

## Special Topics

## Ellis 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 5 key cities within the county (Shattuck, Arnett, Gage, Fargo, Catesby). Populations in all of these towns are under 2,000 and thus a comprehensive plan is not expected to be prepared.

**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.

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.

Ellis County does not have a Hazard Mitigation Plan.

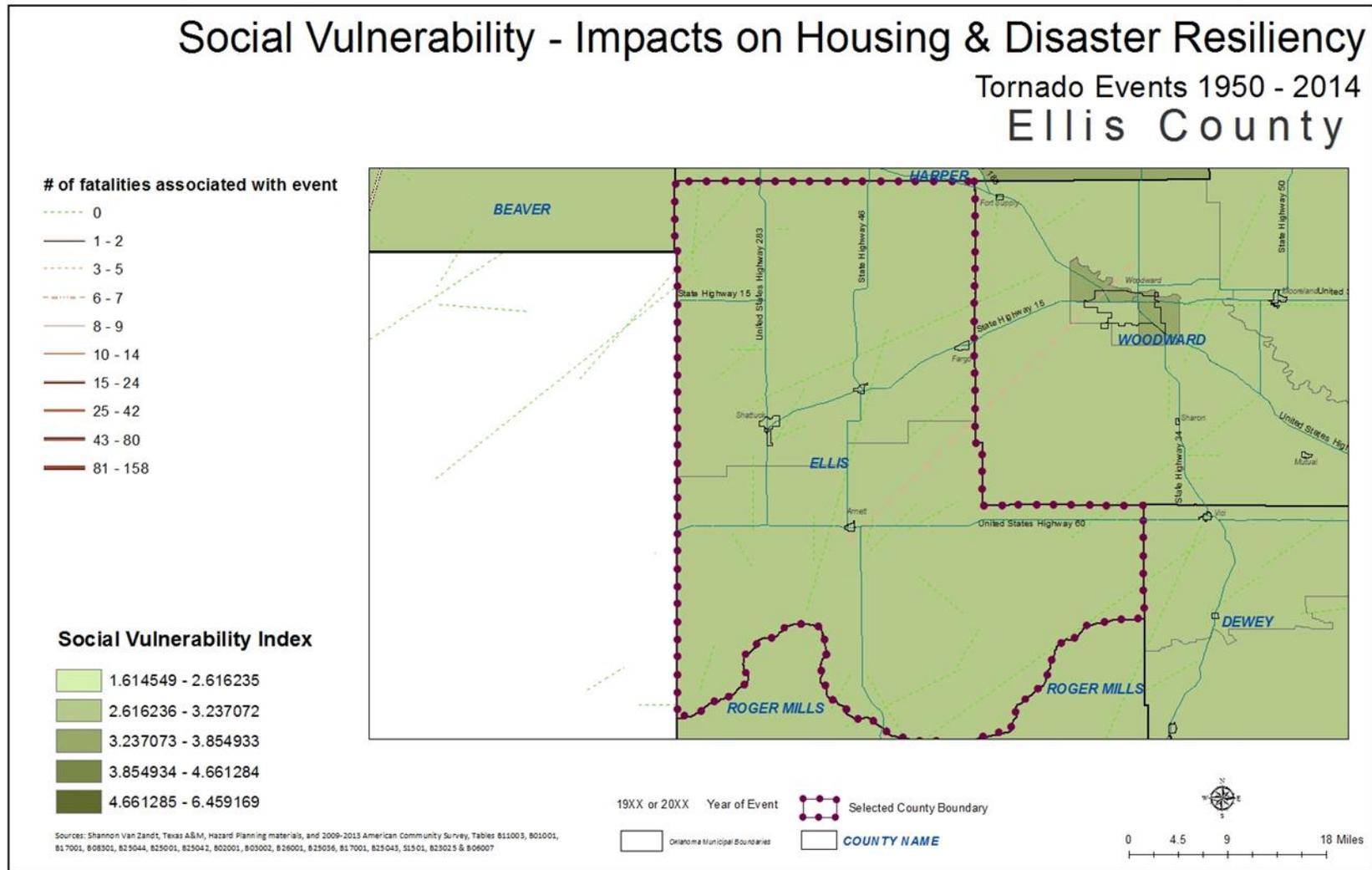
#### C.2.1.1. Historical Data on Natural Disasters and Other Hazards

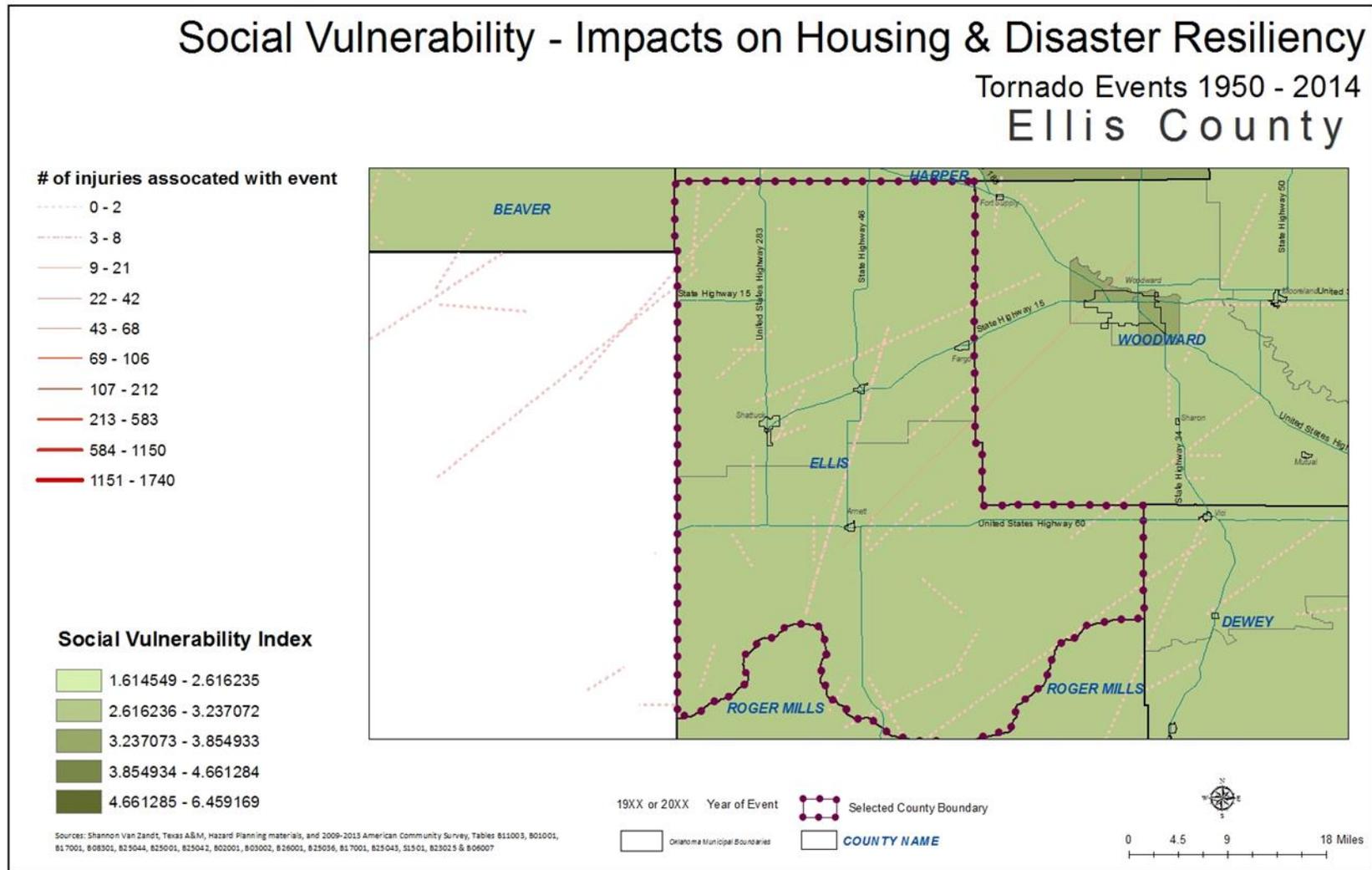
Data on historical damages and casualties is typically collected as part of a **Hazard Mitigation Plan** preparation to determine the appropriate planning measures and actions to take before and after an event.

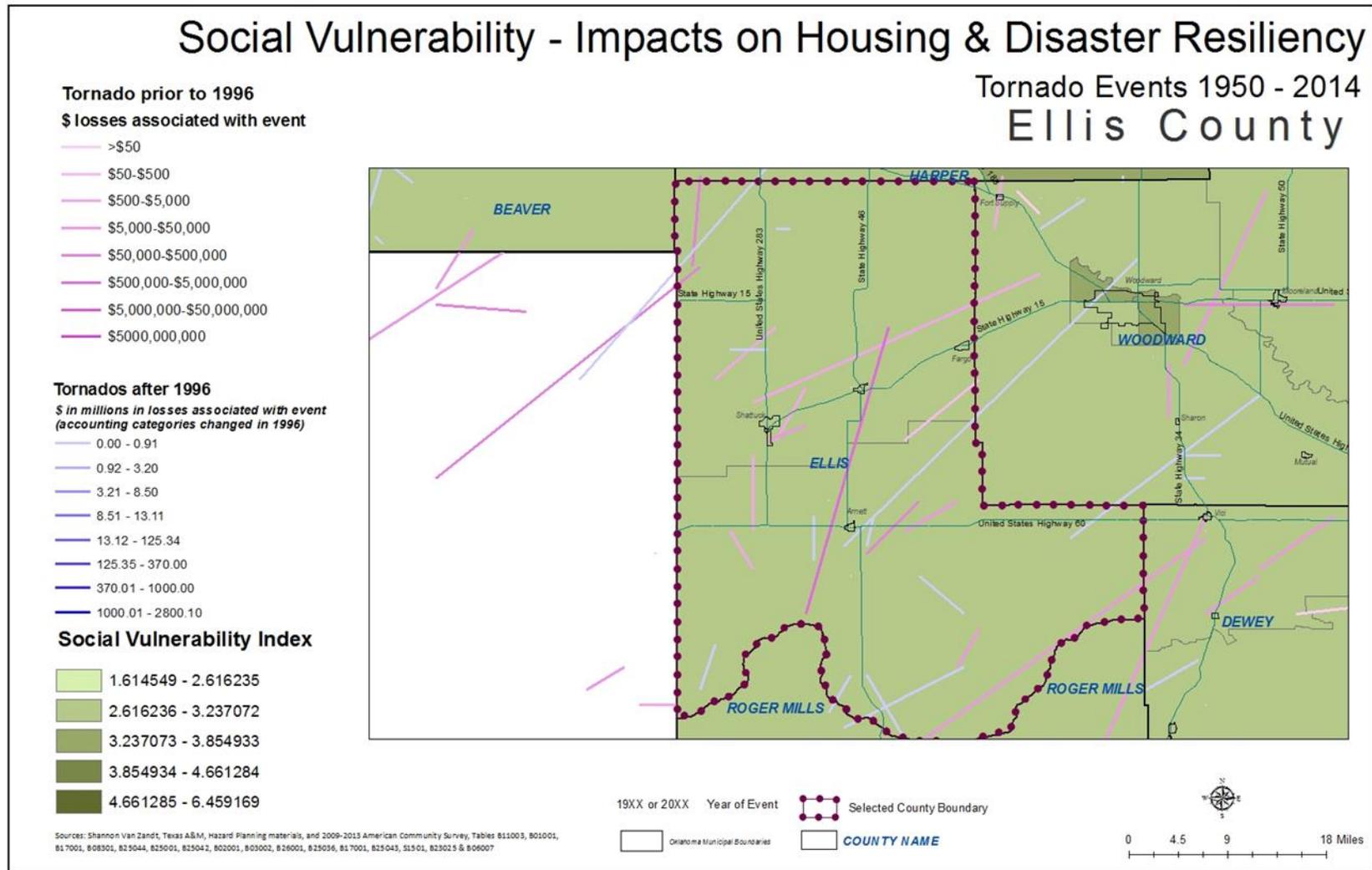
Flooding, based on FEMA FIRM maps, does not show floodplain areas in the county. The National Flood Hazard Layer (Official) is not available for this area. Flash flooding is a concern for all parts of the state after heavy precipitation.

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

Historic data on tornados between 1950-2014 there are 68 tornados documented. There were 35 injuries that occurred connected to these tornados, with 29 of those injuries happening in the 2012 tornado. There were 6 fatalities connected to tornadoes during this time period, all of which occurred in 2012. Property losses between 1950-1996 ranged from \$55,000.00 to \$550,000.00. (The accounting methods used for losses changed in 1996.) The losses estimated between 1996-2014 was \$1,270,000.00.







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

Information not available.

**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**

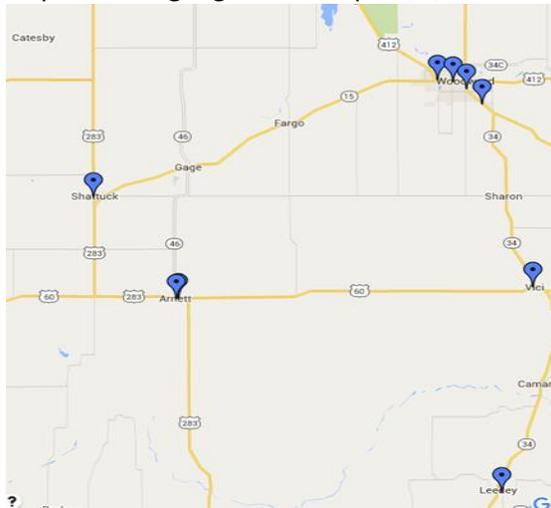
The identified Threat & Hazard Warning Systems for Ellis County includes:

- Sirens
- Phone notification
- Emergency Broadcast System
- Facebook

Facebook posts are very active by the Ellis County Emergency Management and residents seem engaged. Noted in a post: “east side of shattuck by the baseball field” outdoor sirens cannot be heard.

Google Mapped sirens in Oklahoma:

<https://www.google.com/maps/d/u/0/viewer?mid=zkgp3PmLxLzg.kXQeGF45FpQg&hl=en>



**Social Vulnerability**

Based on the research work done by the Texas A&M University Hazard Reduction and Recovery Center [CITATION], 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 - Ellis County**

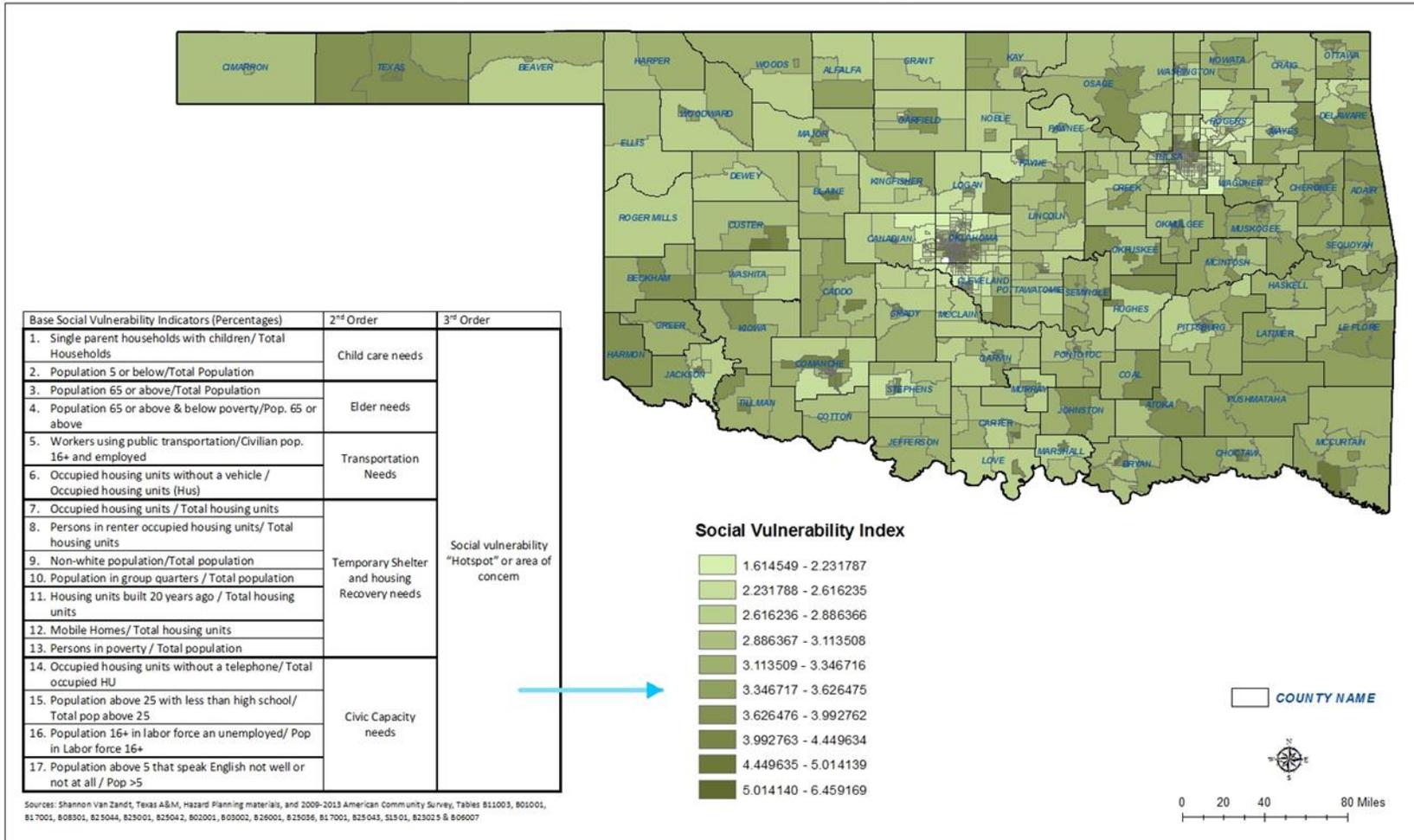
Base Social Vulnerability Indicators (%)		2nd Order	3rd Order
1.) Single Parent Households	9.10%	0.154	<b>2.974</b> <b>Social Vulnerability</b> <b>'Hotspot' or Area of</b> <b>Concern</b>
2.) Population Under 5	6.29%	(Child Care Needs)	
3.) Population 65 or Above	19.83%	0.37	
4.) Population 65 or Above & Below Poverty Rate	17.14%	(Elder Needs)	
5.) Workers Using Public Transportation	0.26%	0.018	
6.) Occupied Housing Units w/o Vehicle	1.56%	(Transportation Needs)	
7.) Housing Unit Occupancy Rate	76.15%	<b>2.267</b> (Temporary Shelter and Housing Recovery Needs)	
8.) Rental Occupancy Rate	22.26%		
9.) Non-White Population	10.61%		
10.) Population in Group Quarters	2.21%		
11.) Housing Units Built Prior to 1990	86.51%		
12.) Mobile Homes, RVs, Vans, etc.	12.96%		
13.) Poverty Rate	15.99%	<b>0.165</b> (Civic Capacity Needs)	
14.) Housing Units Lacking Telephones	0.69%		
15.) Age 25+ With Less Than High School Diploma	11.70%		
16.) Unemployment Rate	3.24%		
17.) Age 5+ Which Cannot Speak English Well or Not At All	0.91%		

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



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

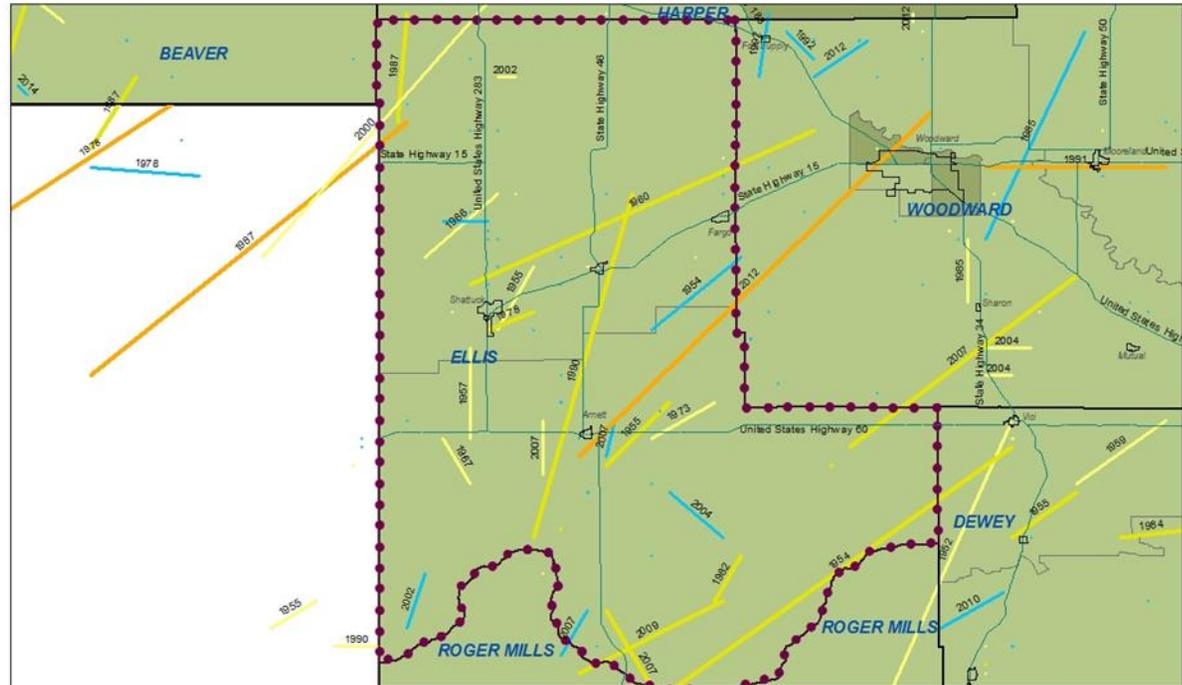
## Tornado Events 1950 - 2014

### ELLIS COUNTY

**Tornado Magnitude**



**Social Vulnerability Index**



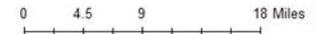
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19XX or 20XX Year of Event

□ Oklahoma Municipal Boundaries

Selected County Boundary

□ COUNTY NAME



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 below the state score per this index for social vulnerability when comparing as a county to other counties in the state (less socially vulnerable). There are no particularly elevated census tracts within the county where increased social vulnerability is notable.

**Recommendations for this county:**

- Update 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.
- 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.