

Special Topics

Greer County Disaster Resiliency Assessment

The purpose of this section is to assess at the county level key components of disaster resiliency. Housing location and quality as well as planning activities can help reduce impacts from disaster events and allow for faster recovery. Disasters can include tornadoes, extreme weather, high winds, as well as man-made events. These events may largely be inevitable, but the ability to reduce damage and casualties as well recovery can be improved with good planning.

C.0 Comprehensive Plans & Hazard Mitigation Plans

There are 3 key cities within the county (Mangum, Granite, Willow).

Comprehensive plans are the guiding documents for cities of various sizes to address key aspects of their community from land use, transportation, environment, housing, and economic development.

No comprehensive plan was found for Mangum.

The other key plan for a city to manage, mitigate and plan for recovery related to disasters is a **Hazard Mitigation Plan** (or Emergency Management Plan). Often low density counties, the Hazard Mitigation Plan is done at the county level, though some cities may augment the county plan with a city plan.

Greer County does have a Hazard Mitigation Plan, but it was not available for use for this study.

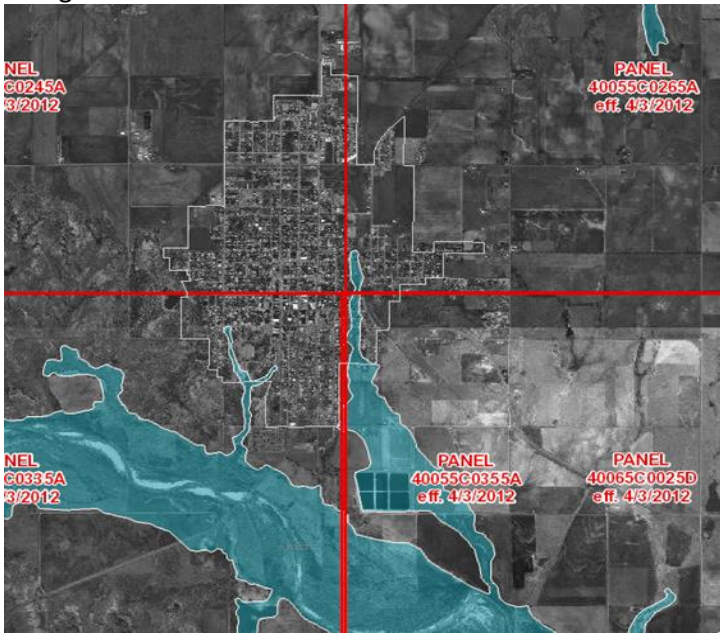
C.2.1.1. Historical Data on Natural Disasters and Other Hazards

Data on historical damages and casualties is typically collected as part of a **Hazard Mitigation Plan** preparation to determine the appropriate planning measures and actions to take before and after an event.

Flooding

All parts of the county may be subject to flash flooding, freeze-thaw flooding and extreme precipitation that can cause flooding, unrelated to the streams and rivers. Development in the floodplain, however, increases risk of damages and property loss potentially repeatedly.

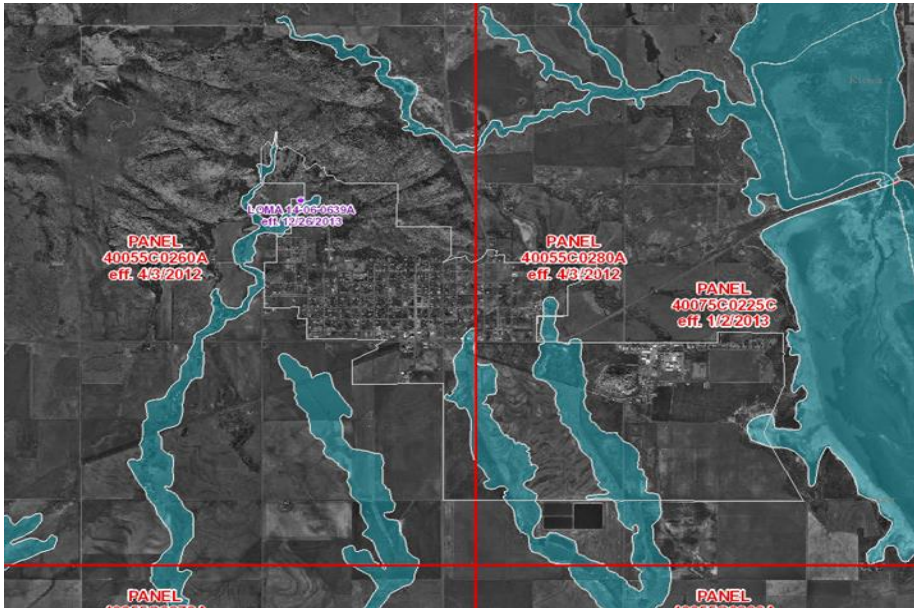
Mangum



FEMA's National Flood Hazard Layer <http://fema.maps.arcgis.com/>

Flood Hazard Zones
■ 1% Annual Chance Flood Hazard

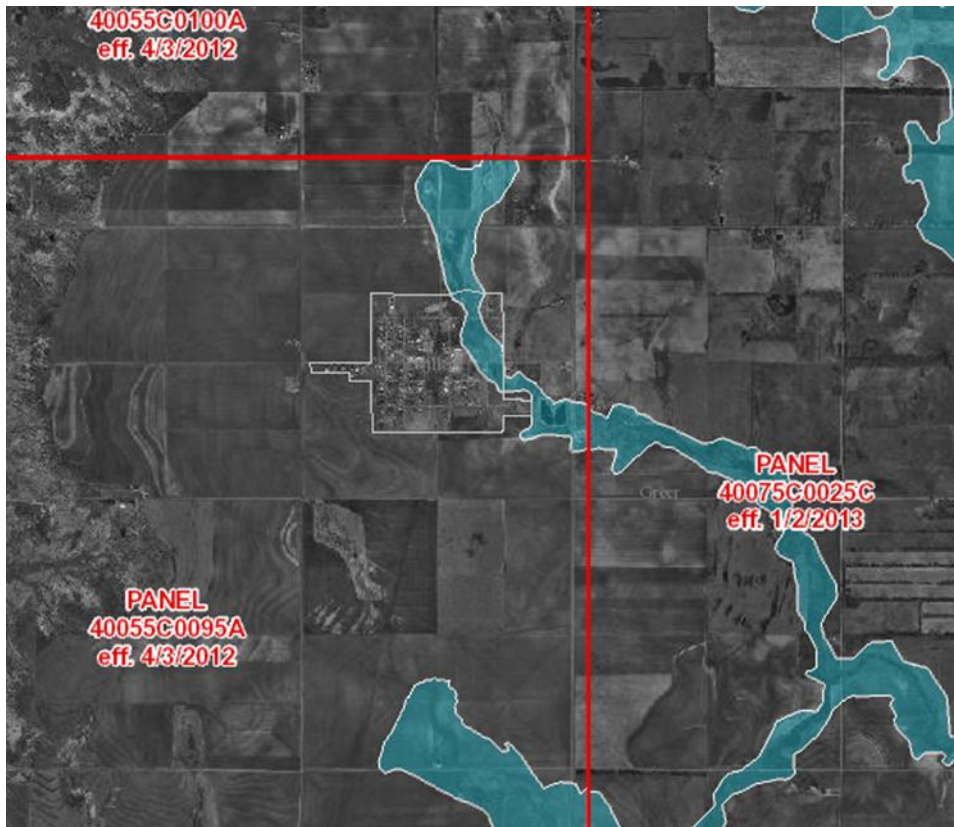
Granite



FEMA's National Flood Hazard Layer <http://fema.maps.arcgis.com/>

Flood Hazard Zones
■ 1% Annual Chance Flood Hazard

Willow



FEMA's National Flood Hazard Layer <http://fema.maps.arcgis.com/>

Flood Hazard Zones
■ 1% Annual Chance Flood Hazard

NOAA data shows the following historic data on disaster events for the county:

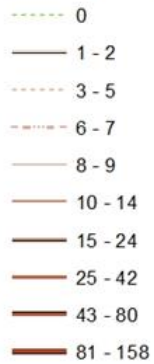
Historic data on tornados between 1950-2014 there are 42 tornados documented. There were 23 injuries that occurred connected to these tornados, with 18 of those injuries happening in the 1982 tornado. There were 2 fatalities connected to tornadoes during this time period, all of which occurred in 1982. Property losses between 1950-1996 ranged from \$128,551.00 to \$1,285,550.00. (The accounting methods used for losses changed in 1996.) The losses estimated between 1996-2014 was \$100,000.00.

Social Vulnerability - Impacts on Housing & Disaster Resiliency

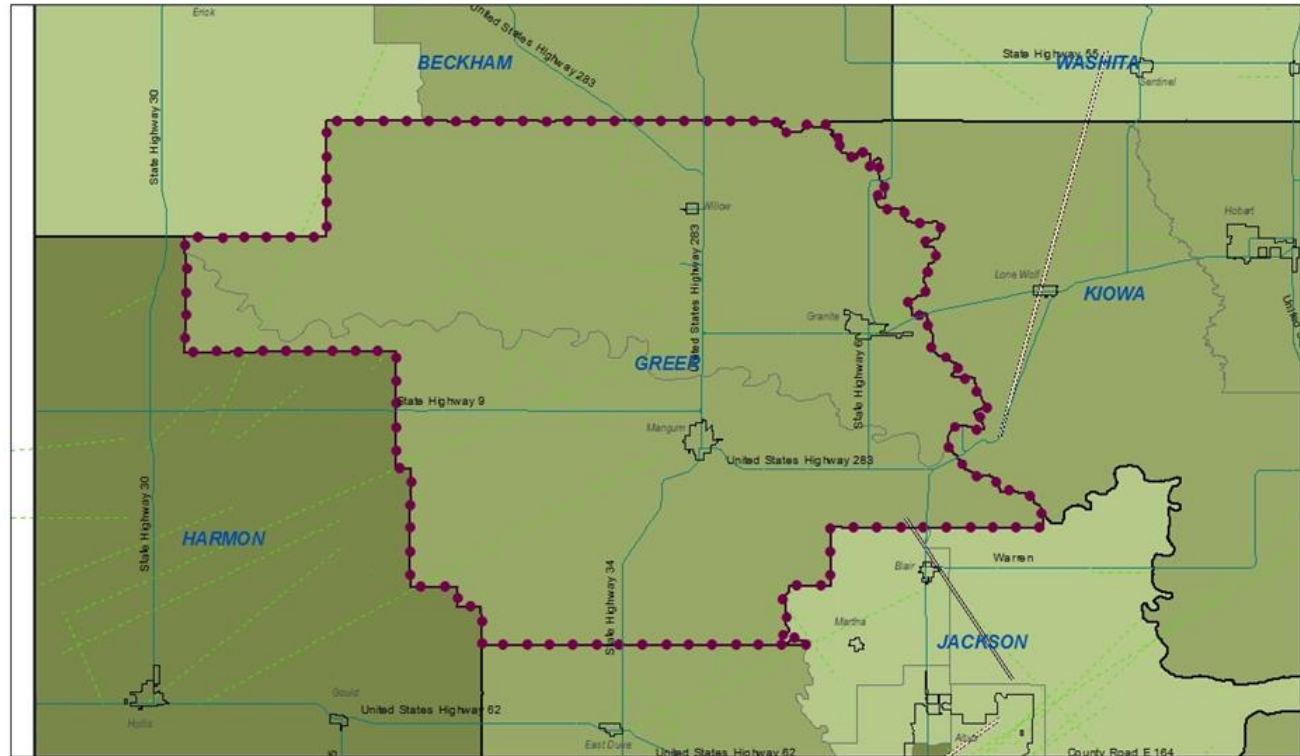
Tornado Events 1950 - 2014

Greer County

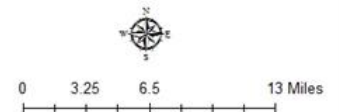
of fatalities associated with event



Social Vulnerability Index



19XX or 20XX Year of Event
 Selected County Boundary
 Oklahoma Municipal Boundaries
 COUNTY NAME



Sources: Shannon Van Zandt, Texas A&M, Hazard Planning materials, and 2009-2013 American Community Survey, Tables 811003, 801001, 817001, 808301, 825044, 825001, 825042, 802001, 803002, 826001, 825036, 817001, 825043, 51501, 823025 & 806007

Social Vulnerability - Impacts on Housing & Disaster Resiliency

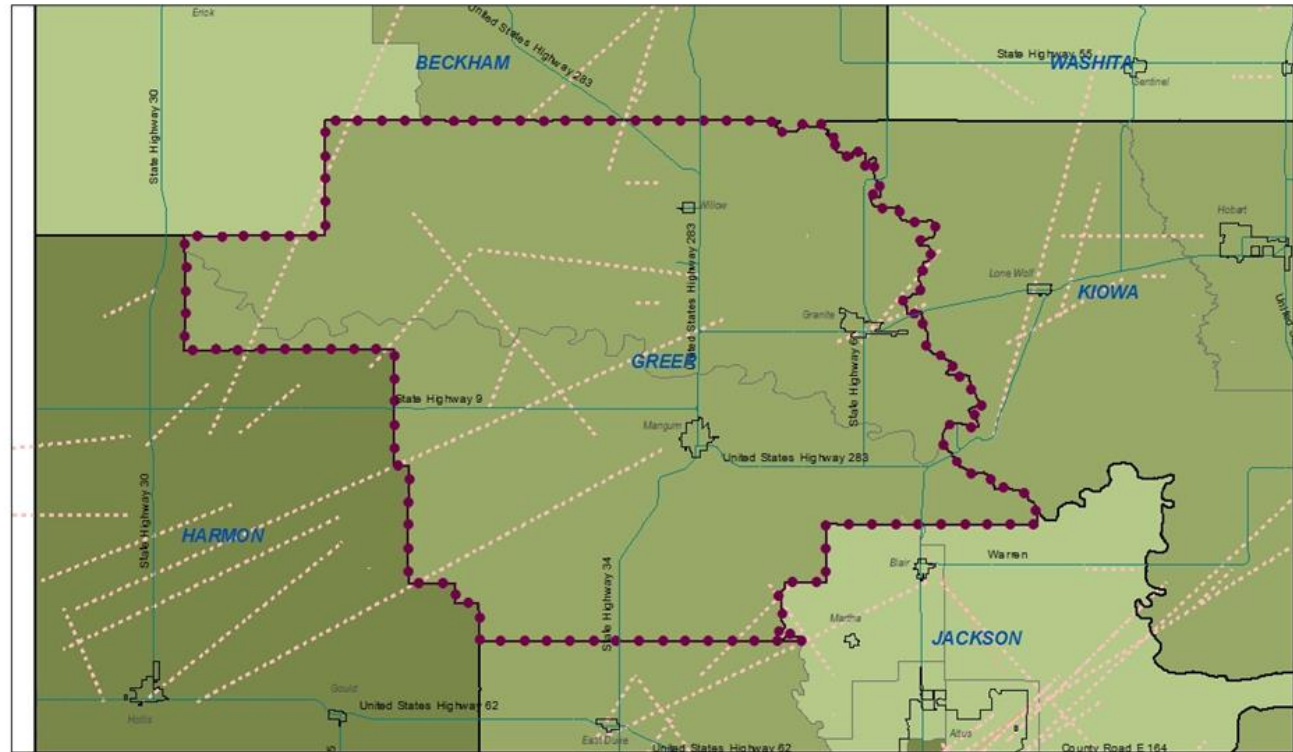
Tornado Events 1950 - 2014

Greer County

of injuries associated with event



Social Vulnerability Index



19XX or 20XX Year of Event

○ Oklahoma Municipal Boundaries

■ Selected County Boundary

□ COUNTY NAME



Sources: Shannon Van Zandt, Texas A&M, Hazard Planning materials, and 2009-2013 American Community Survey, Tables B11003, B01001, B17001, B08301, B25044, B25001, B25042, B02001, B03002, B26001, B25036, B17001, B25043, S1501, B23025 & B06007

Social Vulnerability - Impacts on Housing & Disaster Resiliency

Tornado Events 1950 - 2014 Greer County

Tornado prior to 1996

\$ losses associated with event

- >\$50
- \$50-\$500
- \$500-\$5,000
- \$5,000-\$50,000
- \$50,000-\$500,000
- \$500,000-\$5,000,000
- \$5,000,000-\$50,000,000
- \$50,000,000,000

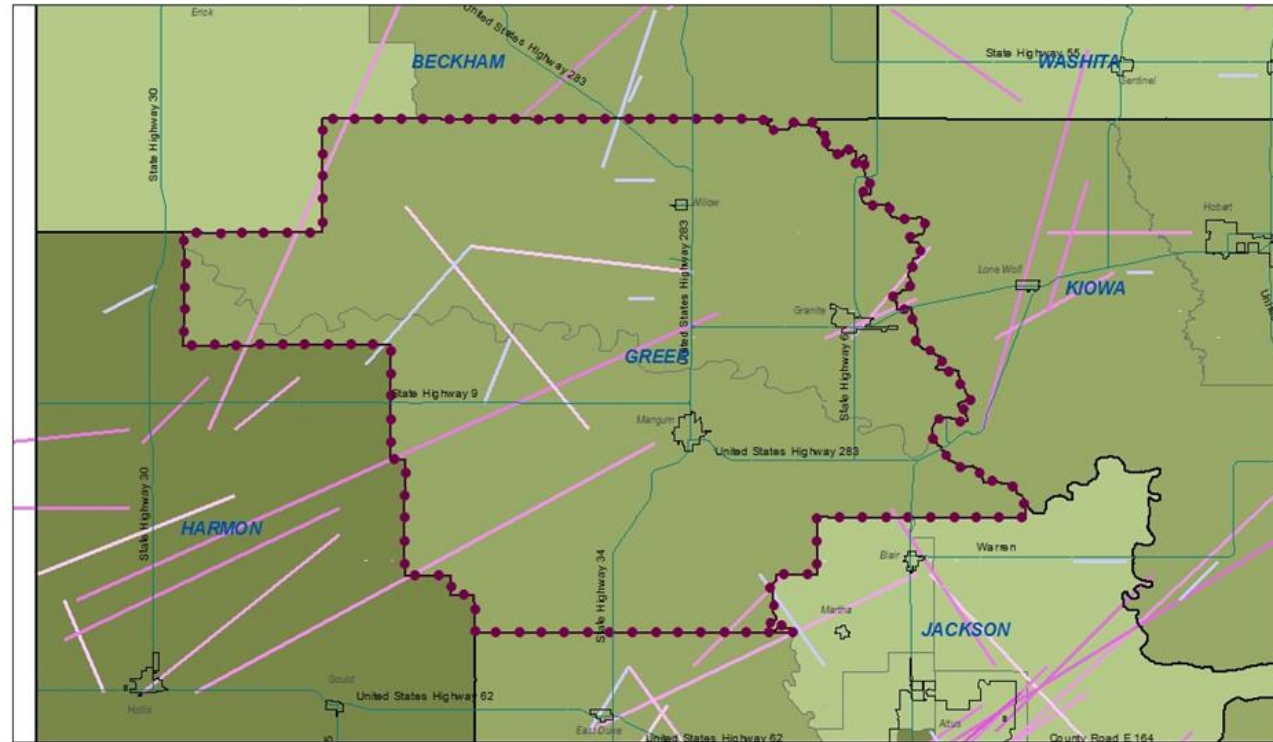
Tornadoes after 1996

**\$ in millions in losses associated with event
(accounting categories changed in 1996)**

- 0.00 - 0.91
- 0.92 - 3.20
- 3.21 - 8.50
- 8.51 - 13.11
- 13.12 - 125.34
- 125.35 - 370.00
- 370.01 - 1000.00
- 1000.01 - 2800.10

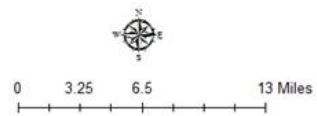
Social Vulnerability Index

- 1.614549 - 2.616235
- 2.616236 - 3.237072
- 3.237073 - 3.854933
- 3.854934 - 4.661284
- 4.661285 - 6.459169



Sources: Shannon Van Zandt, Texas A&M, Hazard Planning materials, and 2009-2013 American Community Survey, Tables B11003, B01001, B17001, B08301, B25044, B25001, B25042, B02001, B03002, B26001, B25036, B17001, B25043, S1501, B23023 & B06007

19XX or 20XX Year of Event ● Selected County Boundary
 Oklahoma Municipal Boundaries COUNTY NAME



C.2.1.2; C.2.1.6; C.2.1.7;C.2.1.8 Shelters from Disaster Event

- Greer County, Hobart- First Methodist Church, 201 S. Washington – primarily setup for events where household has lost power.

C.2.1.3 Public Policy and Governance to Build Disaster Resiliency

Information not available.

C.2.1.4 Local Emergency Response Agency Structure

Information not available.

C.2.1.5 Threat & Hazard Warning Systems

No information found.

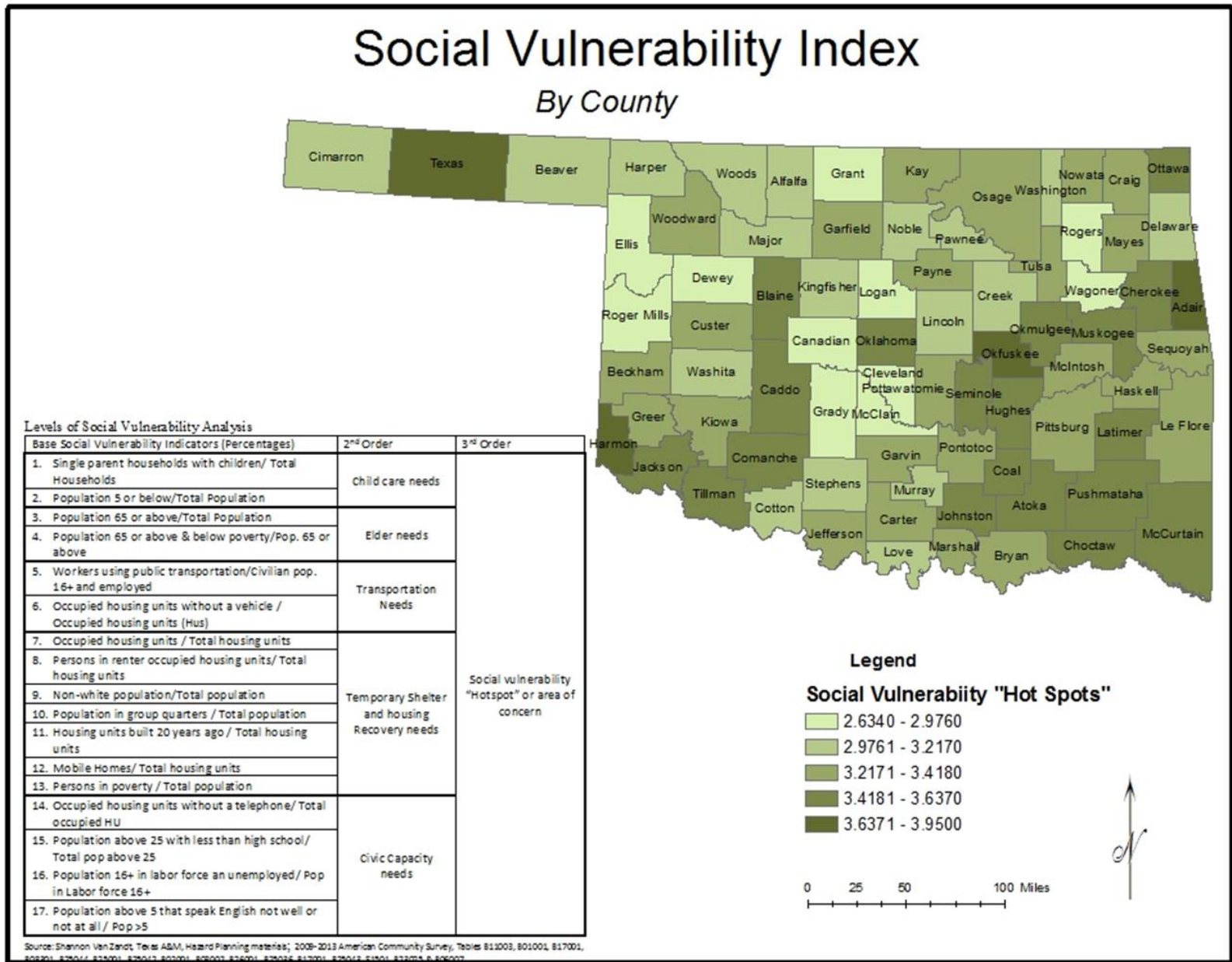
Social Vulnerability

Based on the research work done by the Texas A&M University Hazard Reduction and Recovery Center, an added component is being included in this section. Social vulnerability can place households at a further disadvantage during and after a disaster. This analysis is assessing for the county the levels of social vulnerability based on demographic indicators to highlight 'hotspots' or counties that have higher social vulnerability. That combined with Hazard Mitigation Plans – or lack thereof – can highlight places where additional work is needed to reduce impacts on households.

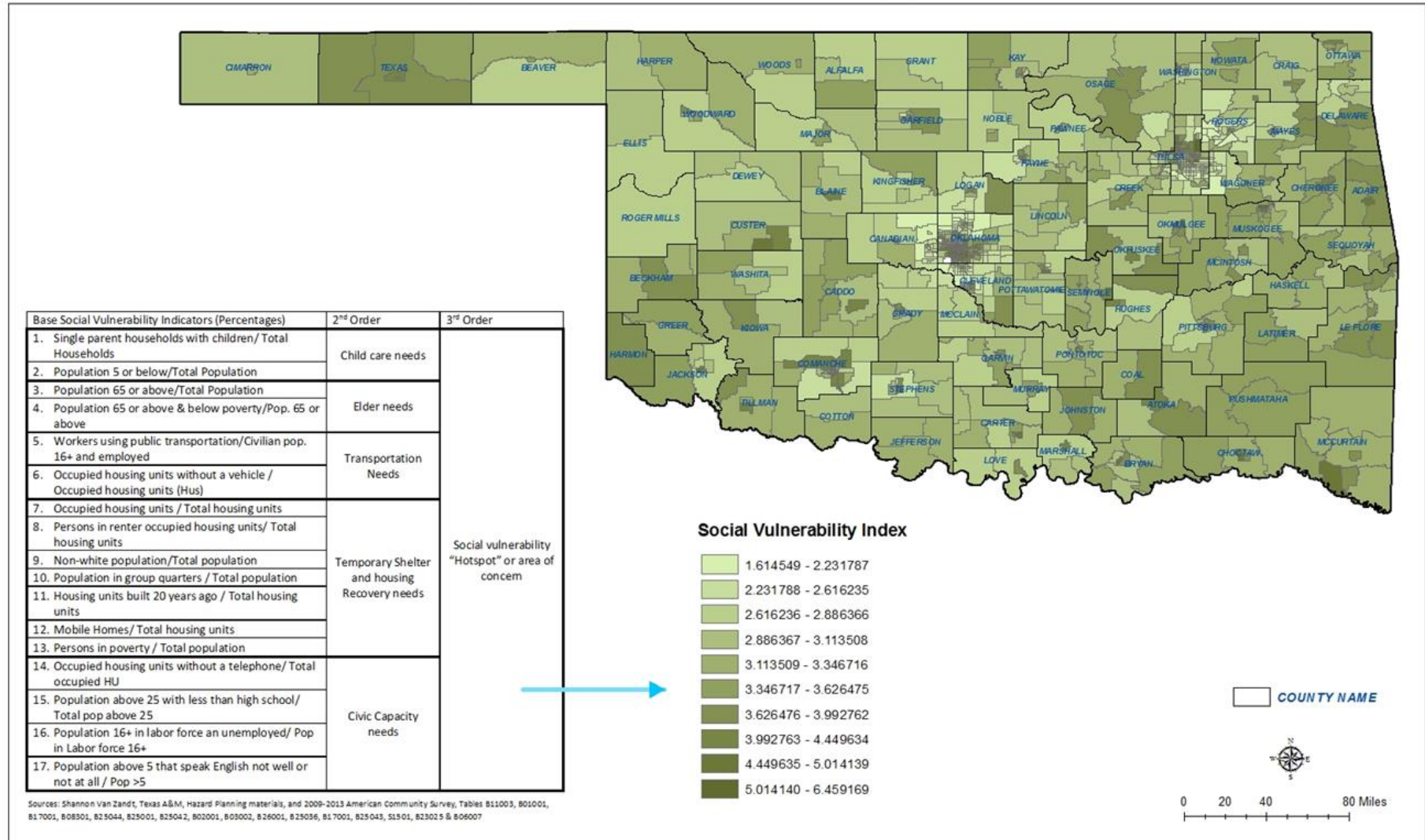
Social Vulnerability Analysis - Greer County

Base Social Vulnerability Indicators (%)		2nd Order	3rd Order
1.) Single Parent Households	8.71%	0.14	3.379 Social Vulnerability 'Hotspot' or Area of Concern
2.) Population Under 5	5.33%	(Child Care Needs)	
3.) Population 65 or Above	17.97%	0.253	
4.) Population 65 or Above & Below Poverty Rate	7.34%	(Elder Needs)	
5.) Workers Using Public Transportation	0.00%	0.074	
6.) Occupied Housing Units w/o Vehicle	7.44%	(Transportation Needs)	
7.) Housing Unit Occupancy Rate	82.21%	2.651 (Temporary Shelter and Housing Recovery Needs)	
8.) Rental Occupancy Rate	33.04%		
9.) Non-White Population	22.68%		
10.) Population in Group Quarters	18.66%		
11.) Housing Units Built Prior to 1990	88.11%		
12.) Mobile Homes, RVs, Vans, etc.	10.51%		
13.) Poverty Rate	9.90%		
14.) Housing Units Lacking Telephones	2.05%	0.26 (Civic Capacity Needs)	
15.) Age 25+ With Less Than High School Diploma	20.50%		
16.) Unemployment Rate	2.44%		
17.) Age 5+ Which Cannot Speak English Well or Not At All	1.01%		

Sources: Shannon Van Zandt, Texas A&M, Hazard Planning materials, and 2009-2013 American Community Survey, Tables B11003, B01001, B17001, B08301, B25044, B25001, B25042, B02001, B03002, B26001, B25036, B17001, B25043, S1501, B23025 & B06007



Social Vulnerability - Impacts on Housing & Disaster Resiliency



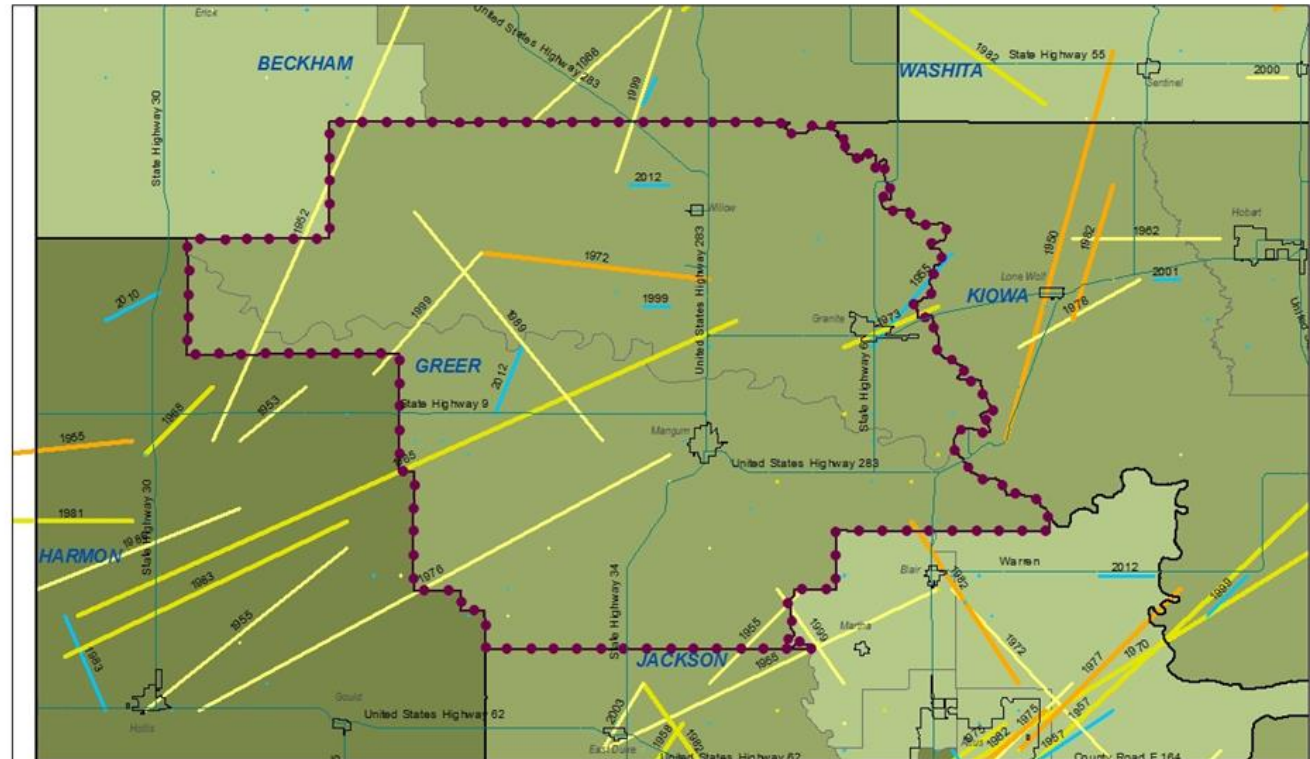
Social Vulnerability - Impacts on Housing & Disaster Resiliency

Tornado Events 1950 - 2014 Greer County

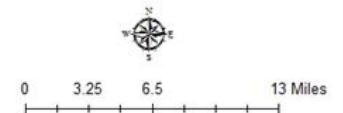
Tornado Magnitude



Social Vulnerability Index



19XX or 20XX Year of Event
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Social vulnerability combined with the devastating impacts of a natural or man-made disaster can compound a household's ability to recover and in fact can place those individuals at an even greater gap or disadvantage prior to the event (Shannon Van Zandt, Texas A&M, Hazard Planning).

This county falls about average per this index for social vulnerability when comparing as a county to other counties in the state. There are no particularly elevated census tracts within the county where increased social vulnerability is more elevated than other locations.

Recommendations for this county:

- Create and maintain the county HMP and include attention to areas within the county that in addition to physical vulnerability may have compounding social vulnerability factors.
- Create and maintain a storm shelter registry.
- Efforts to strengthen building codes related to tornadoes and natural disasters should be considered.
- Planning for shelters from disaster events for multifamily, HUD and LIHTC units, in addition to all housing in the community should be incorporated with any effort to increase housing.