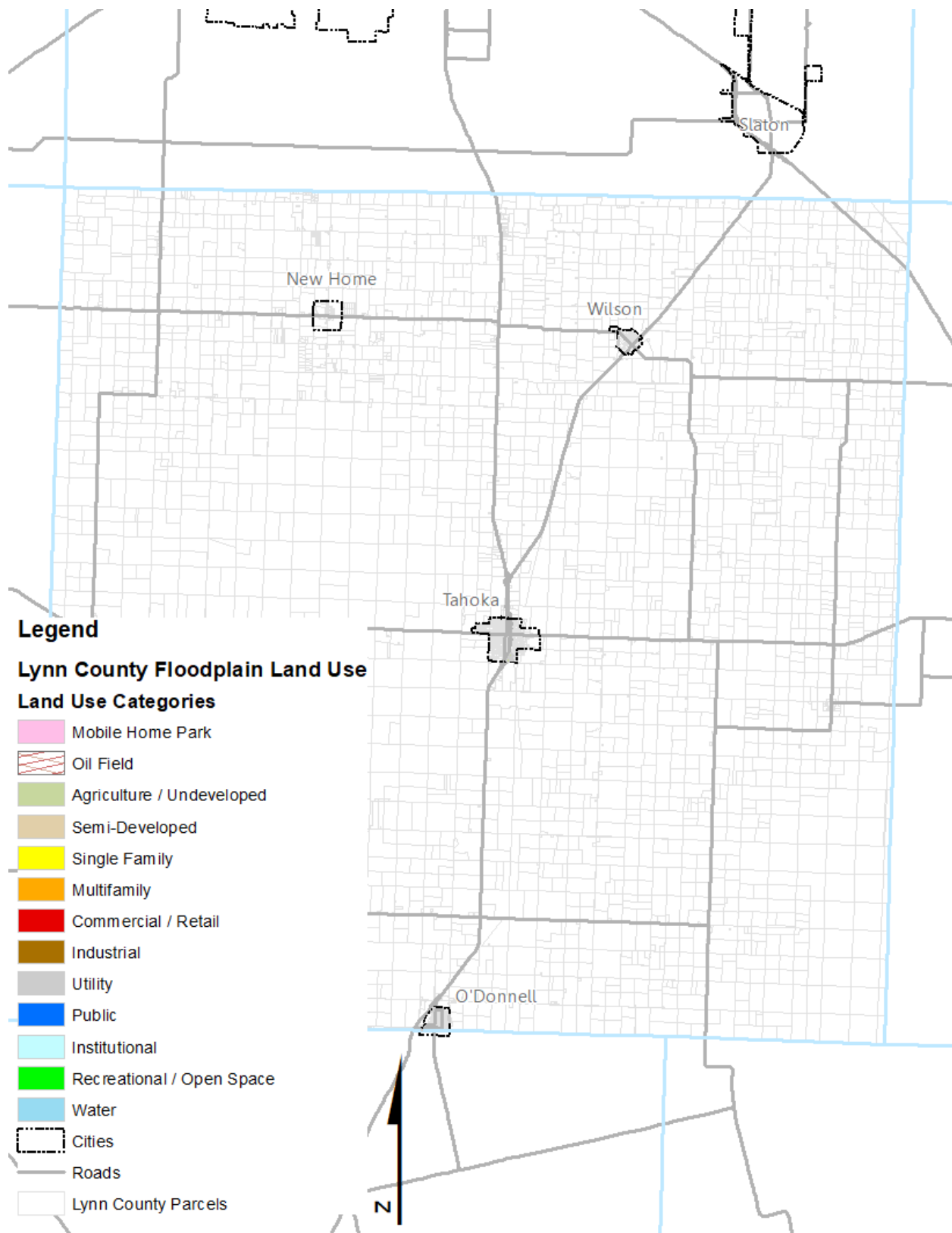


Figure 14: Lynn County Floodplain Land Use

City of O'Donnell

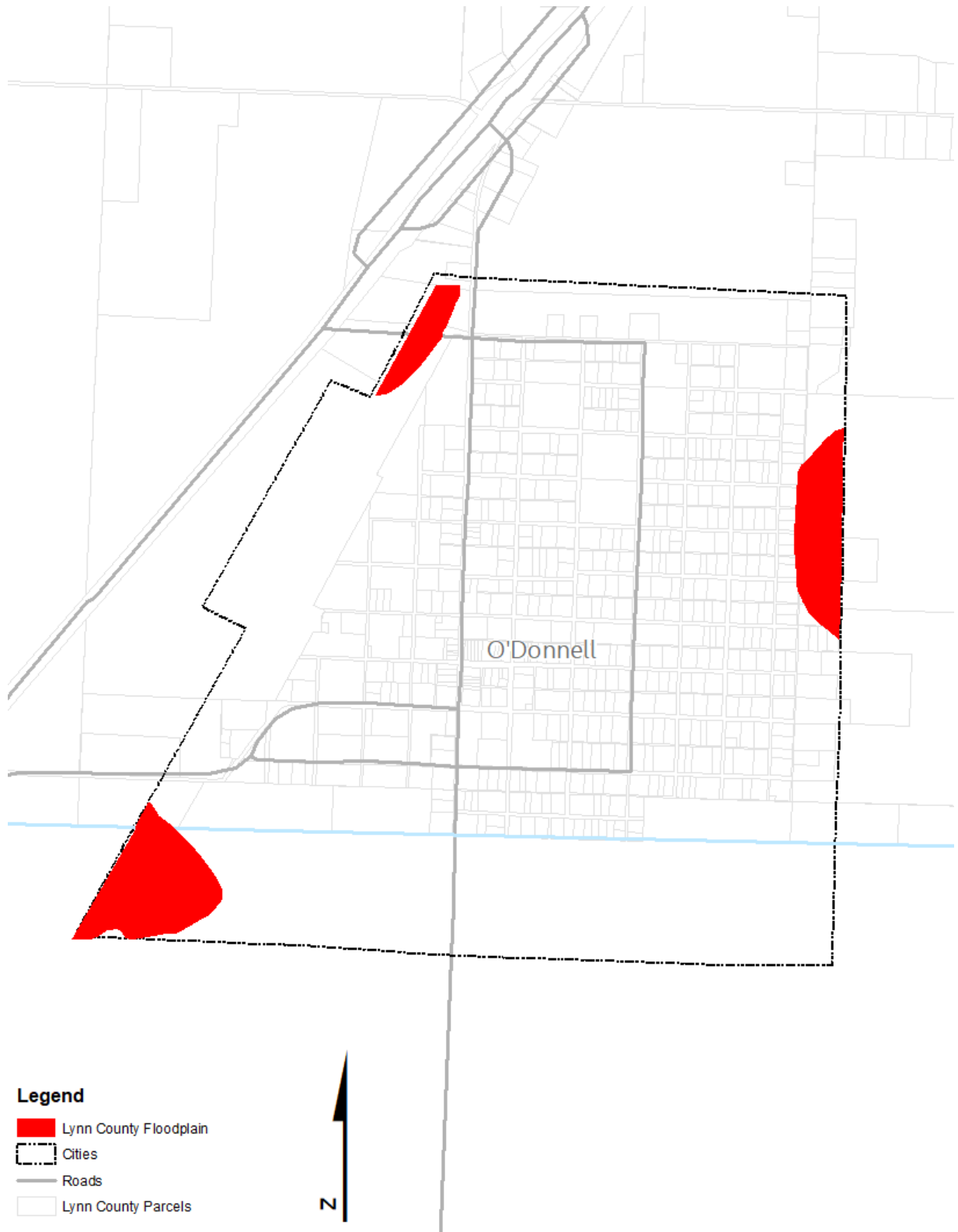


Figure 15: City of O'Donnell FEMA Special Flood Hazard Areas

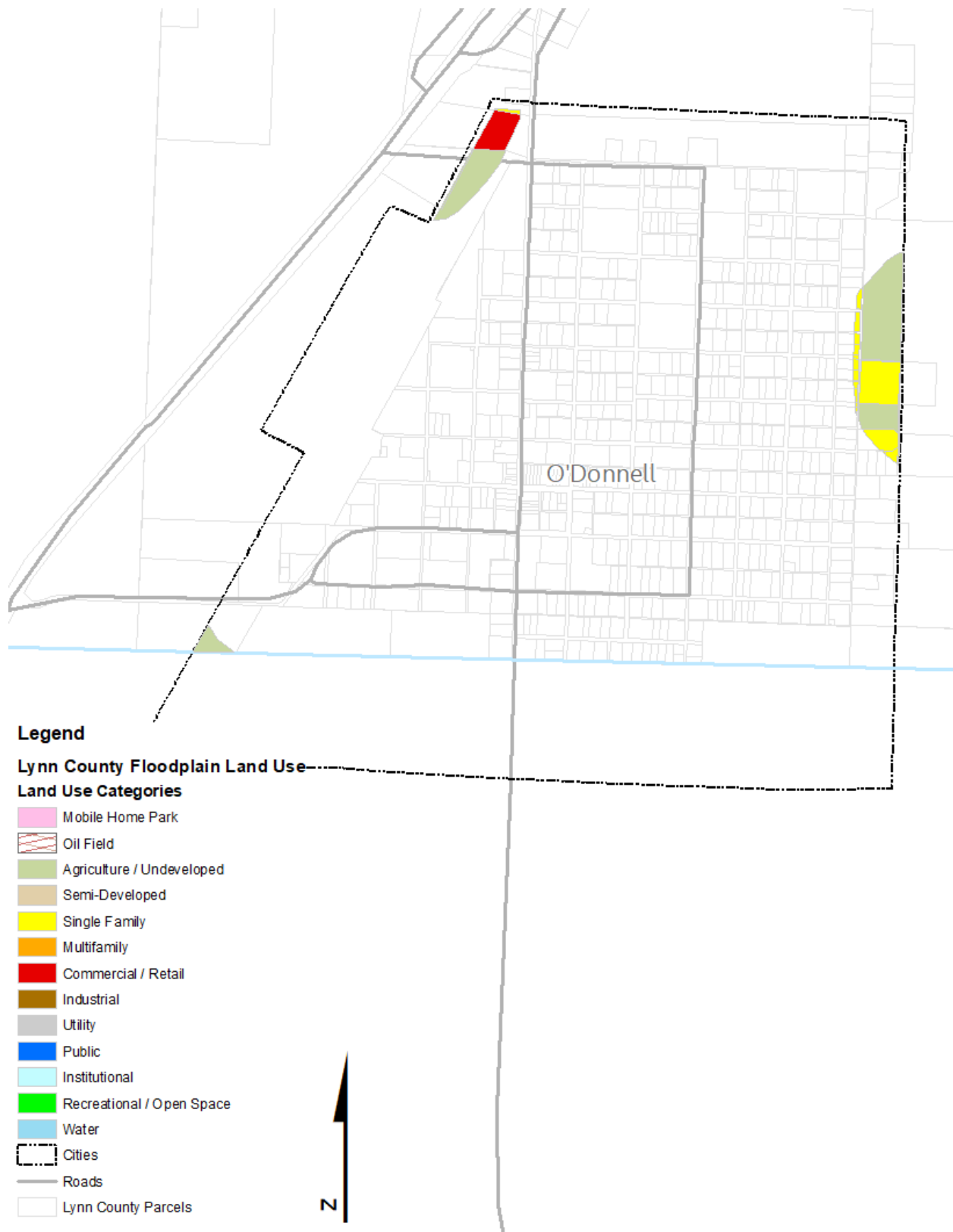


Figure 16: City of O'Donnell Floodplain Land Use

City of Tahoka

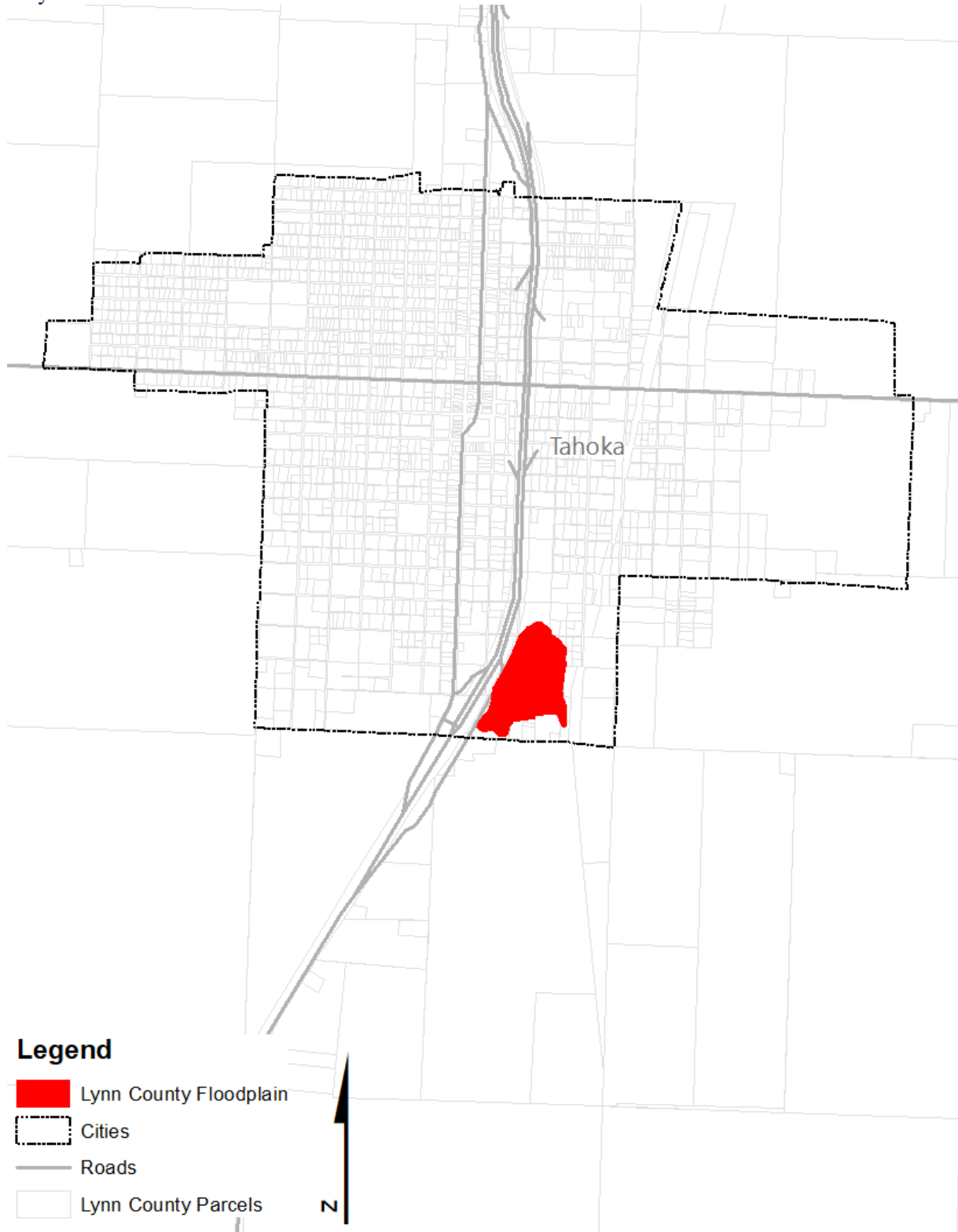


Figure 17: City of Tahoka FEMA Special Flood Hazard Areas

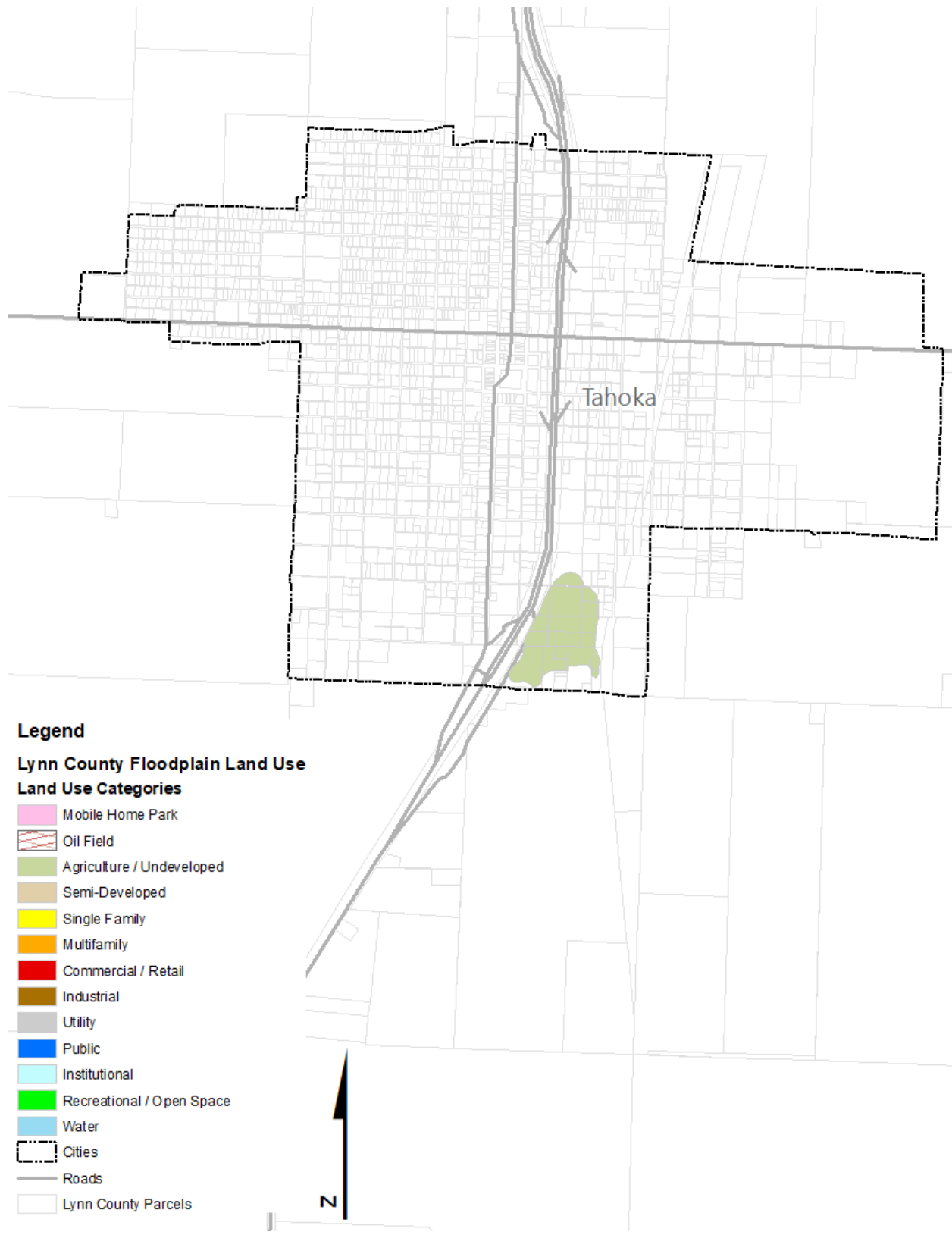


Figure 18: City of Tahoka Floodplain Land Use

City of Wilson

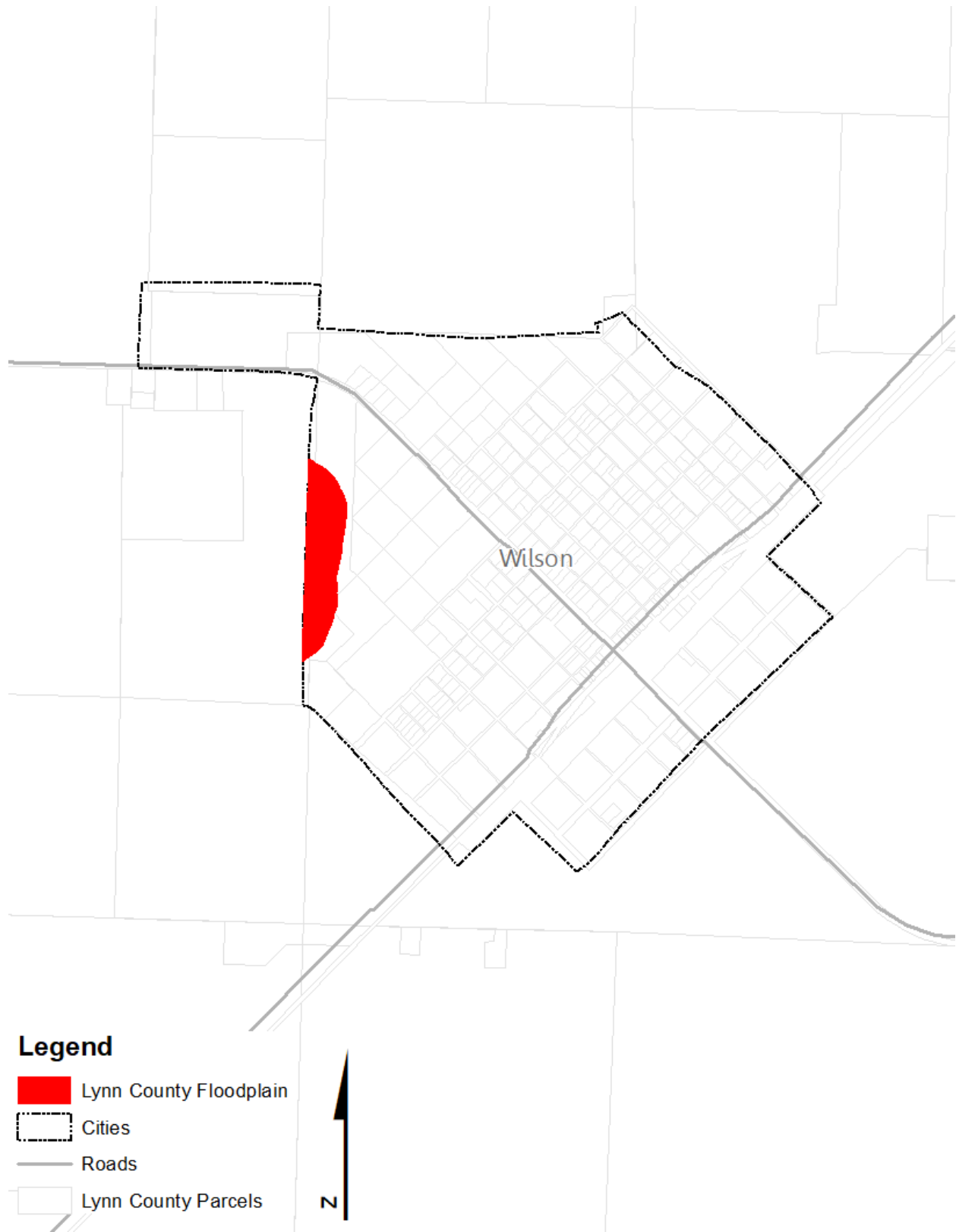


Figure 19: City of Wilson FEMA Special Flood Hazard Areas

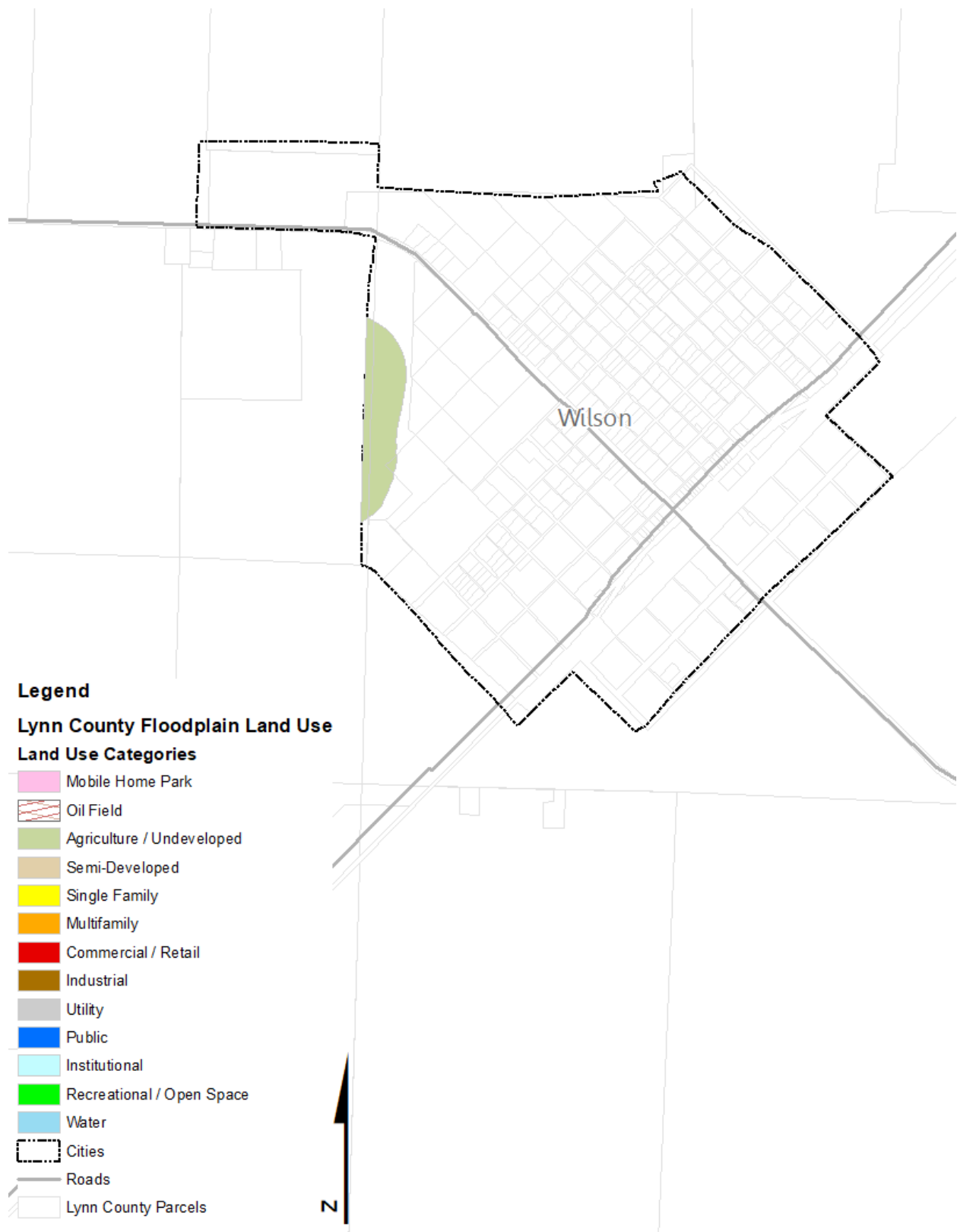


Figure 20: City of Wilson Floodplain Land Use

B) Impact

The likelihood of a FEMA 100-year flood event remains occasional, 1% in any given year. However, the floodplains in Lamb County cross Highways 84 and 430 at Littlefield and Highway 70 at Springlake and Olton, potentially limiting travel in these areas. The floodplains in Lynn County do not cross any major thoroughfares.

The impact of a FEMA 100-year flood event will vary depending on the location, size of the affected area, and number of structures affected. Residents in Lamb and Lynn Counties may temporarily lose power due to downed power lines. Motorists and residents in Littlefield, Springlake, and Olton may be stranded. Affected structures may be flooded, damaged by floodborne contaminants, damaged by debris flow, or even completely washed away. Crops may be damaged or destroyed. Estimated damage totals to vulnerable parcels affected during a 100-year flood event may meet the totals outlined in Tables 20 – 26 below.

5) Vulnerability

A) Population

As described in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that vulnerable populations may need additional help preparing for and recovering from a flood.

Residents of mobile / manufactured housing are of particular concern. These structures are never considered safe during a flood, and depending on tie-down methods, may threaten surrounding structures.

Residents of sub-standard structures are also of particular concern. Structures in sub-standard condition ahead of a flood, whether due to structural damages, missing windows or doors, holes in exterior walls or the roof, may be less safe during a flood than structures in standard condition. Existing structural weaknesses may mean increased damages, injuries, or loss of life.

B) Vulnerable Assets

As described in Section 4 of Chapter 3 above, Kerr County and the participating jurisdictions are home to many vulnerable assets. Increased vulnerability may be due to many factors including but not limited to: asset type, location, height, age, and/or use. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that damage to vulnerable assets, especially public water supply facilities and cell and radio towers may affect the participants' ability to prepare for and recover from flooding.

C) Critical Facilities⁶

Any critical structure located within the boundary of a FEMA floodplain is generally considered especially vulnerable to flooding. However, no critical facilities were found to be located within a FEMA floodplain due to the fact that floodplains are very small in Lamb and Lynn Counties and the other participating jurisdictions.

D) Vulnerable Parcels

Parcels vulnerable to flooding have been identified by their complete or partial location within the FEMA 100-year floodplain.

⁶ For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Table 20: City of Amherst - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
City of Amherst	7	0	0	5	0	0	0	0	0	3	0	0	10	\$87,000

Table 21: City of Littlefield - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
City of Littlefield	43	5	0	4	0	0	0	2	1	127	42	0	222	\$2,251,290

Table 22: City of Olton - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
City of Olton	306	24	0	0	0	0	0	5	30	80	45	3	493	\$5,574,290

Table 23: City of Springlake - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
City of Springlake	4	0	0	0	0	0	0	0	0	0	0	0	4	\$356,420

Table 24: City of O'Donnell - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
City of O'Donnell	5	1	0	0	0	0	0	0	0	20	0	0	26	\$120,220

Table 25: City of Tahoka - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
Schreiner University	19	0	0	0	0	0	0	0	0	1	0	0	20	\$47,540

Table 26: Sid Peterson Memorial Hospital - Vulnerable Parcels by Land Use Type & Flood Zone

Jurisdiction	Vulnerable Parcels by Land Use Type												Total	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Mobile/ Manufactured Housing	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
<u>FEMA 100-Year Flood Zone</u>														
Sid Peterson Memorial Hospital	3	0	0	0	0	0	0	0	0	0	0	0	3	\$66,410

5. Wildfire

Wildfire is defined as a sweeping and destructive conflagration and can be further categorized as wildland, interface, or intermix fires.

Wildland fires are fueled almost exclusively by natural vegetation. Wildland/urban interface (WUI) fires include both vegetation and the built-environment. WUI fires occur in the zone of transition between unoccupied land and human development.

1) Wildfire History

The Texas A&M Forest Service Wildfire Risk Assessment Portal provides wildfire data on fires that occurred between 2005 – 2015 in Lamb and Lynn Counties. Data for the City of Amherst was limited to between the years 2009 – 2011, and data for the City of Earth was limited to 2011. No data on wildfire was found for the City of Littlefield, City of Springlake, or the City of New Home. The Texas A&M Forest Service Wildfire Risk Assessment Portal data is considered to be the most current accurate data available.

Wildfire history isn't broken down beyond the city level and so no data exists for the participating ISDs and Hospitals. However, given the participating jurisdictions' locations within the planning areas, and specifically the number of their facilities located in the wildfire hazard area, participating jurisdictions determined they're vulnerable to this hazard despite lacking a specific history of previous wildfire events.

Table 27: Lamb County Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
Lamb County	197	3/6/2006 – 4/14/2015	0	0	0 – 6,000	50,813	-	-

Table 28: City of Amherst Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Amherst	14	9/3/2009 – 6/28/2011	0	0	1 – 3,000	9,356	-	-

Table 29: City of Earth Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Earth	14	2/12/2011 - 10/17/2011	0	0	1 – 2,000	3,256	-	-

Table 30: City of Olton Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Olton	25	2/21/2006 – 12/19/2013	0	0	0 – 1,500	1,683	-	-

Table 31: City of Sudan Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Sudan	121	12/27/2005 - 10/23/2015	0	0	0.5 – 1,000	13,461	-	-

Table 32: Lynn County Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
Lynn County	296	1/1/2006 – 9/11/2015	0	0	0 - 3,000	34,872	-	-

Table 33: City of O'Donnell Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of O'Donnell	47	1/22/2010 – 4/14/2015	0	0	0 - 3,000	6,370	-	-

Table 34: City of Tahoka Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Tahoka	161	2/5/2006 – 9/11/2015	0	0	0.25 - 3,000	22,585	-	-

Table 35: City of Wilson Wildfire History

Location	Wildfire Events	Date Range	Fatalities	Injuries	Range of Acres Burned	Total Acres Burned	Local Property Damage \$2019	Local Crop Damage \$2019
City of Wilson	61	1/4/2006 – 3/11/2014	0	0	0 - 500	1,331	-	-

There were 493 wildfire ignitions in Lamb and Lynn Counties between 2006 – 2015, the most current year data is available. Tahoka VFD responded to 161, Sudan VFD responded to 121, Wilson VFD responded to 61, O’Donnell VFD responded to 47, and Olton VFD responded to 25. Other fire departments responded to 14 or less, as seen below in Table 56. Equipment use, debris burning, and lightning were the leading causes of wildfires. The largest reported fire burned about 6,000 acres and its origin was traceable to lightning.

Table 36: Wildfire Responses

Responder	# of wildfires
Tahoka Volunteer Fire Department	161
Sudan VFD	121
Wilson VFD	61
ODonnell VFD	47
Olton VFD	25
Amherst VFD	14
Earth VFD	14
Muleshoe VFD	10
Slaton Fire Department	9
Post VFD	6
Slaton Volunteer Fire Dept.	6
Northwest	3
Abernathy VFD	2
Bovina VFD	2

Hart Volunteer Fire Dept.	2
New Home VFD	2
Northwest	2
Adrian Vol Fire and EMS	1
Halfway VFD	1
Levelland Fire Department	1
West Carlisle Fire/EMS	1
Brownfield Fire Department	1
Panhandle	1

No damage dollars, neither structural nor agricultural, were reported for any of the wildfire events for either jurisdiction.

2) Likelihood of Future Occurrence

A) Lamb County

According to the data, Lamb County can experience about 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in Lamb County is highly likely, meaning an event is probable within the next year.

B) City of Amherst

According to the data, the City of Amherst can experience about 7 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Amherst is highly likely, meaning an event is probable within the next year.

C) City of Earth

According to the data, the City of Earth can experience about 14 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Earth is highly likely, meaning an event is probable within the next year.

D) Lamb County Healthcare Center

Given its location within the Lamb County, the Lamb County Healthcare Center considers the likelihood of a future wildfire event to be similar to the county's. Lamb County can experience 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting the Lamb County Healthcare Center is highly likely, meaning an event is probable within the next year.

E) City of Littlefield

Even though no data is reported for the City of Littlefield, given its location within Lamb County, the City considers the likelihood of a future wildfire event to be similar to the county's. According to the data, Lamb County can experience 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Littlefield is highly likely, meaning an event is probable within the next year.

F) Littlefield ISD

Given its location within the City of Littlefield, Littlefield ISD considers the likelihood of a future wildfire event to be similar to the City's who consider their likelihood to be similar to the county's. Lamb County can experience 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Littlefield ISD is highly likely, meaning an event is probable within the next year.

G) City of Olton

According to the data, the City of Olton can experience about 4 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Olton is highly likely, meaning an event is probable within the next year.

H) Olton ISD

Given its location in Olton, Olton ISD considers the likelihood of a future wildfire event to be similar to that in the City of Olton. The City of Olton experiences about 4 wildfires per year.

Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Olton ISD is highly likely, meaning an event is probable within the next year.

I) City of Springlake

Even though no data is reported for the City of Springlake, given its location within Lamb County, the City considers the likelihood of a future wildfire event to be similar to the county's. According to the data, Lamb County can experience 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Springlake is highly likely, meaning an event is probable within the next year.

J) Springlake-Earth ISD

Given its location within Lamb County, Springlake-Earth ISD considers the likelihood of a future wildfire event to be similar to the county's. According to the data, Lamb County can experience 22 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Springlake-Earth ISD is highly likely, meaning an event is probable within the next year.

K) City of Sudan

According to the data, the City of Sudan can experience about 12 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Sudan is highly likely, meaning an event is probable within the next year.

L) Sudan ISD

Given its location in Sudan, Sudan ISD considers the likelihood of a future wildfire event to be similar to that in the City of Sudan. The City of Sudan experiences about 12 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Sudan ISD is highly likely, meaning an event is probable within the next year.

M) Lynn County

According to the data, Lynn County can experience about 33 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in Lynn County is highly likely, meaning an event is probable within the next year.

N) Lynn County Hospital District

Given its location in Tahoka, the Lynn County Hospital District considers the likelihood of a future wildfire event to be similar to that in the City of Tahoka. The City of Tahoka experiences about 18 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Lynn County Hospital District is highly likely, meaning an event is probable within the next year.

O) City of New Home

Even though no data is reported for the City of New Home, given its location within Lynn County, the City considers the likelihood of a future wildfire event to be similar to the county's. According to the data, Lynn County can experience 33 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of New Home is highly likely, meaning an event is probable within the next year.

P) New Home ISD

Given its location within the City of New Home, New Home ISD considers the likelihood of a future wildfire event to be similar to the City's who consider their likelihood to be similar to the county's. Lynn County can experience 33 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting New Home ISD is highly likely, meaning an event is probable within the next year.

Q) City of O'Donnell

According to the data, the City of O'Donnell can experience about 9 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of O'Donnell is highly likely, meaning an event is probable within the next year.

R) O'Donnell ISD

Given its location within the City of O'Donnell, O'Donnell ISD considers the likelihood of a future wildfire event to be similar to the City's. The City of O'Donnell can experience about 9 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting O'Donnell ISD is highly likely, meaning an event is probable within the next year.

S) City of Tahoka

According to the data, the City of Tahoka can experience about 18 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Tahoka is highly likely, meaning an event is probable within the next year.

T) Tahoka ISD

Given its location within the City of Tahoka, Tahoka ISD considers the likelihood of a future wildfire event to be similar to the City's. The City of Tahoka can experience about 18 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Tahoka ISD is highly likely, meaning an event is probable within the next year.

U) City of Wilson

According to the data, the City of Wilson can experience about 8 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event in the City of Wilson is highly likely, meaning an event is probable within the next year.

V) Wilson ISD

Given its location within the City of Wilson, Wilson ISD considers the likelihood of a future wildfire event to be similar to the City's. The City of Wilson can experience 8 wildfires per year. Given prior frequency of wildfire events, the likelihood of a wildfire event affecting Wilson ISD is highly likely, meaning an event is probable within the next year.

3) Extent

The Texas A&M Forest Service's Characteristic Fire Intensity Scale (FIS) specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist. The FIS is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. According to Texas A&M Forest Service data, Lamb and Lynn Counties and the participating jurisdictions are rated between Class 1 and Class 5.

Table 37: Characteristic Fire Intensity Scale⁷

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

The National Wildfire Coordinating Group (NWCG) provides an additional way to measure extent by accounting for fire size. Based on NWCG numbers, the largest fires in Lamb and Lynn Counties and the participating jurisdictions have been Class G events. Based on Texas A&M Forest Service data, the average fire in Lamb and Lynn Counties and the participating jurisdictions is a Class D event.

Table 38: National Wildfire Coordinating Group Size Class of Fire⁸

Class A	¼ acre or less
Class B	More than ¼ acre, but less than 10 acres
Class C	10 acres or more, but less than 100 acres
Class D	100 acres or more, but less than 300 acres
Class E	300 acres or more, but less than 1,000 acres
Class F	1,000 acres or more, but less than 5,000 acres
Class G	5,000 acres or more

Previous wildfires in Lamb and Lynn Counties and the participating jurisdictions have ranged between Class 1 and Class 5 on the Characteristic Fire Intensity Scale, with flames over 30’ in length, and between Class A and Class G on the National Wildfire Coordinating Group Size Class of Fire scale (NWCGSCF). Most fires have been small and were contained quickly. However, the worst reported fire in Lamb and Lynn Counties occurred in Lamb County and burned 6,000 acres. The location of that fire included areas rated between Class 1 and Class 5 on the FIS with expected flame lengths over 30’.

⁷ <https://www.texaswildfirerisk.com>

⁸ <http://www.nwcg.gov/term/glossary/size-class-of-fire>

Future fire events in any of the participating jurisdictions may meet the worst reported Class G (NWCGSCF scale) and Class 5 (FIS) wildfires in terms of intensity, flame length acreage burned, and inflicted damage.

4) Location and Impact

A) Location

Due to wildfire's ability to inflict damages to both structures and landscapes, wildfire location has been assessed by parcel, rather than by structure. Parcels have been identified by land use type, and have been determined to be either partially or completely vulnerable to wildfire based on TxWRAP's Wildland Urban Interface boundaries. Certain parcels may contain various land uses, however, parcels have been identified based on the primary land use type.

Because wildfires are dynamically unpredictable, the following maps and tables may not be representative of every location and parcel at risk of wildfire.

The City of Olton, Olton ISD, and the City of Springlake in Lamb County do not have any WUI lands and so are not mapped in the series of maps below.

No cities or other participating jurisdictions in Lynn County besides the county itself have any WUI lands and so are not mapped below either.

Lamb County

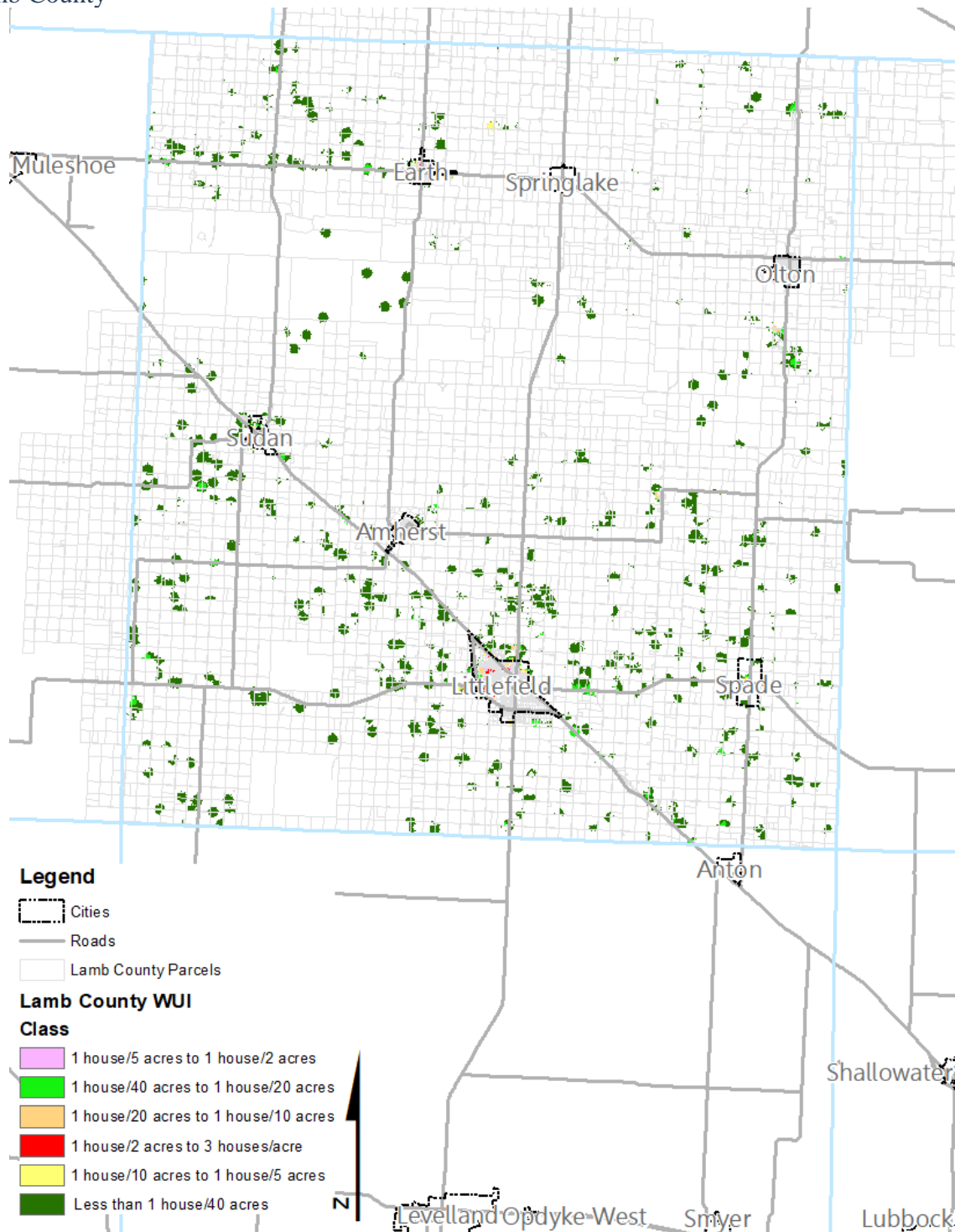


Figure 21: Lamb County Wildland Urban Interface Exposure

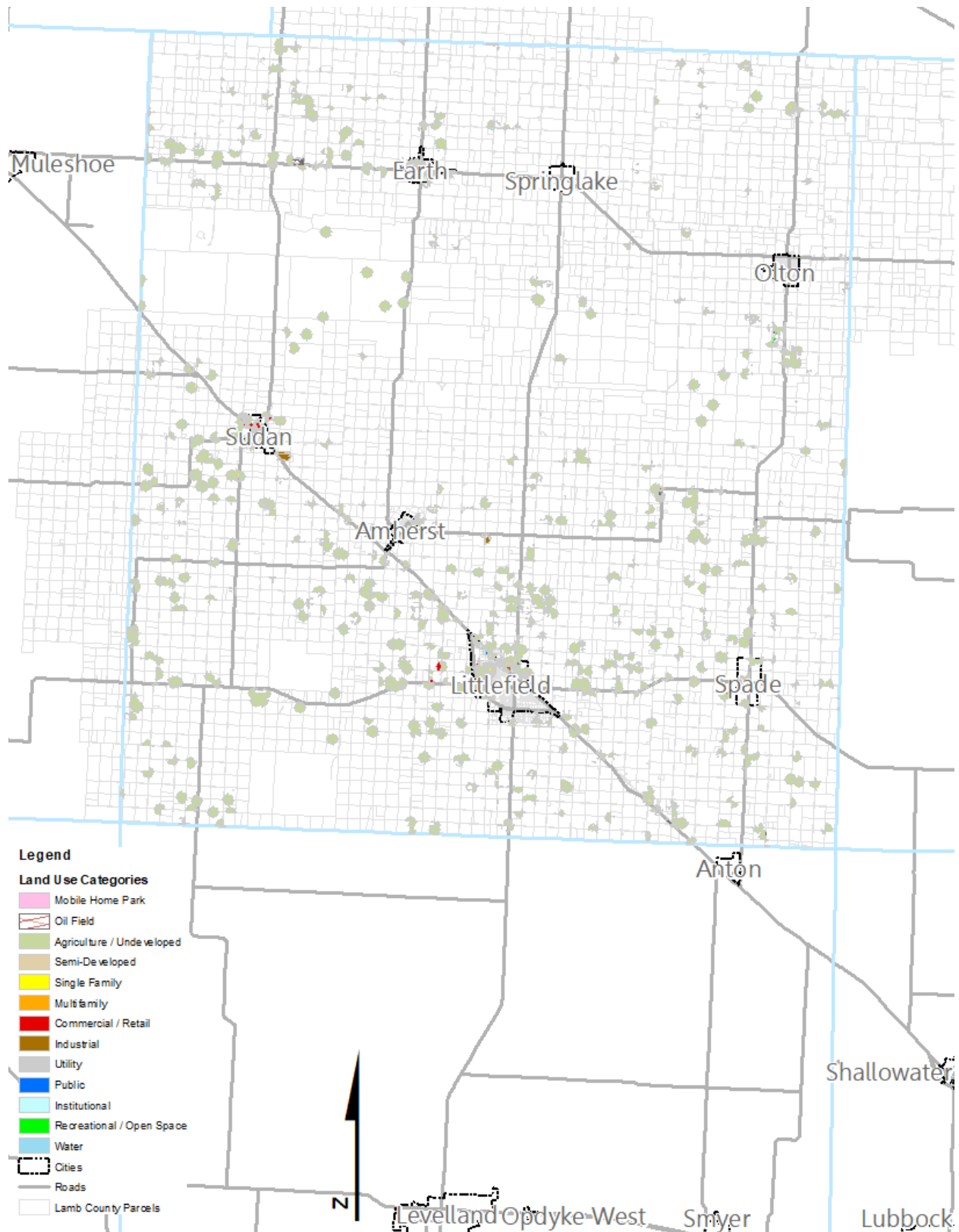


Figure 22: Lamb County Wildland Urban Interface Land Use

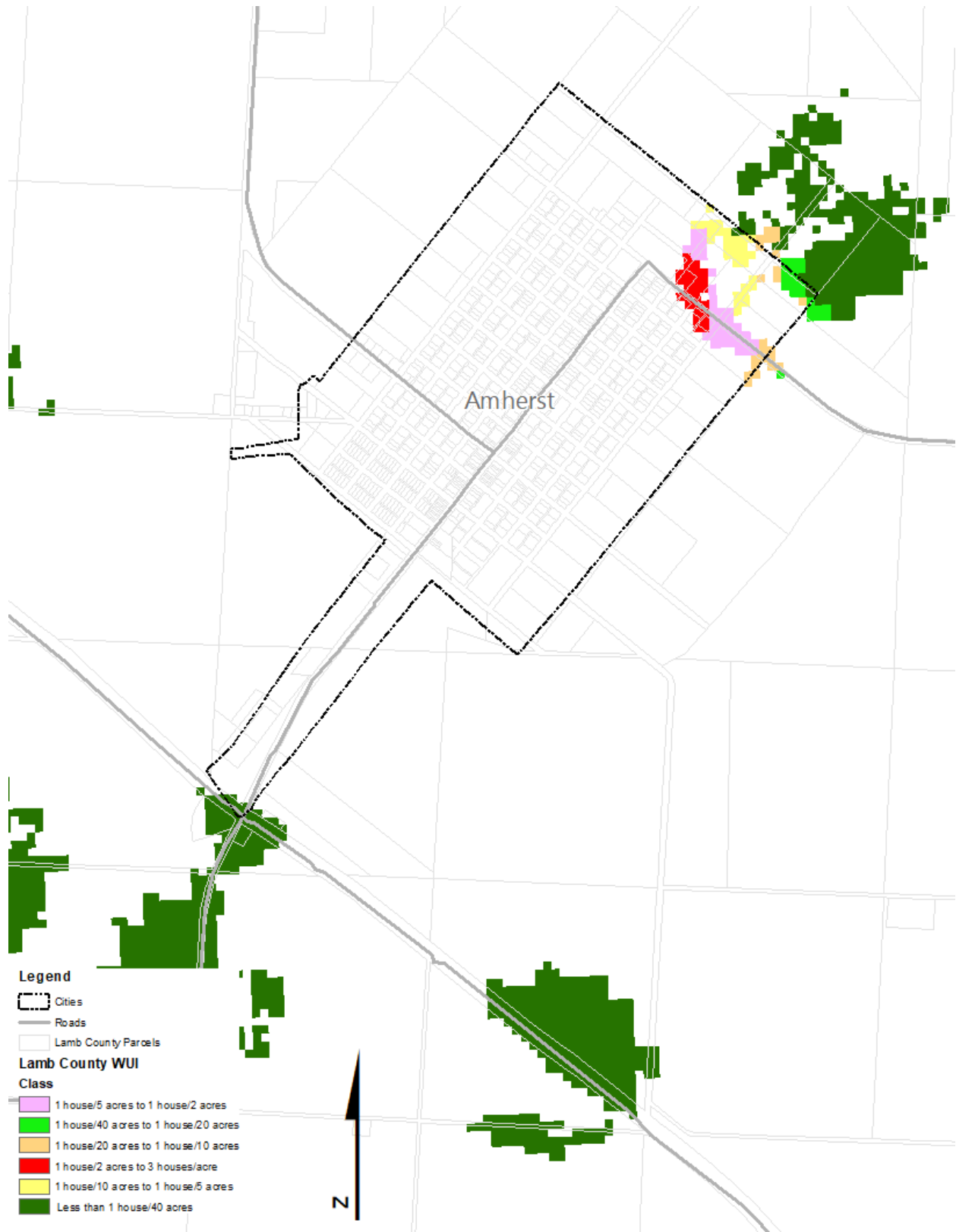


Figure 23: City of Amherst Wildland Urban Interface Exposure

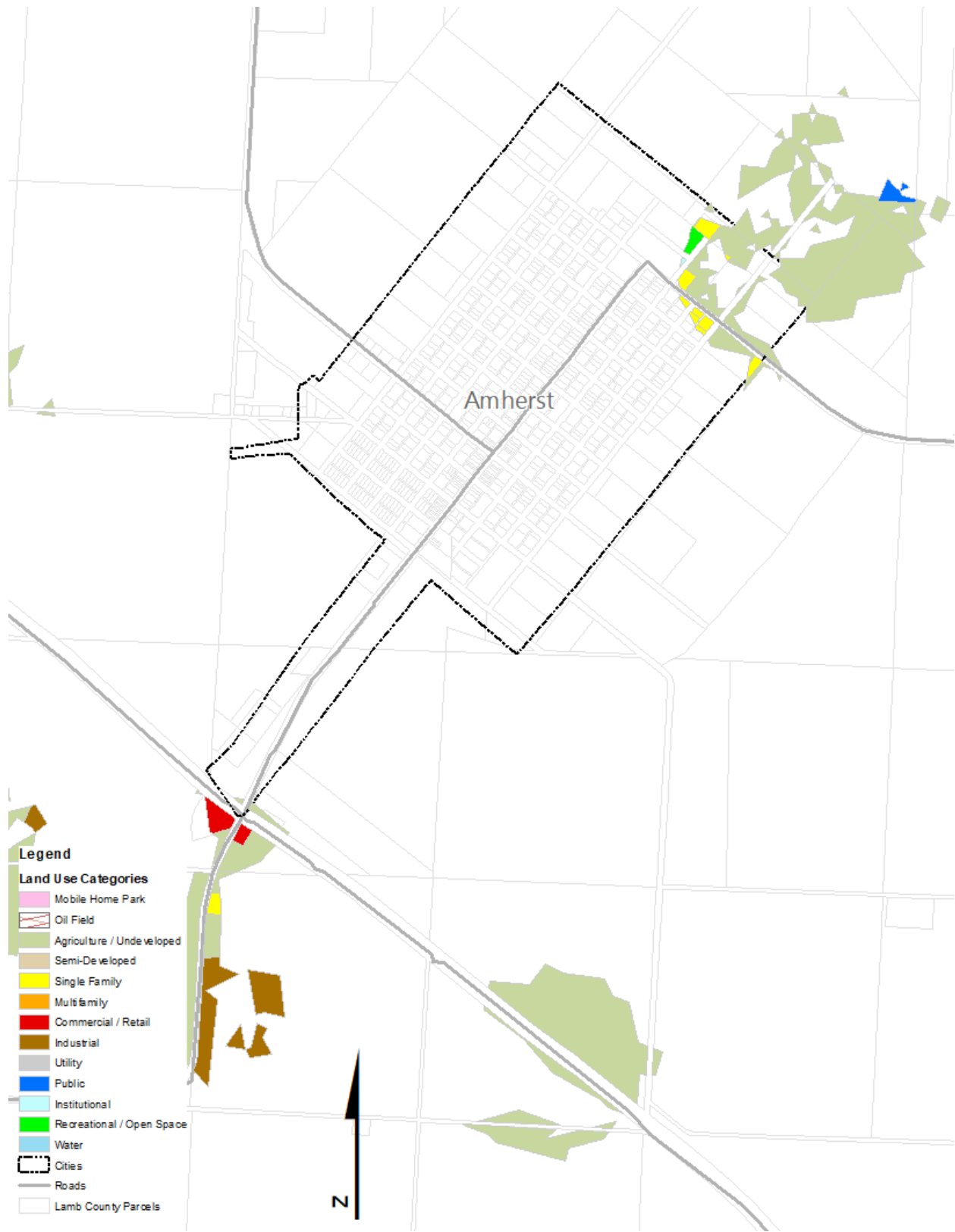


Figure 24: City of Amherst Wildland Urban Interface Land Use

City of Earth

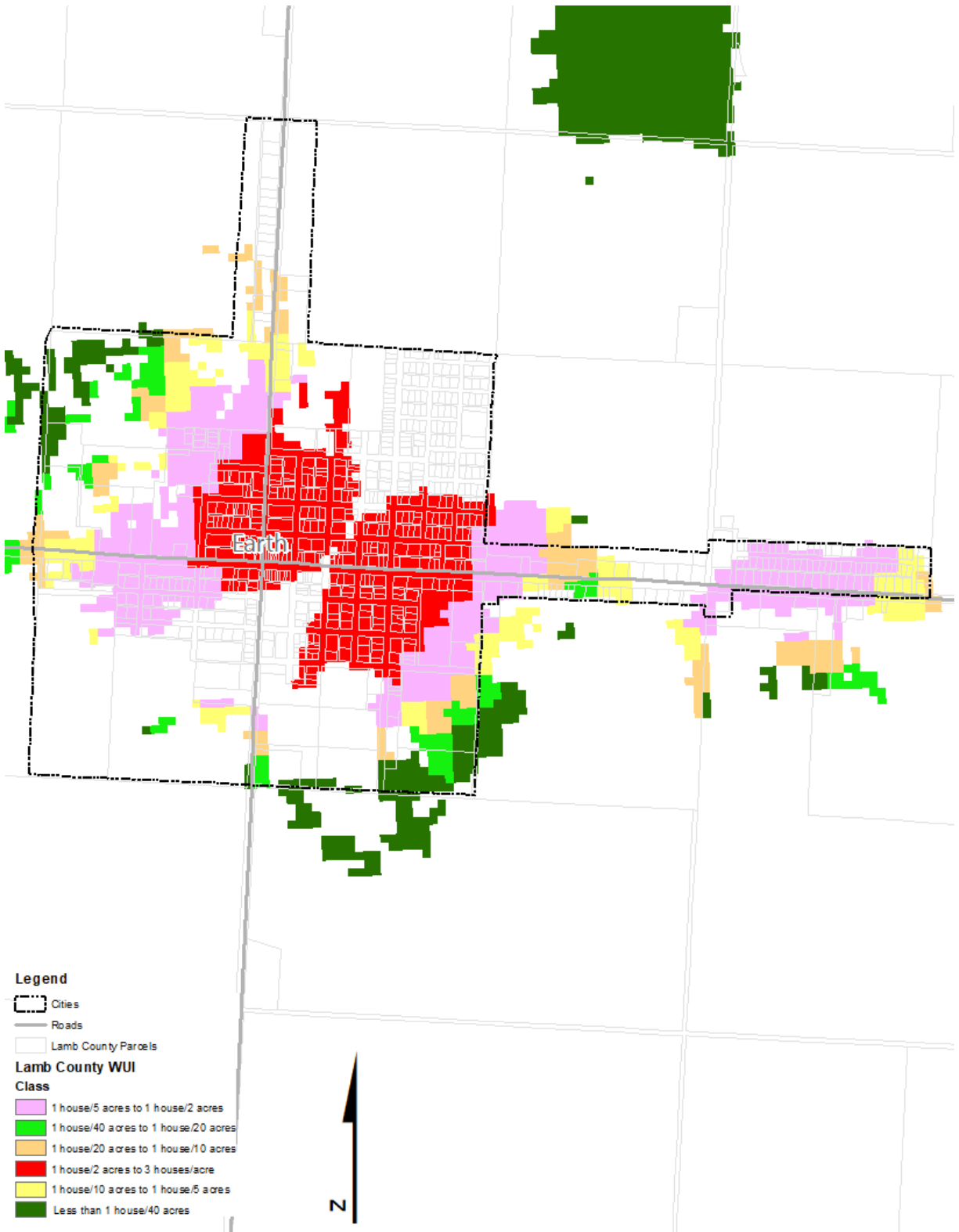


Figure 25: City of Earth Wildland Urban Interface Exposure

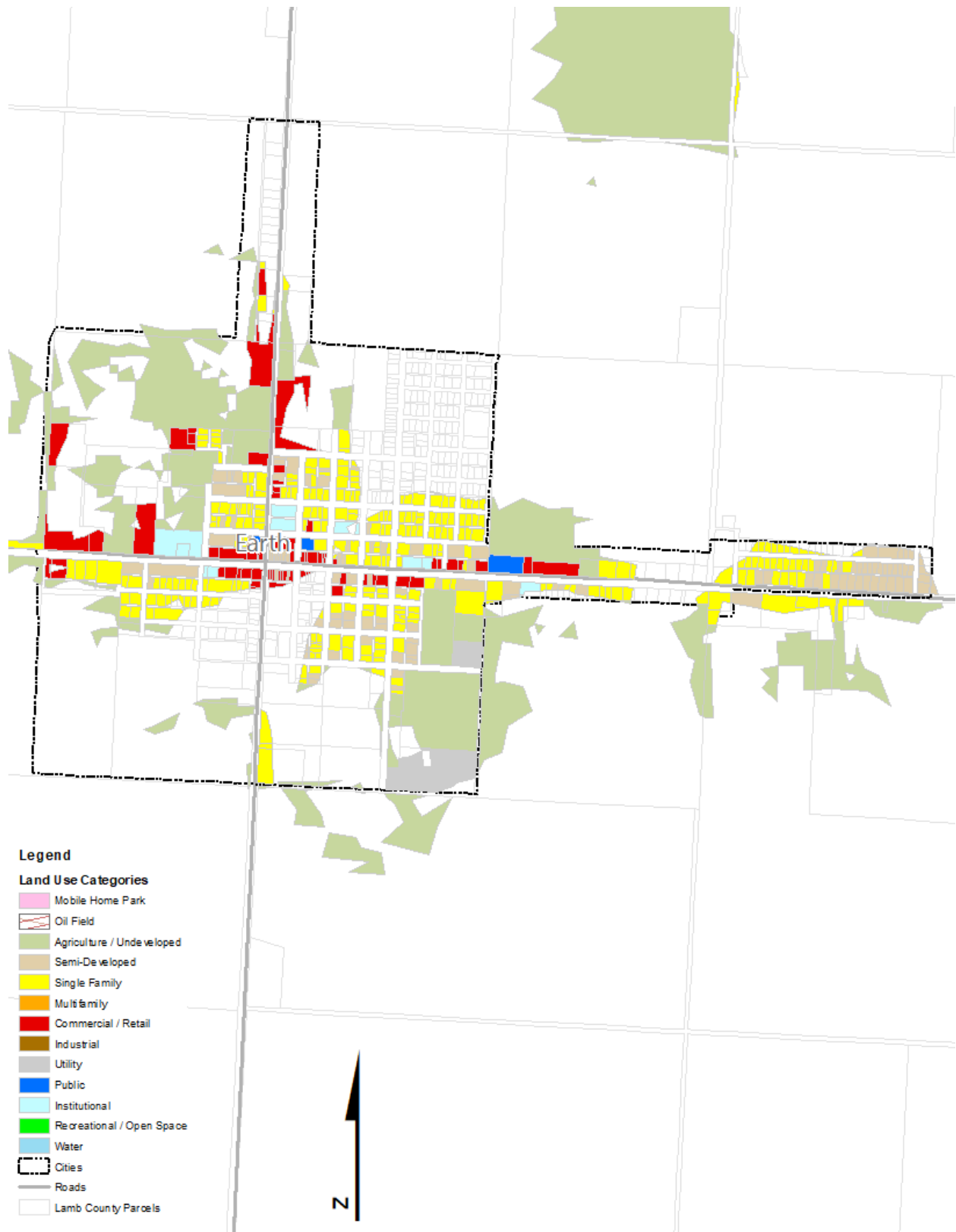


Figure 26: City of Earth Wildland Urban Interface Land Use

Lamb County Healthcare Center

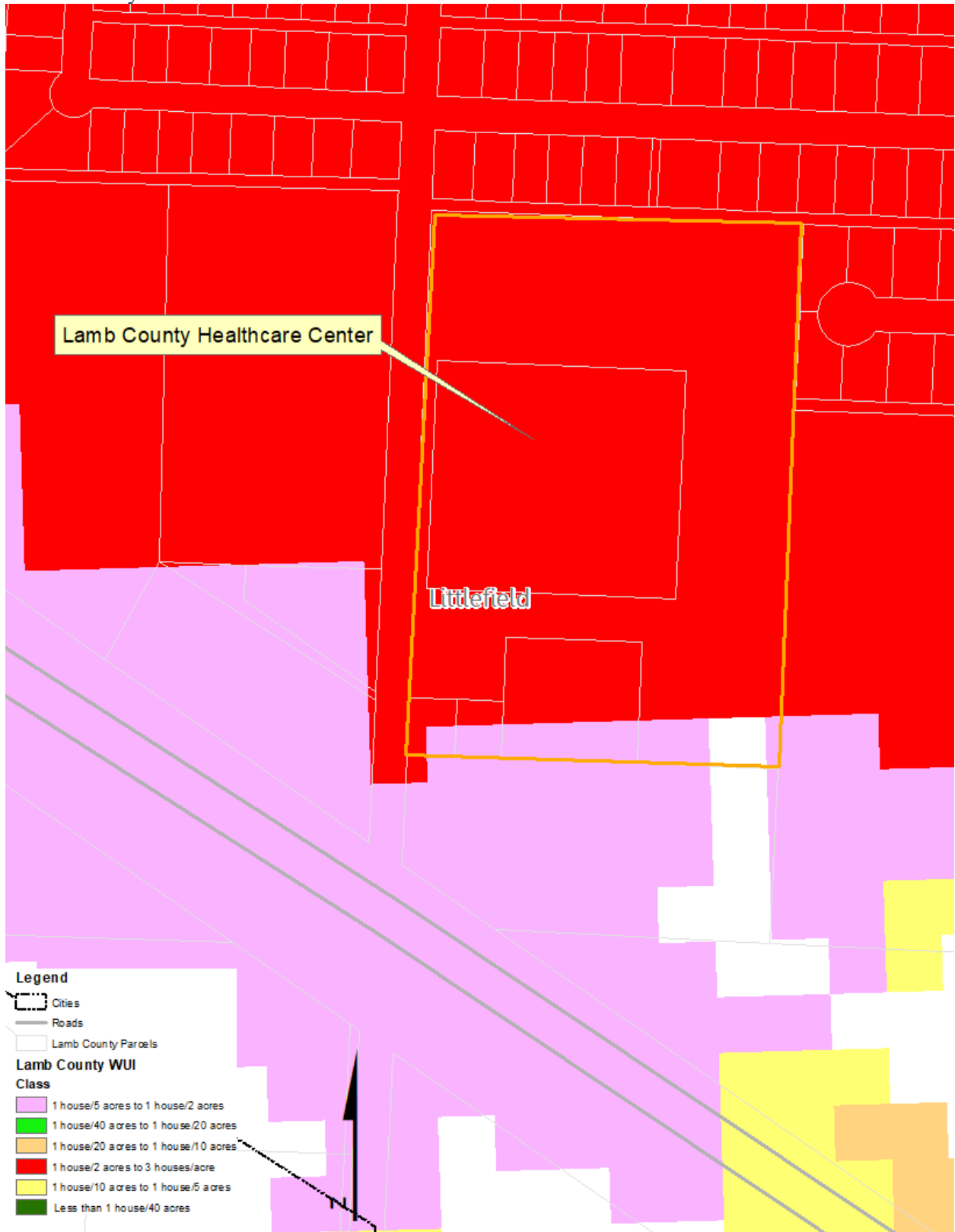


Figure 27: Lamb County Healthcare Center Wildland Urban Interface Exposure

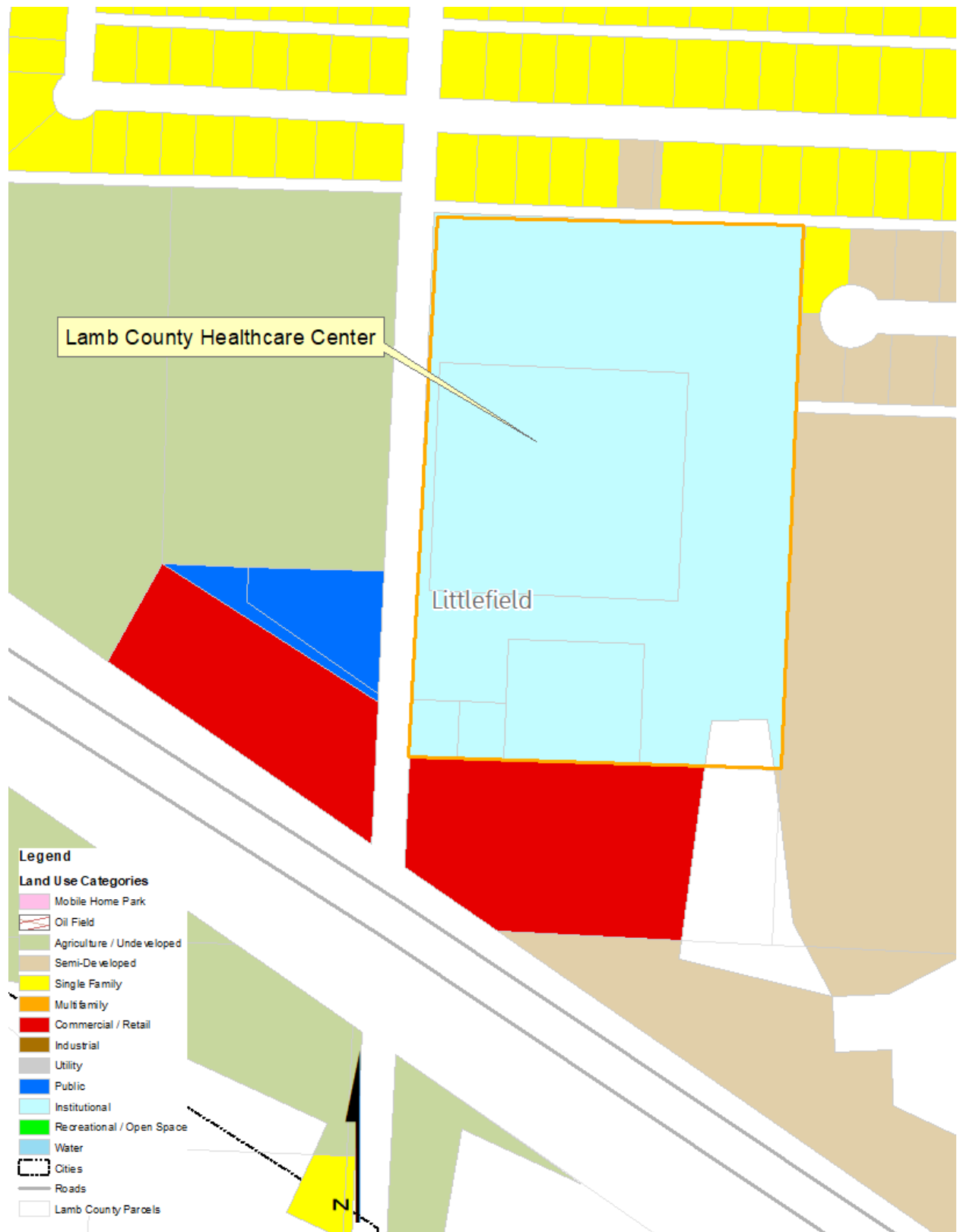


Figure 28: Lamb County Healthcare Center Wildland Urban Interface Land Use

City of Littlefield

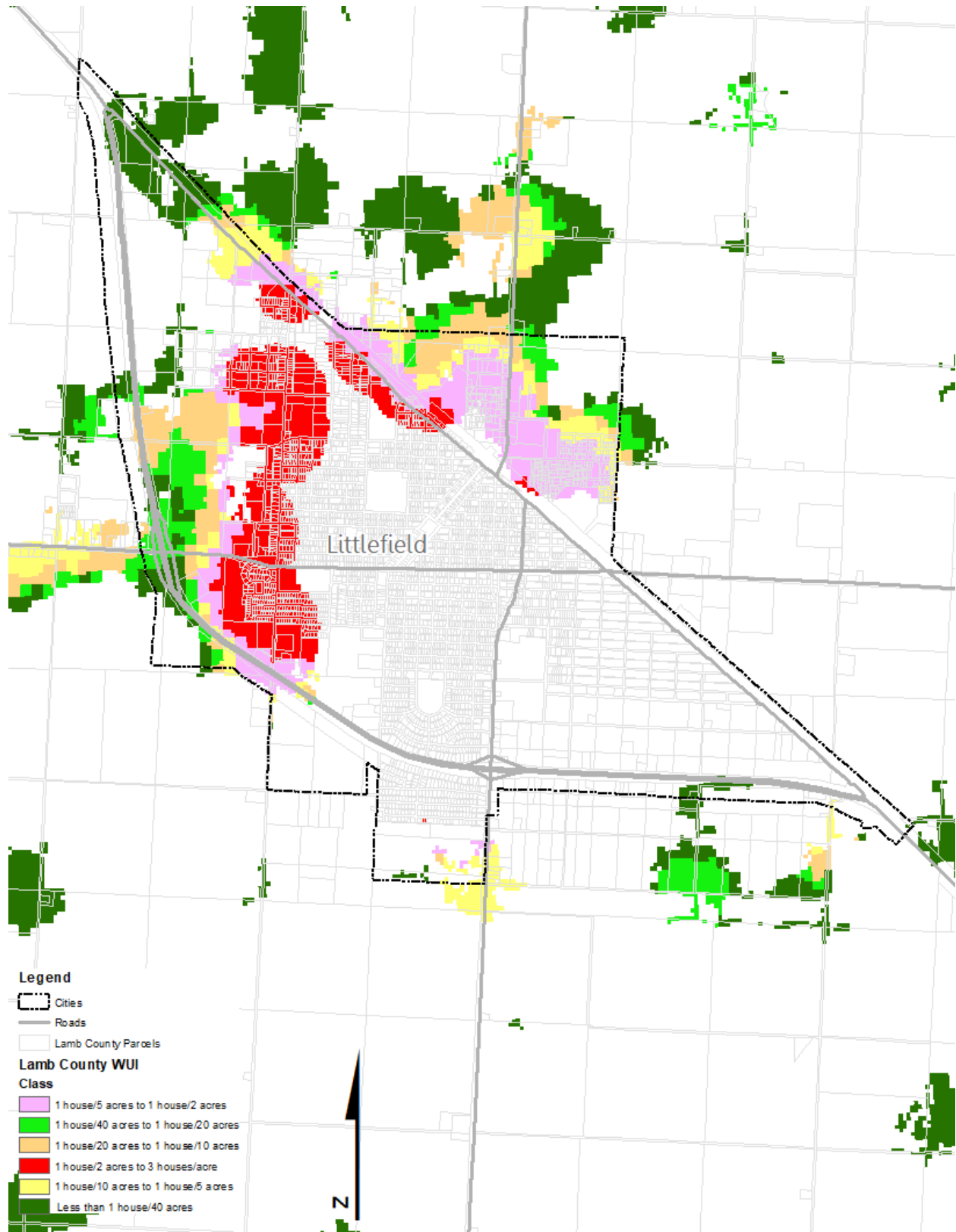


Figure 29: City of Littlefield WUI Exposure

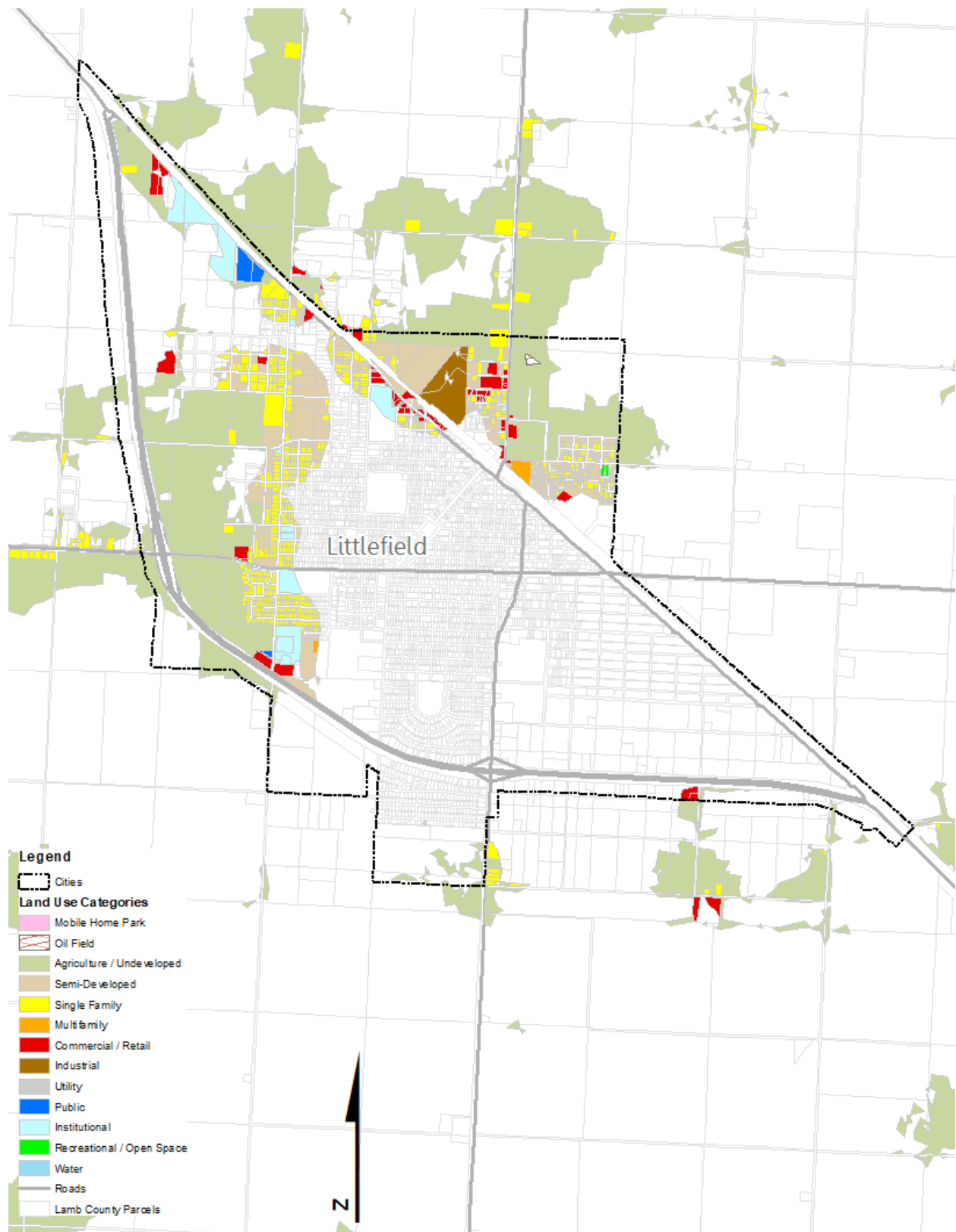


Figure 30: City of Littlefield WUI Land Use

Littlefield ISD

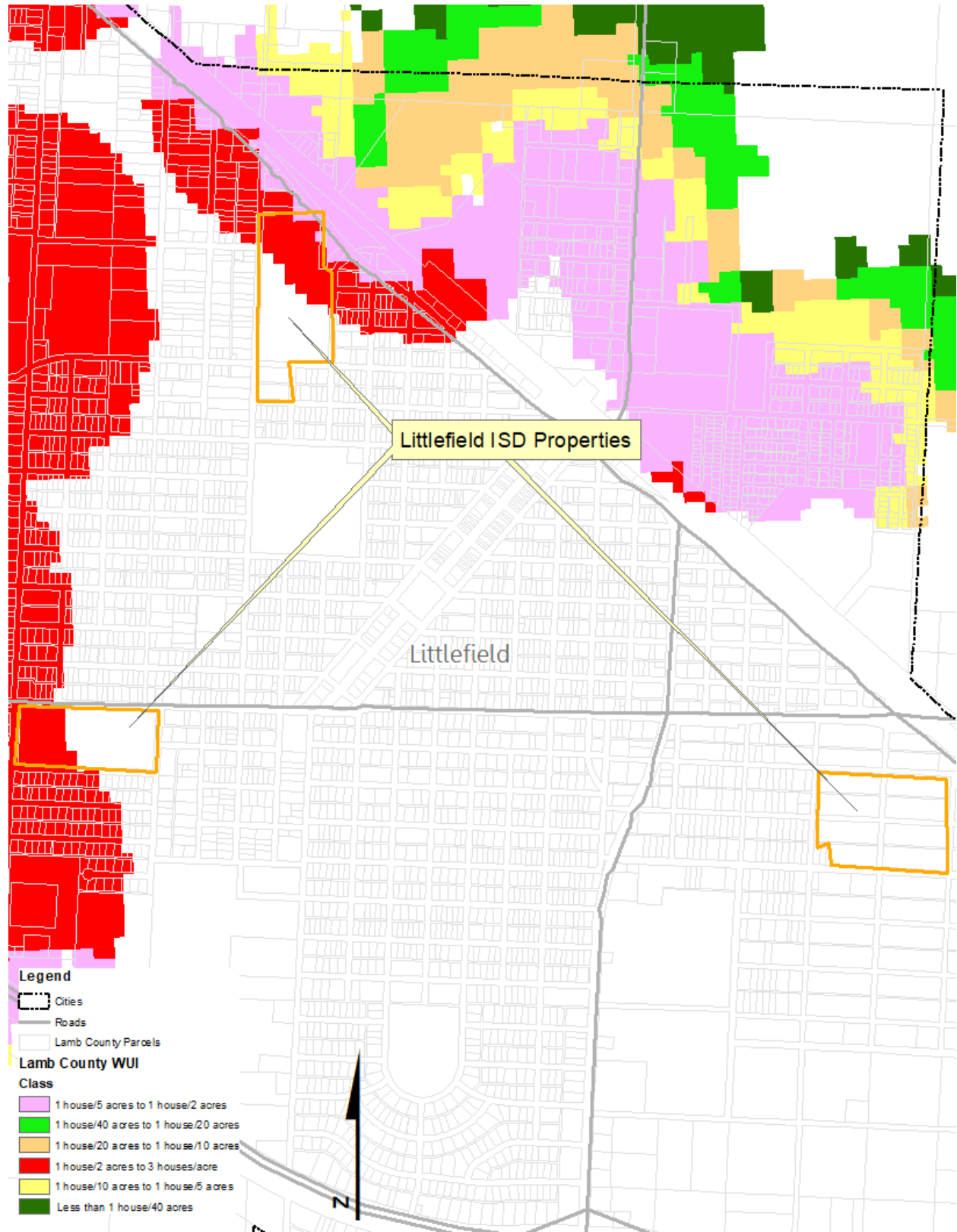


Figure 31: Littlefield ISD WUI Exposure

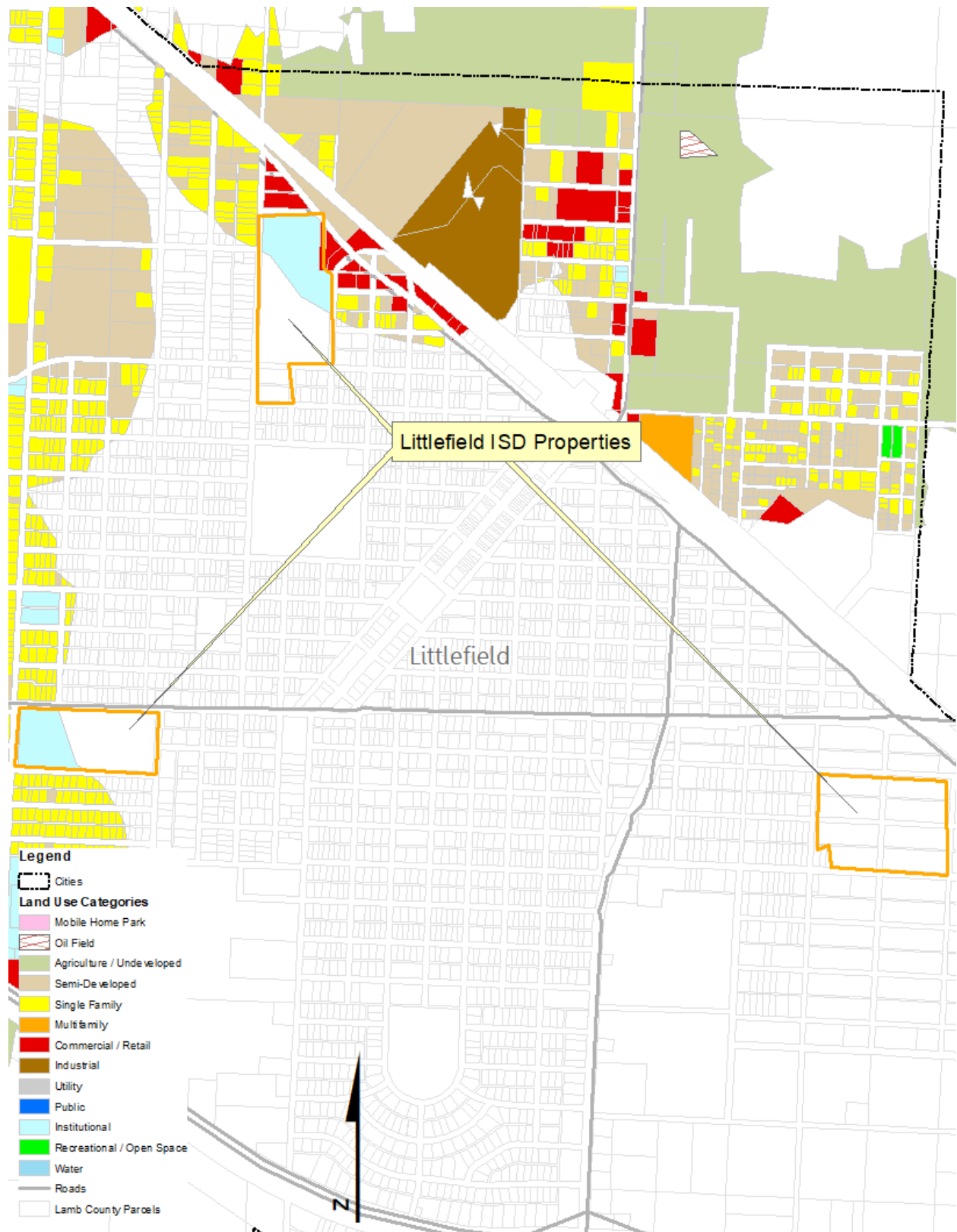


Figure 32: Littlefield ISD WUI Land Use

Springlake-Earth ISD

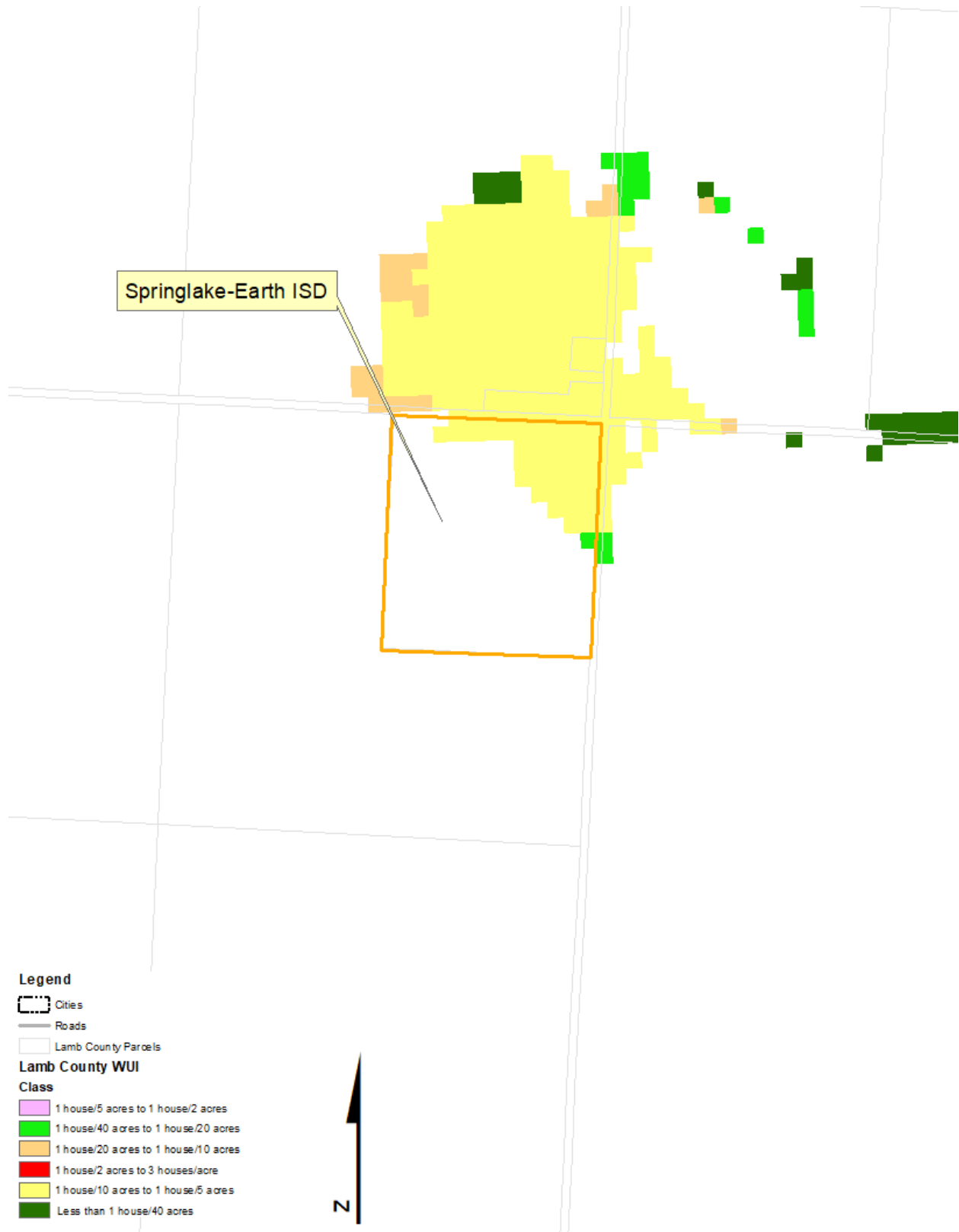


Figure 33: Springlake-Earth ISD WUI Exposure

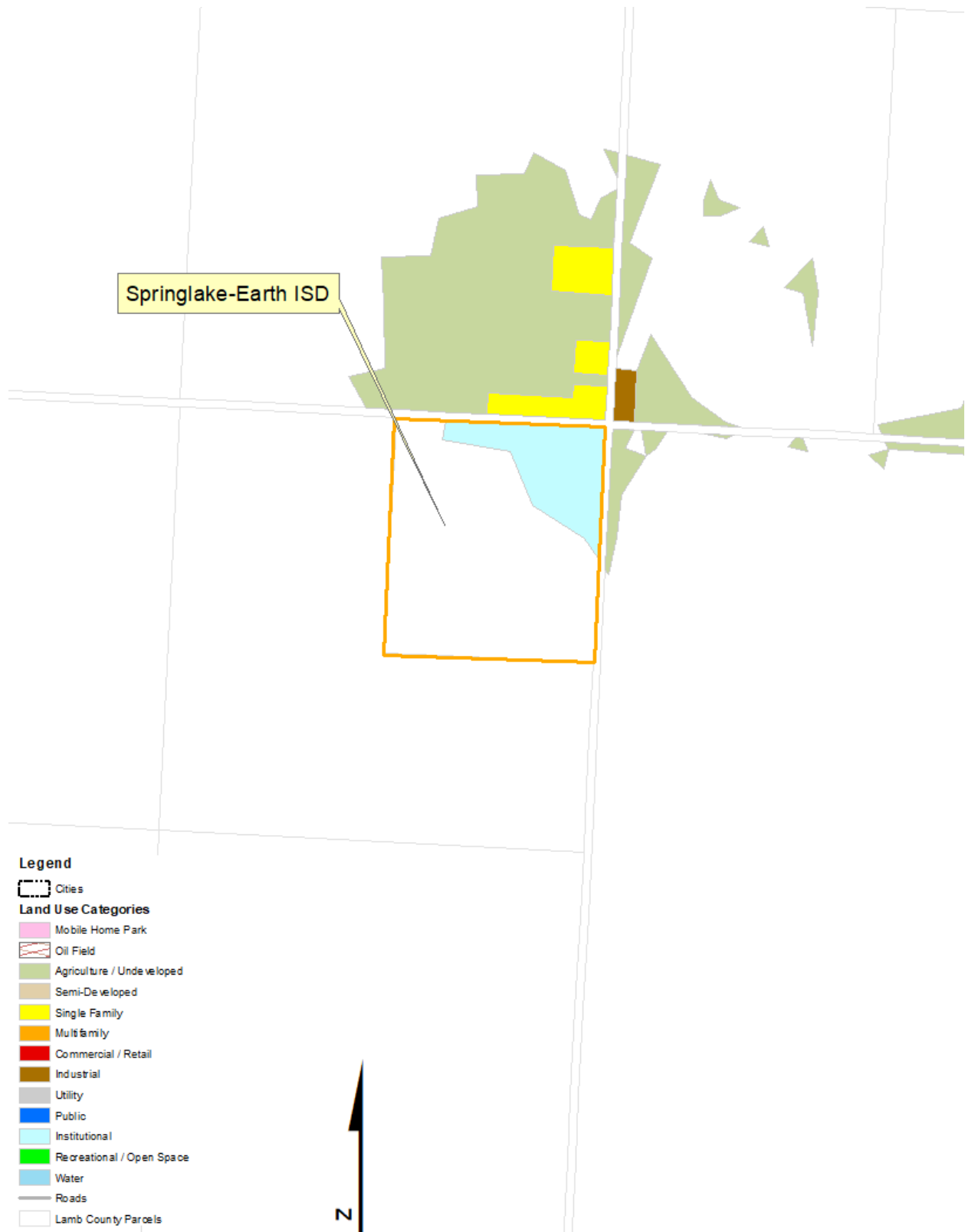


Figure 34: Springlake-Earth ISD WUI Land Use

City of Sudan

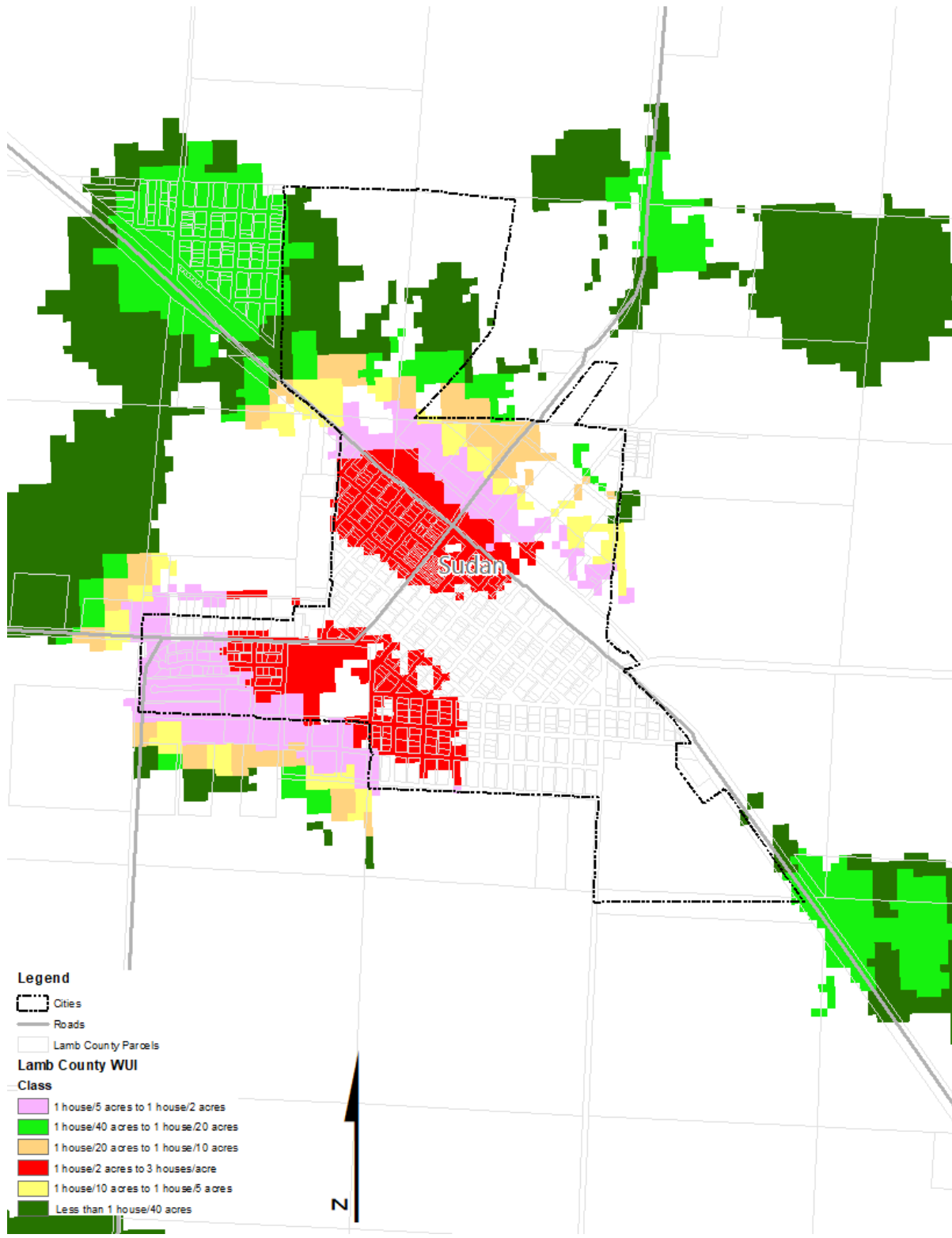


Figure 35: City of Sudan WUI Exposure

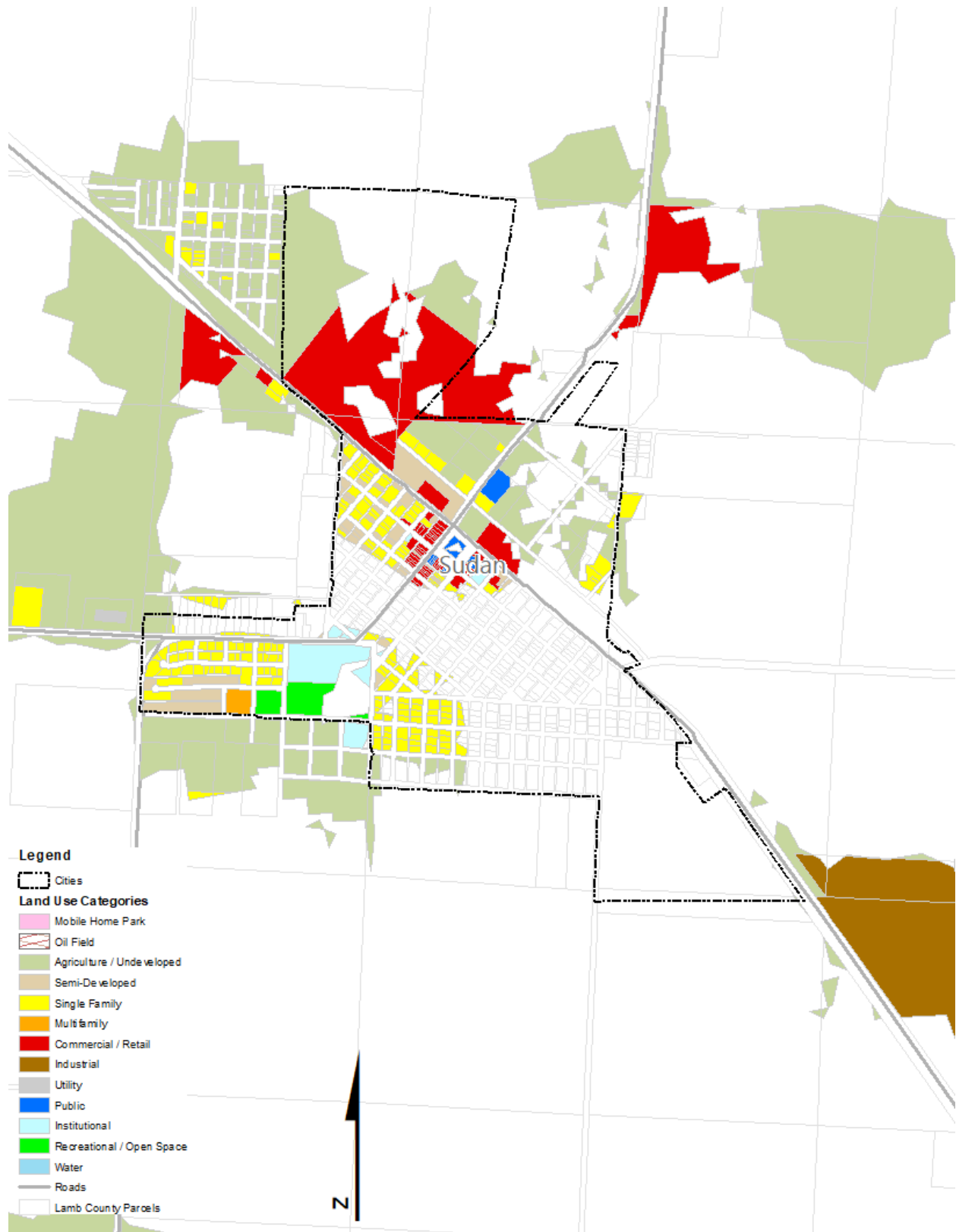


Figure 36: City of Sudan WUI Land Use

Sudan ISD

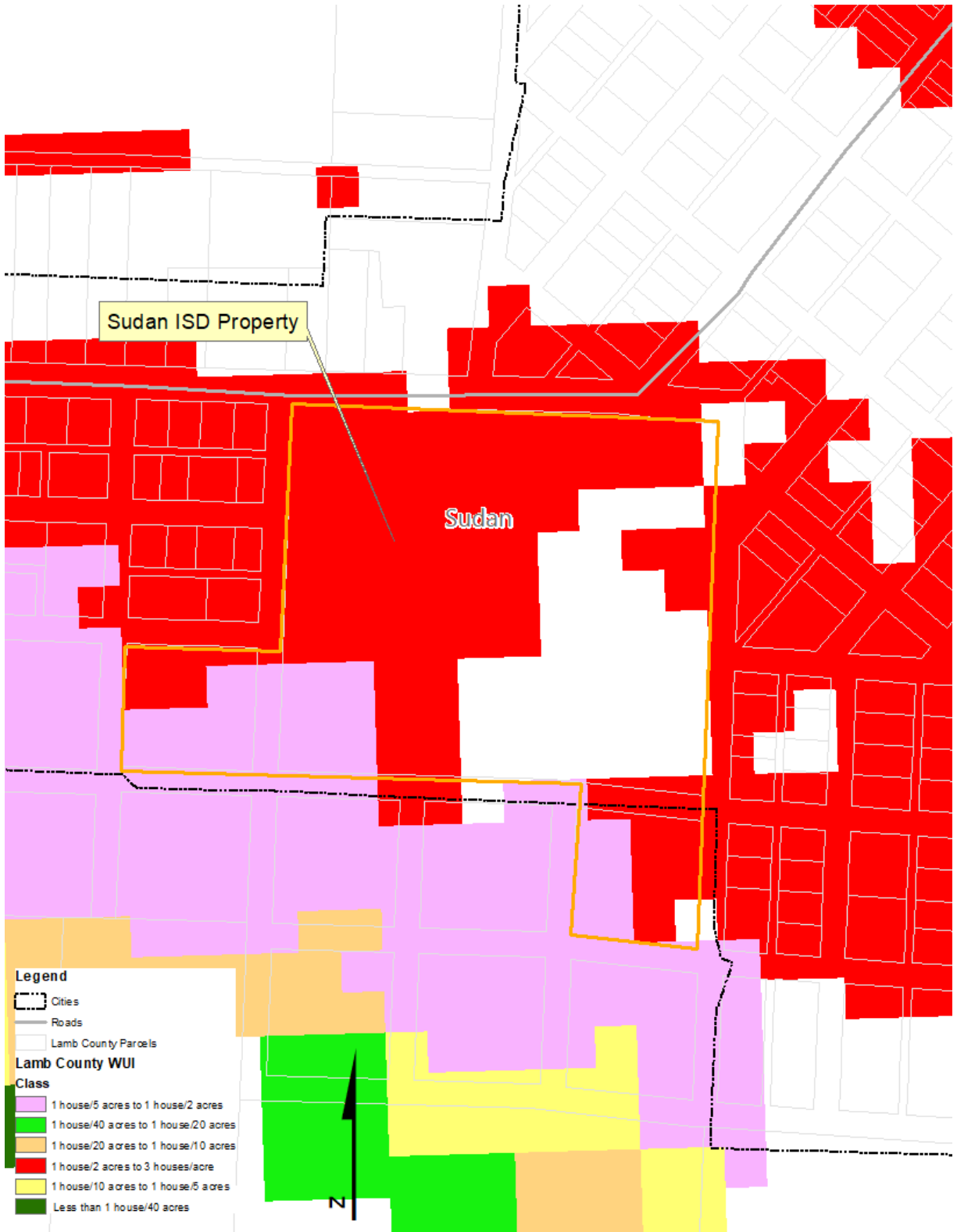


Figure 37: Sudan ISD WUI Exposure

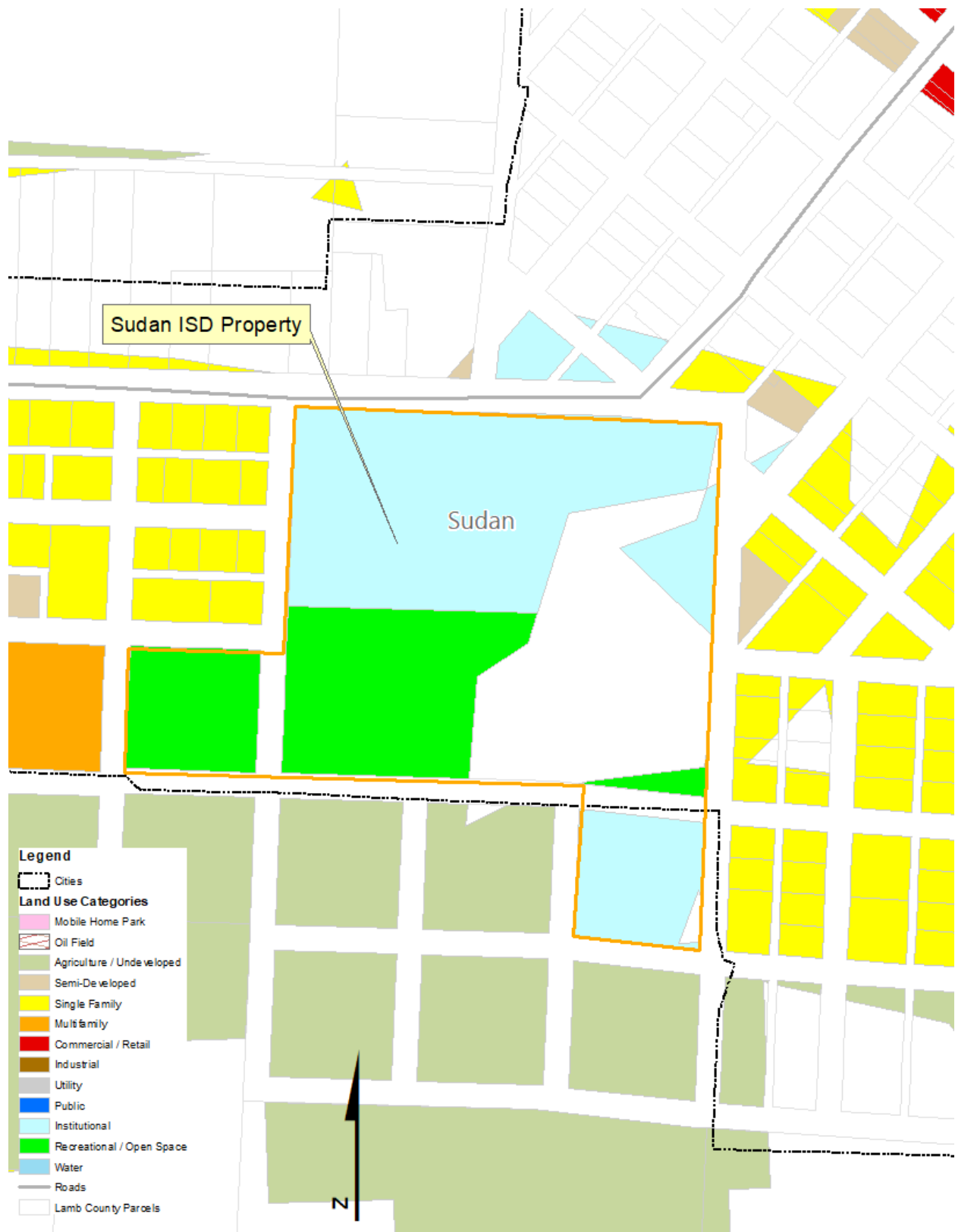


Figure 38: Sudan ISD WUI Land Use

Lynn County

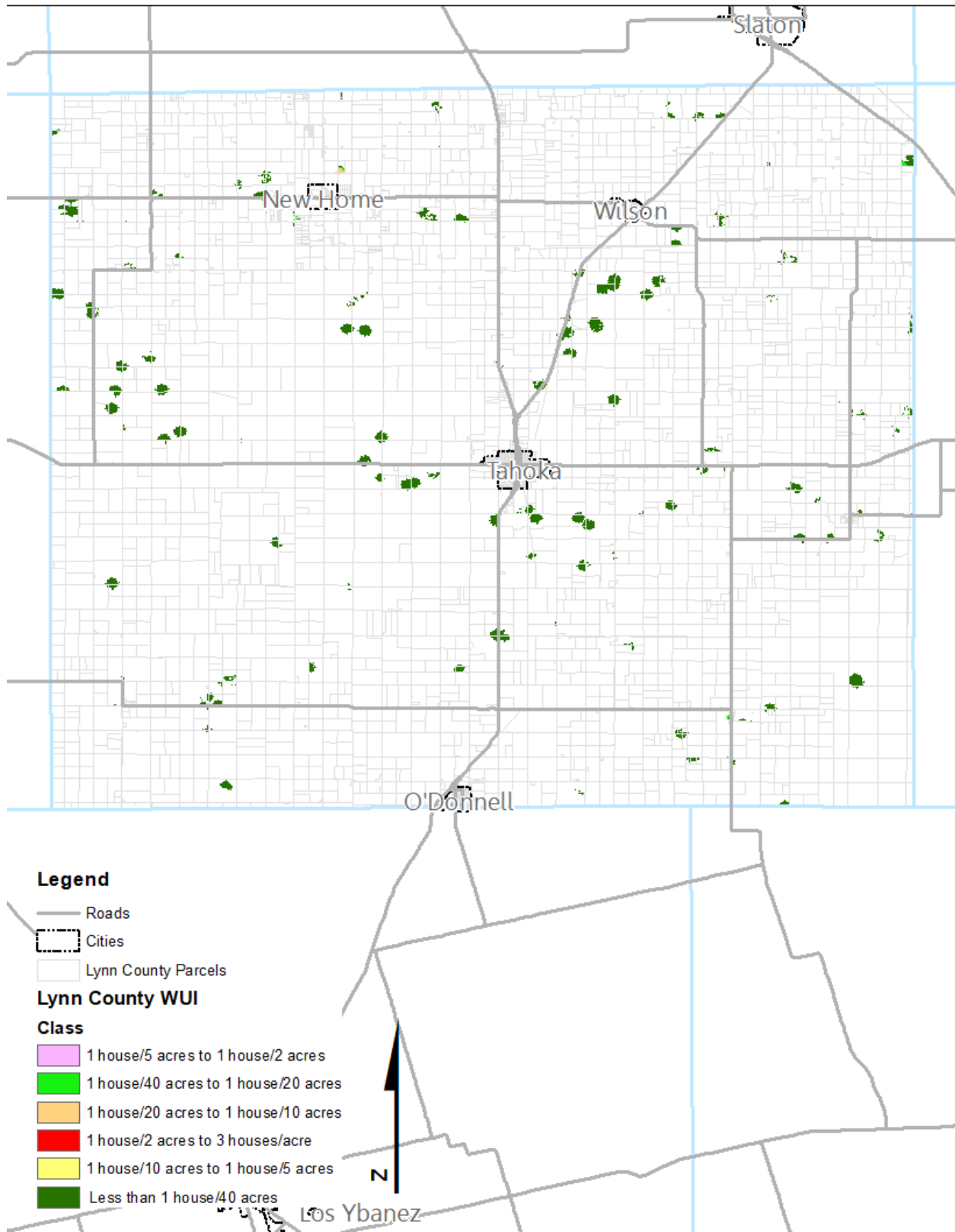


Figure 39: Lynn County WUI Exposure

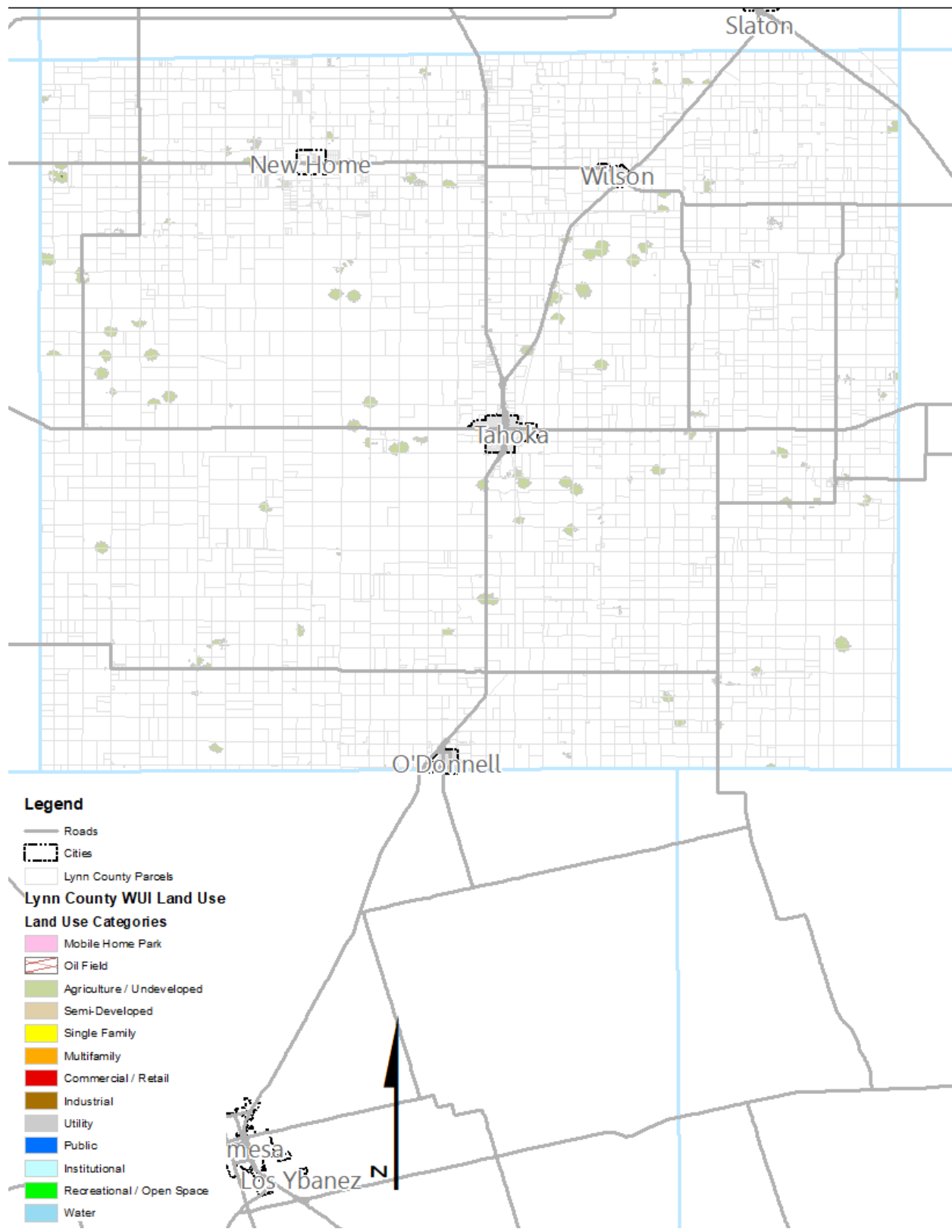


Figure 40: Lynn County WUI Land Use

B) Impact

Impacts from a wildfire in Lamb and Lynn Counties and the participating jurisdictions may include but are not limited to: crop damage or destruction, damaged or destroyed agricultural, residential, commercial, educational, and industrial buildings, escaped, lost, injured or killed livestock and pets. In the worst cases, residents may be injured or killed.

5) Vulnerability

A) Population

As described in the narrative, as well as in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

The jurisdictions recognize that vulnerable populations may need additional help preparing for and recovering from a wildfire.

Residents of mobile homes, specifically those built before HUD's Manufactured Housing and Standards requirements were introduced in 1976, are of particular concern⁹. These structures are more prone to fire and have a higher incidence of occupant death than modern manufactured homes.

Residents of sub-standard structures are also of particular concern. Structures in sub-standard condition ahead of a wildfire, whether due to structural damages, missing windows or doors, holes in exterior walls or the roof, may be less safe during a wildfire than structures in standard condition. Exterior damages may make the homes more prone to fire by more readily exposing flammable materials to flame. Missing windows and other exterior gaps may leave residents and structures prone to smoke inhalation and smoke damage.

All of these issues may increase damages and lead to injuries or loss of life.

B) Vulnerable Assets

As described in Section 4 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable assets. Increased vulnerability may be due to many factors including but not limited to: asset type, location, height, age, and/or use. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that damage to vulnerable assets may affect the participants' ability to prepare for and recover from a wildfire.

C) Critical Facilities¹⁰

Only the following critical facilities in Lamb County are located in the wildland urban interface (WUI), as defined by the Texas A&M Forest Service. Because of their location in the WUI, the density of development, and proximity to wildland areas, these facilities are believed to be particularly susceptible to future wildfire threats. No critical facilities in Lynn County were located in the WUI.

⁹ <https://www.usfa.fema.gov/downloads/pdf/statistics/rural.pdf>

¹⁰ For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Table 39: Lamb County Critical Facilities Vulnerable to Wildfire

	Potential Wildfire Impacts				
	Destruction	Partial Destruction	Heat Damage	Smoke Damage	Water Damage
Littlefield ISD Facilities	x	x	x	x	x
Littlefield Feedyard	x	x	x	x	x
Caprock Dairy 2	x	x	x	x	x
T J's Dairy	x	x	x	x	x
5 Star Dairy	x	x	x	x	x
Milk Harvest Dairy	x	x	x	x	x
Setting Sun Dairy	x	x	x	x	x
Springlake Dairy	x	x	x	x	x
Red Rock Dairy	x	x	x	x	x
Hilltop Dairy	x	x	x	x	x
Boehning Dairy	x	x	x	x	x
Tolk Station	x	x	x	x	x
Savage Services	x	x	x	x	x
Plant X	x	x	x	x	x
Library of Legacies	x	x	x	x	x
Arbor Grace	x	x	x	x	x
Lamb County Electric Coop	x	x	x	x	x
Cattleman's Feedlot	x	x	x	x	x
VB Ranch	x	x	x	x	x
Sudan ISD Facilities	x	x	x	x	x
Springlake-Earth ISD Facilities	x	x	x	x	x
Earth City Hall	x	x	x	x	x
Lamb County Healthcare	x	x	x	x	x

D) Vulnerable Parcels

Table 40: Parcels Partially or Completely Vulnerable to Wildfire

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
Lamb County	3737	224	36	52	3	27	22	12	1571	521	8	6213	\$243,846,330

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
City of Amherst	16	0	1	0	0	0	0	1	11	0	0	29	\$693,950

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
City of Earth	63	74	0	11	0	0	3	0	284	115	2	552	\$12,470,370

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
Lamb County Healthcare Center	0	0	0	4	0	0	0	0	0	0	0	4	\$4,475,690

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		

City of Littlefield	73	55	4	21	2	1	4	2	630	348	0	1140	\$33,118,270
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Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
Littlefield ISD	0	0	0	2	0	0	0	0	0	0	0	2	\$3,329,470

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
Springlake -Earth ISD	0	0	0	1	0	0	0	0	0	0	0	1	\$6,540,460

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
City of Sudan	56	55	0	10	1	0	9	3	216	51	1	402	\$23,218,880

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		
Sudan ISD	0	0	0	2	0	0	0	3	0	0	0	5	\$14,032,140

Jurisdiction	Vulnerable Parcels by Land Use Type											Total Parcels	Estimated Potential Damage Value
	Agricultural / Undeveloped	Commercial	Industrial	Institutional	Multi-Family	Oil Field	Public	Recreational	Single Family	Semi-Developed	Utility		

Lynn County	842	2	0	0	0	2	0	0	60	0	1	907	\$44,446,220
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6. Tornado

A tornado is defined as a rapidly rotating vortex or funnel of air extending ground-ward from a cumulonimbus cloud. Most of the time, vortices remain suspended in the atmosphere and are visible as a funnel cloud. However, when the lower tip of a vortex touches the ground, the tornado becomes a force of destruction. Tornado strength is currently measured using the Enhanced Fujita (EF) Scale. Like the previously used Fujita scale, the EF Scale uses damage to estimate tornado wind speeds and assign a number between 0 and 5. A rating of EF0 represents minor to no damage whereas a rating of EF5 represents total destruction of buildings.

1) Tornado History

According to data from the Lamb and Lynn County 2018 CHAMPS Reports, the following tornados affected Lamb and Lynn Counties and the participating jurisdictions. No data on past tornados was found for the City of Amherst, Lamb County Healthcare Center, Littlefield ISD, Olton ISD, City of Springlake, Springlake-Earth ISD, City of Sudan, Sudan ISD, Lynn County Hospital District, New Home ISD, City of O'Donnell, O'Donnell ISD, Tahoka ISD, Wilson ISD.

Table 41: Tornado History¹¹

Lamb County

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
LAMB	7/2/1951	F2	0	0	\$50,000 - \$500,000		\$495,496-\$4,954,961	
LAMB	5/10/1955	F1	0	0	\$50 - \$500		\$471-\$4,713	
LAMB	5/24/1957	F3	0	3	\$50,000 - \$500,000		\$456,000-\$4,560,000	
LAMB	5/24/1961	F0	0	0				
LAMB	6/3/1961	F3	0	0	\$5,000 - \$50,000		\$44,234 - \$442,336	
LAMB	5/5/1963	F0	0	0				
LAMB	5/11/1963	F0	0	0				
LAMB	6/4/1963	F1	0	0				
LAMB	6/16/1963	F0	0	0				
LAMB	5/14/1964	F0	0	0				
LAMB	6/2/1965	F4	4	76	\$5,000 - \$50,000		\$40,389 - \$403,385	
LAMB	7/28/1965	F0	0	0				
LAMB	8/15/1965	F0	0	0				
LAMB	5/10/1966	F2	0	2				
LAMB	4/12/1967	F2	0	0				
LAMB	7/2/1967	F0	0	0				
LAMB	5/9/1969	F0	0	0				

¹¹ <https://www.ncdc.noaa.gov/stormevents/>

LAMB	5/16/1969	F3	0	0	\$5,000 - \$50,000		\$35,353 - \$353,528	
LAMB	10/19/1969	F2	0	0	\$5,000 - \$50,000		\$35,353 - \$353,528	
LAMB	10/17/1971	F2	0	0	\$500,000 - \$5,000,000		\$3,162,211 - \$31,622,110	
LAMB	5/9/1972	F1	0	0				
LAMB	7/17/1972	F1	0	0				
LAMB	4/9/1978	F0	0	0	\$50		\$201	
LAMB	5/25/1982	F0	0	0	\$50		\$133	
LAMB	6/8/1983	F0	0	0	\$50		\$129	
LAMB	6/10/1987	F0	0	0				
LAMB	7/7/1987	F0	0	0				
LAMB	7/24/1988	F0	0	0				
LAMB	5/29/1990	F2	0	0	\$5,000 - \$50,000		\$9,879 - \$98,788	
LAMB	9/10/1991	F1	0	0	\$50 - \$500		\$94 - \$935	
LAMB	5/20/1992	F1	0	0	\$500 - \$5,000		\$911 - \$9,113	
LAMB	5/31/1995	F0	0	0				
LAMB	5/8/1998 14:38	F0	0	0				
LAMB	5/1/1999 19:42	F0	0	0				
LAMB	5/1/1999 19:43	F0	0	0				
LAMB	5/24/2003 19:48	F0	0	0				
LAMB	5/12/2005 15:30	F0	0	0				
LAMB	4/21/2007 17:20	EF0	0	0				
LAMB	4/21/2007 17:57	EF2	0	1	\$810,000	\$50,000	\$994,262	\$61,375
LAMB	6/2/2007 20:14	EF0	0	0				
LAMB	6/2/2007 21:35	EF0	0	0				
LAMB	9/27/2007 16:52	EF0	0	0		\$3,000		\$3,682

City of Earth

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
EARTH	6/2/2007 20:14	EF0	0	0				

City of Littlefield

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
LITTLEFIELD	5/24/2003 19:48	F0	0	0				
LITTLEFIELD	4/21/2007 17:20	EF0	0	0				
LITTLEFIELD	6/2/2007 21:35	EF0	0	0				

City of Olton

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
OLTON	5/8/1998 14:38	F0	0	0				
OLTON	5/1/1999 19:42	F0	0	0				
OLTON	5/1/1999 19:43	F0	0	0				
OLTON	5/12/2005 15:30	F0	0	0				

Lynn County

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
LYNN	5/24/1957	F3	0	1	\$50,000 - \$500,000		\$456,000 - \$4,560,000	
LYNN	3/28/1958	F0	0	0				

LYNN	7/11/1962	F1	0	0			
LYNN	12/23/1965	F0	0	0			
LYNN	6/8/1968	F1	0	0	\$5,000 - \$50,000	\$36,908 - \$369,079	
LYNN	5/12/1970	F2	0	0	\$500 - \$5,000	\$3,330 - \$33,295	
LYNN	7/20/1975	F0	0	0			
LYNN	6/7/1980	F1	0	0	\$50,000 - \$500,000	\$161,769 - \$1,617,686	
LYNN	6/3/1981	F1	0	0	\$50	\$145	
LYNN	5/27/1982	F0	0	0	\$50	\$133	
LYNN	5/16/1985	F0	0	0			
LYNN	5/29/1986	F0	0	0			
LYNN	5/17/1989	F0	0	0			
LYNN	5/29/1990	F0	0	0			
LYNN	6/13/1992	F0	0	0			
LYNN	5/25/1996	F0	0	0			
LYNN	4/10/1997	F0	0	0			
LYNN	5/25/1998 20:00	F0	0	0			
LYNN	7/21/2009 15:09	EFO	0	0			
LYNN	5/5/2006 16:30	F0	0	0			
LYNN	8/2/2007 12:51	EFO	0	0			
LYNN	6/2/2010 14:55	EFO	0	0			
LYNN	5/25/1996 18:05	F0	0	0			
LYNN	4/10/1997 18:35	F0	0	0			
LYNN	4/10/1997 18:52	F0	0	0			
LYNN	4/10/1997 18:56	F0	0	0			
LYNN	4/10/1997 19:15	F0	0	0			
LYNN	4/19/2002 18:08	F0	0	0			
LYNN	5/29/2006 16:29	F0	0	0			

LYNN	5/25/1996 18:14	F0	0	0				
LYNN	8/7/2006 14:25	F0	0	0				
LYNN	6/14/2010 13:40	EF0	0	0				

City of New Home

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
NEW HOME	5/5/2006 16:30	F0	0	0				
NEW HOME	8/2/2007 12:51	EF0	0	0				
NEW HOME	6/2/2010 14:55	EF0	0	0				

City of O'Donnell

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
ODONNELL	May 2019	EF3	0	0				

City of Tahoka

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
TAHOKA	5/25/1996 18:05	F0	0	0				
TAHOKA	4/10/1997 18:35	F0	0	0				
TAHOKA	4/10/1997 18:52	F0	0	0				
TAHOKA	4/10/1997 18:56	F0	0	0				
TAHOKA	4/10/1997 19:15	F0	0	0				
TAHOKA	4/19/2002 18:08	F0	0	0				

TAHOKA	5/29/2006 16:29	F0	0	0				
TAHOKA	May 2019	EF3	0	0				

City of Wilson

Location	Date/Time	F / EF	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage	Crop Damage
		Magnitude					\$2,019	\$2,019
WILSON	5/25/1996 18:14	F0	0	0				
WILSON	8/7/2006 14:25	F0	0	0				
WILSON	6/14/2010 13:40	EF0	0	0				

Most tornado data for Lamb and Lynn Counties doesn't include property or crop damage estimates. Since tornados don't recognize geographic or political boundaries, the county-level data is considered representative of each participating jurisdiction's tornado history. No tornados have been recorded in Lamb and Lynn Counties or any participating jurisdiction since 2010.

2) Likelihood of Future Occurrence

Based on the frequency of previous tornados in Lamb and Lynn County and the participating jurisdictions, the hazard is considered occasional, meaning one is possible in the next five years.

3) Extent

The Enhanced Fujita Scale, or EF Scale, is the scale for rating the strength of tornados via the damage they cause. Six categories from zero to five represent increasing degrees of damage. The scale takes into account how most structures are designed, and is thought to be an accurate representation of the surface wind speeds in the most violent tornados.

Table 42: Enhanced Fujita Scale¹²

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

Previous tornados were all F0 to F4 on the Fujita Scale. Since the switch to the updated scale, 15 tornados have been recorded. In terms of damages, the worst reported tornado in Lamb and Lynn Counties and the participating jurisdictions was an F4 tornado. It occurred on June 2, 1965, and

¹² Texas State Hazard Mitigation Plan, 2013 Update

after adjusting for inflation, it inflicted up to \$403,000 in property damages and caused 76 injuries and 4 fatalities.

Future tornados in the participating jurisdictions may meet the previous worst-case F4 one in terms of total damage dollars inflicted and the number of residents injured or killed.

4) Location and Impact

A) Location

Tornados are not constrained by any distinct geographic boundary. Tornados can occur across the participating jurisdictions, and they may freely cross from one jurisdiction into another.

B) Impact

Impacts from a tornado may include but are not limited to damaged or destroyed personal property including vehicles, damaged or destroyed agricultural, residential, commercial, and industrial buildings. Crops may be damaged or destroyed. Pets and livestock may be injured or killed by tornados or flying debris. Pets and livestock may escape due to damaged or destroyed structures and fences.

In the worst cases, tornados may cause injuries and/or be deadly.

5) Vulnerability

Tornados have the potential to impact the entire planning area. All existing and future buildings, critical facilities, critical infrastructure, improved property, and the population of the jurisdictions addressing the hazard are considered vulnerable to this hazard.

A) Population

As described in the narrative, as well as in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that vulnerable populations may need additional help preparing for and recovering from a tornado.

Residents of mobile / manufactured homes are of particular concern. These structures are never considered safe during a tornado.

Residents of sub-standard structures are also of particular concern. Structures in sub-standard condition ahead of a tornado, whether due to structural damages, missing windows or doors, holes in exterior walls or the roof, may be less safe during a tornado than structures in standard condition.

Existing structural weaknesses, due to housing type or existing damages, may lead to compounded damages, injuries, or loss of life.

B) Vulnerable Assets

As described in Section 4 of Chapter 3 above, Kerr County and the participating jurisdictions are home to many vulnerable assets. Increased vulnerability may be due to many factors including but not limited to: asset type, location, height, age, and/or use. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that damage to vulnerable assets may affect the participants' ability to prepare for and recover from a tornado.

C) Critical Facilities¹³

Given tornados' violent nature and unpredictability, all identified critical facilities may experience vulnerability to the hazard. Damage to these facilities may have a negative impact on each jurisdiction's recovery from a tornado if that damage affects the facility's ability to reopen and resume normal business right away. Additionally, any loss of culturally important facilities may have negative effects in the community beyond the simple loss of the facility itself.

¹³ For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Table 43: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Tornadoes

	Potential Tornado Impacts								
	Loss of Power	Flying Debris	Uprooted Trees	Flooding Due to Physical Damages	Damaged or Destroyed Roofs	Damaged or Broken Windows	Wind Damage	Injuries	Death
Amherst City Hall	x	x	x	x	x	x	x	x	x
Amherst Fire Department	x	x	x	x	x	x	x	x	x
Amherst Ems Department	x	x	x	x	x	x	x	x	x
Amherst ISD	x	x	x	x	x	x	x	x	x
Harmonee House	x	x	x	x	x	x	x	x	x
Littlefield Feedyard	x	x	x	x	x	x	x	x	x
Caprock Dairy 2	x	x	x	x	x	x	x	x	x
T J'S Dairy	x	x	x	x	x	x	x	x	x
5 Star Dairy	x	x	x	x	x	x	x	x	x
Milk Harvest Dairy	x	x	x	x	x	x	x	x	x
Setting Sun Dairy	x	x	x	x	x	x	x	x	x
Springlake Dairy	x	x	x	x	x	x	x	x	x
Red Rock Dairy	x	x	x	x	x	x	x	x	x
Earth City Hall	x	x	x	x	x	x	x	x	x
Earth Volunteer Fire Department	x	x	x	x	x	x	x	x	x
Earth Ems Department	x	x	x	x	x	x	x	x	x
Earth Police Department	x	x	x	x	x	x	x	x	x
Earth Medical Clinic	x	x	x	x	x	x	x	x	x
Earth Housing Development Corporation	x	x	x	x	x	x	x	x	x
Springlake-Earth ISD	x	x	x	x	x	x	x	x	x
Hilltop Dairy	x	x	x	x	x	x	x	x	x
Boehning Dairy	x	x	x	x	x	x	x	x	x
Tolk Station	x	x	x	x	x	x	x	x	x
Savage Services	x	x	x	x	x	x	x	x	x
Plant X	x	x	x	x	x	x	x	x	x
Littlefield City Hall	x	x	x	x	x	x	x	x	x
Littlefield Fire Department	x	x	x	x	x	x	x	x	x
Littlefield Ems Department	x	x	x	x	x	x	x	x	x
Littlefield Police Department	x	x	x	x	x	x	x	x	x
Littlefield ISD	x	x	x	x	x	x	x	x	x
Lamb County Courthouse	x	x	x	x	x	x	x	x	x
Lamb County Sheriff's Office	x	x	x	x	x	x	x	x	x
LHC Family Medicine	x	x	x	x	x	x	x	x	x
Lamb Health Care Center	x	x	x	x	x	x	x	x	x

Littlefield WIC Clinic	X	X	X	X	X	X	X	X	X
Library of Legacies	X	X	X	X	X	X	X	X	X
Arbor Grace	X	X	X	X	X	X	X	X	X
Lamb County Electric Coop	X	X	X	X	X	X	X	X	X
Continental Dairy Facilities	X	X	X	X	X	X	X	X	X
Olton City Hall	X	X	X	X	X	X	X	X	X
Olton Fire Department	X	X	X	X	X	X	X	X	X
Olton Ems Department	X	X	X	X	X	X	X	X	X
Olton Police Department	X	X	X	X	X	X	X	X	X
Olton ISD	X	X	X	X	X	X	X	X	X
Olton Clinic	X	X	X	X	X	X	X	X	X
City of Olton Housing Authority	X	X	X	X	X	X	X	X	X
Running Water Draw Care Facility	X	X	X	X	X	X	X	X	X
Cattleman's Feedlot	X	X	X	X	X	X	X	X	X
Springlake City Hall	X	X	X	X	X	X	X	X	X
VB Ranch	X	X	X	X	X	X	X	X	X
Sudan City Hall	X	X	X	X	X	X	X	X	X
Sudan Police Department	X	X	X	X	X	X	X	X	X
Sudan Fire Department	X	X	X	X	X	X	X	X	X
Sudan Ems Department	X	X	X	X	X	X	X	X	X
Sudan ISD	X	X	X	X	X	X	X	X	X
Sudan Medical Clinic	X	X	X	X	X	X	X	X	X

Table 44: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Tornadoes

	Potential Tornado Impacts								
	Loss of Power	Flying Debris	Uprooted Trees	Flooding Due to Physical Damages	Damaged or Destroyed Roofs	Damaged or Broken Windows	Wind Damage	Injuries	Death
Tahoka WIC Clinic	X	X	X	X	X	X	X	X	X
Tahoka Housing Authority	X	X	X	X	X	X	X	X	X
Tahoka Police Department	X	X	X	X	X	X	X	X	X
Tahoka Correctional Institution	X	X	X	X	X	X	X	X	X
Lynn County Hospital	X	X	X	X	X	X	X	X	X

O'Donnell Family Wellness Clinic	X	X	X	X	X	X	X	X	X
O'Donnell Housing Authority	X	X	X	X	X	X	X	X	X
O'Donnell Police Department	X	X	X	X	X	X	X	X	X
O'Donnell Health Clinic	X	X	X	X	X	X	X	X	X
Lynn County Courthouse	X	X	X	X	X	X	X	X	X
Tahoka City Hall	X	X	X	X	X	X	X	X	X
O'Donnell City Hall	X	X	X	X	X	X	X	X	X
New Home City Hall	X	X	X	X	X	X	X	X	X
Wilson City Hall	X	X	X	X	X	X	X	X	X
Tahoka ISD Facilities	X	X	X	X	X	X	X	X	X
O'Donnell ISD Facilities	X	X	X	X	X	X	X	X	X
New Home ISD Facilities	X	X	X	X	X	X	X	X	X
Wilson ISD Facilities	X	X	X	X	X	X	X	X	X
Tahoka water and sewer systems	X	X	X	X	X	X	X	X	X
O'Donnell water and sewer systems	X	X	X	X	X	X	X	X	X
New Home water and sewer systems	X	X	X	X	X	X	X	X	X
Wilson water and sewer systems	X	X	X	X	X	X	X	X	X

D) Vulnerable Parcels

Table 45: Estimated Potential Damage Values in Each Jurisdiction¹⁴

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570
Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880
New Home ISD	916	\$100,075,260

¹⁴ Property values and parcel counts based on Kerr Central Appraisal District Data, unless otherwise noted.

City of O'Donnell	548	\$16,945,540
O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

7. Drought

Drought is defined as the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length.

Droughts are one of the most complex natural hazards to identify because 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.

Table 46: Drought Classifications

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.

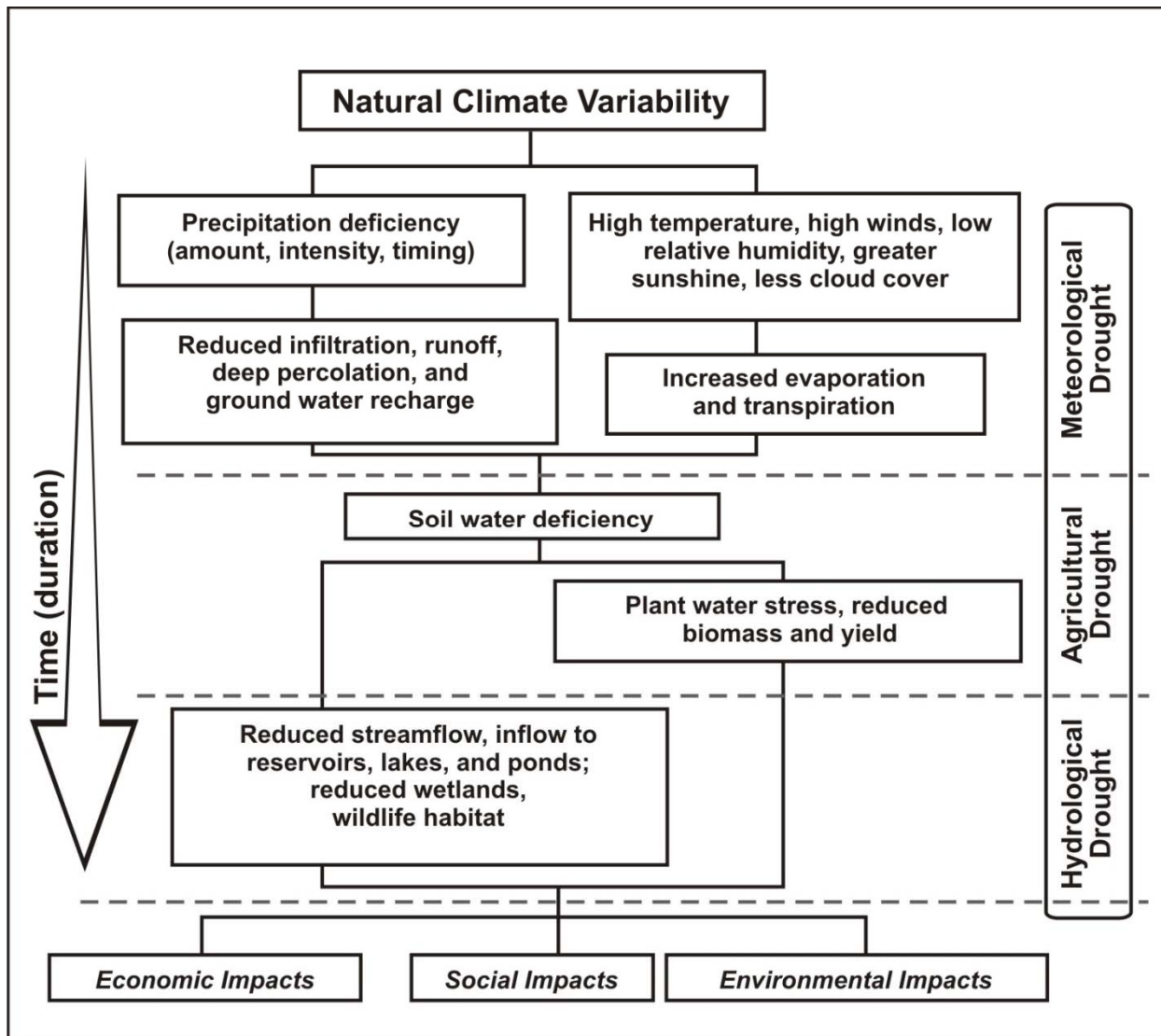


Figure 41: Sequence of Drought Occurrence and Impacts for Commonly Accepted Drought Types¹⁵

¹⁵ Source: National Drought Mitigation Center, University of Nebraska-Lincoln, <http://drought.unl.edu/DroughtBasics/TypesofDrought.aspx>

1) Drought History

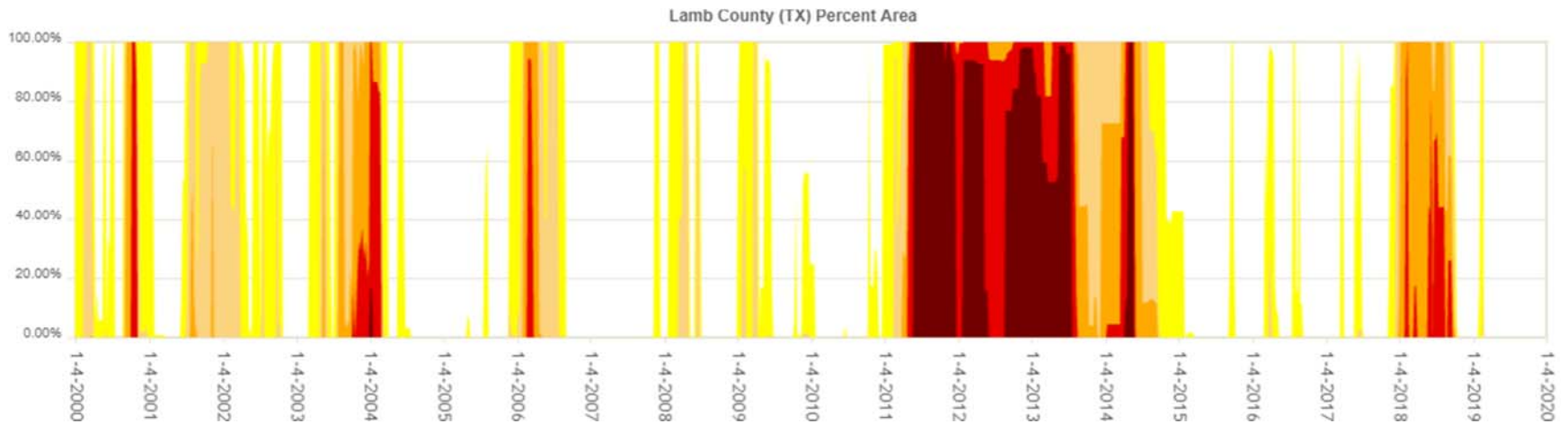


Figure 42: Lamb County Drought History

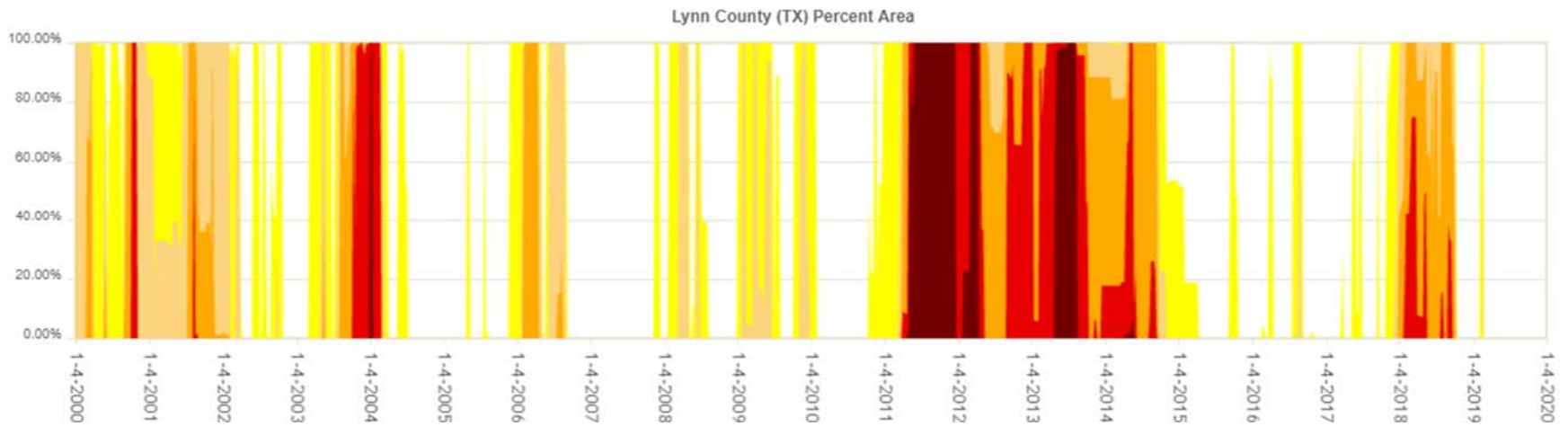


Figure 43: Lynn County Drought History

Drought history is recorded at the county level. However, the data is measured by the percentage of the county affected by drought. Although no specific data regarding drought’s occurrences in the individual participating jurisdictions is reported, it’s possible to use the data in the above figures to infer when all jurisdictions addressing the hazard previously experienced drought conditions due to the fact that the conditions impacted 100% of the county.

According to the data, all jurisdictions addressing the hazard have experienced drought conditions on a nearly annual basis during the last 10 years.

The planning team collected additional drought history from the Lamb and Lynn Counties 2018 CHAMPS Reports. It included the following information about droughts that occurred from 1996 to 2014:

Table 47: Lamb County 2018 CHAMPS Report Drought Data

Date Range	Drought Events	Fatalities	Injuries	Local Property Damage \$2019	Local Crop Damage \$2019
4/1/1996 - 9/1/2014	79	0	0	\$324,356	\$1,621,781

Table 48: Lynn County 2018 CHAMPS Report Drought Data

Date Range	Drought Events	Fatalities	Injuries	Local Property Damage \$2019	Local Crop Damage \$2019
4/1/1996 - 9/1/2014	75	0	0	\$374,150	\$3,872,891

2) Likelihood of Future Occurrence

Based on historical drought in Texas and Lamb and Lynn Counties, the likelihood of future drought affecting the participating jurisdictions is likely, with an event probable in the next three years, and a major drought every 20 years.

3) Extent

Over the last 10 years, Lamb and Lynn Counties have regularly experienced county-wide droughts classified as periods ranging from abnormal dryness to exceptional drought. At multiple times, both entire Counties, including all jurisdictions addressing the hazard, have been in exceptional drought, the most severe drought category.

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 49: Palmer Drought Index

Drought Index	Drought Conditions Classifications						
	Extreme	Severe	Moderate	Normal	Mostly 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 +2.00	+3.00 to +3.00	+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 +2.00	+3.00 to +3.00	+4.00 and above

Table 50: Palmer Drought Category Descriptions¹⁶

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. Indicators correspond to the intensity of drought.

Based on the historical occurrences of drought, Lamb and Lynn Counties and all participating jurisdictions addressing the hazard should anticipate experiencing droughts ranging from abnormally dry to exceptional drought or D0 to D4 based on the Palmer Drought Category.

Given varying conditions, droughts may start on the low end of the Palmer Drought Category, but will intensify with duration and an ongoing lack of precipitation.

Lamb and Lynn Counties have experienced some level of drought conditions over 60% of the time since 2000. Throughout that time, drought conditions have ranged from abnormally dry to

¹⁶ www.droughtmonitor.unl.edu

exceptional drought. The worst period lasted from December 2010 through November 2014. Between May and November 2011, 100% of both Counties was in exceptional drought, D4. Since 1996, the worst droughts in Lamb and Lynn Counties and the participating jurisdictions have inflicted up to \$152,645¹⁷ in property damages and \$1,116,550¹⁸ in crop damages. Droughts have been as intense as D4, exceptional drought, on the Palmer Drought Category scale. Future drought events may meet previous droughts in terms of intensity, duration, and total damage dollars inflicted.

4) Location and Impact

A) Location

Drought has no distinct geographic boundary. Drought can occur across Lamb and Lynn Counties and the participating jurisdictions.

B) Impact

Infrastructural impacts may include damage to the foundations of agricultural, residential, commercial, and industrial buildings. Road networks that pass through the Counties and participating jurisdictions may be damaged to the point of failure as the ground shifts and shrinks. The participating jurisdictions' water and wastewater systems may fail due to cracks and breaks in underground tanks and pipe networks.

Economic impacts may include: increased prices for food, unemployment for farm workers and ranch hands, and reduced tax revenues because of reduced supplies of agriculture products and livestock that are dependent on rainfall.

According to the 2016 Region O Water Plan (Llano Estacado Regional Water Plan), eight of the ten cities participating in this plan have adopted Drought Contingency Plans. These cities are Amherst, Earth, Littlefield, Olton, Sudan, O'Donnell, Tahoka, and Wilson. The cities of Springlake and New Home are not listed in the plan as having Drought Contingency Plans. The plans describe different stages of water restrictions ranging from voluntary conservation to water allocation. Each stage is triggered by changes in the water supply and demand. The table below details the triggers and restrictions for each of these plans.

¹⁷ Event date: 5/1/1996 and 6/1/1996, both in Lamb County, damage dollars adjusted to \$2019

¹⁸ Event date: 6/18/2009, in Lynn County, damage dollars adjusted to \$2019

Jurisdiction		Mild	Moderate	Severe	Critical	Emergency	Water Allocation
Amherst	Triggers	TDWD ≥ 195K gallons for 3 consecutive days or 65K gpd or 11 feet on SCADA; falling treated water reservoir levels below 75% for 3 consecutive days.	TDWD ≥ 210K gallons for 3 consecutive days or 70K gpd or 9 feet on SCADA; falling treated water reservoir levels below 70% for 3 consecutive days.	TDWD ≥ 225K gallons for 3 consecutive days or 75K gpd or 9 feet on SCADA; falling treated water reservoir levels below 65% for 3 consecutive days.	TDWD ≥ 240K gallons for 3 consecutive days or 80K gpd or 8 feet on SCADA; falling treated water reservoir levels below 60% for 3 consecutive days.	TDWD ≥ 240K gallons for 3 consecutive days or 80K gpd or 8 feet on SCADA; falling treated water reservoir levels below 55% for 3 consecutive days.	N/A
	Responses	Voluntary water use restrictions for irrigation/landscape; 20% reduction in TDWD for 3 consecutive days.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses; 30% reduction in TDWD for 3 consecutive days.	Moderate condition measures with additional landscape and other watering restrictions; 40% reduction in TDWD for 3 consecutive days.	Moderate and Severe condition measures with prohibition of outdoor water use; 50% reduction in TDWD.	Moderate, Severe and Critical condition measures with prohibition of washing vehicles; 60% reduction in TDWD.	N/A
Earth	Triggers	TDWD ≥ 70% system capacity for 5 consecutive days.	TDWD ≥ 85% system capacity for 5 consecutive days.	Treated water reservoir levels do not refill to more than 75% of capacity overnight for 2 consecutive days.	Treated water reservoir levels do not refill to more than 50% of capacity overnight for 2 consecutive days.	Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water	N/A

						service; or natural or man-made contamination of the water supply source(s); more than 1/4 of water wells are out of service due to natural or man-made disaster.	
	Responses	Voluntary water use restrictions for irrigation/landscape.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Moderate condition measures with additional landscape and other watering restrictions.	Moderate and Severe condition measures with additional prohibitions for some uses.	Moderate, Severe and Critical condition measures with additional prohibitions for some uses.	N/A
Littlefield	Triggers	TDWD \geq 75% of average daily water use for 3 consecutive days.	TDWD \geq 90% of average daily water use for 3 consecutive days; net reservoir storage falls below 60% of capacity in 48 hours; water pressure in distribution systems falls below 40 psi for at least 8 hours.	Water demand exceeds firm system capacity for one day.	The imminent or actual failure of a major water supply component of the system which would affect the safety, health or welfare of the citizens of Littlefield;	The imminent or actual failure of a major water supply component of the system which would affect the safety, health or welfare of the public; natural or man-made	If necessary

					natural or man-made contamination of the water supply source(s).	contamination of the water supply source(s).	
	Responses	Voluntary water use restrictions for irrigation/landscape.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Moderate condition measures with additional landscape and other watering restrictions.	Moderate and Severe condition measures with additional prohibitions for some uses.	Moderate, Severe and Critical condition measures with additional prohibitions for some uses.	Water will be allocated based on residential household size, multi-family residential size, and commercial user needs.
Olton	Triggers	TDWD ≥ 70% system capacity for 5 consecutive days.	TDWD ≥ 85% system capacity for 3 consecutive days.	Treated water reservoir levels do not refill to more than 75% of capacity for 2 consecutive days.	Treated water reservoir levels do not refill to more than 50% of capacity for 2 consecutive days.	Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or natural or man-made	N/A

						contamination of the water supply source(s); significant portion of system is out of service due to natural or man-made disaster.	
	Responses	Voluntary water use restrictions for irrigation/landscape.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Moderate condition measures with additional landscape and other watering restrictions.	Moderate and Severe condition measures with additional prohibitions for some uses.	Moderate, Severe and Critical condition measures with additional prohibitions for some uses.	N/A
Sudan	Triggers	TDWD \geq 1.75 mgd for 5 consecutive days or 350,000 on a single day; falling treated water reservoir levels below 75% or 11 feet on SCADA for 5 consecutive days.	TDWD \geq 2 mgd for 5 consecutive days or 400,000 on a single day; falling treated water reservoir levels below 70% or 10 feet on SCADA for 5 consecutive days; well #2, well #5 or a combination of the 3 other wells fail and are down for repairs.	TDWD \geq 2.25 mgd for 5 consecutive days or 450,000 on a single day; falling treated water reservoir levels below 65% or 9.5 feet on SCADA for 5 consecutive days; well #2, well #5 or a combination of	TDWD \geq 2.5 mgd for 5 consecutive days or 500,000 on a single day; falling treated water reservoir levels below 60% or 9 feet on SCADA for 5 consecutive days; well #2, well #5 or a combination of the 3 other	Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or natural or man-made contamination of the water supply source(s).	N/A

				the 3 other wells fail and are down for repairs.	wells fail and are down for repairs.		
	Responses	Voluntary water use restrictions for irrigation/landscape.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Moderate condition measures with additional landscape and other watering restrictions.	Moderate and Severe condition measures with additional prohibitions for some uses.	Moderate, Severe and Critical condition measures with additional prohibitions for some uses.	N/A
O'Donnell	Triggers	Available water supply <80% of flow capabilities or director of utilities determines a mild shortage condition exists.	Available water supply <75% of flow capabilities or director of utilities determines a moderate water condition exists.	Analysis of water supply availability indicates there may be an immediate risk of a shortage.	Available water supply <50% of flow capabilities or director of utilities determines a critical water condition exists.	Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or natural or man-made contamination of the water	N/A

						supply source(s).	
	Responses	Not stated.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Not stated.	Not stated.	Not stated.	N/A
Tahoka	Triggers	TDWD ≥ 80% system capacity for 10 consecutive days; water supply available only sufficient to meet projected needs; lake levels, reservoir capacities, or groundwater supplies are low for some concern exists for future water supplies if drought or emergency conditions continue.	TDWD ≥ 90% system capacity for 10 consecutive days; water supply available reduced, but greater than 90% of projected needs; water availability from lakes or groundwater below normal.	TDWD ≥ 100% system capacity for 5 consecutive days; water supply available reduced to 90% or less of projected needs; water availability from lakes or groundwater well below normal.	N/A	TDWD ≥ 105% system capacity for 5 consecutive days; water supply available reduced to 70% or less of projected needs; there has been a failure in a major water supply source or system or natural disaster that causes a severe and prolonged limit on the ability of the water supply system to meet water	N/A

						supply demands.	
	Responses	Voluntary water use restrictions for irrigation/landscape.	Mandatory restrictions for irrigation/landscape watering and some non-essential uses.	Moderate condition measures with additional landscape and other watering restrictions.	N/A	Moderate and Severe condition measures with additional prohibitions for some uses.	N/A
Wilson	Triggers	TDWD > 75% City's production capacity for 3 consecutive days.	TDWD > 90% City's production capacity for 3 consecutive days; net reservoir storage falls below 60% of capacity in 48 hours; water pressure in distribution systems falls below 40 psi for at least 8 hours.	The imminent or actual failure of a major water supply component of the system which would affect the safety, health or welfare of the public; natural or man-made contamination	N/A	N/A	N/A

			of the water supply source(s).			
Responses	Voluntary water use restrictions for residents and major water customers; mandatory restrictions for irrigation/landscape.	Mild condition measures with additional prohibitions for landscape/irrigation and some other non-essential uses.	Mild and Moderate condition measures with additional prohibitions for some commercial uses not essential for health and human safety.	N/A	Major condition measures with additional prohibitions for some commercial uses not essential for health and human safety.	N/A

5) Vulnerability

Because drought has the potential to impact every jurisdiction addressing the hazard equally, all improved property and the entire population is exposed to this hazard. Foundations of all buildings are vulnerable; however, older structures or those built under less stringent foundation code requirements are most vulnerable. Critical infrastructure like water and wastewater lines and roads are also vulnerable.

A) Population

As described in the narrative, as well as in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

The jurisdictions recognize that vulnerable populations may need additional help preparing for and recovering from a drought.

Lower income populations who may not have the resources to buy large quantities of bottled water in the event of a shortage may be more vulnerable than other populations.

Residents of sub-standard structures are also of particular concern. Structures in sub-standard condition ahead of a drought may be more likely to suffer additional damages, including irreparable damage to building foundations as soils shift and shrink. Depending on their financial means, these residents may require additional assistance recovering from drought-caused damages.

B) Vulnerable Assets

As described in Section 4 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable assets. Increased vulnerability may be due to many factors including but not limited to: asset type, location, height, age, and/or use. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that damage to vulnerable assets may affect the participants' ability to prepare for and recover from a drought.

Drought conditions may lead to increased demand on water and wastewater facilities in the participating jurisdictions.

Buildings of older ages may be more likely to suffer physical damages, including irreparable damage to building foundations as soils shift and shrink. Depending on their severity, structural damages may cause an increased demand for services in the participating jurisdictions.

C) Critical Facilities¹⁹

In addition to triggering various components of participating jurisdictions' Drought Contingency plans, drought conditions may affect local critical facilities. Area fire departments may see increased demand for controlling wildland fire due to dry conditions. Drought is likely to require

¹⁹ For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

increased output from the local power companies in order to keep up with electrical demand. Depending on factors like time of year, temperature, and duration, increased electrical demand may cause brownouts that could severely impact critical facilities at hospitals and local nursing homes. Structural damage to critical facilities, based on the rarity of previous instances of structural damage, is expected to be limited. However, in the worst cases such damage is possible, and may include cracked building foundations, damages to water and wastewater lines that serve the facilities, and in certain cases, these physical damages may create economic damages for the broader community.

Table 51: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Drought

	Potential Drought Impacts			
	Structural Damage	Water/Wastewater Line Damages	Increased Demand for Services	Economic Damages
Amherst City Hall	x	x	x	x
Amherst Fire Department	x	x	x	x
Amherst Ems Department	x	x	x	x
Amherst ISD	x	x	x	x
Harmonee House	x	x	x	x
Littlefield Feedyard	x	x	x	x
Caprock Dairy 2	x	x	x	x
T J'S Dairy	x	x	x	x
5 Star Dairy	x	x	x	x
Milk Harvest Dairy	x	x	x	x
Setting Sun Dairy	x	x	x	x
Springlake Dairy	x	x	x	x
Red Rock Dairy	x	x	x	x
Earth City Hall	x	x	x	x
Earth Volunteer Fire Department	x	x	x	x
Earth Ems Department	x	x	x	x
Earth Police Department	x	x	x	x
Earth Medical Clinic	x	x	x	x
Earth Housing Development Corporation	x	x	x	x
Springlake-Earth ISD	x	x	x	x
Hilltop Dairy	x	x	x	x
Boehning Dairy	x	x	x	x
Tolk Station	x	x	x	x
Savage Services	x	x	x	x
Plant X	x	x	x	x
Littlefield City Hall	x	x	x	x
Littlefield Fire Department	x	x	x	x
Littlefield Ems Department	x	x	x	x
Littlefield Police Department	x	x	x	x
Littlefield ISD	x	x	x	x
Lamb County Courthouse	x	x	x	x
Lamb County Sheriff's Office	x	x	x	x
LHC Family Medicine	x	x	x	x
Lamb Health Care Center	x	x	x	x
Littlefield WIC Clinic	x	x	x	x
Library of Legacies	x	x	x	x
Arbor Grace	x	x	x	x
Lamb County Electric Coop	x	x	x	x

Continental Dairy Facilities	x	x	x	x
Olton City Hall	x	x	x	x
Olton Fire Department	x	x	x	x
Olton Ems Department	x	x	x	x
Olton Police Department	x	x	x	x
Olton ISD	x	x	x	x
Olton Clinic	x	x	x	x
City of Olton Housing Authority	x	x	x	x
Running Water Draw Care Facility	x	x	x	x
Cattleman's Feedlot	x	x	x	x
Springlake City Hall	x	x	x	x
VB Ranch	x	x	x	x
Sudan City Hall	x	x	x	x
Sudan Police Department	x	x	x	x
Sudan Fire Department	x	x	x	x
Sudan Ems Department	x	x	x	x
Sudan ISD	x	x	x	x
Sudan Medical Clinic	x	x	x	x

Table 52: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Drought

	Potential Drought Impacts			
	Structural Damage	Water/Wastewater Line Damages	Increased Demand for Services	Economic Damages
Tahoka WIC Clinic	x	x	x	x
Tahoka Housing Authority	x	x	x	x
Tahoka Police Department	x	x	x	x
Tahoka Correctional Institution	x	x	x	x
Lynn County Hospital	x	x	x	x
O'Donnell Family Wellness Clinic	x	x	x	x
O'Donnell Housing Authority	x	x	x	x
O'Donnell Police Department	x	x	x	x
O'Donnell Health Clinic	x	x	x	x
Lynn County Courthouse	x	x	x	x
Tahoka City Hall	x	x	x	x
O'Donnell City Hall	x	x	x	x
New Home City Hall	x	x	x	x
Wilson City Hall	x	x	x	x
Tahoka ISD Facilities	x	x	x	x
O'Donnell ISD Facilities	x	x	x	x
New Home ISD Facilities	x	x	x	x
Wilson ISD Facilities	x	x	x	x
Tahoka water and sewer systems	x	x	x	x
O'Donnell water and sewer systems	x	x	x	x
New Home water and sewer systems	x	x	x	x
Wilson water and sewer systems	x	x	x	x

D) Vulnerable Parcels and Infrastructure

Given drought’s geographic reach, all structures within the jurisdictions addressing the hazard are equally vulnerable. However, given the limited structural damage inflicted by previous droughts, future structural damages are expected to be similarly limited.

Table 53: Estimated Potential Damage Values in Each Jurisdiction²⁰

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570
Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880

²⁰ Property values and parcel counts based on Lamb and Lynn Counties Central Appraisal District Data, unless otherwise noted.

New Home ISD	916	\$100,075,260
City of O'Donnell	548	\$16,945,540
O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

I. Water and Wastewater Systems

Water and wastewater systems rely on underground pipe networks and storage tanks to function properly. During extreme droughts, as the ground shifts and shrinks, these pipes and tanks become vulnerable to cracks and breaks.

As shown in Figure 11 above, the water supply systems in Lamb and Lynn Counties rely on wells spread throughout the Counties. Lines running from these wells are critical to ensuring a sufficient drinking water supply to meet local demand.

The Cities participating in the plan and Springlake-Earth ISD own their water and wastewater systems. Maintaining functionality at these facilities, especially during a drought, is especially critical given that the majority of the Counties' populations reside within the participating cities. Damage to water and wastewater systems, especially during a drought, may be severe enough to exceed a jurisdiction's ability to immediately fund repairs without outside assistance. Delays to returning these systems to normal functionality will require the participating jurisdictions to provide emergency alternatives.

II. Road Networks

Drought conditions may damage road networks in various ways. Depending on usage and temperature, as soil shifts and shrinks, roadbeds may subside. A combination of shifting ground, high temperatures, and heavy usage may cause asphalt roads to become rutted.

Although surface streets may be most vulnerable to drought's effects due to variations in street construction requirements throughout the counties and participating jurisdictions, damages to US 84, US 385, US 70, US 87, and US 380 would create the greatest impact in Lamb and Lynn Counties and the participating jurisdictions.

III. Agricultural Production

According to the USDA 2012 Census of Agriculture²¹, the most recent census of agriculture data available, the total market value of agricultural products sold, including direct sales, in Lamb County was \$575,286,000 and in Lynn County was \$67,595,000. Between 1995 and 2017²², the most recent data available, \$346,514,337 in indemnities was paid to farmers in Lamb County and \$418,985,697 in Lynn County. That is roughly \$63,791,670 per year for both counties. Although the proportion of indemnities paid to cover losses due to drought isn't identifiable, given Lamb and Lynn County's recent drought histories, it is likely that at least some of the dollars paid were related to drought-caused damages.

Given agriculture's role in the Counties, drought-caused losses will have impacts beyond any individual and may lead to contraction in the wider economy. However, because the data is recorded at the county level, there is no specific information regarding agricultural losses due to drought for individual participating jurisdictions.

²¹https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Texas/st48_2_002_002.pdf

²² <https://farm.ewg.org/cropinsurance.php?fips=48047&summpage=SUMMARY>

8. Riverine Erosion

Riverine erosion is the removal of a volume of sediment from a stream reach. However, in riverine areas, a stream reach can be stable and still migrate back and forth. Channel instability occurs when natural or man-induced processes lead to excessive erosion or deposition. Therefore, when a stream migrates laterally but maintains its dimensions, pattern, and profile, stability is achieved even though the river is “active” and moves across the floodplain. A reach experiencing such lateral migration is considered to be “eroding,” and thus has a riverine erosion hazard area. Such stream migration due to erosion can threaten buildings and infrastructure. Property damaged by flood inundation can sometimes be considered a total loss, but property damaged by riverine erosion is not only destroyed, the land itself may be completely washed away leaving no chance to rebuild, let alone recover any property contents.

1) Erosion History

According to the local planning teams, the participating jurisdictions experience varying riverine erosion rates of up to 40” per year. The planning team has determined that at least one riverine erosion event occurs every three years in Lamb and Lynn Counties and the other participating jurisdictions.

2) Likelihood of Future Occurrence

Given the ongoing nature of riverine erosion, a future event in Lamb and Lynn Counties and the jurisdictions addressing the hazard is likely, meaning ongoing riverine erosion is probable in the next three years.

3) Extent

Unlike the flood inundation zones identified in FEMA FIRM maps, riverine erosion hazards are not necessarily proportional to the peak flood discharge. Catastrophic losses may result from larger flood events; smaller, more frequent events; or from the cumulative effects of a series of smaller storms.

In fluvial geomorphic terms, a stream or river is described as a system, consisting of the stream itself, and the water that flows in it, and the sediment that is eroded from it, deposited in it, or transported through it; along with the watershed around the stream, from which water and sediment are conveyed to the stream. If climatic conditions and land use on the watershed stay about the same, a stream tends to reach a more or less stable state, known as dynamic equilibrium, when large and abrupt changes in the characteristics of the stream do not occur under normal conditions. If the material (sediment) and energy (from flowing water) inputs to the stream change, however, then the system has to adjust to the changed conditions, until a new state of dynamic equilibrium is reached²³.

In the worst cases, riverbanks have lost up to 40” of land.

²³ <http://manualzz.com/doc/29211055/by-asfpm-riverine-erosion-hazards-working-group-february-...>

4) Location and Impact

A) Location

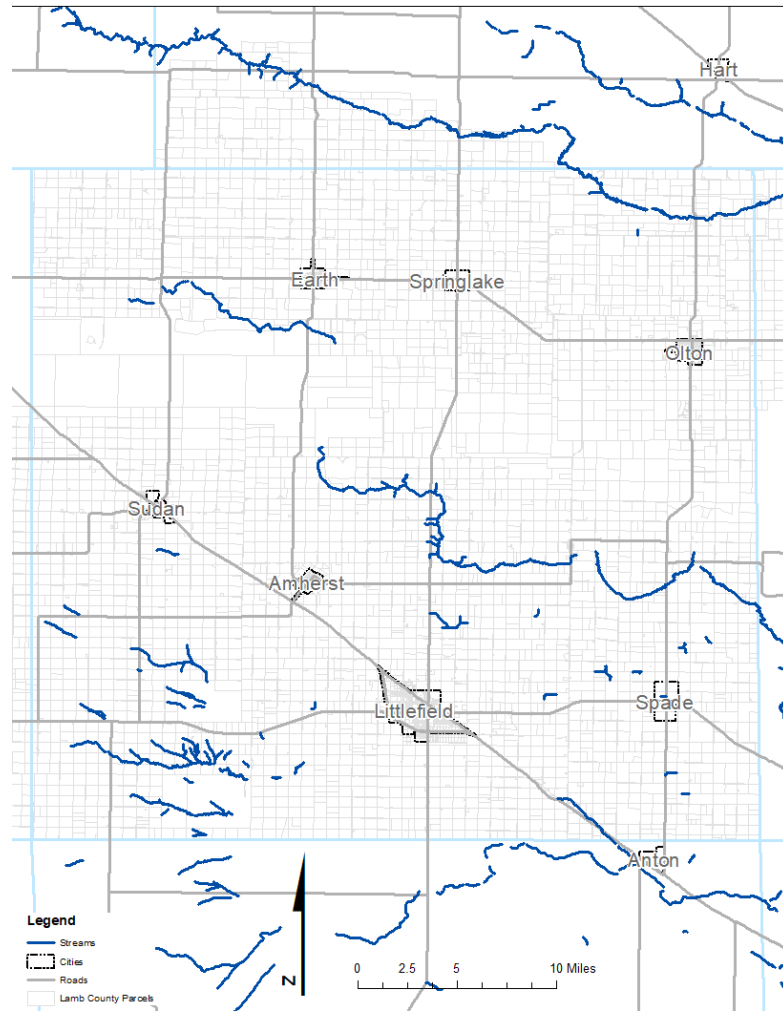


Figure 44: Lamb County Riverine Erosion Locations

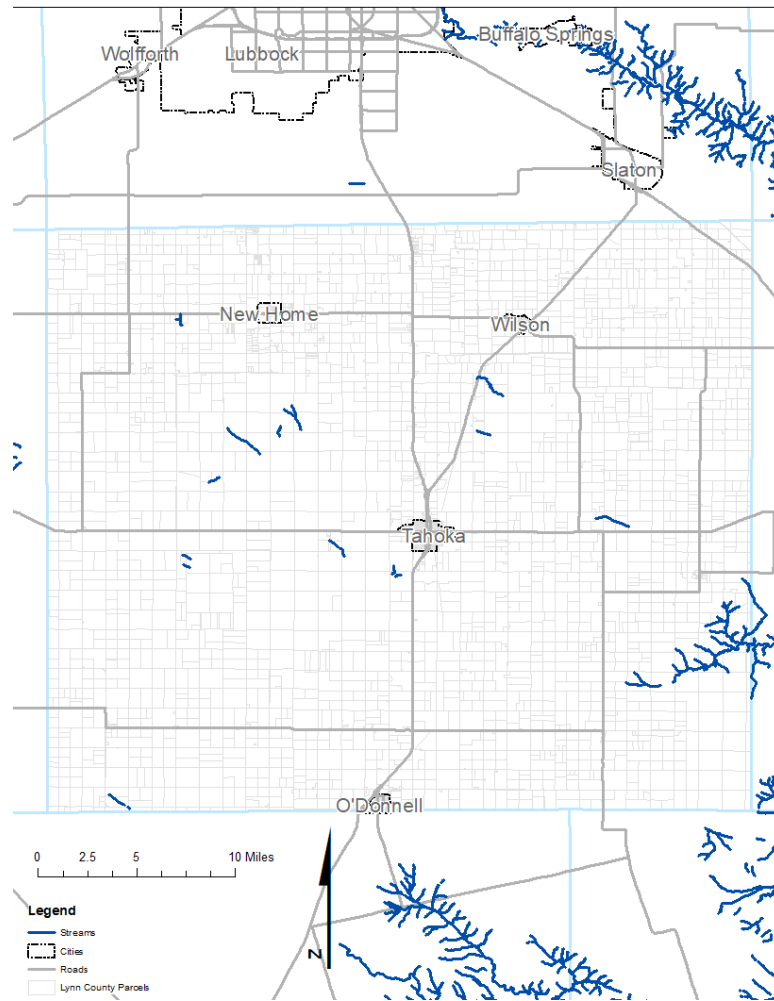


Figure 45: Lynn County Riverine Erosion Locations

B) Impact

The impacts of erosion may include but are not limited to decreasing property values, the partial or complete loss of structures, loss of land area and the ability to rebuild damaged or destroyed structures, economic losses to agricultural operations due to land and structure loss, damage to local infrastructure including, water and wastewater lines, roads and bridges.

5) Vulnerability

A) Critical Facilities

In Lamb and Lynn Counties and the other participating jurisdictions, no critical facilities were found to be in the path of streams and so no critical facilities are expect to be vulnerable to the effects of riverine erosion. This is mostly due to the fact that there are so few drainages and streams in the Plains.

B) Vulnerable Parcels

To determine vulnerability, the plan inventoried parcels intersecting streams within Lamb and Lynn Counties. In order to determine the value, the Appraisal District's Market Valuation of these parcels were determined and added together.

Table 54: Lamb County Parcels Vulnerable to Riverine Erosion

Jurisdiction	Total Parcels	Estimated Potential Damage Value
Countywide	294	
Estimated Value		\$22,661,650

Table 55: Lynn County Parcels Vulnerable to Riverine Erosion

Jurisdiction	Total Parcels	Estimated Potential Damage Value
Countywide	66	
Estimated Value		\$9,067,130

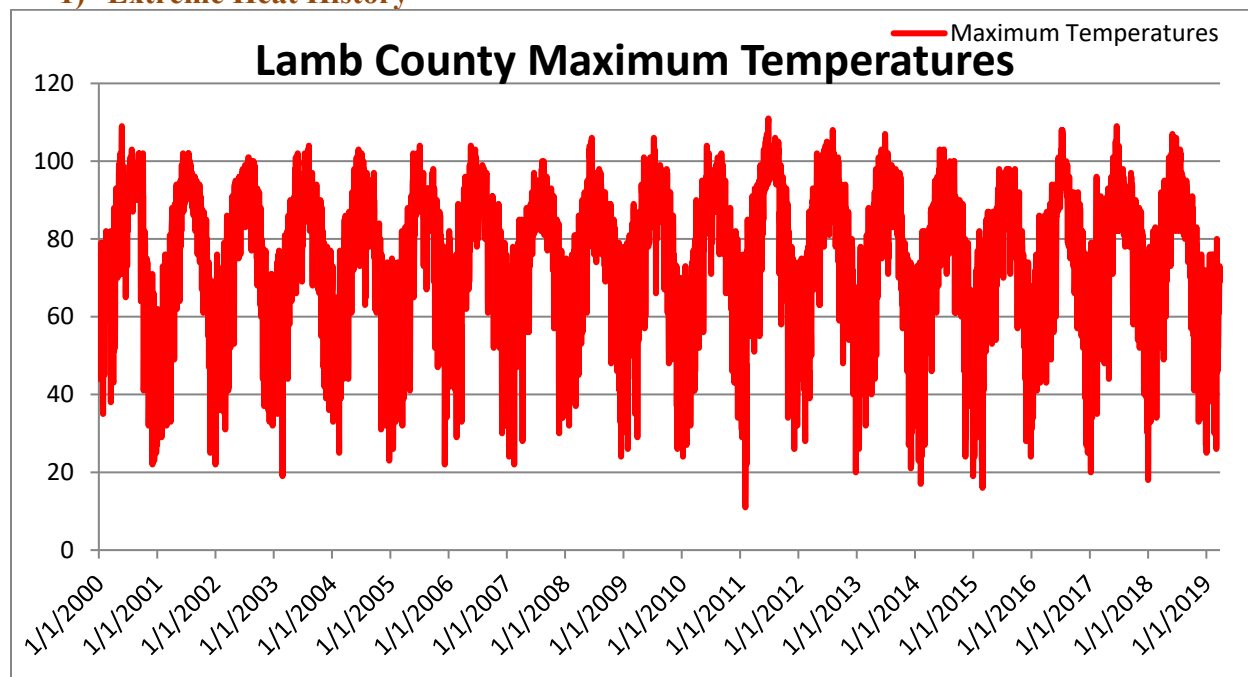
9. Extreme Heat

Extreme heat is defined as summertime temperatures that are substantially hotter and/or more humid than average for a given location at that time of year. Humid conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground.

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 heat stroke. The most vulnerable population to heat casualties are children and the elderly or infirm, 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 wellbeing.

Severe summer heat is an invisible killer. Although a heat wave does not happen with the spectacle of other hazards such as tornados and floods, the National Center for Environmental Health reports that extreme heat caused 7,415 heat-related deaths in the United States from 1999 to 2010²⁴. Extreme heat kills more people than hurricanes, floods, tornados and lightning combined, according to the National Weather Service. In 2001, 300 deaths were caused by excessive heat exposure.

1) Extreme Heat History



²⁴ http://www.bt.cdc.gov/disasters/extremeheat/heat_guide.asp

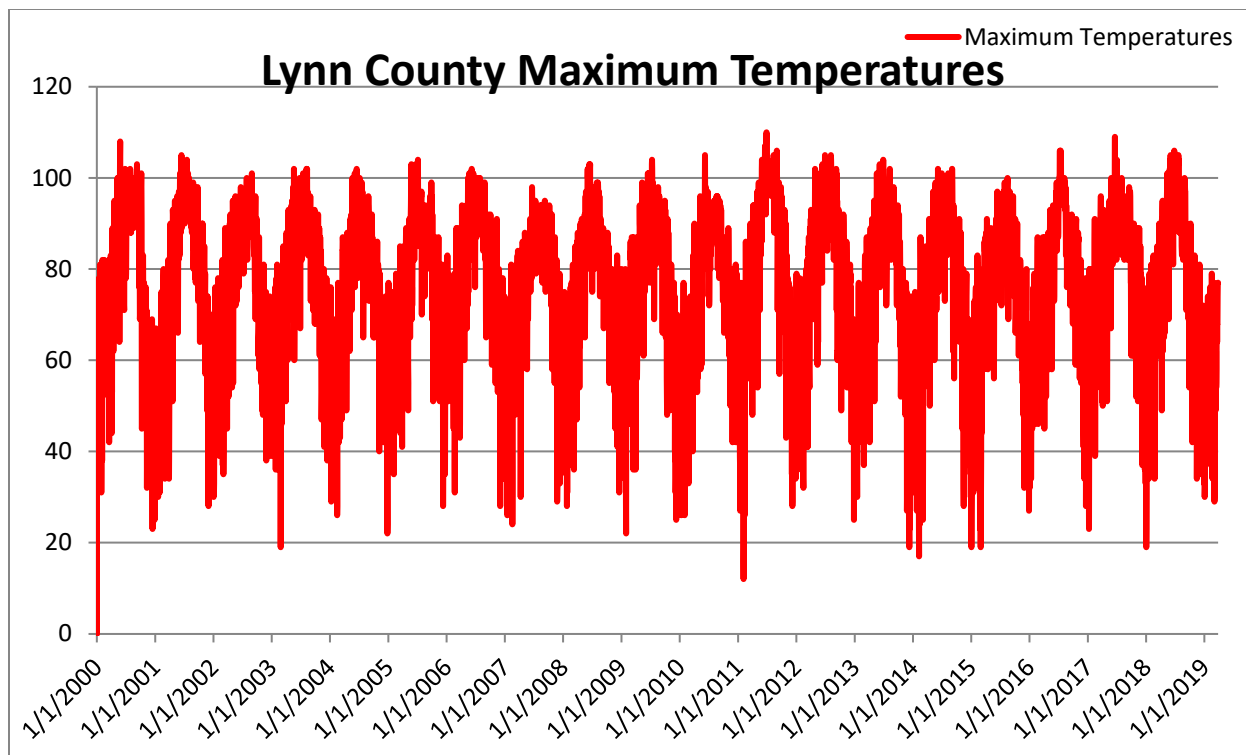


Figure 46: Maximum Recorded Daily Temperature 2000-2019²⁵

Between January, 2000 and March, 2019, Lamb County and the participating jurisdictions in the county experienced 232 days with a maximum temperature of 100°F or hotter but only 1 day where the combination of moderate-to-high temperatures during the day and overnight warranted a heat advisory, if not an excessive heat warning. During the same time period, Lynn County and the participating jurisdictions in the county experienced 218 days with a maximum temperature of 100°F or hotter and 31 days where the combination of moderate-to-high temperatures during the day and overnight warranted a heat advisory, if not an excessive heat warning.

Extreme heat data is recorded at the county level. However, given the nature of extreme heat, all jurisdictions in Lamb and Lynn Counties experienced the same extreme heat events. No damage dollars for any extreme heat event have been recorded in any participating jurisdiction in over 18 years.

2) Likelihood of Future Occurrence

Based on historic weather data, the likelihood of extreme heat in all three jurisdictions is highly likely, meaning an event affecting any or all jurisdictions is probable in the next year.

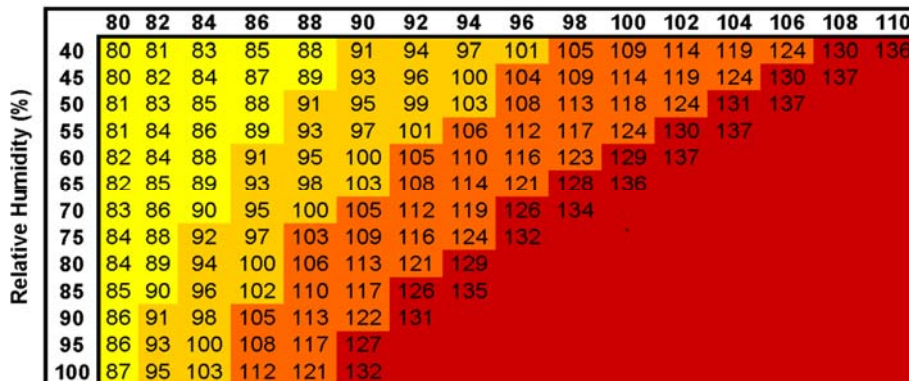
3) Extent

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 71. This index measures how hot it feels outside when humidity is combined with high temperatures.

²⁵ Source: National Centers for Environmental Information, <https://www.ncdc.noaa.gov/cdo-web/datasets>

NOAA's National Weather Service

Heat Index
Temperature (°F)



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution Extreme Caution Danger Extreme Danger

Figure 47: NOAA's NWS Heat Index Chart²⁶

The extent scale in Figure 56 displays varying degrees of caution depending on the relative humidity combined with the temperature. For example, when the temperature is below 90°F, 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 level of intensity where fatigue due to heat exposure is possible. “Extreme Caution” indicates that sunstroke, muscle cramps or heat exhaustion are possible, whereas 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 Table 100.

Table 56: Heat Intensity

Intensity	Description
Heat Advisory	Extreme heat index making it feel hot, typically between 105°F to 110°F for 3 hours or more during the day and at or above 75°F at night.
Excessive Heat Warning	Extreme heat index making it feel very hot, typically above 105°F for 3 hours or more during the day and at or above 80°F at night.

Given an estimated daily average relative humidity level of 67%²⁷, highs as low as 90°F can produce a heat index temperature of 103°F. The combination of humidity and moderate

²⁶ <http://www.nws.noaa.gov/om/heat/ht-images/heatindexchart.png>

²⁷ <https://www.currentresults.com/Weather/Texas/humidity-annual.php>

temperatures can create an environment that reaches the Danger Zone on NOAA's Heat Index Chart, and may trigger a NWS Heat Advisory.

Between 2000 and 2019, Lamb County and the jurisdictions in that county experienced only one day with highs of 89°F or hotter and overnight lows of 75°F or hotter while Lynn County and the jurisdictions in that county experienced 31 days with highs of 89°F or hotter and overnight lows of 75°F or hotter. Based on the NWS descriptions in Table 110 above, and the average daily humidity level, these days may have warranted a heat advisory.

The hottest temperature recorded in Lamb County in the recent past, 111°F, was reached on June 27th, 2011. The hottest temperature in Lynn County in the recent past, 110°F, was reached twice, both on June 26th and June 27th, 2011. Based on the NWS descriptions in Table 110 above, during the time period reviewed, Lamb County and the participating jurisdictions didn't experience any days that warranted an excessive heat warning based on daytime highs, the average daily humidity level, and overnight lows not falling below 80°F. But Lynn County and the participating jurisdictions in that county experienced one day that warranted an excessive heat warning based on those criteria.

According to the Lamb County and Lynn County 2018 CHAMPS Reports, no injuries, fatalities, crop or property damages have occurred in any of the jurisdictions due to extreme heat.

Future extreme heat events may meet the heat index requirements for issuing an Excessive Heat Warning as described in the Heat Intensity scale in Table 100 above. The hottest temperatures in all participating jurisdictions may meet the Counties' current record temperature of 110° to 111°F. Future extreme heat events may be also be more intense, last longer, and cause casualties and fatalities.

4) Location and Impact

A) Location – All Jurisdictions

Extreme heat has no distinct geographic boundary. Extreme heat can occur across Lamb and Lynn Counties and uniformly affect all jurisdictions addressing the hazard.

B) Impact – All Jurisdictions

The potential impact of excessive summer heat is normally minor, resulting in few, if any, injuries. Although no deaths related to extreme heat have been reported in the participating jurisdictions, in the worst cases, the hazard has the potential to be deadly.

Extreme heat will likely cause only minor property damage and minimal disruption to the quality of life in the participating jurisdictions. Any shutdown of facilities due to extreme heat is expected to be temporary.

5) Vulnerability

A) Population

Vulnerable populations, as described in the narrative, as well as in Section 3 of Chapter 3 above, may feel greater impacts from extreme heat due to these populations' limited ability to properly address the hazard due to deficiencies including but not limited to: lack of air conditioning in their homes or vehicles, lack of access to air conditioned public spaces during the hottest part of the day, insufficient numbers of box or ceiling fans, or lack of access to other means of cooling. The participating ISDs may be especially vulnerable to extreme heat because their students, faculty, and staff spend elevated amounts of time outdoors in the hottest months, either moving

between buildings or participating in sports including but not limited to baseball, softball, tennis, and track in the spring and cross county and football in the summer and fall.

All participating jurisdictions may have staff members who work outdoors on construction, maintenance, and repairs. These crews may also be especially vulnerable to extreme heat, particularly during the hottest months of the year.

The consequences for these populations' exposure to extreme heat can include but are not limited to: heat cramps, sunburn, dehydration, fatigue, heat exhaustion, heat stroke, or death.

B) Critical Facilities

While all of the jurisdictions addressing the hazard are equally exposed to extreme temperatures, existing buildings, infrastructure, and critical facilities are not considered vulnerable to damages significant enough to interrupt or stop normal operations. Therefore, any estimated property losses associated with the hazard are anticipated to be minimal across the area.

10. Hailstorm

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. Frozen droplets gradually accumulate into ice crystals until they fall as precipitation that is round or irregularly shaped masses of ice. The size²⁸ 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 byproduct of heating on the Earth's surface. Higher temperature gradients above Earth's surface result in increased suspension time and hailstone size.

Texas officials estimate that up to 40 percent of all homeowners' insurance claims in the state result from hail damage.

²⁸ As of January 5, 2010, the national minimum size for severe hail increased from ¾" to 1".

1) Hailstorm History

A) Lamb County

Table 57: Lamb County Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019
LAMB	7/29/1959	Hail	0	0	2				
LAMB	5/17/1960	Hail	0	0	1.5				
LAMB	5/28/1960	Hail	0	0	2				
LAMB	10/11/1960	Hail	0	0	0.75				
LAMB	6/3/1961	Hail	0	0	2.5				
LAMB	7/28/1962	Hail	0	0	1.75				
LAMB	5/21/1963	Hail	0	0	2				
LAMB	6/4/1963	Hail	0	0	2.75				
LAMB	5/10/1966	Hail	0	0	1.75				
LAMB	6/17/1966	Hail	0	0	2.75				
LAMB	9/17/1966	Hail	0	0	1.25				
LAMB	5/8/1971	Hail	0	0	1.75				
LAMB	5/27/1972	Hail	0	0	1.75				
LAMB	6/3/1974	Hail	0	0	1.75				
LAMB	7/9/1979	Hail	0	0	1.75				
LAMB	8/20/1979	Hail	0	0	0.75				
LAMB	8/24/1979	Hail	0	0	4.5				
LAMB	6/1/1981	Hail	0	0	1.75				
LAMB	6/18/1982	Hail	0	0	1.75				
LAMB	10/16/1983	Hail	0	0	1.75				
LAMB	9/18/1986	Hail	0	0	1.75				
LAMB	9/9/1987	Hail	0	0	1.75				

LAMB	6/3/1989	Hail	0	0	0.88				
LAMB	5/6/1995	Hail	0	0	1.75				
LAMB	5/29/1995	Hail	0	0	0.75				
LAMB	6/2/1995	Hail	0	0	2.75				
LAMB	5/25/1996 22:20	Hail	0	0	1.75				
LAMB	5/25/1996 22:50	Hail	0	0	1.75				
LAMB	5/30/1996 1:30	Hail	0	0	1				
LAMB	5/30/1996 7:00	Hail	0	0	1				
LAMB	6/2/1996 21:20	Hail	0	0	1.75		\$25,000		\$40,544
LAMB	5/28/1997 18:14	Hail	0	0	1.75				
LAMB	5/28/1997 18:45	Hail	0	0	1.75				
LAMB	5/28/1997 19:20	Hail	0	0	1.75				
LAMB	5/29/1997 23:05	Hail	0	0	1				
LAMB	5/29/1997 23:20	Hail	0	0	1				
LAMB	5/29/1997 23:46	Hail	0	0	1				
LAMB	6/9/1997 15:05	Hail	0	0	1				
LAMB	6/9/1997 16:25	Hail	0	0	1				
LAMB	5/8/1998 14:35	Hail	0	0	1.75	\$150,000		\$234,163	
LAMB	5/8/1998 15:01	Hail	0	0	1.75		\$25,000		\$39,027
LAMB	10/1/1998 14:55	Hail	0	0	1		\$25,000		\$39,027
LAMB	4/13/1999 14:20	Hail	0	0	0.75				
LAMB	5/1/1999 19:45	Hail	0	0	2.75				
LAMB	5/25/1999 15:15	Hail	0	0	1.75	\$25,000	\$50,000	\$38,183	\$76,368
LAMB	6/10/2000 18:18	Hail	0	0	1.75	\$10,000	\$1,000,000	\$14,777	\$1,477,686
LAMB	6/11/2000 13:40	Hail	0	0	1.75	\$25,000	\$1,300,000	\$36,943	\$1,920,991
LAMB	6/11/2000 14:00	Hail	0	0	1.75	\$25,000	\$1,300,000	\$36,943	\$1,920,991
LAMB	4/21/2001 19:20	Hail	0	0	1.75	\$25,000	\$30,000	\$35,920	\$43,104
LAMB	5/3/2001 18:55	Hail	0	0	1		\$50,000		\$71,840
LAMB	5/3/2001 19:00	Hail	0	0	1		\$50,000		\$71,840
LAMB	5/3/2001 19:30	Hail	0	0	0.88		\$100,000		\$143,680

LAMB	5/3/2001 21:04	Hail	0	0	1.75		\$150,000		\$215,520
LAMB	5/11/2001 16:55	Hail	0	0	0.75		\$35,000		\$50,288
LAMB	5/17/2001 19:07	Hail	0	0	0.75		\$25,000		\$35,920
LAMB	5/17/2001 19:08	Hail	0	0	1		\$50,000		\$71,840
LAMB	5/17/2001 19:09	Hail	0	0	0.75		\$25,000		\$35,920
LAMB	5/17/2001 19:13	Hail	0	0	1.75	\$50,000	\$100,000	\$71,840	\$143,680
LAMB	5/17/2001 19:15	Hail	0	0	1.75		\$100,000		\$143,680
LAMB	5/17/2001 19:25	Hail	0	0	1				
LAMB	5/30/2001 19:52	Hail	0	0	0.75		\$500,000		\$718,401
LAMB	5/30/2001 20:00	Hail	0	0	1.75		\$15,000,000		\$21,552,009
LAMB	5/30/2001 20:20	Hail	0	0	1.75	\$100,000	\$3,000,000	\$143,680	\$4,310,402
LAMB	5/30/2001 20:35	Hail	0	0	1.75		\$3,000,000		\$4,310,402
LAMB	7/13/2001 16:50	Hail	0	0	0.88		\$20,000		\$28,736
LAMB	7/13/2001 16:55	Hail	0	0	1.25		\$50,000		\$71,840
LAMB	8/23/2001 15:38	Hail	0	0	0.88		\$10,000		\$14,368
LAMB	8/24/2001 15:50	Hail	0	0	1.75		\$50,000		\$71,840
LAMB	9/18/2001 18:15	Hail	0	0	1.5		\$20,000		\$28,736
LAMB	5/5/2002 17:54	Hail	0	0	2.75	\$250,000		\$353,710	
LAMB	5/5/2002 18:08	Hail	0	0	1.75		\$100,000		\$141,444
LAMB	5/10/2002 21:20	Hail	0	0	1.75		\$100,000		\$141,444
LAMB	5/10/2002 21:40	Hail	0	0	1.75	\$50,000		\$70,722	
LAMB	6/4/2002 18:25	Hail	0	0	1.75	\$100,000		\$141,444	
LAMB	10/1/2002 20:25	Hail	0	0	1				
LAMB	5/24/2003 17:45	Hail	0	0	1.25		\$50,000		\$69,147
LAMB	6/3/2003 15:43	Hail	0	0	1		\$250,000		\$345,731
LAMB	6/3/2003 19:50	Hail	0	0	1.5		\$200,000		\$276,584
LAMB	6/13/2003 17:06	Hail	0	0	1				
LAMB	6/13/2003 17:08	Hail	0	0	1.5				
LAMB	6/13/2003 17:45	Hail	0	0	2.75		\$300,000		\$414,876
LAMB	6/20/2003 19:35	Hail	0	0	1				

LAMB	10/5/2003 17:47	Hail	0	0	1.5		\$150,000		\$207,439
LAMB	10/6/2003 15:47	Hail	0	0	2.75	\$150,000	\$500,000	\$207,439	\$691,460
LAMB	10/6/2003 16:08	Hail	0	0	1.75		\$300,000		\$414,876
LAMB	10/6/2003 16:28	Hail	0	0	1.75		\$300,000		\$414,876
LAMB	10/6/2003 16:35	Hail	0	0	0.75				
LAMB	5/8/2004 20:24	Hail	0	0	1				
LAMB	6/16/2004 20:15	Hail	0	0	0.88		\$100,000		\$134,705
LAMB	6/17/2004 17:00	Hail	0	0	1		\$25,000		\$33,677
LAMB	6/18/2004 19:50	Hail	0	0	1.75		\$100,000		\$134,705
LAMB	7/6/2004 20:47	Hail	0	0	0.88				
LAMB	7/6/2004 21:15	Hail	0	0	1				
LAMB	7/6/2004 21:30	Hail	0	0	0.88				
LAMB	8/20/2004 0:20	Hail	0	0	1.75		\$200,000		\$269,409
LAMB	1/30/2005 18:15	Hail	0	0	0.75				
LAMB	5/10/2005 18:39	Hail	0	0	1.75				
LAMB	5/12/2005 15:10	Hail	0	0	1				
LAMB	5/12/2005 15:15	Hail	0	0	1.75				
LAMB	5/31/2005 2:33	Hail	0	0	1.75				
LAMB	5/31/2005 5:20	Hail	0	0	1.75				
LAMB	5/31/2005 16:45	Hail	0	0	2				
LAMB	5/31/2005 17:48	Hail	0	0	1.75				
LAMB	5/31/2005 18:05	Hail	0	0	1				
LAMB	5/31/2005 18:15	Hail	0	0	2.5				
LAMB	6/6/2005 21:00	Hail	0	0	0.88				
LAMB	6/9/2005 16:00	Hail	0	0	0.75				
LAMB	6/11/2005 17:00	Hail	0	0	0.88				
LAMB	6/16/2005 17:22	Hail	0	0	0.75				
LAMB	9/12/2005 17:15	Hail	0	0	1				
LAMB	9/17/2005 15:05	Hail	0	0	0.75				
LAMB	9/17/2005 15:35	Hail	0	0	1				

LAMB	9/17/2005 15:45	Hail	0	0	0.88				
LAMB	5/3/2006 17:00	Hail	0	0	0.75				
LAMB	5/30/2006 18:55	Hail	0	0	0.88				
LAMB	9/5/2006 16:00	Hail	0	0	0.88		\$650,000		\$820,423
LAMB	9/14/2006 16:10	Hail	0	0	1				
LAMB	9/14/2006 17:20	Hail	0	0	0.88				
LAMB	4/21/2007 17:20	Hail	0	0	1.75		\$25,000		\$30,687
LAMB	4/21/2007 18:02	Hail	0	0	2.75	\$25,000	\$100,000	\$30,687	\$122,748
LAMB	4/21/2007 18:56	Hail	0	0	1.75		\$15,000		\$18,412
LAMB	5/31/2007 16:41	Hail	0	0	1.5				
LAMB	5/31/2007 19:45	Hail	0	0	1.75				
LAMB	6/1/2007 19:55	Hail	0	0	0.88				
LAMB	6/2/2007 19:53	Hail	0	0	1.75				
LAMB	9/26/2007 15:30	Hail	0	0	1		\$100,000		\$122,748
LAMB	10/10/2007 19:38	Hail	0	0	1.75	\$3,000	\$5,000,000	\$3,682	\$6,137,418
LAMB	4/23/2008 10:00	Hail	0	0	0.75				
LAMB	5/6/2008 17:40	Hail	0	0	1.75				
LAMB	5/6/2008 19:02	Hail	0	0	4.5	\$10,000		\$11,819	
LAMB	5/6/2008 19:02	Hail	0	0	0.88				
LAMB	6/8/2008 18:36	Hail	0	0	0.75				
LAMB	6/17/2008 19:26	Hail	0	0	4.5	\$25,000		\$29,547	
LAMB	6/17/2008 19:26	Hail	0	0	1.75				
LAMB	8/13/2008 15:55	Hail	0	0	1				
LAMB	4/16/2009 14:35	Hail	0	0	1				
LAMB	6/4/2009 19:09	Hail	0	0	0.75				
LAMB	6/10/2009 8:25	Hail	0	0	0.88				
LAMB	6/14/2009 15:09	Hail	0	0	0.88				
LAMB	5/14/2010 13:00	Hail	0	0	1.75				
LAMB	5/25/2010 23:09	Hail	0	0	0.88				
LAMB	5/26/2010 16:13	Hail	0	0	0.88				

LAMB	6/17/2010 17:56	Hail	0	0	0.75				
LAMB	6/17/2010 18:07	Hail	0	0	1		\$200,000		\$233,340
LAMB	6/17/2010 18:33	Hail	0	0	0.75				
LAMB	6/17/2010 18:44	Hail	0	0	1.75				
LAMB	8/9/2011 20:40	Hail	0	0	0.75		\$100,000		\$113,143
LAMB	8/11/2011 17:26	Hail	0	0	1				
LAMB	10/5/2011 16:10	Hail	0	0	0.88		\$10,000		\$11,314
LAMB	3/18/2012 21:42	Hail	0	0	0.88				
LAMB	4/29/2012 18:35	Hail	0	0	1.75				
LAMB	6/2/2012 19:21	Hail	0	0	1				
LAMB	5/21/2013 6:35	Hail	0	0	1.75				
LAMB	6/5/2013 20:22	Hail	0	0	2				
LAMB	6/18/2014 15:08	Hail	0	0	1				
LAMB	6/19/2014 17:57	Hail	0	0	1				
LAMB	5/3/2015 19:01	Hail	0	0	1				
LAMB	6/12/2015 16:35	Hail	0	0	1				
LAMB	7/5/2016 17:10	Hail	0	0	1.75				

B) Lamb County Healthcare Center

Hailstorm history isn't recorded below the city level. However, given the Healthcare Center's location within the planning area, hailstorms that affected Littlefield are likely to have also affected Lamb County Healthcare Center.

C) City of Amherst

Table 58: City of Amherst Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019
AMHERST	5/28/1997 18:45	Hail	0	0	1.75				
AMHERST	5/3/2001 19:30	Hail	0	0	0.88		\$100,000		\$143,680

AMHERST	10/6/2003 15:47	Hail	0	0	2.75	\$150,000	\$500,000	\$207,439	\$691,460
AMHERST	6/18/2004 19:50	Hail	0	0	1.75		\$100,000		\$134,705
AMHERST	5/31/2005 18:15	Hail	0	0	2.5				
AMHERST	6/8/2008 18:36	Hail	0	0	0.75				
AMHERST	4/16/2009 14:35	Hail	0	0	1				
AMHERST	5/14/2010 13:00	Hail	0	0	1.75				
AMHERST	6/12/2015 16:35	Hail	0	0	1				

D) City of Earth

Table 59: City of Earth Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019
EARTH	5/25/1996 22:20	Hail	0	0	1.75				
EARTH	5/28/1997 18:14	Hail	0	0	1.75				
EARTH	5/29/1997 23:05	Hail	0	0	1				
EARTH	5/29/1997 23:20	Hail	0	0	1				
EARTH	10/1/1998 14:55	Hail	0	0	1		\$25,000		\$39,027
EARTH	10/6/2003 16:35	Hail	0	0	0.75				
EARTH	5/31/2005 16:45	Hail	0	0	2				
EARTH	6/16/2005 17:22	Hail	0	0	0.75				
EARTH	6/2/2007 19:53	Hail	0	0	1.75				
EARTH	6/17/2008 19:26	Hail	0	0	4.5	\$25,000		\$29,547	
EARTH	6/17/2008 19:26	Hail	0	0	1.75				
EARTH	8/13/2008 15:55	Hail	0	0	1				
EARTH	6/4/2009 19:09	Hail	0	0	0.75				
EARTH	6/14/2009 15:09	Hail	0	0	0.88				
EARTH	6/17/2010 17:56	Hail	0	0	0.75				
EARTH	6/18/2014 15:08	Hail	0	0	1				

E) City of Littlefield

Table 60: City of Littlefield Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019
LITTLEFIELD	5/30/1996 7:00	Hail	0	0	1				
LITTLEFIELD	5/28/1997 19:20	Hail	0	0	1.75				
LITTLEFIELD	6/9/1997 15:05	Hail	0	0	1				
LITTLEFIELD	6/9/1997 16:25	Hail	0	0	1				
LITTLEFIELD	4/13/1999 14:20	Hail	0	0	0.75				
LITTLEFIELD	6/11/2000 14:00	Hail	0	0	1.75	\$25,000	\$1,300,000	\$36,943	\$1,920,991
LITTLEFIELD	6/11/2000 13:40	Hail	0	0	1.75	\$25,000	\$1,300,000	\$36,943	\$1,920,991
LITTLEFIELD	5/3/2001 18:55	Hail	0	0	1		\$50,000		\$71,840
LITTLEFIELD	5/3/2001 19:00	Hail	0	0	1		\$50,000		\$71,840
LITTLEFIELD	5/3/2001 21:04	Hail	0	0	1.75		\$150,000		\$215,520
LITTLEFIELD	5/17/2001 19:07	Hail	0	0	0.75		\$25,000		\$35,920
LITTLEFIELD	5/17/2001 19:08	Hail	0	0	1		\$50,000		\$71,840
LITTLEFIELD	5/17/2001 19:09	Hail	0	0	0.75		\$25,000		\$35,920
LITTLEFIELD	5/17/2001 19:13	Hail	0	0	1.75	\$50,000	\$100,000	\$71,840	\$143,680
LITTLEFIELD	5/17/2001 19:15	Hail	0	0	1.75		\$100,000		\$143,680
LITTLEFIELD	5/17/2001 19:25	Hail	0	0	1				
LITTLEFIELD	5/30/2001 20:20	Hail	0	0	1.75	\$100,000	\$3,000,000	\$143,680	\$4,310,402
LITTLEFIELD	5/30/2001 20:35	Hail	0	0	1.75		\$3,000,000		\$4,310,402
LITTLEFIELD	8/24/2001 15:50	Hail	0	0	1.75		\$50,000		\$71,840
LITTLEFIELD	5/5/2002 17:54	Hail	0	0	2.75	\$250,000		\$353,610	
LITTLEFIELD	5/10/2002 21:20	Hail	0	0	1.75		\$100,000		\$141,444
LITTLEFIELD	6/4/2002 18:25	Hail	0	0	1.75	\$100,000		\$141,444	
LITTLEFIELD	6/3/2003 19:50	Hail	0	0	1.5		\$200,000		\$276,584
LITTLEFIELD	6/13/2003 17:08	Hail	0	0	1.5				
LITTLEFIELD	6/13/2003 17:06	Hail	0	0	1				

LITTLEFIELD	6/20/2003 19:35	Hail	0	0	1				
LITTLEFIELD	10/6/2003 16:08	Hail	0	0	1.75	\$300,000		\$414,876	
LITTLEFIELD	10/6/2003 16:28	Hail	0	0	1.75	\$300,000		\$414,876	
LITTLEFIELD	6/17/2004 17:00	Hail	0	0	1	\$25,000		\$33,677	
LITTLEFIELD	7/6/2004 21:30	Hail	0	0	0.88				
LITTLEFIELD	5/10/2005 18:39	Hail	0	0	1.75				
LITTLEFIELD	5/31/2005 5:20	Hail	0	0	1.75				
LITTLEFIELD	5/31/2005 17:48	Hail	0	0	1.75				
LITTLEFIELD	6/11/2005 17:00	Hail	0	0	0.88				
LITTLEFIELD	9/17/2005 15:05	Hail	0	0	0.75				
LITTLEFIELD	5/3/2006 17:00	Hail	0	0	0.75				
LITTLEFIELD	5/30/2006 18:55	Hail	0	0	0.88				
LITTLEFIELD	6/1/2007 19:55	Hail	0	0	0.88				
LITTLEFIELD	9/26/2007 15:30	Hail	0	0	1	\$100,000		\$122,748	
LITTLEFIELD	4/23/2008 10:00	Hail	0	0	0.75				
LITTLEFIELD	6/10/2009 8:25	Hail	0	0	0.88				
LITTLEFIELD	5/25/2010 23:09	Hail	0	0	0.88				
LITTLEFIELD	5/26/2010 16:13	Hail	0	0	0.88				
LITTLEFIELD	3/18/2012 21:42	Hail	0	0	0.88				
LITTLEFIELD	4/29/2012 18:35	Hail	0	0	1.75				
LITTLEFIELD	5/21/2013 6:35	Hail	0	0	1.75				
LITTLEFIELD	6/19/2014 17:57	Hail	0	0	1				
LITTLEFIELD	5/3/2015 19:01	Hail	0	0	1				

F) City of Olton

Table 61: City of Olton Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019

OLTON	5/8/1998 14:35	Hail	0	0	1.75	\$150,000		\$234,163	
OLTON	5/8/1998 15:01	Hail	0	0	1.75		\$25,000		\$39,027
OLTON	5/1/1999 19:45	Hail	0	0	2.75				
OLTON	6/10/2000 18:18	Hail	0	0	1.75	\$10,000	\$1,000,000	\$14,777	\$1,477,686
OLTON	5/10/2002 21:40	Hail	0	0	1.75	\$50,000		\$70,722	
OLTON	6/13/2003 17:45	Hail	0	0	2.75		\$300,000		\$414,876
OLTON	5/8/2004 20:24	Hail	0	0	1				
OLTON	8/20/2004 0:20	Hail	0	0	1.75		\$200,000		\$269,409
OLTON	5/12/2005 15:10	Hail	0	0	1				
OLTON	5/12/2005 15:15	Hail	0	0	1.75				
OLTON	6/6/2005 21:00	Hail	0	0	0.88				
OLTON	9/12/2005 17:15	Hail	0	0	1				
OLTON	9/17/2005 15:45	Hail	0	0	0.88				
OLTON	9/5/2006 16:00	Hail	0	0	0.88		\$650,000		\$820,423
OLTON	9/14/2006 17:20	Hail	0	0	0.88				
OLTON	4/21/2007 18:02	Hail	0	0	2.75	\$25,000	\$100,000	\$30,687	\$122,748
OLTON	4/21/2007 18:56	Hail	0	0	1.75		\$15,000		\$18,412
OLTON	5/6/2008 19:02	Hail	0	0	4.5	\$10,000		\$11,819	
OLTON	5/6/2008 19:02	Hail	0	0	0.88				
OLTON	6/17/2010 18:33	Hail	0	0	0.75				
OLTON	6/17/2010 18:44	Hail	0	0	1.75				
OLTON	8/11/2011 17:26	Hail	0	0	1				

G) City of Springlake

Table 62: City of Springlake Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
SPRINGLAKE	5/25/1996 22:50	Hail	0	0	1.75			\$2,019	\$2,019

SPRINGLAKE	5/25/1999 15:15	Hail	0	0	1.75	\$25,000	\$50,000	\$38,183	\$76,368
SPRINGLAKE	8/23/2001 15:38	Hail	0	0	0.88		\$10,000		\$14,368
SPRINGLAKE	7/6/2004 20:47	Hail	0	0	0.88				
SPRINGLAKE	5/31/2005 18:05	Hail	0	0	1				
SPRINGLAKE	9/14/2006 16:10	Hail	0	0	1				
SPRINGLAKE	6/17/2010 18:07	Hail	0	0	1		\$200,000		\$233,340
SPRINGLAKE	10/5/2011 16:10	Hail	0	0	0.88		\$10,000		\$11,314
SPRINGLAKE	6/5/2013 20:22	Hail	0	0	2				

H) City of Sudan

Table 63: City of Sudan Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
SUDAN	5/30/1996 1:30	Hail	0	0	1				
SUDAN	6/2/1996 21:20	Hail	0	0	1.75		\$25,000		\$40,544
SUDAN	4/21/2001 19:20	Hail	0	0	1.75	\$25,000	\$30,000	\$35,920	\$43,104
SUDAN	5/30/2001 19:52	Hail	0	0	0.75		\$500,000		\$718,401
SUDAN	5/30/2001 20:00	Hail	0	0	1.75		\$15,000,000		\$21,552,009
SUDAN	10/1/2002 20:25	Hail	0	0	1				
SUDAN	5/24/2003 17:45	Hail	0	0	1.25		\$50,000		\$69,147
SUDAN	6/16/2004 20:15	Hail	0	0	0.88		\$100,000		\$134,705
SUDAN	7/6/2004 21:15	Hail	0	0	1				
SUDAN	1/30/2005 18:15	Hail	0	0	0.75				
SUDAN	5/31/2005 2:33	Hail	0	0	1.75				
SUDAN	4/21/2007 17:20	Hail	0	0	1.75		\$25,000		\$30,687
SUDAN	5/31/2007 16:41	Hail	0	0	1.5				

I) Littlefield ISD

Hailstorm history isn't recorded below the city level. However, given the ISD's location in the planning area, hailstorms that affected the City of Littlefield are likely to have also affected Littlefield ISD.

J) Olton ISD

Hailstorm history isn't recorded below the city level. However, given the ISD's location in the planning area, hailstorms that affected the City of Olton are likely to have also affected Olton ISD.

K) Springlake-Earth ISD

Hailstorm history isn't recorded below the city level. However, given the ISD's location in the planning areas, hailstorms that affected the Cities of Earth and Springlake are likely to have also affected Springlake-Earth ISD.

L) Sudan ISD

Hailstorm history isn't recorded below the city level. However, given the ISD's location in the planning area, hailstorms that affected the City of Sudan are likely to have also affected Sudan ISD.

M) Lynn County

Table 64: Lynn County Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
LYNN	4/20/1957	Hail	0	0	0.75				
LYNN	5/28/1961	Hail	0	0	3.5				
LYNN	6/2/1961	Hail	0	0	1.5				
LYNN	6/8/1962	Hail	0	0	2				
LYNN	6/14/1962	Hail	0	0	1.75				
LYNN	6/2/1963	Hail	0	0	0.75				
LYNN	5/10/1965	Hail	0	0	2.75				
LYNN	6/12/1967	Hail	0	0	1.75				
LYNN	6/8/1968	Hail	0	0	1.75				
LYNN	5/5/1969	Hail	0	0	0.75				
LYNN	5/12/1970	Hail	0	0	2.75				

LYNN	5/13/1972	Hail	0	0	1.75			
LYNN	5/22/1973	Hail	0	0	2.5			
LYNN	5/24/1974	Hail	0	0	3			
LYNN	9/27/1976	Hail	0	0	1			
LYNN	5/5/1977	Hail	0	0	2.75			
LYNN	5/5/1978	Hail	0	0	2.5			
LYNN	6/5/1978	Hail	0	0	2.75			
LYNN	3/21/1979	Hail	0	0	2.75			
LYNN	7/9/1979	Hail	0	0	1.75			
LYNN	5/7/1981	Hail	0	0	2.75			
LYNN	6/1/1981	Hail	0	0	1.75			
LYNN	5/16/1982	Hail	0	0	2.75			
LYNN	5/23/1982	Hail	0	0	1.75			
LYNN	6/18/1982	Hail	0	0	1.75			
LYNN	6/8/1983	Hail	0	0	1.75			
LYNN	6/11/1983	Hail	0	0	2.75			
LYNN	4/27/1985	Hail	0	0	1			
LYNN	5/7/1985	Hail	0	0	2.75			
LYNN	4/5/1986	Hail	0	0	0.75			
LYNN	9/29/1986	Hail	0	0	1.75			
LYNN	7/3/1987	Hail	0	0	1.75			
LYNN	8/30/1987	Hail	0	0	1.75			
LYNN	3/31/1988	Hail	0	0	1.75			
LYNN	4/16/1988	Hail	0	0	2.75			
LYNN	5/16/1989	Hail	0	0	1.75			
LYNN	6/1/1989	Hail	0	0	1.75			
LYNN	5/22/1991	Hail	0	0	1.75	\$50 - \$500		\$94 - \$935
LYNN	6/21/1991	Hail	0	0	0.75			
LYNN	5/27/1992	Hail	0	0	0.88			

LYNN	6/11/1992	Hail	0	0	1.75	\$500 - \$5,000		\$911 - \$9,113	
LYNN	6/12/1992	Hail	0	0	1.75	\$500 - \$5,000		\$911 - \$9,113	
LYNN	5/17/1993	Hail	0	0	1.75	\$50 - \$500		\$88 - \$883	
LYNN	6/11/1994	Hail	0	0	1.75	\$500 - \$5,000		\$861 - \$8,609	
LYNN	7/13/1994	Hail	0	0	0.75	\$5,000 - \$50,000		\$8,609 - \$86,085	
LYNN	4/19/1985	Hail	0	0	1				
LYNN	5/31/1995	Hail	0	0	1.75				
LYNN	6/2/1995	Hail	0	0	0.75				
LYNN	6/4/1995	Hail	0	0	1.75				
LYNN	5/9/1996 19:15	Hail	0	0	1.75				
LYNN	5/25/1996 17:20	Hail	0	0	2.75				
LYNN	5/25/1996 17:49	Hail	0	0	1.75				
LYNN	5/25/1996 18:09	Hail	0	0	0.75				
LYNN	5/25/1996 18:13	Hail	0	0	0.75				
LYNN	5/25/1996 18:14	Hail	0	0	1				
LYNN	5/25/1996 18:15	Hail	0	0	1.75				
LYNN	5/25/1996 18:17	Hail	0	0	2				
LYNN	5/25/1996 18:30	Hail	0	0	2	\$200,000	\$100,000	\$324,356	\$162,178
LYNN	5/25/1996 18:50	Hail	0	0	1.75	\$40,000		\$64,871	
LYNN	5/25/1996 19:45	Hail	0	0	1.75				
LYNN	4/10/1997 17:50	Hail	0	0	1				
LYNN	4/10/1997 18:00	Hail	0	0	2.75	\$10,000		\$15,854	
LYNN	4/10/1997 18:41	Hail	0	0	1.25				
LYNN	4/10/1997 18:45	Hail	0	0	2.75				
LYNN	5/8/1997 20:10	Hail	0	0	2	\$5,000		\$7,927	
LYNN	5/29/1997 19:07	Hail	0	0	0.75				
LYNN	6/6/1997 2:45	Hail	0	0	0.88				

LYNN	6/6/1997 3:10	Hail	0	0	1.75				
LYNN	6/11/1997 18:44	Hail	0	0	0.75		\$2,000,000		\$3,170,809
LYNN	6/14/1997 14:10	Hail	0	0	1.75		\$25,000		\$39,027
LYNN	5/25/1998 19:21	Hail	0	0	1.5		\$25,000		\$39,027
LYNN	5/25/1998 19:33	Hail	0	0	2.75		\$50,000		\$78,054
LYNN	5/25/1998 19:44	Hail	0	0	1				
LYNN	5/25/1998 19:51	Hail	0	0	2.75	\$500,000		\$780,545	
LYNN	5/9/1999 15:54	Hail	0	0	2.75				
LYNN	5/9/1999 16:15	Hail	0	0	2				
LYNN	5/26/1999 0:28	Hail	0	0	2.75	\$50,000	\$50,000	\$81,137	\$81,137
LYNN	5/26/1999 0:50	Hail	0	0	0.88		\$150,000		\$229,103
LYNN	5/26/1999 1:25	Hail	0	0	1		\$100,000		\$152,736
LYNN	6/11/1999 18:27	Hail	0	0	1.75		\$5,000,000		\$7,636,776
LYNN	6/11/1999 19:05	Hail	0	0	1.75		\$6,000,000		\$9,164,131
LYNN	9/15/1999 18:15	Hail	0	0	2.25		\$1,000,000		\$1,527,355
LYNN	9/15/1999 18:25	Hail	0	0	1.25		\$200,000		\$305,471
LYNN	9/15/1999 19:05	Hail	0	0	1.75		\$200,000		\$305,471
LYNN	2/24/2000 18:46	Hail	0	0	1				
LYNN	2/24/2000 18:55	Hail	0	0	0.88				
LYNN	2/24/2000 19:30	Hail	0	0	0.75				
LYNN	3/22/2000 3:30	Hail	0	0	1				
LYNN	4/11/2000 16:30	Hail	0	0	1				
LYNN	4/30/2000 17:37	Hail	0	0	1.75	\$40,000		\$59,107	
LYNN	5/25/2000 17:15	Hail	0	0	2.75	\$200,000	\$200,000	\$295,537	\$295,537
LYNN	5/25/2000 17:19	Hail	0	0	2.75	\$10,000	\$200,000	\$14,777	\$295,537
LYNN	3/23/2001 21:15	Hail	0	0	1.75	\$25,000		\$35,920	
LYNN	4/30/2001 18:10	Hail	0	0	0.75				
LYNN	5/12/2001 1:05	Hail	0	0	0.75		\$25,000		\$35,920
LYNN	5/30/2001 21:10	Hail	0	0	1.75		\$5,000,000		\$7,636,776
LYNN	5/30/2001 22:05	Hail	0	0	1		\$5,000,000		\$7,636,776

LYNN	8/23/2001 18:30	Hail	0	0	0.88		\$10,000		\$14,368
LYNN	4/19/2002 17:58	Hail	0	0	1.5				
LYNN	4/19/2002 18:05	Hail	0	0	4	\$50,000		\$70,722	
LYNN	4/19/2002 18:14	Hail	0	0	2.5	\$10,000		\$14,144	
LYNN	4/19/2002 18:20	Hail	0	0	1.5				
LYNN	5/29/2002 15:55	Hail	0	0	0.75		\$15,000		\$21,216
LYNN	5/29/2002 16:08	Hail	0	0	1				
LYNN	5/29/2002 16:15	Hail	0	0	1.5				
LYNN	6/4/2002 19:05	Hail	0	0	1		\$100,000		\$133,130
LYNN	6/4/2002 21:15	Hail	0	0	1.75		\$200,000		\$266,259
LYNN	6/13/2002 15:04	Hail	0	0	1				
LYNN	6/13/2002 16:14	Hail	0	0	0.88		\$75,000		\$99,847
LYNN	6/13/2002 16:31	Hail	0	0	0.88				
LYNN	6/13/2002 16:45	Hail	0	0	1		\$100,000		\$141,444
LYNN	4/18/2003 21:20	Hail	0	0	1.75				
LYNN	4/18/2003 23:50	Hail	0	0	1.75	\$20,000		\$27,659	
LYNN	5/23/2003 21:15	Hail	0	0	0.88		\$40,000		\$55,317
LYNN	6/3/2003 16:55	Hail	0	0	1		\$200,000		\$266,259
LYNN	6/3/2003 17:15	Hail	0	0	0.75		\$100,000		\$133,130
LYNN	6/3/2003 19:05	Hail	0	0	1.75		\$300,000		\$414,876
LYNN	6/24/2003 19:24	Hail	0	0	1.75		\$300,000		\$414,876
LYNN	6/24/2003 19:26	Hail	0	0	0.75		\$200,000		\$266,259
LYNN	8/22/2003 16:23	Hail	0	0	1.5		\$250,000		\$345,731
LYNN	9/7/2003 19:30	Hail	0	0	1.75	\$75,000	\$1,000,000	\$97,622	\$1,382,920
LYNN	10/5/2003 21:10	Hail	0	0	1.5		\$200,000		\$266,259
LYNN	10/6/2003 15:30	Hail	0	0	0.88				
LYNN	5/10/2004 16:10	Hail	0	0	0.75				
LYNN	5/10/2004 18:50	Hail	0	0	1.75	\$30,000		\$40,411	
LYNN	5/10/2004 19:14	Hail	0	0	0.88				
LYNN	6/17/2004 16:04	Hail	0	0	0.88		\$600,000		\$808,229

LYNN	6/17/2004 16:40	Hail	0	0	0.88		\$25,000		\$33,677
LYNN	8/6/2004 20:35	Hail	0	0	2.5		\$200,000		\$269,409
LYNN	9/30/2004 19:30	Hail	0	0	1				
LYNN	2/27/2005 17:08	Hail	0	0	0.75				
LYNN	2/27/2005 17:10	Hail	0	0	0.88				
LYNN	5/12/2005 16:35	Hail	0	0	1				
LYNN	5/12/2005 17:37	Hail	0	0	0.75				
LYNN	5/31/2005 20:01	Hail	0	0	1.75				
LYNN	6/5/2005 16:25	Hail	0	0	4.25				
LYNN	6/5/2005 17:05	Hail	0	0	1.75				
LYNN	8/27/2005 18:05	Hail	0	0	1				
LYNN	8/27/2005 18:50	Hail	0	0	0.88				
LYNN	9/14/2005 15:25	Hail	0	0	1.75				
LYNN	9/14/2005 15:28	Hail	0	0	1.75				
LYNN	9/17/2005 16:06	Hail	0	0	1				
LYNN	5/5/2006 16:15	Hail	0	0	1.75				
LYNN	5/5/2006 16:45	Hail	0	0	2.75	\$10,000		\$12,622	
LYNN	5/5/2006 17:00	Hail	0	0	2.75				
LYNN	5/5/2006 17:54	Hail	0	0	0.88				
LYNN	3/28/2007 23:03	Hail	0	0	0.88				
LYNN	5/5/2007 20:16	Hail	0	0	1.75				
LYNN	5/28/2007 19:34	Hail	0	0	0.88		\$200,000		\$245,497
LYNN	6/20/2007 0:20	Hail	0	0	0.88		\$25,000		\$30,687
LYNN	9/7/2007 13:45	Hail	0	0	1		\$1,500,000		\$1,841,226
LYNN	10/1/2007 15:22	Hail	0	0	1				
LYNN	5/28/2008 0:10	Hail	0	0	0.88		\$200,000		\$236,734
LYNN	4/16/2009 14:35	Hail	0	0	0.88				
LYNN	7/21/2009 15:09	Hail	0	0	1				
LYNN	7/27/2009 17:07	Hail	0	0	0.88				
LYNN	4/22/2010 19:29	Hail	0	0	1				

LYNN	4/22/2010 20:20	Hail	0	0	1				
LYNN	6/14/2010 13:20	Hail	0	0	1	\$100,000		\$116,670	
LYNN	6/14/2010 14:16	Hail	0	0	1				
LYNN	6/14/2010 14:53	Hail	0	0	0.75				
LYNN	6/14/2010 15:01	Hail	0	0	1				
LYNN	10/21/2010 20:30	Hail	0	0	1.5	\$5,000,000		\$5,833,503	
LYNN	2/24/2011 3:00	Hail	0	0	1				
LYNN	4/14/2012 21:30	Hail	0	0	0.88				
LYNN	4/29/2012 20:38	Hail	0	0	2.75	\$1,000		\$1,108	
LYNN	4/29/2012 21:17	Hail	0	0	1.75				
LYNN	4/29/2012 22:12	Hail	0	0	2				
LYNN	4/29/2012 22:49	Hail	0	0	1.75				
LYNN	5/23/2013 18:03	Hail	0	0	1.1				
LYNN	6/17/2013 18:24	Hail	0	0	2.25				
LYNN	6/17/2013 19:02	Hail	0	0	1				
LYNN	8/15/2013 0:45	Hail	0	0	0.88				
LYNN	4/16/2015 18:55	Hail	0	0	1.75				
LYNN	4/16/2015 19:17	Hail	0	0	1.5				
LYNN	5/28/2015 13:50	Hail	0	0	1				
LYNN	6/12/2015 18:36	Hail	0	0	1	\$50,000		\$53,683	
LYNN	4/10/2016 15:02	Hail	0	0	0.88				
LYNN	5/22/2016 16:10	Hail	0	0	2.75				
LYNN	5/30/2016 19:47	Hail	0	0	1.25				
LYNN	11/2/2016 15:31	Hail	0	0	1.75	\$30,000	\$300,000	\$31,874	\$318,736

N) Lynn County Hospital District

Hailstorm history isn't recorded below the city level. However, given the Hospital's location within the planning area, hailstorms that affected Tahoka are likely to have also affected Lynn County Hospital District.

O) City of New Home

Table 65: City of New Home Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
NEW HOME	5/9/1996 19:15	Hail	0	0	1.75				
NEW HOME	5/26/1999 0:28	Hail	0	0	2.75	\$50,000	\$50,000	\$76,368	\$76,368
NEW HOME	2/24/2000 18:55	Hail	0	0	0.88				
NEW HOME	4/11/2000 16:30	Hail	0	0	1				
NEW HOME	8/23/2001 18:30	Hail	0	0	0.88		\$10,000		\$14,368
NEW HOME	5/29/2002 16:15	Hail	0	0	1.5				
NEW HOME	5/29/2002 16:08	Hail	0	0	1				
NEW HOME	4/18/2003 23:50	Hail	0	0	1.75	\$20,000		\$27,659	
NEW HOME	6/3/2003 19:05	Hail	0	0	1.75		\$300,000		\$414,876
NEW HOME	5/10/2004 16:10	Hail	0	0	0.75				
NEW HOME	9/17/2005 16:06	Hail	0	0	1				
NEW HOME	5/5/2006 17:00	Hail	0	0	2.75				
NEW HOME	5/5/2006 16:15	Hail	0	0	1.75				
NEW HOME	5/5/2006 16:45	Hail	0	0	2.75	\$10,000		\$12,622	
NEW HOME	5/5/2006 17:54	Hail	0	0	0.88				
NEW HOME	5/28/2007 19:34	Hail	0	0	0.88		\$200,000		\$2,454,987
NEW HOME	6/20/2007 0:20	Hail	0	0	0.88		\$25,000		\$30,687
NEW HOME	6/12/2015 18:36	Hail	0	0	1	\$50,000		\$53,683	
NEW HOME	4/10/2016 15:02	Hail	0	0	0.88				

P) City of O'Donnell

Table 66: City of O'Donnell Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
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ODONNELL	5/25/1996 18:09	Hail	0	0	0.75				
ODONNELL	5/25/1996 18:30	Hail	0	0	2	\$200,000	\$100,000	\$324,356	\$162,178
ODONNELL	5/29/1997 19:07	Hail	0	0	0.75				
ODONNELL	6/11/1997 18:44	Hail	0	0	0.75		\$2,000,000		\$3,170,809
ODONNELL	5/25/1998 19:44	Hail	0	0	1				
ODONNELL	6/11/1999 19:05	Hail	0	0	1.75		\$6,000,000		\$9,164,131
ODONNELL	4/30/2000 17:37	Hail	0	0	1.75	\$40,000		\$59,107	
ODONNELL	5/25/2000 17:15	Hail	0	0	2.75	\$200,000	\$200,000	\$295,537	\$295,537
ODONNELL	5/25/2000 17:19	Hail	0	0	2.75	\$10,000	\$200,000	\$14,777	\$295,537
ODONNELL	3/23/2001 21:15	Hail	0	0	1.75	\$25,000		\$36,026	
ODONNELL	4/19/2002 17:58	Hail	0	0	1.5				
ODONNELL	6/13/2002 16:45	Hail	0	0	1		\$100,000		\$141,444
ODONNELL	10/5/2003 21:10	Hail	0	0	1.5		\$200,000		\$276,584
ODONNELL	6/17/2004 16:04	Hail	0	0	0.88		\$600,000		\$808,229
ODONNELL	6/17/2004 16:40	Hail	0	0	0.88		\$25,000		\$33,677
ODONNELL	5/5/2007 20:16	Hail	0	0	1.75				
ODONNELL	5/28/2008 0:10	Hail	0	0	0.88		\$200,000		\$236,757
ODONNELL	7/27/2009 17:07	Hail	0	0	0.88				
ODONNELL	5/23/2013 18:03	Hail	0	0	1.1				
ODONNELL	4/16/2015 18:55	Hail	0	0	1.75				
ODONNELL	11/2/2016 15:31	Hail	0	0	1.75	\$30,000	\$300,000	\$31,874	\$318,736

Q) City of Tahoka

Table 67: City of Tahoka Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage	Local Crop Damage
								\$2,019	\$2,019
TAHOKA	5/25/1996 17:20	Hail	0	0	2.75				
TAHOKA	5/25/1996 17:49	Hail	0	0	1.75				

TAHOKA	5/25/1996 18:50	Hail	0	0	1.75	\$40,000		\$64,871	
TAHOKA	4/10/1997 18:41	Hail	0	0	1.25				
TAHOKA	4/10/1997 18:45	Hail	0	0	2.75				
TAHOKA	5/25/1998 19:21	Hail	0	0	1.5		\$25,000		\$39,027
TAHOKA	5/25/1998 19:33	Hail	0	0	2.75		\$50,000		\$78,054
TAHOKA	5/25/1998 19:51	Hail	0	0	2.75	\$500,000		\$780,545	
TAHOKA	5/26/1999 0:50	Hail	0	0	0.88		\$150,000		\$229,103
TAHOKA	6/11/1999 18:27	Hail	0	0	1.75		\$5,000,000		\$7,636,776
TAHOKA	2/24/2000 18:46	Hail	0	0	1				
TAHOKA	3/22/2000 3:30	Hail	0	0	1				
TAHOKA	5/12/2001 1:05	Hail	0	0	0.75		\$25,000		\$35,920
TAHOKA	4/19/2002 18:20	Hail	0	0	1.5				
TAHOKA	5/29/2002 15:55	Hail	0	0	0.75		\$15,000		\$21,216
TAHOKA	6/13/2002 16:14	Hail	0	0	0.88		\$75,000		\$106,083
TAHOKA	6/13/2002 16:31	Hail	0	0	0.88				
TAHOKA	4/18/2003 21:20	Hail	0	0	1.75				
TAHOKA	10/6/2003 15:30	Hail	0	0	0.88				
TAHOKA	9/30/2004 19:30	Hail	0	0	1				
TAHOKA	2/27/2005 17:08	Hail	0	0	0.75				
TAHOKA	2/27/2005 17:10	Hail	0	0	0.88				
TAHOKA	5/12/2005 16:35	Hail	0	0	1				
TAHOKA	8/27/2005 18:50	Hail	0	0	0.88				
TAHOKA	9/14/2005 15:28	Hail	0	0	1.75				
TAHOKA	3/28/2007 23:03	Hail	0	0	0.88				
TAHOKA	9/7/2007 13:45	Hail	0	0	1		\$1,500,000		\$1,841,226
TAHOKA	10/1/2007 15:22	Hail	0	0	1				
TAHOKA	4/22/2010 19:29	Hail	0	0	1				
TAHOKA	4/22/2010 20:20	Hail	0	0	1				
TAHOKA	6/14/2010 13:20	Hail	0	0	1		\$100,000		\$166,670
TAHOKA	6/14/2010 14:16	Hail	0	0	1				

TAHOKA	6/14/2010 14:53	Hail	0	0	0.75				
TAHOKA	6/14/2010 15:01	Hail	0	0	1				
TAHOKA	2/24/2011 3:00	Hail	0	0	1				
TAHOKA	4/14/2012 21:30	Hail	0	0	0.88				
TAHOKA	4/29/2012 22:12	Hail	0	0	2				
TAHOKA	4/29/2012 22:49	Hail	0	0	1.75				
TAHOKA	6/17/2013 19:02	Hail	0	0	1				
TAHOKA	8/15/2013 0:45	Hail	0	0	0.88				
TAHOKA	4/16/2015 19:17	Hail	0	0	1.5				
TAHOKA	5/30/2016 19:47	Hail	0	0	1.25				

R) City of Wilson

Table 68: City of Wilson Hailstorm History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Magnitude	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
WILSON	5/8/1997 20:10	Hail	0	0	2	\$5,000		\$7,927	
WILSON	6/6/1997 2:45	Hail	0	0	0.88				
WILSON	6/6/1997 3:10	Hail	0	0	1.75				
WILSON	6/14/1997 14:10	Hail	0	0	1.75		\$25,000		\$39,635
WILSON	5/9/1999 15:54	Hail	0	0	2.75				
WILSON	5/9/1999 16:15	Hail	0	0	2				
WILSON	9/15/1999 18:15	Hail	0	0	2.25		\$1,000,000		\$1,527,355
WILSON	9/15/1999 18:25	Hail	0	0	1.25		\$200,000		\$305,471
WILSON	2/24/2000 19:30	Hail	0	0	0.75				
WILSON	6/4/2002 21:15	Hail	0	0	1.75		\$200,000		\$282,888
WILSON	5/23/2003 21:15	Hail	0	0	0.88		\$40,000		\$55,317
WILSON	6/3/2003 16:55	Hail	0	0	1		\$200,000		\$276,584
WILSON	8/22/2003 16:23	Hail	0	0	1.5		\$250,000		\$345,731

WILSON	5/10/2004 19:14	Hail	0	0	0.88			
WILSON	5/12/2005 17:37	Hail	0	0	0.75			
WILSON	5/31/2005 20:01	Hail	0	0	1.75			
WILSON	6/5/2005 16:25	Hail	0	0	4.25			
WILSON	8/27/2005 18:05	Hail	0	0	1			
WILSON	4/16/2009 14:35	Hail	0	0	0.88			
WILSON	7/21/2009 15:09	Hail	0	0	1			
WILSON	4/29/2012 20:38	Hail	0	0	2.75	\$1,000		\$1,043
WILSON	6/17/2013 18:24	Hail	0	0	2.25			

S) New Home ISD

Hailstorm history isn't recorded below the city level. However, given its location within the planning area, hailstorms that affected the City of New Home are likely to have also affected New Home ISD.

T) O'Donnell ISD

Hailstorm history isn't recorded below the city level. However, given its location within the planning area, hailstorms that affected the City of O'Donnell are likely to have also affected O'Donnell ISD.

U) Tahoka ISD

Hailstorm history isn't recorded below the city level. However, given its location within the planning area, hailstorms that affected the City of Tahoka are likely to have also affected Tahoka ISD.

V) Wilson ISD

Hailstorm history isn't recorded below the city level. However, given its location within the planning area, hailstorms that affected the City of Wilson are likely to have also affected Wilson ISD.

2) Likelihood of Future Occurrence

Based on the participating jurisdictions' hailstorm history, as well as the knowledge that both hailstorms and hailstorm damages have likely been underreported, the planning team has determined that future hailstorm events are highly likely, meaning that an event is probable in every jurisdiction addressing the hazard within the next year. Warning time for a hailstorm is generally minimal or there is no warning.

3) Extent

The severity of hail events ranges based on the size of the hail, wind speed, and the number and types of structures in the path of the hail storm. Storms that produce high winds in addition to hail are most damaging and can result in numerous broken windows and damaged siding. When hail breaks windows, water damage from accompanying rains can also be significant. A major hailstorm can easily cause damage running into the millions of dollars. Nationwide hail is responsible for over \$1 billion in property and crop damages per year. The scale showing intensity categories in Table 123 was developed by combining data from the National Centers for Environmental Information (NCEI), formerly the National Climatic Data Center, and the Tornado and Storm Research Organization (TORRO). Damaging hail in Lamb County and the participating jurisdictions in that county has ranged in size from H2 to H10. Damaging hail in Lynn County and the participating jurisdictions in that county has also ranged in size from H2 to H10

Table 69: Hailstorm Intensity^{29,30}

Size Code	Intensity Category	Size (Diameter in inches)	Descriptive Term	Typical Damage
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33-.060	Mothball	Slight damage to plants and crops
H2	Significant	.060-.080	Penny	Significant damage to fruit, crops, and vegetation
H3	Severe ³¹	0.80-1.20	Nickel – Half dollar	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	1.2-1.6	Half dollar – Ping pong ball	Widespread glass damage and vehicle bodywork damage

²⁹ <http://www1.ncdc.noaa.gov/pub/data/cmb/extremes/sccec/reports/SCEC-Hail-Guide.pdf>

³⁰ <http://www.torro.org.uk/hscale.php>

³¹ Hail must be 1" or larger to be classified as severe

H5	Destructive	1.6-2.0	Ping pong ball – hen egg	Wholesale destruction of glass, damage to tiled roofs, and significant risk of injuries
H6	Destructive	2.0-2.4	Hen egg – tennis ball	Bodywork of grounded aircraft dented and brick walls pitted
H7	Destructive	2.4-3.0	Tennis ball – Baseball	Severe roof damage and risk of serious injuries
H8	Destructive	3.0-3.5	Hockey puck	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.5-4.0	Softball	Extensive structural damage could cause fatal injuries
H10	Super Hailstorms	4.0+	Greater than softball-sized	Extensive structural damage could cause fatal injuries

According to NCEI data and Lamb and Lynn Counties’ 2018 CHAMPS Reports, the worst hailstorms in the jurisdictions addressing the hazard have produced hail up to 4 ½” in diameter, H10 on the Hailstorm Intensity Scale. Adjusted for inflation, the worst individual hailstorms have inflicted the equivalent of over \$780,000 in reported property damages and over \$21 million in crop damages.

Future hailstorm intensity in Lamb and Lynn Counties and the jurisdictions may meet previous worst-case events (H10 on the Hailstorm Intensity Scale) in terms of hailstone size, damage dollars inflicted, and the number of residents injured.

4) Location and Impact

A) Location

Hailstorms vary in terms of size, location, intensity and duration but are considered frequent occurrences in the planning area. Lamb and Lynn Counties and the participating jurisdictions addressing the hazard are uniformly exposed to hail events, just as each is uniformly exposed to the thunderstorms that typically produce the hail events.

B) Impact

The severity of a hailstorm’s impact is considered to be limited since they generally result in injuries treatable with first aid, shut down critical facilities and services for 24 hours or less, and less than ten percent of affected properties are destroyed or suffer major damage. All existing and future buildings, facilities, and populations in the jurisdictions are considered to be exposed to this hazard and could potentially be impacted.

5) Vulnerability

A) Population

As described in the narrative, as well as in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

Since hailstorms arise with little to no warning, the participating jurisdictions recognize that vulnerable populations may primarily need additional help recovering from a hailstorm.

Residents of sub-standard structures are of particular concern. Structures in sub-standard condition ahead of a hailstorm, whether due to structural damages, missing windows or doors, holes in exterior walls or the roof, may sustain more damages than structures in standard condition.

Existing weaknesses, especially those related to the condition of a structure’s roof, due to housing type or existing damages, may lead to compounded damages, injuries, or loss of life.

B) Critical Facilities³²

Because hailstorms don’t recognize geographic boundaries, all critical facilities in the jurisdictions addressing the hazard are equally vulnerable to hailstorms.

Table 70: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Hail

	Potential Hailstorm Impacts		
	Damaged or Destroyed Roof or Structure	Damaged Windows	Water Damage due to Physical Damages
Amherst City Hall	x	x	x
Amherst Fire Department	x	x	x
Amherst Ems Department	x	x	x
Amherst ISD	x	x	x
Harmonee House	x	x	x
Littlefield Feedyard	x	x	x
Caprock Dairy 2	x	x	x
T J'S Dairy	x	x	x
5 Star Dairy	x	x	x
Milk Harvest Dairy	x	x	x
Setting Sun Dairy	x	x	x
Springlake Dairy	x	x	x
Red Rock Dairy	x	x	x
Earth City Hall	x	x	x
Earth Volunteer Fire Department	x	x	x
Earth Ems Department	x	x	x
Earth Police Department	x	x	x
Earth Medical Clinic	x	x	x
Earth Housing Development Corporation	x	x	x
Springlake-Earth ISD	x	x	x
Hilltop Dairy	x	x	x
Boehning Dairy	x	x	x
Tolk Station	x	x	x
Savage Services	x	x	x
Plant X	x	x	x
Littlefield City Hall	x	x	x
Littlefield Fire Department	x	x	x
Littlefield Ems Department	x	x	x
Littlefield Police Department	x	x	x
Littlefield ISD	x	x	x
Lamb County Courthouse	x	x	x

³² For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Lamb County Sheriff's Office	x	x	x
LHC Family Medicine	x	x	x
Lamb Health Care Center	x	x	x
Littlefield WIC Clinic	x	x	x
Library of Legacies	x	x	x
Arbor Grace	x	x	x
Lamb County Electric Coop	x	x	x
Continental Dairy Facilities	x	x	x
Olton City Hall	x	x	x
Olton Fire Department	x	x	x
Olton Ems Department	x	x	x
Olton Police Department	x	x	x
Olton ISD	x	x	x
Olton Clinic	x	x	x
City of Olton Housing Authority	x	x	x
Running Water Draw Care Facility	x	x	x
Cattleman's Feedlot	x	x	x
Springlake City Hall	x	x	x
VB Ranch	x	x	x
Sudan City Hall	x	x	x
Sudan Police Department	x	x	x
Sudan Fire Department	x	x	x
Sudan Ems Department	x	x	x
Sudan ISD	x	x	x
Sudan Medical Clinic	x	x	x

Table 71: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Hail

	Potential Hailstorm Impacts		
	Damaged or Destroyed Roof or Structure	Damaged Windows	Water Damage due to Physical Damages
Tahoka WIC Clinic	x	x	x
Tahoka Housing Authority	x	x	x
Tahoka Police Department	x	x	x
Tahoka Correctional Institution	x	x	x
Lynn County Hospital	x	x	x
O'Donnell Family Wellness Clinic	x	x	x
O'Donnell Housing Authority	x	x	x
O'Donnell Police Department	x	x	x
O'Donnell Health Clinic	x	x	x
Lynn County Courthouse	x	x	x
Tahoka City Hall	x	x	x
O'Donnell City Hall	x	x	x
New Home City Hall	x	x	x
Wilson City Hall	x	x	x
Tahoka ISD Facilities	x	x	x
O'Donnell ISD Facilities	x	x	x
New Home ISD Facilities	x	x	x
Wilson ISD Facilities	x	x	x
Tahoka water and sewer systems	x	x	x

O'Donnell water and sewer systems	x	x	x
New Home water and sewer systems	x	x	x
Wilson water and sewer systems	x	x	x

C) Vulnerable Parcels

Although every structure is vulnerable to damage from hail, due to often having large and/or flat roofs and the increased exposure that large and/or flat roofs create, commercial, industrial, and manufacturing structures, most significantly concentrated in the cities, but spread throughout the participating jurisdictions, are expected to sustain more damages than other infrastructure.

Table 72: Structures Vulnerable to Hailstorms

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
Amherst ISD	1182	\$70,652,910
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570
Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880
New Home ISD	916	\$100,075,260

City of O'Donnell	548	\$16,945,540
O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

11. Severe Winter Storm

A severe winter storm is defined by extreme cold and heavy concentrations of snowfall or ice. Texas is disrupted more severely by severe winter storms than are regions that experience severe winter weather more frequently.

The types of severe winter storms which Texans are most familiar with are snowstorms, blizzards, cold waves and ice storms.

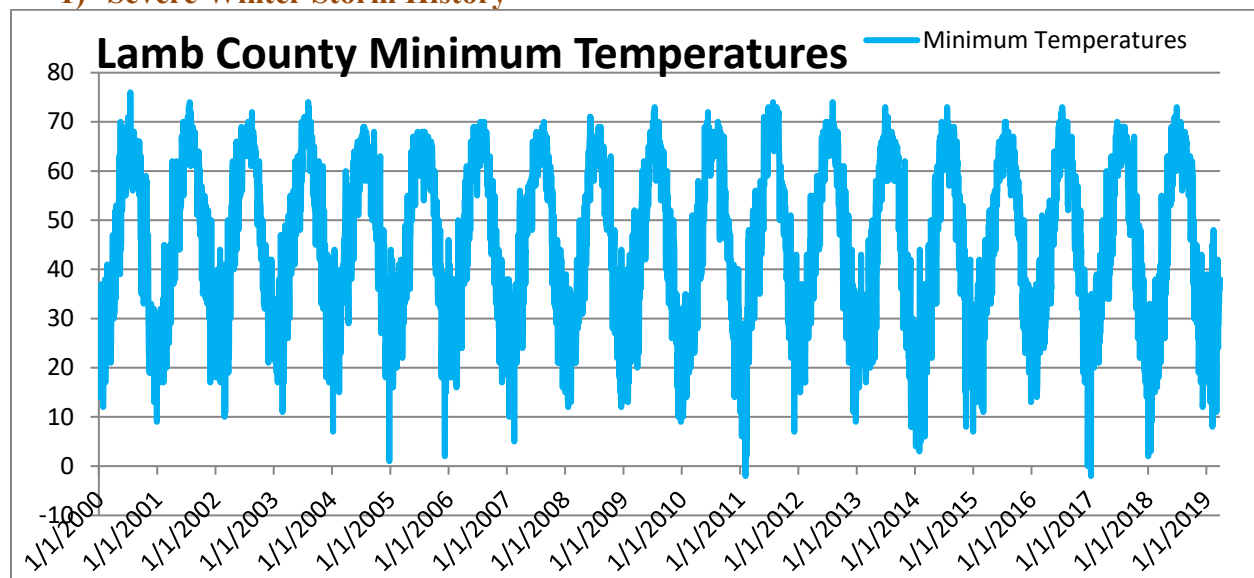
Snowfall with an accumulation of four or more inches in a 12-hour period is considered a heavy snowfall.

Blizzards are the most perilous of all winter storms, characterized by low temperatures and strong winds in excess of 35 mph, bearing large amounts of blowing or drifting snow. Blizzards take a terrible toll on livestock and people caught in the open. In Texas, blizzards are most likely to occur in the Panhandle and South Plains Regions.

The passage of a winter cold front with a drastic drop in temperature heralds the arrival of a cold wave, usually referred to as a “blue north’er.”

An ice storm occurs when rain falls out of the warm and moist upper layers of the atmosphere into a cold and dry layer near the ground. The rain freezes on contact with the cold ground and accumulates on exposed surfaces. If a half inch of rain freezes on trees and utility wires, damage can occur, especially if accompanied by high winds, thus half an inch is used as the criteria before an icing event is categorized as an “ice storm.”

1) Severe Winter Storm History



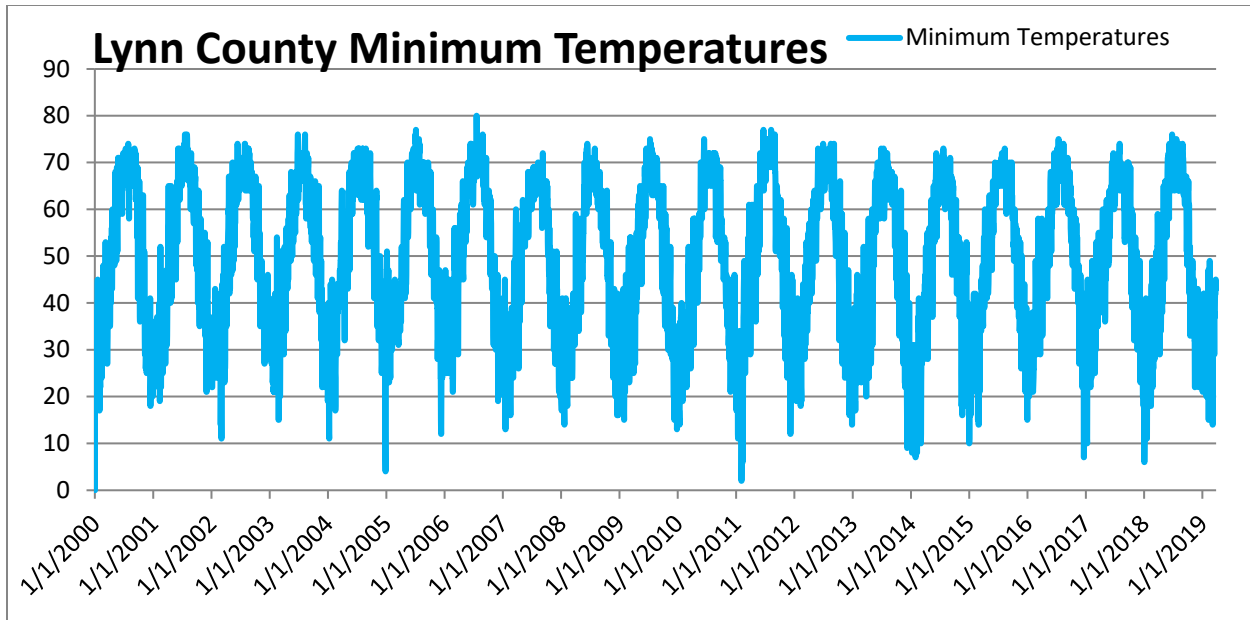


Figure 48: Minimum Recorded Daily Temperature, 2000-2019³³

During the previous 19 years, Lamb County and the participating jurisdictions in that county experienced 2,041 days with a minimum temperature of 32°F or colder. Lynn County and the participating jurisdictions in that county experienced 1,492 days with a minimum temperature of 32°F or colder.

During the same timeframe, the coldest temperature recorded among all jurisdictions was -2°F on January 8, 2017 and also on February 3 and 4, 2011.

Table 73: Lamb County Severe Winter Storm History

Date/Time	Hazard	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
12/25/1997 9:00	Winter Storm	0	0				
1/29/1999 2:00	Winter Storm	0	0				
12/8/1999 23:00	Heavy Snow	0	0				
11/7/2000 10:00	Heavy Snow	0	0				
12/25/2000 12:00	Winter Storm	0	0				
1/27/2001 10:00	Winter Storm	0	0				
1/30/2002 11:00	Winter Storm	0	0				
2/24/2004 10:00	Heavy Snow	0	0				
11/2/2004 0:00	Winter Storm	0	0				
3/15/2005 7:00	Heavy Snow	0	0				
3/23/2006 15:00	Winter Weather	0	0				
11/29/2006 22:00	Heavy Snow	0	0				
12/19/2006 3:00	Ice Storm	0	0				
12/19/2006 22:30	Winter Weather	0	0				
12/29/2006 19:00	Winter Weather	0	0				

³³ Source: National Centers for Environmental Information, <https://www.ncdc.noaa.gov/cdo-web/datasets>

1/12/2007 17:00	Ice Storm	0	0	\$50,000		\$61,375	
1/19/2007 8:00	Heavy Snow	0	0				
2/1/2007 17:00	Winter Weather	0	0				
2/14/2007 4:00	Winter Weather	0	0	\$100,000		\$122,748	
4/7/2007 5:00	Winter Weather	0	0				
11/24/2007 0:00	Winter Weather	0	0				
12/14/2007 20:30	Winter Weather	0	0				
12/14/2007 20:30	Heavy Snow	0	0				
1/31/2008 6:30	Winter Weather	0	0				
3/2/2008 23:00	Winter Weather	0	0				
1/26/2009 10:00	Winter Weather	0	0				
3/27/2009 6:00	Winter Weather	0	0				
12/7/2009 20:00	Winter Weather	0	0				
12/1/2009 5:00	Winter Weather	0	0				
12/23/2009 23:00	Winter Storm	0	0				
12/29/2009 8:00	Winter Storm	0	0				
12/31/2009 9:00	Winter Weather	0	0				
1/28/2010 9:00	Winter Storm	0	0	\$100,000		\$116,670	
2/22/2010 17:00	Winter Weather	0	0				
2/1/2010 15:00	Winter Weather	0	0				
2/11/2010 2:00	Winter Weather	0	0	\$50,000		\$58,335	
3/11/2010 8:00	Winter Weather	0	0				
3/19/2010 21:00	Winter Weather	0	0				
2/1/2011 0:00	Winter Weather	0	0	\$50,000		\$56,571	
2/6/2011 8:00	Winter Weather	0	0				
5/3/2011 1:00	Frost/Freeze	0	0				
12/5/2011 0:00	Winter Weather	0	0				
12/23/2011 22:00	Winter Storm	0	0				
2/12/2012 7:00	Winter Weather	0	0				
12/25/2012 5:00	Winter Storm	0	0				
2/24/2013 23:00	Blizzard	0	0				
11/23/2013 8:00	Winter Storm	0	0				
12/8/2013 0:00	Winter Weather	0	0				
11/16/2014 8:00	Winter Weather	0	0				
12/30/2014 7:00	Winter Weather	0	0				
1/2/2015 14:00	Winter Weather	0	0				
1/21/2015 19:00	Heavy Snow	0	0				
2/22/2015 17:00	Winter Weather	0	0				
2/27/2015 1:30	Winter Weather	0	0				
3/4/2015 9:00	Winter Weather	0	0				
12/26/2015 23:10	Blizzard	0	0	\$1,000,000		\$1,073,660	

Table 74: Lynn County Severe Winter Storm History

Date/Time	Hazard	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
1/7/1997 17:00	Heavy Snow	0	0				
2/12/1997 7:00	Heavy Snow	0	0				
11/7/2000 10:00	Heavy Snow	0	0				
12/25/2000 12:00	Winter Storm	0	0				
1/27/2001 10:00	Winter Storm	0	0				
11/2/2004 0:00	Winter Storm	0	0				
12/22/2004 6:00	Winter Storm	0	0				
2/1/2005 8:00	Winter Storm	0	0				
11/30/2006 0:00	Winter Weather	0	0				
1/12/2007 17:00	Ice Storm	0	23	\$150,000		\$184,123	
1/19/2007 8:00	Winter Weather	0	0				
1/23/2007 7:00	Winter Weather	0	0				
2/1/2007 19:00	Winter Weather	0	0				
4/7/2007 5:00	Winter Weather	0	0				
11/22/2007 10:00	Heavy Snow	0	0	\$10,000		\$12,275	
11/25/2007 10:00	Heavy Snow	0	0				
1/5/2009 2:00	Winter Weather	0	0				
1/26/2009 10:00	Winter Weather	0	0				
12/23/2009 23:00	Winter Storm	0	0	\$100,000		\$118,628	
12/7/2009 20:00	Winter Weather	0	0				
12/29/2009 8:00	Winter Weather	0	0				
1/28/2010 9:00	Winter Storm	0	0	\$10,000		\$11,667	
2/11/2010 2:00	Winter Weather	0	0				
2/22/2010 17:00	Heavy Snow	0	0				
3/15/2010 14:00	Winter Weather	0	0				
3/19/2010 21:00	Winter Weather	0	0				
2/1/2011 0:00	Winter Weather	0	0				
2/4/2011 4:00	Winter Weather	0	0				
5/3/2011 1:00	Frost/Freeze	0	0				
12/5/2011 0:00	Winter Weather	0	0				
12/23/2011 22:00	Winter Weather	0	0				
2/12/2012 7:00	Winter Weather	0	0	\$10,000		\$11,082	
3/8/2012 13:30	Winter Weather	0	2	\$20,000		\$22,165	
12/25/2012 8:30	Winter Weather	0	0				
11/22/2013 5:00	Ice Storm	0	0				
11/23/2013 9:00	Winter Storm	0	0				
12/5/2013 7:00	Ice Storm	0	0				

12/8/2013 2:00	Winter Weather	0	0				
2/2/2014 0:30	Heavy Snow	0	0				
11/16/2014 7:00	Winter Weather	0	0				
12/30/2014 9:00	Winter Weather	0	1				
1/21/2015 21:00	Winter Weather	0	0				
2/16/2015 20:00	Winter Weather	0	0				
2/22/2015 18:00	Winter Weather	0	0				
3/4/2015 8:00	Winter Weather	0	0				
11/27/2015 7:45	Ice Storm	0	0				
12/26/2015 23:00	Blizzard	0	0	\$400,000		\$429,463	

Severe winter weather data is recorded at the county level. However, given the nature of severe winter weather, all jurisdictions addressing the hazard experienced the same severe winter weather events. No damage dollars for any severe winter weather event have been recorded in any jurisdiction addressing the hazard since 2015.

2) Likelihood of Future Occurrence

Because it is likely that more winter storms have occurred than have been officially reported, and especially given the participating jurisdictions' locations in the High Plains, the likelihood for winter storms occurring in the jurisdictions addressing the hazard is highly likely, meaning an event affecting any or all of them is probable in the next year.

3) Extent

Table 134 below displays the magnitude of severe winter storms. The wind-chill factor is further described in Figure 73. The wind chill index was developed by the National Weather Service. It neither addresses temperatures above 40°F nor wind speeds below 5 mph.

Table 75: Winter Weather Extent Scale³⁴

Frost Advisory*	Issued when nighttime minimum temperatures are expected to range from 33°F to 36°F in the growing season.
Freeze Warning*	Issued when nighttime minimum temperatures are expected to reach 32°F or lower in the growing season. They are usually issued to highlight the first few freezes of the fall, or unusually late freezes in the spring. <i>A Freeze Watch is issued when these conditions may be met 12 to 48 hours in the future.</i>
Snow Advisory	Issued when accumulating snow of 2 to 4 inches is expected. An advisory may still be warranted if lesser accumulations will produce travel difficulties, especially early in the winter season.
Blowing Snow Advisory	Issued when blowing snow is expected to occasionally reduce visibilities to 1/4 mile or less with winds generally 25 to 34 mph. The event should last at least 3 hours.

³⁴ Source: National Weather Service Weather Forecast Office; Norman, Oklahoma. <http://www.srh.noaa.gov/oun/?n=spotter-wwa-definitions>

Snow and Blowing Snow Advisory	Issued when winds of 25 to 34 mph are expected to be accompanied by falling snow and blowing snow, occasionally reducing the visibility to 1/4 mile or less. The event should last at least 3 hours
Freezing Rain / Drizzle Advisory	Issued for freezing rain when ice accumulations are expected to cause travel problems, but not exceed 1/4".
Sleet Advisory	Issued for accumulating sleet of 1/4" to 1". Because sleet usually occurs with other precipitation types, a winter weather advisory will almost always be used in such cases.
Winter Weather Advisory	Issued for a winter weather event in which there is more than one hazard present, but all precipitation is expected to remain below warning criteria. For example, it would be issued if 2 inches of snow were expected with a small amount of sleet mixing in at times.
Wind Chill Advisory³⁵	Issued when wind chill temperatures are expected to be a significant inconvenience to life with prolonged exposure, and, if caution is not exercised, could lead to hazardous exposure.
Wind Chill Warning³⁶	Issued when wind chill temperatures are expected to be hazardous to life within several minutes of exposure.
Ice Storm Warning	Issued when a period of freezing rain is expected to produce ice accumulations of 1/4" or greater, or cause significant disruptions to travel or utilities.
Heavy Sleet Warning	Issued when a period of sleet is expected to produce ice accumulations of 1" or greater, or cause significant disruptions to travel or utilities.
Heavy Snow Warning	Issued when snow is expected to accumulate 4 inches or more in 12 hours, or 6 inches or more in 24 hours.
Winter Storm Warning	Issued for a winter weather event in which there is more than one hazard present, and one of the warning criteria listed above is expected to be met. For example, it would be issued if 5 inches of snow were expected in 12 hours, with some sleet mixing in at times. It is commonly issued for heavy snow with strong winds of 25-34 mph that will cause blowing and drifting of the snow. <i>A Winter Storm Watch is issued when these conditions may be met 12 to 48 hours in the future.</i>
Blizzard Warning	Issued for sustained wind or frequent gusts greater than or equal to 35 mph accompanied by falling and/or blowing snow, frequently reducing visibility to less than 1/4 mile for three hours or more. <i>A Blizzard Watch is issued when these conditions may be met 12 to 48 hours in the future.</i>

* - Non-precipitation watch / warning / advisory

³⁵ https://www.osha.gov/dts/weather/winter_weather/windchill.html

³⁶ https://www.osha.gov/dts/weather/winter_weather/windchill.html



Wind Chill Chart

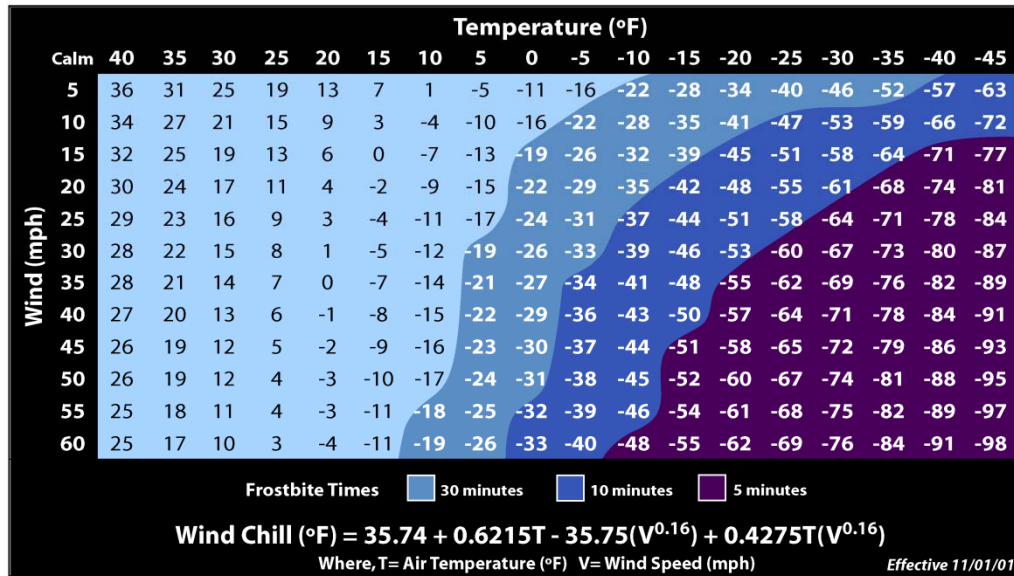


Figure 49: NWS Wind Chill Index

According to the Lamb and Lynn Counties 2018 CHAMPS Reports, the worst severe winter storms have inflicted over \$1 million³⁷ in property damages. In January 1985, snow depth reached up to 13.5". The worst ice storms in the participating jurisdictions have seen accumulation of up to 1" of ice.

Future winter storm events in in the jurisdictions addressing the hazard may see temperatures drop to the participating jurisdictions' lowest recently recorded temperature, -2°F, have snow accumulation of 13.5" or more, or have ice accumulation of 1" or more. Additionally, these future events may exceed previous ones in terms duration and the number of residents injured or worse.

4) Location and Impact

A) Location

Severe winter weather has no distinct geographic boundary. Severe winter weather can occur across Lamb and Lynn Counties and uniformly affect all jurisdictions.

B) Impact

The potential impact of a severe winter storm is normally minor, resulting in few, if any, injuries. Drivers may be at the highest risk of crashing their vehicle and sustaining injuries due to icy conditions on area roads.

Beyond accidents caused by icy conditions, severe winter weather has the potential to cause widespread power outages due to snow and ice accumulation on trees and other vegetation. Overburdened trees that grow along or near power lines and utility lines would create the

³⁷ Event date: 12/26/2015, damage dollars adjusted to \$2019

greatest impact on the participating jurisdictions. Falling limbs or trees can easily take down power and utility lines. Neglected vegetation is especially at risk of failure due to increased weight loads. Power outages can create a cascading effect depending on residents' ability to heat their homes without electricity, especially for the vulnerable residents identified in Section 3 of Chapter 3 above. Although no deaths related to severe winter storms have been reported in either jurisdiction, in the worst cases, the hazard has the potential to be deadly.

Beyond power outages and car accidents, severe winter storms will likely cause only minor property damage and minimal disruption to the quality of life in the participating jurisdictions. Any shutdown of facilities due to severe winter weather is expected to be temporary. Depending on when the event happens, a severe winter storm may damage or destroy crops, primarily in unincorporated portions of Lamb and Lynn Counties.

5) Vulnerability

Although the jurisdictions are exposed to extreme temperatures, existing buildings, infrastructure, and critical facilities are not considered vulnerable to direct damages significant enough to interrupt or stop normal operations. This determination was made based on the expectation that most roofs can support 20 lbs. / square foot of snow³⁸. **The worst snow storm in any participating jurisdiction dropped 13.5" or the equivalent of just over 5 lbs. / square foot.** Although it's not impossible³⁹ for that much snow to cause structural damage, given that the snow weight is well below the threshold where damage is likely, structural damages are not expected. Additionally, 1" of ice is roughly equivalent in weight per square foot to 10" of snow. **Considering the worst ice storms in the participating jurisdictions cause ice accumulations of ½",** it's unlikely, but not impossible, that an ice storm causing structural ice accumulations of less than 4" will cause significant structural damages. Therefore, estimated property losses associated are anticipated to be minimal across the area.

Areas with concentrations of vulnerable residents as described in Section 3 of Chapter 3 above, may feel greater impacts from severe winter weather due to those residents' limited ability to properly address the hazard, especially during extended power outages caused by snow or ice accumulation.

Students, faculty, and staff members of the participating jurisdictions will experience increased vulnerability to severe winter storms as they travel between buildings, participate in outdoor activities, or spend time working outside on construction, maintenance, and repair projects.

A) Critical Facilities

Given the potential severity of winter storms in the Panhandle region, shutdown of critical facilities is possible. Since winter storms affect large areas that could cover both Lamb and Lynn Counties and all the participating jurisdictions as well, it is felt that all identified critical facilities have the potential to be impacted, at least temporarily.

³⁸ <https://disastersafety.org/freezing-weather/prevent-roof-collapse-homes/>

³⁹ https://www.fema.gov/media-library-data/7d8c55d1c4f815edf3d7e7d1c120383f/FEMA957_Snowload_508.pdf - The weight of a foot a snow can vary widely based on how wet the snow is, between 3 and 21 lbs. per square foot. However, wet snow primarily affects the East Coast, Pacific Northwest, and southwestern Alaska.

Table 76: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Severe Winter Storm

	Potential Severe Winter Storm Impacts
	Temporary Shutdown
Amherst City Hall	x
Amherst Fire Department	x
Amherst Ems Department	x
Amherst ISD	x
Harmonee House	x
Littlefield Feedyard	x
Caprock Dairy 2	x
T J'S Dairy	x
5 Star Dairy	x
Milk Harvest Dairy	x
Setting Sun Dairy	x
Springlake Dairy	x
Red Rock Dairy	x
Earth City Hall	x
Earth Volunteer Fire Department	x
Earth Ems Department	x
Earth Police Department	x
Earth Medical Clinic	x
Earth Housing Development Corporation	x
Springlake-Earth ISD	x
Hilltop Dairy	x
Boehning Dairy	x
Tolk Station	x
Savage Services	x
Plant X	x
Littlefield City Hall	x
Littlefield Fire Department	x
Littlefield Ems Department	x
Littlefield Police Department	x
Littlefield ISD	x
Lamb County Courthouse	x
Lamb County Sheriff's Office	x
LHC Family Medicine	x
Lamb Health Care Center	x
Littlefield WIC Clinic	x
Library of Legacies	x
Arbor Grace	x
Lamb County Electric Coop	x
Continental Dairy Facilities	x
Olton City Hall	x
Olton Fire Department	x
Olton Ems Department	x
Olton Police Department	x
Olton ISD	x
Olton Clinic	x
City of Olton Housing Authority	x
Running Water Draw Care Facility	x
Cattleman's Feedlot	x
Springlake City Hall	x
VB Ranch	x

Sudan City Hall	X
Sudan Police Department	X
Sudan Fire Department	X
Sudan Ems Department	X
Sudan ISD	X
Sudan Medical Clinic	X

Table 77: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Severe Winter Storm

	Potential Severe Winter Storm Impacts
	Temporary Shutdown
Tahoka WIC Clinic	X
Tahoka Housing Authority	X
Tahoka Police Department	X
Tahoka Correctional Institution	X
Lynn County Hospital	X
O'Donnell Family Wellness Clinic	X
O'Donnell Housing Authority	X
O'Donnell Police Department	X
O'Donnell Health Clinic	X
Lynn County Courthouse	X
Tahoka City Hall	X
O'Donnell City Hall	X
New Home City Hall	X
Wilson City Hall	X
Tahoka ISD Facilities	X
O'Donnell ISD Facilities	X
New Home ISD Facilities	X
Wilson ISD Facilities	X
Tahoka water and sewer systems	X
O'Donnell water and sewer systems	X
New Home water and sewer systems	X
Wilson water and sewer systems	X

12. Windstorm

A windstorm⁴⁰ is classified as any wind that is strong enough to cause at least light damage to trees and buildings, and may or may not be accompanied by precipitation. Wind speeds during a windstorm typically exceed 41 knots. Damage can be attributed to gusts or longer periods of sustained winds.

Windstorms may last for just a few minutes when caused by downbursts from thunderstorms, or they may last for hours (and even several days) when they result from large-scale weather systems. A windstorm that travels in a straight line and is caused by the gust front (the boundary between descending cold air and warm air at the surface) of an approaching thunderstorm is called a derecho. Derechos are capable of causing widespread damage and landscape devastation.

1) Windstorm History

Between 1959 – 2016 Lamb County and the participating jurisdictions in that county experienced damaging high winds with gusts up to 70 mph on 177 separate occasions. Between 1963 – 2016 Lynn County and the participating jurisdictions in that county experienced damaging high winds with gusts up to 66 mph on 126 separate occasions. Windstorms have occurred in both counties and all participating jurisdictions and caused damage with the exception of the City of Earth, for which windstorms have been recorded without damages. Although no specific data regarding windstorm damages for the ISDs and hospitals is available, all are vulnerable to physical damages during windstorms.

⁴⁰ <https://www.britannica.com/science/windstorm>

Table 78: Lamb County Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
LAMB	6/1/1959	Damaging Wind		0	0				
LAMB	10/11/1960	Damaging Wind		0	0				
LAMB	6/18/1961	Damaging Wind		0	0				
LAMB	5/16/1962	Damaging Wind		0	0				
LAMB	9/15/1962	Damaging Wind		0	0				
LAMB	9/5/1965	Damaging Wind		0	0				
LAMB	10/17/1965	Damaging Wind	53	0	0				
LAMB	4/12/1967	Damaging Wind	70	0	0				
LAMB	6/1/1967	Damaging Wind		0	0				
LAMB	9/3/1967	Damaging Wind		0	0				
LAMB	6/13/1969	Damaging Wind	70	0	0				
LAMB	5/27/1972	Damaging Wind	69	0	0				
LAMB	7/1/1977	Damaging Wind		0	0				
LAMB	7/16/1979	Damaging Wind	60	0	0				
LAMB	8/24/1979	Damaging Wind	70	0	0				
LAMB	6/1/1980	Damaging Wind		0	0				
LAMB	8/18/1987	Damaging Wind	52	0	0				
LAMB	7/7/1988	Damaging Wind	60	0	0	\$5,000 - \$50,000		\$10,878 - \$108,778	
LAMB	9/22/1988	Damaging Wind	50	0	0				
LAMB	8/18/1990	Damaging Wind	55	0	0	\$500 - \$5,000		\$988 - \$9,879	
LAMB	7/18/1991	Damaging Wind		0	0	\$500 - \$5,000		\$935 - \$9,350	
LAMB	6/18/1992	Damaging Wind	52	0	0				
LAMB	6/20/1992	Damaging Wind	50	0	0				
LAMB	7/13/1993	Damaging Wind	70	0	0	\$5,000 - \$50,000		\$8,826 - \$88,258	

LAMB	12/12/1993	Damaging Wind		0	0	\$5,000 - \$50,000		\$8,826 - \$88,258	
LAMB	6/11/1994	Damaging Wind		0	0				
LAMB	5/15/1995	Damaging Wind		0	0	\$500 - \$5,000		\$837 - \$8,374	
LAMB	6/26/1995	Damaging Wind		0	0				
LAMB	6/11/1996 21:28	Thunderstorm Wind		0	0	\$5,000	\$5,000	\$8,109	\$8,109
LAMB	6/14/1997 16:15	Thunderstorm Wind	55	0	0	\$20,000		\$31,708	
LAMB	6/14/1997 16:30	Thunderstorm Wind	55	0	0				
LAMB	4/2/1998 14:54	High Wind	50	0	0				
LAMB	4/13/1999 14:15	Thunderstorm Wind		0	0	\$15,000		\$22,911	
LAMB	4/14/1999 14:00	High Wind	34	0	0				
LAMB	5/4/1999 11:00	High Wind	51	0	0				
LAMB	8/28/1999 18:00	Thunderstorm Wind		0	0	\$10,000		\$15,274	
LAMB	2/24/2000 18:00	Thunderstorm Wind		0	0				
LAMB	3/7/2000 12:00	High Wind	56	0	0				
LAMB	4/22/2000 12:00	High Wind		0	0				
LAMB	4/29/2000 17:00	Thunderstorm Wind		0	0				
LAMB	4/30/2000 12:15	Thunderstorm Wind		0	0				
LAMB	5/25/2000 15:00	Thunderstorm Wind		0	0				
LAMB	6/11/2000 13:00	Thunderstorm Wind		0	0				
LAMB	6/28/2000 15:10	Thunderstorm Wind		0	0	\$2,000		\$2,956	
LAMB	2/8/2001 18:20	Thunderstorm Wind	70	0	0	\$5,000		\$7,184	
LAMB	2/24/2001 11:00	High Wind		0	0				
LAMB	4/6/2001 14:00	High Wind		0	0				
LAMB	4/6/2001 16:12	Thunderstorm Wind		0	0	\$2,000		\$2,874	
LAMB	4/6/2001 16:15	Thunderstorm Wind	72	0	0				
LAMB	4/11/2001 9:00	High Wind		0	0				
LAMB	4/22/2001 10:00	High Wind		0	0				
LAMB	5/29/2001 16:00	Thunderstorm Wind		0	0				
LAMB	5/30/2001 18:30	Thunderstorm Wind		0	0				

LAMB	5/30/2001 19:52	Thunderstorm Wind	60	0	0			
LAMB	5/30/2001 20:25	Thunderstorm Wind	55	0	0			
LAMB	5/30/2001 20:30	Thunderstorm Wind		0	0			
LAMB	7/13/2001 16:55	Thunderstorm Wind		0	1	\$15,000		\$21,552
LAMB	7/15/2001 20:05	Thunderstorm Wind	57	0	0			
LAMB	8/21/2001 18:00	Thunderstorm Wind	52	0	0			
LAMB	9/16/2001 17:00	Thunderstorm Wind		0	0	\$5,000		\$7,184
LAMB	4/15/2002 23:00	Thunderstorm Wind		0	0	\$10,000		\$14,144
LAMB	5/5/2002 17:55	Thunderstorm Wind	62	0	0	\$75,000		\$106,083
LAMB	5/5/2002 17:58	Thunderstorm Wind	71	0	0	\$10,000		\$14,144
LAMB	7/27/2002 18:05	Thunderstorm Wind	54	0	0			
LAMB	1/1/2003 11:00	High Wind	52	0	0			
LAMB	4/15/2003 14:00	High Wind	52	0	0			
LAMB	6/5/2003 19:10	Thunderstorm Wind	61	0	0	\$15,000		\$20,743
LAMB	6/5/2003 19:15	Thunderstorm Wind	67	0	0			
LAMB	6/13/2003 19:45	Thunderstorm Wind	60	0	0			
LAMB	6/20/2003 0:45	Thunderstorm Wind	67	0	0			
LAMB	6/20/2003 0:45	Thunderstorm Wind	70	0	0	\$500,000		\$691,460
LAMB	6/20/2003 18:39	Thunderstorm Wind	56	0	0	\$5,000		\$6,914
LAMB	6/20/2003 19:40	Thunderstorm Wind	52	0	0			
LAMB	6/20/2003 19:50	Thunderstorm Wind	56	0	0	\$10,000		\$13,829
LAMB	6/20/2003 20:05	Thunderstorm Wind	50	0	0			
LAMB	6/23/2003 19:05	Thunderstorm Wind	56	0	0			
LAMB	10/6/2003 15:47	Thunderstorm Wind	52	0	0	\$50,000		\$69,147
LAMB	12/15/2003 11:00	High Wind	54	0	0			
LAMB	2/19/2004 12:00	High Wind	51	0	0			
LAMB	6/18/2004 20:00	Thunderstorm Wind	55	0	0	\$5,000		\$6,735
LAMB	7/6/2004 21:15	Thunderstorm Wind	57	0	0	\$5,000		\$6,735
LAMB	7/6/2004 21:30	Thunderstorm Wind	61	0	0	\$50,000		\$67,352
LAMB	5/10/2005 19:25	Thunderstorm Wind	55	0	0			

LAMB	6/6/2005 20:55	Thunderstorm Wind	65	0	0			
LAMB	7/5/2005 0:15	Thunderstorm Wind	51	0	0			
LAMB	7/5/2005 0:20	Thunderstorm Wind	55	0	0			
LAMB	7/5/2005 0:35	Thunderstorm Wind	57	0	0			
LAMB	7/6/2005 1:14	Thunderstorm Wind	55	0	0			
LAMB	1/1/2006 10:40	High Wind	58	0	0			
LAMB	3/8/2006 19:45	High Wind	51	0	0			
LAMB	4/6/2006 8:50	High Wind	52	0	0			
LAMB	5/26/2006 23:05	High Wind	53	0	0			
LAMB	5/30/2006 18:25	Thunderstorm Wind	55	0	0			
LAMB	6/22/2006 22:10	Thunderstorm Wind	52	0	0			
LAMB	7/10/2006 18:35	Thunderstorm Wind	57	0	0			
LAMB	9/5/2006 16:02	Thunderstorm Wind	56	0	0			
LAMB	9/5/2006 16:25	Thunderstorm Wind	57	0	0	\$75,000		\$94,665
LAMB	2/24/2007 8:45	High Wind	56	0	0	\$100,000		\$122,748
LAMB	3/23/2007 23:30	Thunderstorm Wind	52	0	0	\$20,000		\$24,550
LAMB	4/10/2007 14:00	High Wind	55	0	0			\$24,550
LAMB	6/2/2007 20:50	Thunderstorm Wind	51	0	0			
LAMB	1/29/2008 4:40	High Wind	43	0	0			
LAMB	1/29/2008 7:10	High Wind	55	0	0			
LAMB	2/25/2008 11:35	High Wind	54	0	0			
LAMB	3/2/2008 19:05	High Wind	50	0	0			
LAMB	3/14/2008 15:00	High Wind	54	0	0			
LAMB	4/1/2008 8:55	High Wind	56	0	0			
LAMB	5/25/2008 17:50	Thunderstorm Wind	57	0	0	\$20,000		\$23,637
LAMB	6/7/2008 21:15	High Wind	50	0	0			
LAMB	6/19/2008 18:45	Thunderstorm Wind	50	0	0			
LAMB	6/23/2008 20:20	Thunderstorm Wind	52	0	0			
LAMB	6/24/2008 20:10	Thunderstorm Wind	52	0	0			
LAMB	8/13/2008 16:14	Thunderstorm Wind	63	0	0	\$15,000		\$17,728

LAMB	8/14/2008 19:25	Thunderstorm Wind	50	0	0			
LAMB	12/14/2008 13:35	High Wind	52	0	0			
LAMB	2/8/2009 20:25	Thunderstorm Wind	59	0	0			
LAMB	4/2/2009 2:15	High Wind	37	0	0			
LAMB	4/9/2009 14:10	High Wind	51	0	0			
LAMB	6/10/2009 9:00	Thunderstorm Wind	56	0	0			
LAMB	7/6/2009 21:15	Thunderstorm Wind	52	0	0			
LAMB	12/8/2009 13:15	High Wind	55	0	0	\$75,000		\$88,971
LAMB	1/22/2010 21:00	High Wind	53	0	0			
LAMB	3/26/2010 14:50	High Wind	54	0	0			
LAMB	5/10/2010 11:05	High Wind	54	0	0			
LAMB	5/31/2010 17:30	Thunderstorm Wind	56	0	0	\$100,000		\$116,670
LAMB	5/31/2010 18:40	Thunderstorm Wind	53	0	0			
LAMB	6/8/2010 20:35	Thunderstorm Wind	50	0	0			
LAMB	6/10/2010 16:45	Thunderstorm Wind	52	0	0			
LAMB	6/14/2010 15:23	Thunderstorm Wind	66	0	0	\$150,000		\$175,005
LAMB	6/17/2010 17:25	Thunderstorm Wind	56	0	0	\$125,000		\$145,838
LAMB	6/17/2010 18:07	Thunderstorm Wind	52	0	0		\$100,000	\$116,670
LAMB	6/17/2010 20:05	Thunderstorm Wind	52	0	0			
LAMB	6/17/2010 21:30	Thunderstorm Wind	66	0	0			
LAMB	9/9/2010 15:25	Thunderstorm Wind	56	0	0			
LAMB	12/30/2010 19:35	Thunderstorm Wind	66	0	0			
LAMB	2/27/2011 12:40	High Wind	59	0	0			
LAMB	4/6/2011 22:35	High Wind	53	0	0			
LAMB	8/11/2011 16:18	Thunderstorm Wind	60	0	0	\$150,000		\$169,714
LAMB	10/17/2011 16:00	High Wind	59	0	0	\$50,000		\$56,571
LAMB	11/26/2011 10:45	High Wind	37	0	0			
LAMB	1/22/2012 9:40	High Wind	56	0	0	\$15,000		\$16,624
LAMB	2/20/2012 11:30	High Wind	51	0	0			
LAMB	4/24/2012 19:45	Thunderstorm Wind	56	0	0			

LAMB	4/24/2012 20:30	Thunderstorm Wind	50	0	0	\$4,000		\$4,432	
LAMB	5/17/2012 19:20	High Wind	60	0	0				
LAMB	6/2/2012 19:55	Thunderstorm Wind	57	0	0				
LAMB	6/2/2012 21:10	High Wind	50	0	0				
LAMB	6/12/2012 23:25	Thunderstorm Wind	60	0	0				
LAMB	6/15/2012 20:10	Thunderstorm Wind	50	0	0				
LAMB	12/14/2012 15:10	Thunderstorm Wind	50	0	0				
LAMB	12/14/2012 15:25	Thunderstorm Wind	52	0	0	\$1,000		\$1,108	
LAMB	12/19/2012 18:15	High Wind	50	0	0				
LAMB	3/17/2013 16:30	Thunderstorm Wind	54	0	0				
LAMB	3/23/2013 16:35	High Wind	51	0	0				
LAMB	3/23/2013 16:55	High Wind	50	0	0				
LAMB	5/9/2013 19:30	Strong Wind	48	2	0				
LAMB	5/18/2013 0:05	High Wind	56	0	0				
LAMB	6/5/2013 21:25	Thunderstorm Wind	50	0	0				
LAMB	6/5/2013 21:30	High Wind	52	0	0				
LAMB	6/20/2013 23:15	High Wind	51	0	0				
LAMB	3/11/2014 19:00	High Wind	36	0	0				
LAMB	4/27/2014 13:38	High Wind	54	0	0				
LAMB	4/28/2014 14:35	High Wind	57	0	0				
LAMB	5/21/2014 17:20	Thunderstorm Wind	52	0	0				
LAMB	5/24/2014 4:25	Thunderstorm Wind	51	0	0				
LAMB	5/24/2014 4:44	Thunderstorm Wind	61	0	0	\$4,000		\$4,300	
LAMB	6/6/2014 20:00	Thunderstorm Wind	53	0	0				
LAMB	6/6/2014 20:15	Thunderstorm Wind	51	0	0				
LAMB	6/7/2014 21:35	Thunderstorm Wind	70	0	0	\$26,000		\$27,951	
LAMB	6/12/2015 16:45	Thunderstorm Wind	56	0	0				
LAMB	6/12/2015 16:56	Thunderstorm Wind	56	0	0				
LAMB	8/5/2015 15:10	Thunderstorm Wind	53	0	0				
LAMB	3/23/2016 9:50	High Wind	35	0	0				

LAMB	3/23/2016 14:45	High Wind	50	0	0				
LAMB	5/29/2016 17:25	Thunderstorm Wind	55	0	0				
LAMB	6/11/2016 18:41	Thunderstorm Wind	65	0	0	\$100,000		\$106,245	
LAMB	6/15/2016 17:45	Thunderstorm Wind	65	0	0	\$25,000		\$26,561	

Table 79: City of Amherst Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
AMHERST	7/15/2001 20:05	Thunderstorm Wind	57	0	0				
AMHERST	8/21/2001 18:00	Thunderstorm Wind	52	0	0				
AMHERST	7/27/2002 18:05	Thunderstorm Wind	54	0	0				
AMHERST	6/5/2003 19:10	Thunderstorm Wind	61	0	0	\$15,000		\$20,743	
AMHERST	6/5/2003 19:15	Thunderstorm Wind	67	0	0				
AMHERST	6/13/2003 19:45	Thunderstorm Wind	60	0	0				
AMHERST	6/20/2003 0:45	Thunderstorm Wind	67	0	0				
AMHERST	6/23/2003 19:05	Thunderstorm Wind	56	0	0				
AMHERST	10/6/2003 15:47	Thunderstorm Wind	52	0	0	\$50,000		\$69,147	
AMHERST	7/5/2005 0:15	Thunderstorm Wind	51	0	0				
AMHERST	7/5/2005 0:20	Thunderstorm Wind	55	0	0				
AMHERST	7/10/2006 18:35	Thunderstorm Wind	57	0	0				
AMHERST	6/2/2007 20:50	Thunderstorm Wind	51	0	0				
AMHERST	8/13/2008 16:14	Thunderstorm Wind	63	0	0	\$15,000		\$17,728	
AMHERST	6/8/2010 20:35	Thunderstorm Wind	50	0	0				
AMHERST	6/17/2010 21:30	Thunderstorm Wind	66	0	0				
AMHERST	12/30/2010 19:35	Thunderstorm Wind	66	0	0				
AMHERST	4/24/2012 19:45	Thunderstorm Wind	56	0	0				
AMHERST	12/14/2012 15:10	Thunderstorm Wind	50	0	0				
AMHERST	3/17/2013 16:30	Thunderstorm Wind	54	0	0				
AMHERST	5/21/2014 17:20	Thunderstorm Wind	52	0	0				
AMHERST	5/24/2014 4:25	Thunderstorm Wind	51	0	0				

AMHERST	6/6/2014 20:00	Thunderstorm Wind	53	0	0				
AMHERST	6/7/2014 21:35	Thunderstorm Wind	70	0	0	\$26,000		\$27,951	
AMHERST	8/5/2015 15:10	Thunderstorm Wind	53	0	0				

Table 80: City of Earth Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
EARTH	7/6/2009 21:15	Thunderstorm Wind	52	0	0				
EARTH	6/17/2010 20:05	Thunderstorm Wind	52	0	0				

Table 81: City of Littlefield Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
LITTLEFIELD	6/14/1997 16:15	Thunderstorm Wind	55	0	0	\$20,000		\$31,708	
LITTLEFIELD	4/13/1999 14:15	Thunderstorm Wind		0	0	\$15,000		\$22,911	
LITTLEFIELD	8/28/1999 18:00	Thunderstorm Wind		0	0	\$10,000		\$15,274	
LITTLEFIELD	5/30/2001 20:25	Thunderstorm Wind	55	0	0				
LITTLEFIELD	5/30/2001 20:30	Thunderstorm Wind		0	0				
LITTLEFIELD	9/16/2001 17:00	Thunderstorm Wind		0	0	\$5,000		\$7,184	
LITTLEFIELD	4/15/2002 23:00	Thunderstorm Wind		0	0	\$10,000		\$14,144	
LITTLEFIELD	5/5/2002 17:55	Thunderstorm Wind	62	0	0	\$75,000		\$106,083	
LITTLEFIELD	5/5/2002 17:58	Thunderstorm Wind	71	0	0	\$10,000		\$14,144	
LITTLEFIELD	6/20/2003 18:39	Thunderstorm Wind	56	0	0	\$5,000		\$6,914	
LITTLEFIELD	6/20/2003 19:40	Thunderstorm Wind	52	0	0				
LITTLEFIELD	6/20/2003 19:50	Thunderstorm Wind	56	0	0	\$10,000		\$13,829	
LITTLEFIELD	7/6/2004 21:30	Thunderstorm Wind	61	0	0	\$50,000		\$67,352	
LITTLEFIELD	6/6/2005 20:55	Thunderstorm Wind	65	0	0				
LITTLEFIELD	7/5/2005 0:35	Thunderstorm Wind	57	0	0				
LITTLEFIELD	3/23/2007 23:30	Thunderstorm Wind	52	0	0	\$20,000		\$24,550	
LITTLEFIELD	5/25/2008 17:50	Thunderstorm Wind	57	0	0	\$20,000		\$23,637	

LITTLEFIELD	6/10/2010 16:45	Thunderstorm Wind	52	0	0				
LITTLEFIELD	6/11/2016 18:41	Thunderstorm Wind	65	0	0	\$100,000		\$106,245	

Table 82: City of Olton Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
OLTON	2/8/2001 18:20	Thunderstorm Wind	70	0	0	\$5,000		\$7,184	
OLTON	4/6/2001 16:15	Thunderstorm Wind	72	0	0				
OLTON	6/20/2003 0:45	Thunderstorm Wind	70	0	0	\$500,000		\$691,460	
OLTON	6/20/2003 20:05	Thunderstorm Wind	50	0	0				
OLTON	5/10/2005 19:25	Thunderstorm Wind	55	0	0				
OLTON	7/6/2005 1:14	Thunderstorm Wind	55	0	0				
OLTON	5/30/2006 18:25	Thunderstorm Wind	55	0	0				
OLTON	6/22/2006 22:10	Thunderstorm Wind	52	0	0				
OLTON	9/5/2006 16:02	Thunderstorm Wind	56	0	0				
OLTON	6/19/2008 18:45	Thunderstorm Wind	50	0	0				
OLTON	8/14/2008 19:25	Thunderstorm Wind	50	0	0				
OLTON	2/8/2009 20:25	Thunderstorm Wind	59	0	0				
OLTON	6/10/2009 9:00	Thunderstorm Wind	56	0	0				
OLTON	5/31/2010 18:40	Thunderstorm Wind	53	0	0				
OLTON	6/14/2010 15:23	Thunderstorm Wind	66	0	0	\$150,000		\$175,005	
OLTON	9/9/2010 15:25	Thunderstorm Wind	56	0	0				
OLTON	8/11/2011 16:18	Thunderstorm Wind	60	0	0	\$150,000		\$169,714	
OLTON	6/15/2012 20:10	Thunderstorm Wind	50	0	0				
OLTON	6/5/2013 21:25	Thunderstorm Wind	50	0	0				
OLTON	5/24/2014 4:44	Thunderstorm Wind	61	0	0	\$4,000		\$4,300	
OLTON	6/6/2014 20:15	Thunderstorm Wind	51	0	0				
OLTON	6/15/2016 17:45	Thunderstorm Wind	65	0	0	\$25,000		\$25,561	

Table 83: City of Springlake Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
SPRINGLAKE	6/11/1996 21:28	Thunderstorm Wind		0	0	\$5,000	\$5,000	\$8,109	\$8,109
SPRINGLAKE	5/31/2010 17:30	Thunderstorm Wind	56	0	0	\$100,000		\$116,670	
SPRINGLAKE	6/17/2010 18:07	Thunderstorm Wind	52	0	0		\$100,000		\$116,670

Table 84: City of Sudan Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
SUDAN	4/6/2001 16:12	Thunderstorm Wind		0	0	\$2,000		\$2,874	
SUDAN	5/30/2001 19:52	Thunderstorm Wind	60	0	0				
SUDAN	6/18/2004 20:00	Thunderstorm Wind	55	0	0	\$5,000		\$6,735	
SUDAN	7/6/2004 21:15	Thunderstorm Wind	57	0	0	\$5,000		\$6,735	
SUDAN	6/24/2008 20:10	Thunderstorm Wind	52	0	0				
SUDAN	6/17/2010 17:25	Thunderstorm Wind	56	0	0	\$125,000		\$145,838	

Table 85: Lynn County Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
LYNN	6/2/1963	Damaging Wind		0	0				
LYNN	6/8/1968	Damaging Wind		0	0				
LYNN	9/22/1969	Damaging Wind		0	0				
LYNN	6/1/1980	Damaging Wind		0	0				
LYNN	6/27/1984	Damaging Wind		0	0				
LYNN	6/16/1986	Damaging Wind	62	0	0				
LYNN	7/12/1987	Damaging Wind		0	0	\$5,000 - \$50,000		\$11,318 - \$113,180	
LYNN	8/25/1987	Damaging Wind		0	0	\$5,000 - \$50,000		\$11,318 - \$113,180	
LYNN	9/22/1988	Damaging Wind	52	0	0				

LYNN	4/20/1989	Damaging Wind		0	0	\$500 - \$5,000		\$1,039 - \$10,393	
LYNN	5/14/1989	Damaging Wind		0	0				
LYNN	6/1/1989	Damaging Wind	52	0	0				
LYNN	5/22/1991	Damaging Wind	51	0	0	<\$50		<\$93	
LYNN	6/5/1991	Damaging Wind	60	0	0	\$500 - \$5,000		\$935 - \$9,350	
LYNN	5/8/1993	Damaging Wind	52	0	0				
LYNN	12/12/1993	Damaging Wind		0	0	\$500 - \$5,000		\$883 - \$8,826	
LYNN	11/19/1994	Damaging Wind		0	0	\$500 - \$5,000		\$861 - \$8,608	
LYNN	5/7/1995	Damaging Wind	60	0	0	\$500 - \$5,000		\$837 - \$8,374	
LYNN	5/25/1995	Damaging Wind	55	0	0				
LYNN	1/17/1996 13:00	High Wind	51	0	0				
LYNN	5/25/1996 18:00	Thunderstorm Wind	55	0	0				
LYNN	5/25/1996 18:30	Thunderstorm Wind		0	0	\$100,000		\$162,178	
LYNN	6/3/1996 21:30	Thunderstorm Wind	55	0	0				
LYNN	6/11/1997 18:30	Thunderstorm Wind	52	0	0				
LYNN	7/29/1997 19:00	Thunderstorm Wind	65	0	0	\$25,000		\$39,635	
LYNN	4/2/1998 14:54	High Wind	50	0	0				
LYNN	5/14/1998 23:40	Thunderstorm Wind	60	0	0				
LYNN	5/25/1998 19:21	Thunderstorm Wind		0	0	\$1,000		\$1,561	
LYNN	4/14/1999 14:00	High Wind	34	0	0				
LYNN	5/4/1999 11:00	High Wind	51	0	0				
LYNN	6/11/1999 18:27	Thunderstorm Wind		0	0	\$2,000	\$3,000,000	\$3,055	\$4,582,066
LYNN	6/11/1999 18:50	Thunderstorm Wind		0	0	\$1,400,000	\$2,000,000	\$2,138,297	\$3,054,710
LYNN	6/11/1999 18:52	Thunderstorm Wind		0	2	\$1,000		\$1,528	
LYNN	6/11/1999 18:55	Thunderstorm Wind		0	0	\$3,000		\$4,582	
LYNN	6/11/1999 18:55	Thunderstorm Wind		0	0	\$10,000	\$2,000,000	\$15,274	\$3,054,710
LYNN	6/11/1999 19:10	Thunderstorm Wind		0	0	\$60,000	\$2,000,000	\$91,642	\$3,054,710

LYNN	2/24/2000 18:00	Thunderstorm Wind		0	0			
LYNN	3/7/2000 12:00	High Wind	56	0	0			
LYNN	4/22/2000 12:00	High Wind		0	0			
LYNN	4/29/2000 17:00	Thunderstorm Wind		0	0			
LYNN	4/30/2000 12:15	Thunderstorm Wind		0	0			
LYNN	4/30/2000 18:00	Thunderstorm Wind		0	0	\$2,000	\$2,956	
LYNN	5/25/2000 15:00	Thunderstorm Wind		0	0			
LYNN	5/25/2000 17:15	Thunderstorm Wind		0	0	\$100,000	\$147,768	
LYNN	6/11/2000 13:00	Thunderstorm Wind		0	0			
LYNN	6/25/2000 19:45	Thunderstorm Wind		0	0	\$1,000	\$1,478	
LYNN	2/24/2001 11:00	High Wind		0	0			
LYNN	4/6/2001 14:00	High Wind		0	0			
LYNN	4/22/2001 10:00	High Wind		0	0			
LYNN	5/30/2001 18:30	Thunderstorm Wind		0	0			
LYNN	5/30/2001 21:45	Thunderstorm Wind	55	0	0			
LYNN	5/30/2001 21:50	Thunderstorm Wind		0	0	\$15,000	\$21,552	
LYNN	5/30/2001 21:55	Thunderstorm Wind	66	0	0			
LYNN	7/28/2001 14:10	Thunderstorm Wind	51	0	0			
LYNN	8/23/2001 19:45	Thunderstorm Wind	65	0	0	\$5,000	\$7,184	
LYNN	6/13/2002 16:55	Thunderstorm Wind	53	0	0			
LYNN	6/15/2002 22:25	High Wind	40	0	0			
LYNN	6/27/2002 0:05	Thunderstorm Wind	51	0	0			
LYNN	6/27/2002 0:10	Thunderstorm Wind	57	0	0			
LYNN	9/13/2002 19:00	Thunderstorm Wind	51	0	0			
LYNN	3/16/2003 20:55	High Wind	58	0	0			
LYNN	4/15/2003 14:00	High Wind	61	0	0			
LYNN	4/28/2003 16:30	Thunderstorm Wind	58	0	0			
LYNN	12/15/2003 11:00	High Wind	50	0	0			
LYNN	2/19/2004 12:00	High Wind	50	0	0			
LYNN	7/6/2004 23:55	High Wind	52	0	0			

LYNN	3/29/2005 15:30	High Wind	51	0	0			
LYNN	4/5/2005 18:25	High Wind	51	0	0			
LYNN	6/5/2005 23:00	Thunderstorm Wind	53	0	0			
LYNN	6/5/2005 23:05	Thunderstorm Wind	55	0	0			
LYNN	7/5/2005 1:45	Thunderstorm Wind	55	0	0			
LYNN	7/5/2005 4:05	High Wind	53	0	0			
LYNN	11/27/2005 12:15	High Wind	54	0	0			
LYNN	1/1/2006 10:40	High Wind	58	0	0			
LYNN	3/12/2006 11:30	High Wind	54	0	0			
LYNN	4/6/2006 8:50	High Wind	50	0	0			
LYNN	5/20/2006 17:00	Thunderstorm Wind	52	0	0			
LYNN	5/21/2006 19:05	Thunderstorm Wind	58	0	0			
LYNN	6/22/2006 16:15	Thunderstorm Wind	53	0	0			
LYNN	7/28/2006 15:50	Thunderstorm Wind	50	0	0	\$10,000	\$12,622	
LYNN	2/24/2007 8:45	High Wind	56	0	0	\$25,000	\$30,687	
LYNN	4/13/2007 11:10	High Wind	53	0	0			
LYNN	6/9/2007 16:15	Thunderstorm Wind	52	0	0			
LYNN	6/26/2007 21:35	Thunderstorm Wind	65	0	0	\$1,000,000	\$1,227,483	
LYNN	9/7/2007 13:45	Thunderstorm Wind	52	0	0	\$50,000	\$61,375	
LYNN	1/29/2008 9:15	High Wind	39	0	0			
LYNN	1/29/2008 9:35	High Wind	52	0	0			
LYNN	5/6/2008 17:25	Thunderstorm Wind	52	0	0			
LYNN	5/28/2008 0:10	Thunderstorm Wind	61	0	0	\$100,000	\$118,187	
LYNN	6/19/2008 20:30	Thunderstorm Wind	53	0	0			
LYNN	8/13/2008 18:50	Thunderstorm Wind	37	0	0	\$5,000	\$5,909	
LYNN	4/2/2009 3:25	High Wind	40	0	0	\$30,000	\$35,589	
LYNN	4/9/2009 13:00	High Wind	51	0	0			
LYNN	6/18/2009 19:15	Thunderstorm Wind	50	0	0			
LYNN	7/27/2009 17:20	Thunderstorm Wind	65	0	0			
LYNN	7/29/2009 23:00	Thunderstorm Wind	63	0	0			

LYNN	3/23/2010 19:50	High Wind	53	0	0			
LYNN	5/10/2010 12:45	High Wind	51	0	0			
LYNN	6/10/2010 18:55	Thunderstorm Wind	52	0	0			
LYNN	6/10/2010 20:15	Thunderstorm Wind	50	0	0			
LYNN	6/14/2010 13:20	Thunderstorm Wind	73	0	0	\$100,000	\$116,670	
LYNN	10/25/2010 11:00	Strong Wind	38	0	0		\$250,000	\$291,675
LYNN	4/25/2011 13:10	High Wind	51	0	0			
LYNN	6/16/2011 18:35	High Wind	52	0	0			
LYNN	11/26/2011 9:25	High Wind	36	0	0			
LYNN	1/22/2012 11:15	High Wind	36	0	0			
LYNN	12/19/2012 13:25	High Wind	51	0	0			
LYNN	2/25/2013 10:50	High Wind	43	0	0			
LYNN	3/9/2013 13:35	High Wind	53	0	0			
LYNN	4/30/2013 16:45	Thunderstorm Wind	50	0	0	\$1,000	\$1,092	
LYNN	5/23/2013 18:25	Thunderstorm Wind	53	0	0			
LYNN	6/5/2013 22:00	Thunderstorm Wind	54	0	0			
LYNN	6/5/2013 22:30	High Wind	56	0	0			
LYNN	6/17/2013 19:30	Thunderstorm Wind	64	0	0			
LYNN	6/29/2013 22:45	Thunderstorm Wind	51	0	0			
LYNN	4/28/2014 13:00	High Wind	52	0	1	\$10,000	\$10,750	
LYNN	6/7/2014 23:15	Thunderstorm Wind	53	0	0			
LYNN	4/8/2015 18:30	Thunderstorm Wind	52	0	0			
LYNN	4/24/2015 14:20	High Wind	50	0	0			
LYNN	5/23/2015 16:25	Thunderstorm Wind	56	0	0			
LYNN	5/30/2015 1:05	High Wind	52	0	0			
LYNN	6/13/2015 19:55	Thunderstorm Wind	56	0	0			
LYNN	6/13/2015 19:55	Thunderstorm Wind	56	0	0	\$25,000	\$26,842	
LYNN	5/13/2016 18:11	Thunderstorm Wind	56	0	0			
LYNN	5/22/2016 16:15	Thunderstorm Wind	52	0	0	\$9,000	\$9,562	
LYNN	7/14/2016 17:40	Thunderstorm Wind	52	0	0	\$60,000	\$63,747	

Table 86: City of New Home Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
NEW HOME	7/29/1997 19:00	Thunderstorm Wind	65	0	0	\$25,000		\$39,635	
NEW HOME	6/25/2000 19:45	Thunderstorm Wind		0	0	\$1,000		\$1,478	
NEW HOME	6/10/2010 18:55	Thunderstorm Wind	52	0	0				

Table 87: City of O'Donnell Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
ODONNELL	5/25/1996 18:30	Thunderstorm Wind		0	0	\$100,000		\$162,178	
ODONNELL	6/11/1997 18:30	Thunderstorm Wind	52	0	0				
ODONNELL	6/11/1999 18:52	Thunderstorm Wind		0	2	\$1,000		\$1,528	
ODONNELL	5/25/2000 17:15	Thunderstorm Wind		0	0	\$100,000		\$147,768	
ODONNELL	5/30/2001 21:45	Thunderstorm Wind	55	0	0				
ODONNELL	7/28/2001 14:10	Thunderstorm Wind	51	0	0				
ODONNELL	6/13/2002 16:55	Thunderstorm Wind	53	0	0				
ODONNELL	6/27/2002 0:05	Thunderstorm Wind	51	0	0				
ODONNELL	6/5/2005 23:00	Thunderstorm Wind	53	0	0				
ODONNELL	6/5/2005 23:05	Thunderstorm Wind	55	0	0				
ODONNELL	5/21/2006 19:05	Thunderstorm Wind	58	0	0				
ODONNELL	6/22/2006 16:15	Thunderstorm Wind	53	0	0				
ODONNELL	5/6/2008 17:25	Thunderstorm Wind	52	0	0				
ODONNELL	5/28/2008 0:10	Thunderstorm Wind	61	0	0		\$100,000		\$118,187
ODONNELL	7/27/2009 17:20	Thunderstorm Wind	65	0	0				
ODONNELL	6/17/2013 19:30	Thunderstorm Wind	64	0	0				
ODONNELL	6/29/2013 22:45	Thunderstorm Wind	51	0	0				
ODONNELL	5/23/2015 16:25	Thunderstorm Wind	56	0	0				
ODONNELL	6/13/2015 19:55	Thunderstorm Wind	56	0	0				

Table 88: City of Tahoka Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
TAHOKA	5/25/1996 18:00	Thunderstorm Wind	55	0	0				
TAHOKA	5/25/1998 19:21	Thunderstorm Wind		0	0	\$1,000		\$1,561	
TAHOKA	6/11/1999 18:27	Thunderstorm Wind		0	0	\$2,000	\$3,000,000	\$3,055	\$4,582,066
TAHOKA	6/11/1999 18:55	Thunderstorm Wind		0	0	\$3,000		\$4,582	
TAHOKA	6/11/1999 18:55	Thunderstorm Wind		0	0	\$10,000	\$2,000,000	\$15,274	\$3,054,710
TAHOKA	5/30/2001 21:55	Thunderstorm Wind	66	0	0				
TAHOKA	8/23/2001 19:45	Thunderstorm Wind	65	0	0	\$5,000		\$7,184	
TAHOKA	6/27/2002 0:10	Thunderstorm Wind	57	0	0				
TAHOKA	9/13/2002 19:00	Thunderstorm Wind	51	0	0				
TAHOKA	4/28/2003 16:30	Thunderstorm Wind	58	0	0				
TAHOKA	7/5/2005 1:45	Thunderstorm Wind	55	0	0				
TAHOKA	5/20/2006 17:00	Thunderstorm Wind	52	0	0				
TAHOKA	7/28/2006 15:50	Thunderstorm Wind	50	0	0	\$10,000		\$12,622	
TAHOKA	6/26/2007 21:35	Thunderstorm Wind	65	0	0		\$1,000,000		\$1,227,483
TAHOKA	9/7/2007 13:45	Thunderstorm Wind	52	0	0		\$50,000		\$61,375
TAHOKA	6/19/2008 20:30	Thunderstorm Wind	53	0	0				
TAHOKA	8/13/2008 18:50	Thunderstorm Wind	37	0	0	\$5,000		\$5,909	
TAHOKA	6/18/2009 19:15	Thunderstorm Wind	50	0	0				
TAHOKA	7/29/2009 23:00	Thunderstorm Wind	63	0	0				
TAHOKA	6/10/2010 20:15	Thunderstorm Wind	50	0	0				
TAHOKA	6/5/2013 22:00	Thunderstorm Wind	54	0	0				
TAHOKA	6/7/2014 23:15	Thunderstorm Wind	53	0	0				
TAHOKA	4/8/2015 18:30	Thunderstorm Wind	52	0	0				
TAHOKA	5/13/2016 18:11	Thunderstorm Wind	56	0	0				
TAHOKA	6/14/2010 13:20	Thunderstorm Wind	73	0	0	\$100,000		\$116,670	
TAHOKA	6/13/2015 19:55	Thunderstorm Wind	56	0	0	\$25,000		\$26,842	

Table 89: City of Wilson Windstorm History

Location	Date/Time	Hazard	Windspeed Knots	Fatalities	Injuries	Property Damage	Crop Damage	Property Damage \$2,019	Crop Damage \$2,019
WILSON	6/3/1996 21:30	Thunderstorm Wind	55	0	0				
WILSON	5/14/1998 23:40	Thunderstorm Wind	60	0	0				
WILSON	5/30/2001 21:50	Thunderstorm Wind		0	0	\$15,000		\$21,552	

2) Likelihood of Future Occurrence

Given the frequency of windstorm events in Lamb and Lynn Counties and the participating jurisdictions, the likelihood of a damaging windstorm in the future is highly likely, meaning that an event affecting any of the jurisdictions addressing the hazard is probable in the next year.

3) Extent

The generally accepted extent scale for wind events is the Beaufort Wind Scale. The following table lists categories, measurement, classification, and appearance descriptions.

Table 90: Beaufort Wind Scale⁴¹

Beaufort Wind Scale				
Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Small waves 1-4 feet becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Moderate waves 4-8 feet taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger waves 8-13 feet, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Sea heaps up, waves 13-20 feet, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Moderately high (13-20 feet) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41-47	Strong Gale	High waves (20 feet), sea begins to roll, dense streaks	Slight structural damage occurs, slate blows off roofs

⁴¹ Source: www.spc.noaa.gov/faq/tornado/beaufort.html

			of foam, spray may reduce visibility	
10	48-55	Storm	Very high waves (20-30 feet) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Exceptionally high (30-45 feet) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 feet, sea completely white with driving spray, visibility greatly reduced	

The worst windstorms in Lamb and Lynn Counties and the participating jurisdictions have ranged from 8 to 12 on the Beaufort Wind Scale.

With winds up to 70 Knots, or a 12 on the Beaufort Wind Scale, the strongest windstorms in Lamb and Lynn Counties and the participating jurisdictions have reached hurricane-level speeds. Adjusted for inflation to \$2019, the single most devastating wind event in Lamb County inflicted over \$690,000 in property damages on June 20, 2003. Adjusted for inflation to \$2019, the single most devastating wind event in Lynn County inflicted over \$2 million in property damages and over \$4 million in crop damages on June 11, 1999. The worst storm in Lynn County does not include a measurement of wind speed, but the worst storm in Lamb County's wind speed was recorded as 70 mph.

Future windstorms in the participating jurisdictions addressing the hazard may meet previous worst-case events (12 on the Beaufort Wind Scale) in terms of wind speed and damage dollars inflicted.

4) Location and Impact

A) Location

Windstorms are not constrained by any distinct geographic boundary. Windstorms can occur across the jurisdictions addressing the hazard.

B) Impact

Impacts from a windstorm may include but are not limited to damaged or destroyed personal property including vehicles, damaged or destroyed agricultural, residential, commercial, and industrial buildings. Crops may be damaged or destroyed. Pets and livestock may be injured or killed by flying debris. Pets and livestock may escape due to damaged or destroyed structures and fences.

In the worst cases, windstorms may cause injuries and/or be deadly.

5) Vulnerability

Windstorms have the potential to impact all the jurisdictions addressing the hazard. Therefore, each jurisdiction is equally exposed to the hazard. Improved property, critical facilities, critical infrastructure, and the entire population are considered vulnerable to windstorms.

Based on windstorm data collected for the participating jurisdictions, windstorms primarily damage physical structures. However, there is no uniformity with respect to the type of structures that have been damaged by windstorms in any of the participating jurisdictions. Windstorm damages can be directly caused by the wind itself, flying debris, and falling trees, or indirectly by damages like power outages.

A) Population

As described in the narrative, as well as in Section 3 of Chapter 3 above, Lamb and Lynn Counties and the participating jurisdictions are home to many vulnerable residents. Increased vulnerability may be due to many factors including but not limited to: age, physical ability, financial means, housing type, and housing condition. Many of these vulnerabilities often overlap.

The participating jurisdictions recognize that vulnerable populations may need additional help preparing for and recovering from a windstorm.

Residents of mobile / manufactured homes are of particular concern. These structures may not be safe during a windstorm.

Residents of sub-standard structures are also of particular concern. Structures in sub-standard condition ahead of a windstorm, whether due to structural damages, missing windows or doors, holes in exterior walls or the roof, may be less safe during a windstorm than structures in standard condition.

Existing structural weaknesses, due to housing type or existing damages, may lead to compounded damages, injuries, or loss of life.

B) Critical Facilities⁴²

Similar to tornados, and given wind's potentially violent nature, all identified critical facilities may experience increased levels of vulnerability to the hazards. Damage to any of these facilities may have a disproportionately negative impact on each jurisdiction's recovery from a windstorm if that damage affects the facility's ability to reopen and resume normal business right away.

Table 91: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Windstorms

	Potential Windstorm Impacts								
	Loss of Power	Flying Debris	Uprooted Trees	Flooding Due to Physical Damages	Damaged or Destroyed Roofs	Damaged or Broken Windows	Wind Damage	Injuries	Death
Amherst City Hall	x	x	x	x	x	x	x	x	x
Amherst Fire Department	x	x	x	x	x	x	x	x	x
Amherst Ems Department	x	x	x	x	x	x	x	x	x

⁴² For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Amherst ISD	x	x	x	x	x	x	x	x	x
Harmonee House	x	x	x	x	x	x	x	x	x
Littlefield Feedyard	x	x	x	x	x	x	x	x	x
Caprock Dairy 2	x	x	x	x	x	x	x	x	x
T J'S Dairy	x	x	x	x	x	x	x	x	x
5 Star Dairy	x	x	x	x	x	x	x	x	x
Milk Harvest Dairy	x	x	x	x	x	x	x	x	x
Setting Sun Dairy	x	x	x	x	x	x	x	x	x
Springlake Dairy	x	x	x	x	x	x	x	x	x
Red Rock Dairy	x	x	x	x	x	x	x	x	x
Earth City Hall	x	x	x	x	x	x	x	x	x
Earth Volunteer Fire Department	x	x	x	x	x	x	x	x	x
Earth Ems Department	x	x	x	x	x	x	x	x	x
Earth Police Department	x	x	x	x	x	x	x	x	x
Earth Medical Clinic	x	x	x	x	x	x	x	x	x
Earth Housing Development Corporation	x	x	x	x	x	x	x	x	x
Springlake-Earth ISD	x	x	x	x	x	x	x	x	x
Hilltop Dairy	x	x	x	x	x	x	x	x	x
Boehning Dairy	x	x	x	x	x	x	x	x	x
Tolk Station	x	x	x	x	x	x	x	x	x
Savage Services	x	x	x	x	x	x	x	x	x
Plant X	x	x	x	x	x	x	x	x	x
Littlefield City Hall	x	x	x	x	x	x	x	x	x
Littlefield Fire Department	x	x	x	x	x	x	x	x	x
Littlefield Ems Department	x	x	x	x	x	x	x	x	x
Littlefield Police Department	x	x	x	x	x	x	x	x	x
Littlefield ISD	x	x	x	x	x	x	x	x	x
Lamb County Courthouse	x	x	x	x	x	x	x	x	x
Lamb County Sheriff's Office	x	x	x	x	x	x	x	x	x
LHC Family Medicine	x	x	x	x	x	x	x	x	x
Lamb Health Care Center	x	x	x	x	x	x	x	x	x
Littlefield WIC Clinic	x	x	x	x	x	x	x	x	x
Library of Legacies	x	x	x	x	x	x	x	x	x
Arbor Grace	x	x	x	x	x	x	x	x	x
Lamb County Electric Coop	x	x	x	x	x	x	x	x	x
Continental Dairy Facilities	x	x	x	x	x	x	x	x	x
Olton City Hall	x	x	x	x	x	x	x	x	x
Olton Fire Department	x	x	x	x	x	x	x	x	x
Olton Ems Department	x	x	x	x	x	x	x	x	x
Olton Police Department	x	x	x	x	x	x	x	x	x
Olton ISD	x	x	x	x	x	x	x	x	x
Olton Clinic	x	x	x	x	x	x	x	x	x
City of Olton Housing Authority	x	x	x	x	x	x	x	x	x
Running Water Draw Care Facility	x	x	x	x	x	x	x	x	x
Cattleman's Feedlot	x	x	x	x	x	x	x	x	x
Springlake City Hall	x	x	x	x	x	x	x	x	x
VB Ranch	x	x	x	x	x	x	x	x	x
Sudan City Hall	x	x	x	x	x	x	x	x	x
Sudan Police Department	x	x	x	x	x	x	x	x	x
Sudan Fire Department	x	x	x	x	x	x	x	x	x
Sudan Ems Department	x	x	x	x	x	x	x	x	x
Sudan ISD	x	x	x	x	x	x	x	x	x
Sudan Medical Clinic	x	x	x	x	x	x	x	x	x

Table 92: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Windstorms

	Potential Windstorm Impacts								
	Loss of Power	Flying Debris	Uprooted Trees	Flooding Due to Physical Damages	Damaged or Destroyed Roofs	Damaged or Broken Windows	Wind Damage	Injuries	Death
Tahoka WIC Clinic	x	x	x	x	x	x	x	x	x
Tahoka Housing Authority	x	x	x	x	x	x	x	x	x
Tahoka Police Department	x	x	x	x	x	x	x	x	x
Tahoka Correctional Institution	x	x	x	x	x	x	x	x	x
Lynn County Hospital	x	x	x	x	x	x	x	x	x
O'Donnell Family Wellness Clinic	x	x	x	x	x	x	x	x	x
O'Donnell Housing Authority	x	x	x	x	x	x	x	x	x
O'Donnell Police Department	x	x	x	x	x	x	x	x	x
O'Donnell Health Clinic	x	x	x	x	x	x	x	x	x
Lynn County Courthouse	x	x	x	x	x	x	x	x	x
Tahoka City Hall	x	x	x	x	x	x	x	x	x
O'Donnell City Hall	x	x	x	x	x	x	x	x	x
New Home City Hall	x	x	x	x	x	x	x	x	x
Wilson City Hall	x	x	x	x	x	x	x	x	x
Tahoka ISD Facilities	x	x	x	x	x	x	x	x	x
O'Donnell ISD Facilities	x	x	x	x	x	x	x	x	x
New Home ISD Facilities	x	x	x	x	x	x	x	x	x
Wilson ISD Facilities	x	x	x	x	x	x	x	x	x
Tahoka water and sewer systems	x	x	x	x	x	x	x	x	x
O'Donnell water and sewer systems	x	x	x	x	x	x	x	x	x
New Home water and sewer systems	x	x	x	x	x	x	x	x	x
Wilson water and sewer systems	x	x	x	x	x	x	x	x	x

C) Vulnerable Parcels

Table 93: Estimated Potential Damage Values in Each Jurisdiction⁴³

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570
Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880
New Home ISD	916	\$100,075,260

⁴³ Property values and parcel counts based on Lamb and Lynn Central Appraisal Districts Data, unless otherwise noted.

City of O'Donnell	548	\$16,945,540
O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

13. Lightning

Lightning is a massive electrostatic discharge between electrically charged regions within clouds, or between a cloud and the Earth's surface.

Lightning damage can result in electrocution of humans and animals; vaporization of materials along the path of the strike; fire caused by the high temperature produced by the strike; and sudden power surges that can damage electrical and electronic equipment. Millions of dollars of direct and indirect damages result from lightning strikes on electric utility substations and distribution lines. While property damage is the major hazard associated with lightning, it should be noted that lightning strikes kill nearly 50 people ⁴⁴each year in the United States.

1) Lightning History

Lightning history is recorded at the county level. However, given each jurisdiction's proximity to every other jurisdiction, the County level data is considered representative of each jurisdiction's individual history.

According to data from the NCEI and the Lamb and Lynn Counties 2018 CHAMPS Report, only two lightning events have caused property damages since 1950 to the present. In Lamb County a lightning strike on June 19, 1999 caused \$91,642 in property damage (adjusted to \$2019) in the City of Olton. In Lynn County a lightning strike on June 14, 2010 caused \$29,168 in property damage (adjusted to \$2019) in the City of Tahoka. Neither strike caused crop damages.

Table 94: Lamb County Lightning History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
OLTON	6/19/1999 3:30	Lightning	0	0	\$60,000	\$0	\$91,642	\$0

Table 95: Lynn County Lightning History

Location	Date/Time	Type	Local Fatalities	Local Injuries	Local Property Damage	Local Crop Damage	Local Property Damage \$2,019	Local Crop Damage \$2,019
TAHOKA	6/14/2010 14:00	Lightning	0	0	\$25,000		\$29,168	

No damaging lightning strikes have been recorded in any jurisdiction since 2010 in Lynn County and 1999 in Lamb County.

2) Likelihood of Future Occurrence

Lightning is especially associated with thunderstorms. Despite the lack of reported instances of lightning-caused damages, a lightning event is highly likely, meaning an event affecting any of the jurisdictions addressing the hazard is probable in the next year. According to information from VAISALA⁴⁵, Lamb County and the participating jurisdictions in that county can primarily expect between 0.5 and 8 lightning flashes per square kilometer per year while Lynn County and

⁴⁴ <http://www.lightningsafety.noaa.gov/victims.shtml>

⁴⁵ http://www.vaisala.com/VaisalaImages/Lightning/avg_fd_2005-2014_CONUS_2mi_grid.png

the participating jurisdictions in that county can primarily expect between 2 and 8 lightning flashes per square kilometer per year.

3) Extent

The extent for lightning can be expressed in terms of the number of strikes within an interval. Given the lack of lightning history data, it is expected that Lamb and Lynn Counties and the jurisdictions addressing the hazard may experience lightning events between LAL 1 and LAL 5. Dry thunderstorms, LAL 6, are not expected.

Table 96: Lightning Activity Levels⁴⁶

Lightning Activity Level (LAL)		
Activity levels are valuable guidance tools to aid in the preparation for possible fire initiation from cloud-to-ground lightning.		
LAL	Cloud and Storm Development	Lightning Strikes per 15 Minutes
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
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.	

Adjusted for inflation, the worst lightning events to affect Lamb County and the participating jurisdictions in that county have inflicted up to \$91,642 in property damages while the worst lightning events to affect Lynn County and the participating jurisdictions in that county have inflicted up to \$29,168 in property damages.

Future events may meet previous intensity levels and damage dollars inflicted, and may include damages to crops and livestock and residents injured.

4) Location and Impact

A) Location

Lightning strikes have no distinct geographic boundary. Lightning can occur across each participating jurisdiction addressing the hazard.

⁴⁶ Source: <http://www.prh.noaa.gov/hnl/pages/LAL.php>

B) Impact

Impacts from lightning in the jurisdictions addressing the hazard may include but are not limited to loss of power due to electrical surges, damaged or destroyed personal property including computers and other electronics, damaged or destroyed agricultural, residential, commercial, and industrial buildings. Crops may be damaged or destroyed. Livestock may be injured or killed by lightning. In the worst cases, lightning may cause injuries or even loss of life.

5) Vulnerability

According to the Lightning Protection Institute, it is a myth⁴⁷ that lightning always strikes the tallest objects. Given lightning's indiscriminate nature, it is impossible to identify buildings that are at an increased risk of being struck by lightning. All existing and future buildings, critical facilities, critical infrastructure, improved property, and the population are exposed to this hazard. However, structures without adequate lightning protection and those with large concentrations of electronic equipment like computers, servers, and printers, are most vulnerable, as are locations that may have outside crowds during a lightning event.

A) Critical Facilities⁴⁸

Table 97: Lamb County and Participating Jurisdictions Critical Facilities Vulnerable to Lightning

	Potential Lightning Impacts			
	Physical Damage	Electrical Damage	Data Damage or Loss	Fire
Amherst City Hall	x	x	x	x
Amherst Fire Department	x	x	x	x
Amherst Ems Department	x	x	x	x
Amherst ISD	x	x	x	x
Harmonee House	x	x	x	x
Littlefield Feedyard	x	x	x	x
Caprock Dairy 2	x	x	x	x
T J'S Dairy	x	x	x	x
5 Star Dairy	x	x	x	x
Milk Harvest Dairy	x	x	x	x
Setting Sun Dairy	x	x	x	x
Springlake Dairy	x	x	x	x
Red Rock Dairy	x	x	x	x
Earth City Hall	x	x	x	x
Earth Volunteer Fire Department	x	x	x	x

⁴⁷ http://lightning.org/wp-content/uploads/2015/06/LPI_lightning_infographic_2015.jpg

⁴⁸ For plan writing purposes, ISD campuses were counted as whole units. Individual structures on each campus will be targeted for mitigation as necessary, and are considered integral components of each campus and its function as a critical facility. Hunt ISD has included a list of all ISD structures in Appendix A.

Earth Ems Department	x	x	x	x
Earth Police Department	x	x	x	x
Earth Medical Clinic	x	x	x	x
Earth Housing Development Corporation	x	x	x	x
Springlake-Earth ISD	x	x	x	x
Hilltop Dairy	x	x	x	x
Boehning Dairy	x	x	x	x
Tolk Station	x	x	x	x
Savage Services	x	x	x	x
Plant X	x	x	x	x
Littlefield City Hall	x	x	x	x
Littlefield Fire Department	x	x	x	x
Littlefield Ems Department	x	x	x	x
Littlefield Police Department	x	x	x	x
Littlefield ISD	x	x	x	x
Lamb County Courthouse	x	x	x	x
Lamb County Sheriff's Office	x	x	x	x
LHC Family Medicine	x	x	x	x
Lamb Health Care Center	x	x	x	x
Littlefield WIC Clinic	x	x	x	x
Library of Legacies	x	x	x	x
Arbor Grace	x	x	x	x
Lamb County Electric Coop	x	x	x	x
Continental Dairy Facilities	x	x	x	x
Olton City Hall	x	x	x	x
Olton Fire Department	x	x	x	x
Olton Ems Department	x	x	x	x
Olton Police Department	x	x	x	x
Olton ISD	x	x	x	x
Olton Clinic	x	x	x	x
City of Olton Housing Authority	x	x	x	x
Running Water Draw Care Facility	x	x	x	x
Cattleman's Feedlot	x	x	x	x
Springlake City Hall	x	x	x	x
VB Ranch	x	x	x	x
Sudan City Hall	x	x	x	x
Sudan Police Department	x	x	x	x
Sudan Fire Department	x	x	x	x
Sudan Ems Department	x	x	x	x
Sudan ISD	x	x	x	x
Sudan Medical Clinic	x	x	x	x

Table 98: Lynn County and Participating Jurisdictions Critical Facilities Vulnerable to Lightning

	Potential Lightning Impacts			
	Physical Damage	Electrical Damage	Data Damage or Loss	Fire
Tahoka WIC Clinic	x	x	x	x
Tahoka Housing Authority	x	x	x	x
Tahoka Police Department	x	x	x	x

Tahoka Correctional Institution	x	x	x	x
Lynn County Hospital	x	x	x	x
O'Donnell Family Wellness Clinic	x	x	x	x
O'Donnell Housing Authority	x	x	x	x
O'Donnell Police Department	x	x	x	x
O'Donnell Health Clinic	x	x	x	x
Lynn County Courthouse	x	x	x	x
Tahoka City Hall	x	x	x	x
O'Donnell City Hall	x	x	x	x
New Home City Hall	x	x	x	x
Wilson City Hall	x	x	x	x
Tahoka ISD Facilities	x	x	x	x
O'Donnell ISD Facilities	x	x	x	x
New Home ISD Facilities	x	x	x	x
Wilson ISD Facilities	x	x	x	x
Tahoka water and sewer systems	x	x	x	x
O'Donnell water and sewer systems	x	x	x	x
New Home water and sewer systems	x	x	x	x
Wilson water and sewer systems	x	x	x	x

B) Vulnerable Parcels

Table 99: Estimated Potential Damage Values in Each Jurisdiction⁴⁹

Jurisdiction	Parcel Count	Estimated Potential Damage Value
Lamb County	12914	\$783,527,420
City of Amherst	664	\$9,419,150
City of Earth	674	\$16,110,880
Lamb County Healthcare Center	12914	\$783,527,420
City of Littlefield	3776	\$175,670,780
Littlefield ISD	5156	\$268,601,310
City of Olton	1805	\$41,106,210
Olton ISD	3468	\$200,226,640
City of Springlake	170	\$3,475,890
Springlake-Earth ISD	1662	\$103,389,550
City of Sudan	591	\$30,959,510
Sudan ISD	N/A (Bailey parcels not available)	\$453,195,285 (from Bond Review Board)
Lynn County	6220	\$495,604,570

⁴⁹ Property values and parcel counts based on Lamb and Lynn Central Appraisal Districts Data, unless otherwise noted.

Lynn County Hospital District	6220	\$495,604,570
City of New Home	172	\$10,545,880
New Home ISD	916	\$100,075,260
City of O'Donnell	548	\$16,945,540
O'Donnell ISD	N/A (Dawson parcels not available)	\$94,254,376 (from Bond Review Board)
City of Tahoka	1630	\$64,485,840
Tahoka ISD	2668	\$178,285,320
City of Wilson	310	\$11,591,510
Wilson ISD	960	\$73,208,600

14. Mitigation Strategy

1) Capability Assessment

The planning team reviewed existing regulatory capabilities and opportunities for establishing new capabilities and enhancing existing ones. All jurisdictions can improve their capabilities by: budgeting for mitigation actions and support, passing policies and procedures to implement mitigation actions, adopting and implementing stricter building regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation action updates and additions to existing plans as new needs are recognized.

Table 100: Capability Assessment by Jurisdiction

Lamb County Administrative, Financial, Regulatory, and Technical Abilities
Master Planning
Emergency Planning
Transportation Planning
Mutual Aid Agreements
General Budgeting
Capital Improvement Program Funding
Incur Debt through General Obligation Bonds or Special Tax Bonds
State and Federal Grant Funding

Lamb County Healthcare Center Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Subdivision
Zoning
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Comprehensive Planning
Economic Development
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program Funding

Community Development Block Grant Funding

State and Federal Grant Funding

**City of Amherst
Administrative, Financial, Regulatory, and Technical Abilities**

Building Code Enforcement

Comprehensive Planning

Mitigation Planning

Emergency Management

Continuity of Operations

Warning Systems

Hazard Data and Information

Public Education

Tax Collection

General Obligation or Special Tax Bonds

Fire Department ISO Rating

Land Acquisition for Open Space or Recreation

Mutual Aid Agreements

Grant Writing

Utility Fees

Capital Improvement Program Funding

Community Development Block Grant Funding

State and Federal Grant Funding

**City of Earth
Administrative, Financial, Regulatory, and Technical Abilities**

Floodplain Management

Emergency Management

Building Code Enforcement

Nuisance Abatement

Substandard Structures Abatement

Drought Contingency Planning

Tax Collection

Grant Writing

Mutual Aid Agreements

Warning Systems

General Budgeting

Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

City of Littlefield Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Subdivision
Zoning
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Comprehensive Planning
Economic Development
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

City of Olton Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Subdivision
Zoning
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Comprehensive Planning
Economic Development
Tax Collection
Grant Writing

General Budgeting
Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

City of Springlake Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Subdivision
Zoning
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Comprehensive Planning
Economic Development
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

City of Sudan Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Comprehensive Planning
Economic Development
Tax Collection
Grant Writing
General Budgeting

Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding
Mutual Aid Agreement
Warning Systems

Littlefield ISD Administrative, Financial, Regulatory, and Technical Abilities
Emergency Planning
Facilities Management
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program Funding
State and Federal Grant Funding

Olton ISD Administrative, Financial, Regulatory, and Technical Abilities
Emergency Planning
Comprehensive Planning
Transportation Planning
Mitigation Planning
Mutual Aid Agreements
Warning System
Facilities Management
Tax Collection
Grant Writing
General Budgeting
General Obligation or Special Tax Bonds
Capital Improvement Program Funding
State and Federal Grant Funding
Public Education and Information Program

Springlake-Earth ISD Administrative, Financial, Regulatory, and Technical Abilities
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Hp hujhqf #Sdqqlj#
Idfblwlv#P dqdjhp hqw#
Wd{ #F rdnfwlrq#
J udq#Z ulwqj#
J hghud#Exgjhwqj#
F dsld#p suryhp hqw#Surjudp #Exqqlj#
Vdwh#dqg#Hghud#J udq#Exqqlj#

Sudan ISD Administrative, Financial, Regulatory, and Technical Abilities

Hp hujhqf #Sdqqlj#
F rp suhkhqvlyh#Sdqqlj#
Exlqj#F rgh#Hqirufhp hqw#
Hp hujhqf #P dqdjhp hqw#
K d}dug#G dwd#qg#Hqirup dwrq#
Dxwkrulw #w#Dny #Wd{lv#
Iln#G hsdwp hqw#VR #Jdwqj#
X wdw #hhv#
Iqfxu#G hew#wkurxjk#J hghud#R edjdwrq#dqgzu#vshfbc#Wd{ #Erqgv#
Sxedf#Hqxfwlrq#
Q dwud#G lwdwhu#dihw #Jhwhg#Fkrre#Surjudp v#
Vwrup Uhdg #F huwlfwlrq#
Idfblwlv#P dqdjhp hqw#
Wd{ #F rdnfwlrq#
J udq#Z ulwqj#
J hghud#Exgjhwqj#
F dsld#p suryhp hqw#Surjudp #Exqqlj#
Vdwh#dqg#Hghud#J udq#Exqqlj#

Lynn County Administrative, Financial, Regulatory, and Technical Abilities

Floodplain Management
Emergency Management
Transportation Planning
Economic Development
Subdivision Regulations

Mutual Aid Agreements
Warning Systems
Road and Bridge Management
Tax Collection
Grant Writing
General Budgeting
General Obligation or Special Tax Bonds
Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

Lynn County Hospital District Administrative, Financial, Regulatory, and Technical Abilities
Emergency Management
Continuity of Operations
Subdivision
Zoning
Building Code Enforcement
Site Plan Review
Substandard Structures Abatement
Mutual Aid Agreements
Comprehensive Planning
Economic Development
Transportation Plan
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program
General Obligation Bonds and/or Special Tax Bonds
Community Development Block Grant Funding
State and Federal Grant Funding
Public Education or Information Program
Natural Disaster Safety School Programs

**City of New Home
Administrative, Financial, Regulatory, and Technical Abilities**

Zoning

Tax Collection

Grant Writing

General Budgeting

State and Federal Grant Funding

**City of O'Donnell
Administrative, Financial, Regulatory, and Technical Abilities**

Natural Disaster Education Programs

Drought Contingency Planning

Fire Management

Mutual Aid Agreements

Tax Collection

Grant Writing

Utility Fees

General Budgeting

Community Development Block Grant Funding

State and Federal Grant Funding

**City of Tahoka
Administrative, Financial, Regulatory, and Technical Abilities**

Floodplain Management

Emergency Management

Subdivision

Zoning

Building Code Enforcement

Nuisance Abatement

Substandard Structures Abatement

Drought Contingency Planning

Comprehensive Planning

Economic Development

Tax Collection

Grant Writing

General Budgeting

Capital Improvement Program Funding
Community Development Block Grant Funding
State and Federal Grant Funding

City of Wilson Administrative, Financial, Regulatory, and Technical Abilities
Floodplain Management
Emergency Management
Zoning
Building Code Enforcement
Nuisance Abatement
Substandard Structures Abatement
Drought Contingency Planning
Tax Collection
Warning System
Grant Writing
General Budgeting
Community Development Block Grant Funding
State and Federal Grant Funding
Public Education and Information

New Home ISD Administrative, Financial, Regulatory, and Technical Abilities
Comprehensive Planning
Emergency Operations Planning
Transportation Planning
Emergency Management
Chief Building Official
Warning Systems
Public Education and Information
Bond Issuance
Facilities Management
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Programming and Funding
State and Federal Grant Funding

O'Donnell ISD
Administrative, Financial, Regulatory, and Technical Abilities

Emergency Planning
Facilities Management
Building Inspection
Tax Collection
Grant Writing
General Budgeting
General Obligation or Special Tax Bonds
Capital Improvement Program Funding
State and Federal Grant Funding
Warning System
Public Education and Information
Public-Private Partnership

Tahoka ISD
Administrative, Financial, Regulatory, and Technical Abilities

Emergency Planning
Facilities Management
Tax Collection
Comprehensive/Master Planning
Transportation Planning
Mutual Aid Agreements
Warning systems
General Budgeting
Natural Disaster Safety School Programs
Public/Private Partnerships

Wilson ISD
Administrative, Financial, Regulatory, and Technical Abilities

Emergency Planning and Management
Comprehensive Planning
Transportation Planning
Facilities Management

Building Inspection
Floodplain Management
Tax Collection
Grant Writing
General Budgeting
Capital Improvement Program Funding
State and Federal Grant Funding
Warning System
Public Information and Information

2) Goals and Objectives Overview

The hazard analysis has shown that Lamb and Lynn Counties and the participating jurisdictions are at risk of multiple natural hazards. The following goals and objectives take a broad approach to improving outcomes before, during, and after these anticipated natural hazard events.

The mitigation actions the County and participating jurisdictions have selected are designed to address specific hazard-related issues in support of achieving the desired goals and objectives.

3) Long-term vision

The hazard mitigation plan must strike a balance between identifying long-term goals and objectives and prioritized mitigation actions that may be addressed sooner, depending on funding availability and local priorities. The result is that certain goals and objectives don't have a corresponding mitigation action. Instead, by taking the long view, the local planning team has created a framework that can be developed as the plan is updated over time.

4) Goals

A) Goal 1: To reduce loss of life and injury to persons

Objective 1.1

Improve the delivery and effectiveness of warning messages

Objective 1.2

Preserve public and private emergency response capability (9-1-1, law enforcement, fire services, emergency medical services, hospitals).

Objective 1.3

Utilize available mitigation measures to prevent or reduce life-threatening impacts of natural hazards.

Objective 1.4

Reduce obstacles to timely and safe evacuation of flood hazard areas.

Objective 1.5

Reduce vulnerability of individuals living in mobile homes / manufactured housing.

Objective 1.6

Reduce life or health threatening impacts on individuals with special physical care requirements.

Objective 1.7

Reduce secondary impacts to health and safety from cascading effects.

B) Goal 2: To reduce disruptions to essential public services and infrastructure

Objective 2.1

Minimize disruption to and enhance rapid restoration of utilities.

Objective 2.2

Minimize disruption to and enhance rapid restoration of essential transportation infrastructure.

Objective 2.3

Minimize disruption to governmental, educational, and other institutions providing services to the public.

C) Goal 3: To reduce economic impacts to individuals, businesses, and area institutions

Objective 3.1

Increase home and business owner investment in available mitigation measures for private property.

Objective 3.2

Increase home and business owner participation in appropriate insurance programs.

Objective 3.3

Increase public and private sector development and use of operations continuity strategies.

Objective 3.4

Utilize available mitigation measures to prevent or reduce economic losses from natural hazards.

Objective 3.5

Reduce vulnerability of existing development by encouraging property owners to participate in buy-out or flood-proofing opportunities.

Objective 3.6

Reduce vulnerability of future development by utilizing available planning and structural standards.

D) Goal 4: To reduce losses to civic, cultural, and environmental resources

Objective 4.1

Protect public investment in community-owned facilities and infrastructure through appropriate structural, non-structural, and financial methods.

Objective 4.2

Reduce future losses to the non-profit sector through participation in available mitigation opportunities.

Objective 4.3

Reduce vulnerability of historically or culturally significant structures.

Objective 4.4

Minimize environmental impacts from cascading effects.

5) Mitigation Action Plan

Mitigation Action Prioritization

The planning team members have identified at least two mitigation actions per natural hazard. Action items were identified and prioritized in consideration of the following criteria:

- 1) Life safety and property protection improvements

- 2) Cost effectiveness – do the action’s future benefits exceed its implementation costs
- 3) Technical feasibility – is the action reasonable given its technical requirements
- 4) Political acceptability
- 5) Administrative capabilities and legal authorities for implementation
- 6) Funding availability
- 7) The action’s environmental impacts
- 8) The action’s social acceptability
- 9) The action’s ability to reduce risk to more than one hazard
- 10) The ease of implementation
- 11) The availability of a local champion
- 12) The action’s relationship to other community objectives

In addition to considering an action’s cost effectiveness as described above, the planning team considered TDEM’s Cost-Effectiveness, Environmental Soundness and Technical Feasibility requirements as they relate to construction projects. Mitigation actions relating to physical infrastructure will meet the State’s standards as outlined below:

- A) Any state government construction project, regardless of potential funding source, has to be cost effective, technically feasible and meet all of the appropriate federal, state, and local environmental laws and regulations before it is started.
- B) State government projects funded by Federal Mitigation Grant Programs administered by TDEM have to meet specific criteria related to cost effectiveness, environmental soundness and technical feasibility. These are outlined in the applicable FEMA grant program guidance for that particular funding program.

Incorporation and Integration of Existing Capabilities and Hazard Mitigation

As previously outlined, the planning team reviewed a range of codes, ordinances, and planning studies that have been adopted by the participating jurisdictions. The planning team’s goal was to understand how these existing capabilities might affect mitigation actions in terms of implementation and enforcement.

Each jurisdiction has its own established process for integrating new actions, codes, ordinances, plans, and studies into its existing capabilities. The planning team will ensure that each jurisdiction’s various departments continue to integrate hazard mitigation actions into their day-to-day processes.

Table 101: Plan Integration

Department	All Departments	Commissioners' Court, Road and Bridge, Mayor's Office, Council, Public Works, Economic Development, Zoning, Schoolboard, Boards of Directors	Planning, Zoning, Economic Development, Public Works, Mayor's Office, Floodplain Manager, Schoolboard, Boards of Directors	Office of Emergency Management, Mayor's Office, Chief of Fire Department, Campus Security, Superintendent's Office, Directors' Offices	Office of Emergency Management, Mayor's Office, Chief of Fire Department, Campus Security, Superintendent's Office, Directors' Offices	Office of Emergency Management, Mayor's Office, Superintendent's Office, Schoolboard, Boards of Directors	Office of Emergency Management, Floodplain Manager, Mayor's Office, Directors' Offices
Activity	Annual Budget	Capital Improvement Projects	Comprehensive Master Plan	Public Involvement	Emergency Operations	Grant Application	Floodplain Management
Time Frame	Quarterly/ Annual workshops	Bi-annually	Every 10 Years	As Needed	Annually	Annual Funding Cycles	Annually

Integration Process	Discuss integration of medium and high priority actions with Commissioners' Court, Council, Schoolboard, or Boards of Directors (as appropriate) concerning feasibility, potential funding sources, and a preliminary cost benefit review.	Discuss inclusion of mitigation actions with CIPs. Ensure CIPs are consistent with mitigation actions, NFIP compliance, and any new land use development.	Review existing floodplain and land use controls to insure that long term goals are consistent with actions in the HMAP.	Utilize jurisdictional web sites, social media, and other forms of advertising to make announcements of any periodic review activities concerning potential amendments or updating of the HMAP	Review prevention and protection projects for continued relevance. Ensure appropriate actions and information are included in the Emergency Operation Plan.	Review and update mitigation actions as necessary based on funding opportunities available through FEMA PDM, FEMA HMGP, and other grant funding sources.	Update and maintain floodplain information including but not limited to: maps, construction practices, permitting, and NFIP compliance.
Jurisdiction							
Lamb County	{#}	{#}	{#}	{#}	{#}	{#}	{#}
Lamb County Healthcare Center	{#}	{#}	{#}	{#}	{#}	{#}	#
City of Amherst	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Earth	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Littlefield	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Olton	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Springlake	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Sudan	{#}	{#}	{#}	{#}	{#}	{#}	{#}
Amherst ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Littlefield ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Olton ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Springlake-Earth ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Sudan ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Lynn County	{#}	{#}	{#}	{#}	{#}	{#}	{#}
Lynn County Hospital District	{#}	{#}	{#}	{#}	{#}	{#}	#
City of New Home	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of O'Donnell	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Tahoka	{#}	{#}	{#}	{#}	{#}	{#}	{#}
City of Wilson	{#}	{#}	{#}	{#}	{#}	{#}	{#}
New Home ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
O'Donnell ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Tahoka ISD	{#}	{#}	{#}	{#}	{#}	{#}	#
Wilson ISD	{#}	{#}	{#}	{#}	{#}	{#}	#

Each mitigation action below outlines the following requirements: the identified responsible department head or delegate will research all relevant information to confirm the action’s feasibility and prioritization, will formulate a plan of action, and will confirm funding sources and identify any fiscal liabilities associated with the mitigation action.

As part of each jurisdiction’s commitment to transparency, all relevant information, including but not limited to that described above and in each action’s description, will be presented to the public before the action is formally adopted for implementation. After public notification, the integration process will resemble the one outlined in Table 102 below.

Table 102: Integration Process

Jurisdiction	Integration Process
Lamb County	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Lamb County Commissioners Court.</p> <p>Lamb County will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Lamb County Healthcare Center	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Board of Directors.</p> <p>The Lamb County Healthcare Center will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Amherst	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Amherst will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Earth	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Earth will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Littlefield	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Littlefield will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Olton	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Olton will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Springlake	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Springlake will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Sudan	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Sudan will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Littlefield ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p>

	<p>Littlefield ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Olton ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>Olton ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Springlake-Earth ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>Springlake-Earth ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Sudan ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>Sudan ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Lynn County	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Commissioners Court.</p> <p>Lynn County will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Lynn County Hospital District	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Board of Directors.</p> <p>Lynn County Hospital District will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of New Home	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of New Home will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of O'Donnell	<p>After considering integrating mitigation actions with the activities outlined in Table 153 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of O'Donnell will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Tahoka	<p>After considering integrating mitigation actions with the activities outlined in Table 153 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Tahoka will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
City of Wilson	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the City Council.</p> <p>The City of Wilson will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
New Home ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>New Home ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
O'Donnell ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>O'Donnell ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>

Tahoka ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>Tahoka ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>
Wilson ISD	<p>After considering integrating mitigation actions with the activities outlined in Table 101 above, mitigation actions will be presented, considered, and formally adopted by the Schoolboard.</p> <p>Wilson ISD will also use the Lamb and Lynn Counties Hazard Mitigation Plan as a technical reference and data source for identified and future mitigation actions, as well as future planning processes.</p>

6) Mitigation Actions by Jurisdiction and by Hazard

Each jurisdiction has selected actions that were identified as high or medium priority and that are in line with TDEM’s recommended mitigation actions. However, many of the mitigation actions below are dependent upon outside grant funding for implementation. For all actions likely to require grant funding, potential sources have been identified. However, grant funding is awarded on a competitive basis, so applying for funding doesn’t guarantee that funds will be received. Lamb and Lynn Counties and the participating jurisdictions have a successful history of applying for and receiving grant funding to implement physical infrastructure actions. Budget constraints will remain the determining factor for how and when each action is implemented.

Lamb County Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Lamb County residents about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Harden County Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb

	County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator

Implementation Schedule	1-5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Lamb County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at County-owned and maintained facilities by replacing traditional water fixtures with low flow units.

Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb

	County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Update / Construct Community Safe Rooms
Objective	The action's goal is to minimize Lamb County's population's vulnerability to tornados by upgrading existing tornado safe rooms and/or installing new ones.
Hazard	Tornado
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all county facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all county facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Lamb County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Judge's Office, Lamb County Commissioners' Court, Lamb County Road and Bridge Department, Consulting Engineer, Lamb County Floodplain Administrator, Lamb County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Lamb County Healthcare Center Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	Implement a community resource database for hospital staff and administrators to access information regarding hazard risk and education guidelines to protect themselves and their property.
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lamb County Healthcare EOC/EM Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Procure and Install backup generators UPS system at the Healthcare Center's facilities.
Hazard	Flood, Wildfire, Tornado, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lamb County Healthcare EOC/EM Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Develop an Alternative Water Source
Objective	Work with City of Littlefield to provide an alternative water source to Lamb County Healthcare in the event of Littlefield water loss. Develop mutual aid agreement with alternative water source and Lamb County Healthcare.
Hazard	Wildfire, Drought
Priority	High
Estimated Cost	\$25,000
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lamb County Healthcare EOC/EM Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	FEMA PDM, FEMA HMGP
Responsible Department(s)	Lamb County Healthcare EOC/EM Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

City of Amherst Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Amherst.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Amherst, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Amherst Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Earth Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Earth.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Earth Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Littlefield Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Littlefield, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Littlefield, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Littlefield, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Littlefield, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Littlefield.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Littlefield, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Earth, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Littlefield Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Olton Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Olton.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Olton, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Olton Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Springlake Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Springlake.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Springlake, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Springlake Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Sudan Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Springlake.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Sudan, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Sudan Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

Littlefield ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Littlefield ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Littlefield ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Littlefield ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Littlefield ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Littlefield ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Olton ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Olton ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Olton ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Olton ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Olton ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Olton ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Springlake-Earth ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Springlake-Earth ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Springlake-Earth ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Springlake-Earth ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Sudan ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Sudan ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Sudan ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Sudan ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Sudan ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Sudan ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Lynn County Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Lynn County residents about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Extreme Cold/Severe Winter Storm, Hailstorm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Harden County Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn

	County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator

Implementation Schedule	1-5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Lynn County, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at County-owned and maintained facilities by replacing traditional water fixtures with low flow units.

Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn

	County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Update / Construct Community Safe Rooms
Objective	The action's goal is to minimize Lamb County's population's vulnerability to tornados by upgrading existing tornado safe rooms and/or installing new ones.
Hazard	Tornado
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all county facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all county facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Lynn County, FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Judge's Office, Lynn County Commissioners' Court, Lynn County Road and Bridge Department, Consulting Engineer, Lynn County Floodplain Administrator, Lynn County Emergency Management Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Lynn County Hospital District Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	Implement a community resource database for hospital staff and administrators to access information regarding hazard risk and education guidelines to protect themselves and their property.
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lynn County Hospital EOC/EM Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Procure and Install backup generators UPS system at the Hospital's facilities.
Hazard	Flood, Wildfire, Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lynn County Hospital EOC/EM Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Develop an Alternative Water Source
Objective	Work with City of Tahoka to provide an alternative water source to Lynn County Hospital in the event of Tahoka water loss. Develop mutual aid agreement with alternative water source and Lynn County Hospital.
Hazard	Wildfire, Drought
Priority	High
Estimated Cost	\$25,000
Potential Funding Source(s)	FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	Lynn County Hospital EOC/EM Coordinator
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	FEMA PDM, FEMA HMGP
Responsible Department(s)	Lynn County Hospital EOC/EM Coordinator
Implementation Schedule	5 Years
Target	Existing infrastructure

City of New Home Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Extreme Heat, Riverine Erosion, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Amherst.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of New Home, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of New Home Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of O'Donnell Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Amherst.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of O'Donnell, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of O'Donnell Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Tahoka Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Amherst.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Tahoka, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Tahoka Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

City of Wilson Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the public about specific mitigation actions for all hazards, including but not limited to participation in Wildfire Fuels Reduction, Tornado Saferooms, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at critical facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden Facilities Against Multiple Hazards
Objective	This action proposes hardening County facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to county facilities, reinforcing building foundations, shielding roof-mounted equipment, and increasing thermal insulation.
Hazard	Tornados, Riverine Erosion, Extreme Heat, Hailstorm, Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Single-Hazard Actions

Mitigation Action	Create a Stormwater Master Plan
Objective	This action will develop and implement master plan to mitigate the flood hazard by defining priorities, policies, and strategies to address and remedy the drainage needs and challenges in Amherst.
Hazard	Flood
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Develop and Implement a New Drought Contingency Plan
Objective	The City will re-evaluate all existing drought control measures to identify strengths and weaknesses in order to develop and enforce a new or updated drought contingency plan.
Hazard	Drought
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	City of Wilson, FEMA PDM, FEMA HMGP, FEMA FMA, TWDB
Responsible Department(s)	City of Wilson Mayor's Office
Implementation Schedule	1-5 Years
Target	Existing and future population and infrastructure

New Home ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the New Home ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	New Home ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	New Home ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	New Home ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	New Home ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

O'Donnell ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the O'Donnell ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	O'Donnell ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	O'Donnell ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	O'Donnell ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	O'Donnell ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Tahoka ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Tahoka ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Tahoka ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Tahoka ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Tahoka ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Tahoka ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Wilson ISD Mitigation Actions

Multi-Hazard Actions

Mitigation Action	Purchase Back Up Power Generators
Objective	Installing generators at ISD facilities will help ensure physical safety for facility occupants and maintain electronic systems functionality during power outages. Portable generators will maintain additional systems functionality including but not limited to lift stations, pumps, and communications infrastructure.
Hazard	Tornado, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	More than \$100,000 Each for Fixed Generators, Including Associated Engineering Costs. Less than \$100,000 Each for Portable Generators
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing infrastructure

Mitigation Action	Educational Outreach
Objective	This action will create a program to educate the Wilson ISD students, faculty, and staff about specific mitigation actions for multiple hazards, including but not limited to Flood Safety, Wildfire Fuels Reduction, Structural Hardening, etc...
Hazard	Flood, Wildfire, Tornado, Drought, Riverine Erosion, Extreme Heat, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm, Lightning
Priority	High
Estimated Cost	Less than \$10,000 per hazard
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Implement a Tree Trimming Program
Objective	This action will develop and implement a tree trimming program to reduce wildfire fuels and minimize the amount of debris generated during natural hazard events.
Hazard	Wildfire, Tornado, Hailstorm, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	\$10,000 - \$100,0000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1-5 Years
Target	Existing and future infrastructure

Mitigation Action	Harden ISD Facilities Against Multiple Hazards
Objective	This action proposes hardening ISD facilities to reduce the impacts of future natural hazard events. Hardening may include but is not limited to: adding impact and wind-resistant doors, windows, and shutters to ISD facilities, reinforcing building foundations, and shielding roof-mounted equipment.
Hazard	Tornado, Riverine Erosion, Hailstorm, Extreme Heat, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct Community Safe Rooms
Objective	The action's goal is to minimize local population vulnerability to tornados and other severe weather.
Hazard	Tornado, Extreme Cold/Severe Winter Storm, Windstorm
Priority	High
Estimated Cost	Greater than \$100,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population and infrastructure

Single-Hazard Actions

Mitigation Action	Purchase Portable Pumps
Objective	This action proposes purchasing portable pumps that can be deployed as needed to mitigate the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	\$250,000
Potential Funding Source (s)	Wilson ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department	Wilson ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Construct New Storm Drainage Infrastructure
Objective	This action proposes constructing new storm drainage infrastructure to reduce the potential impacts of future flood events.
Hazard	Flood
Priority	High
Estimated Cost	More than \$100,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP, FEMA FMA
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	5 Years
Target	Existing infrastructure

Mitigation Action	Replace Water Fixtures with Low Flow Units
Objective	This action's goal is to limit water consumption at ISD facilities by replacing traditional water fixtures with low flow units.
Hazard	Drought
Priority	High
Estimated Cost	\$10,000 - \$100,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future infrastructure

Mitigation Action	Set up Cooling Centers in Existing Facilities
Objective	The action's goal is to increase extreme heat resilience by limiting vulnerable populations' exposure to extreme heat.
Hazard	Extreme Heat
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Set up Warming Centers in Existing Facilities
Objective	The action's goal is to increase severe winter storm resilience by limiting vulnerable populations' exposure to extreme cold.
Hazard	Extreme Cold/Severe Winter Storm
Priority	High
Estimated Cost	Less than \$10,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing and future population

Mitigation Action	Install Surge Protection to Protect Electronic Assets
Objective	This action will install surge protection at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP

Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure

Mitigation Action	Install Grounding Systems to Protect Electronic Assets
Objective	This action will install grounding systems including but not limited to: lightning arresters, grounding rods, and grounding electrodes at all ISD facilities to prevent damage to critical electronic devices including but not limited to: computers, servers, audio/visual equipment, laboratory equipment, and appliances.
Hazard	Lightning
Priority	High
Estimated Cost	Greater than \$10,000
Potential Funding Source(s)	Wilson ISD, FEMA PDM, FEMA HMGP
Responsible Department(s)	Wilson ISD Superintendent's Office
Implementation Schedule	1 - 5 Years
Target	Existing infrastructure