

Special Topics

Hughes 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 three key cities within the county: Holdenville, Allen, and Wetumka.

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. Of the 3 key cities in Hughes County no have comprehensive plans were found.

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.

Hughes County does not have a current Hazard Mitigation Plan. The previous HMP has expired. However the county is in the process of developing a new HMP and has contracted an external party to develop the 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.

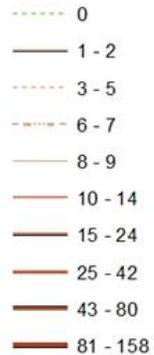
Historic data on tornados between 1950-2014 there are 36 tornados documented. There were 62 injuries that occurred connected to these tornados, with 11 of those injuries happening in the 1961 tornado and 32 injuries occurring in the 1950 tornado. There were 7 fatalities connected to tornadoes during this time period, with 5 happening in 1950. Property losses between 1961-1996 ranged from \$452,053.00 to \$4,520,650.00. (The accounting methods used for losses changed in 1996.) The losses estimated between 1996-2014 was \$230,000.00.

Social Vulnerability - Impacts on Housing & Disaster Resiliency

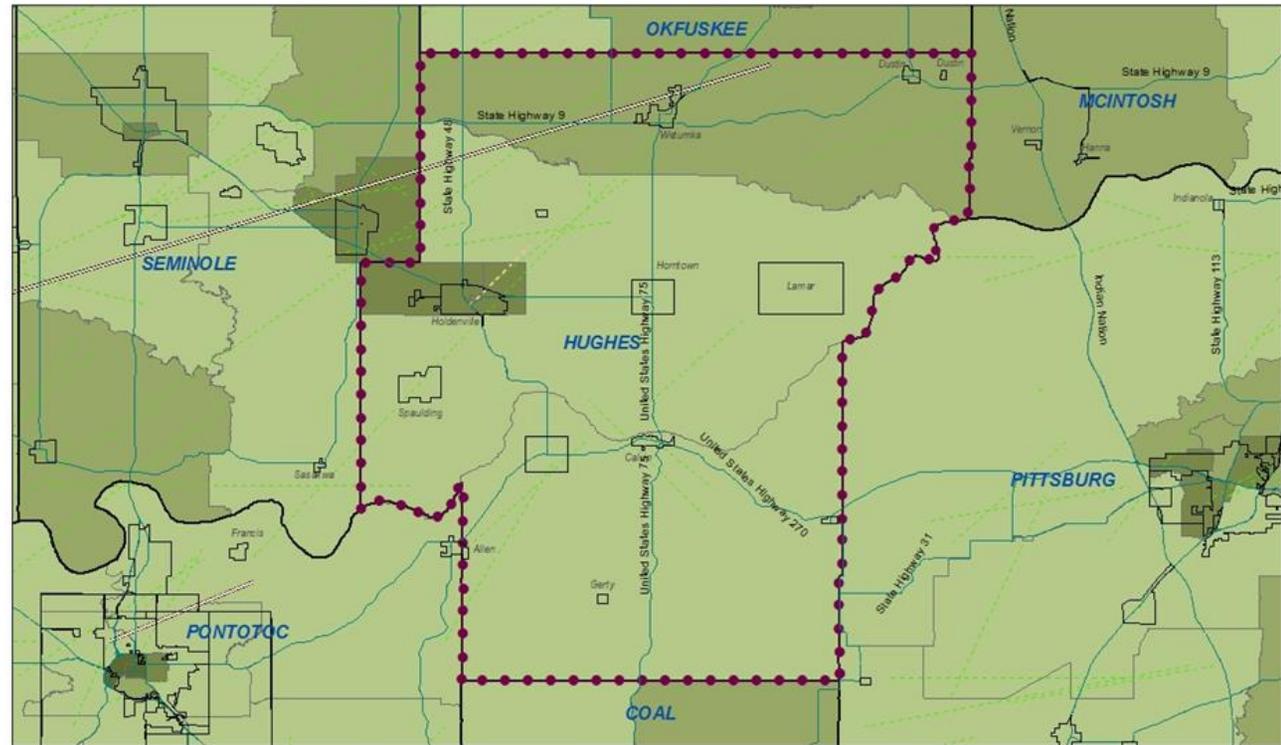
Tornado Events 1950 - 2014

Hughes County

of fatalities associated with event



Social Vulnerability Index



19XX or 20XX Year of Event

Selected County Boundary

Oklahoma Municipal Boundaries

COUNTY NAME



0 3.5 7 14 Miles

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, 825056, 817001, 825043, 51901, 823025 & 806007

Social Vulnerability - Impacts on Housing & Disaster Resiliency

Tornado Events 1950 - 2014

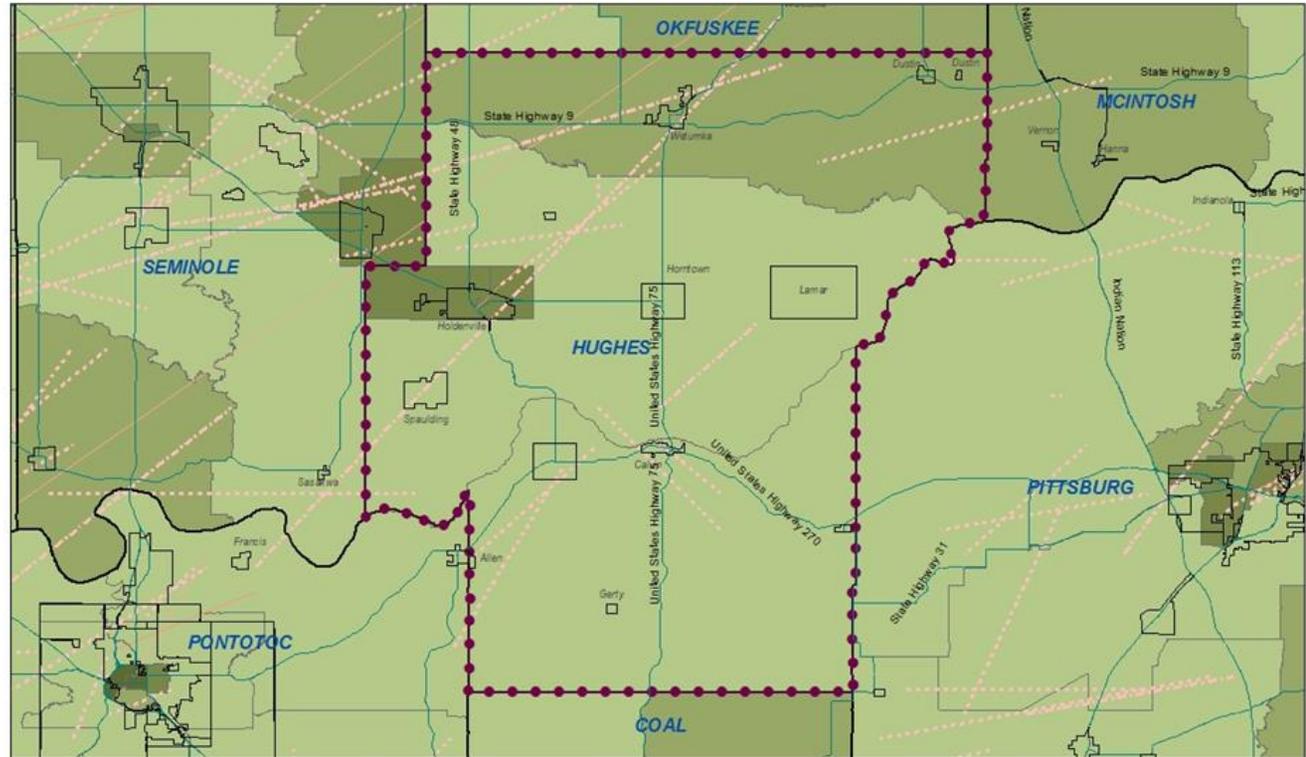
Hughes County

of injuries associated with event

- 0 - 2
- 3 - 8
- 9 - 21
- 22 - 42
- 43 - 68
- 69 - 106
- 107 - 212
- 213 - 583
- 584 - 1150
- 1151 - 1740

Social Vulnerability Index

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



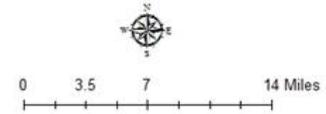
Sources: Shannon Van Zandt, Texas A&M, Hazard Planning materials, and 2009-2013 American Community Survey, Tables B11003, B01001, B17001, B08301, B25044, B25001, B25042, B02001, B03002, B26001, B29036, B17002, B25043, S1301, B29025 & B06007

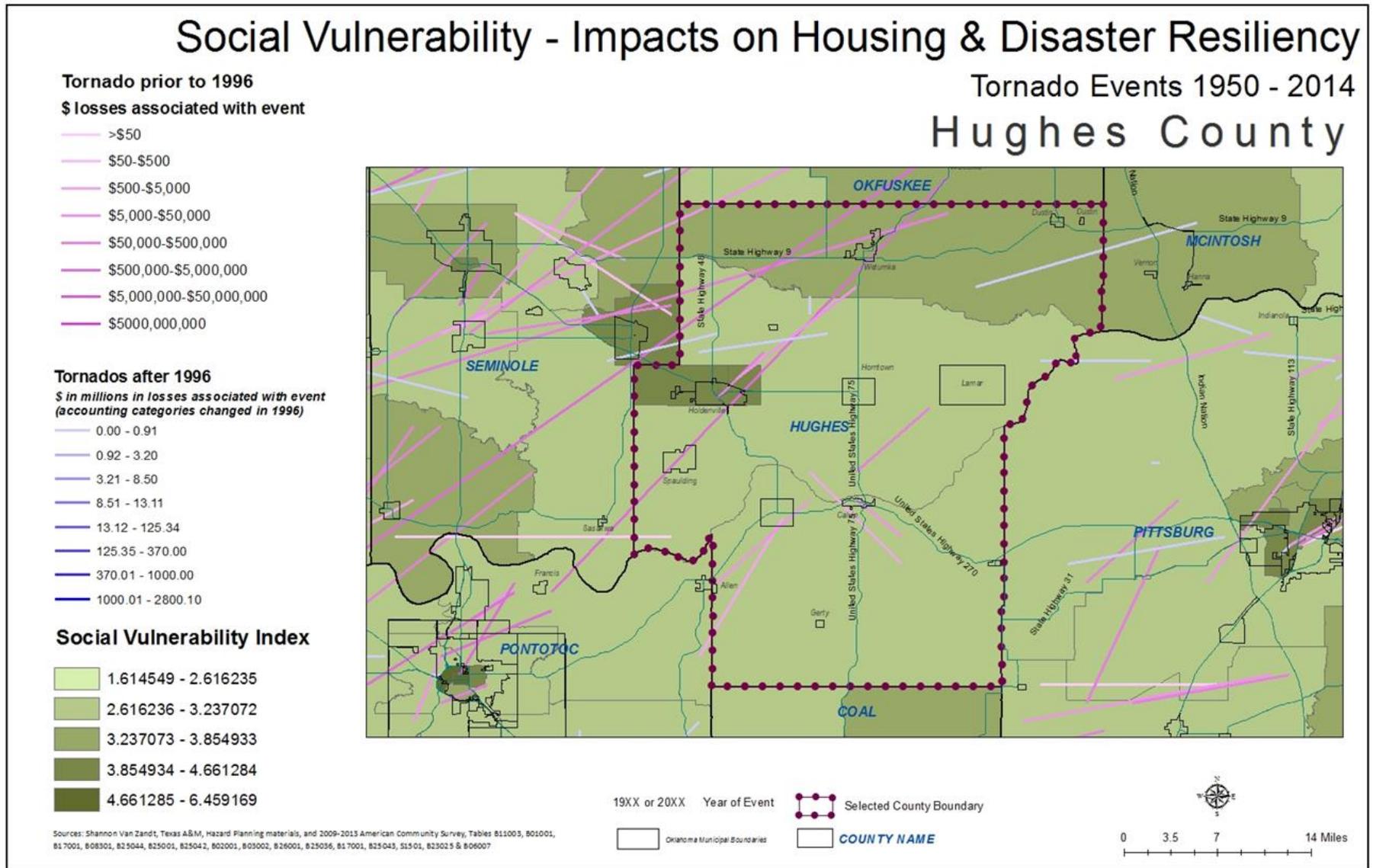
19XX or 20XX Year of Event

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

Interviews with Emergency Managers and city/county officials yielded a total of 100 individual shelters, 3 public shelters, and 0 shelters identified as part of HUD/LIHTC housing that are documented at the city and/or county level.

Based on this information and information gained from the interviews more public shelters are needed for Hughes County, however no estimates were provided.

C.2.1.3 Public Policy and Governance to Build Disaster Resiliency

Information not available.

C.2.1.4 Local Emergency Response Agency Structure

Hughes County does not have a current Hazard Mitigation Plan/Disaster Recovery Plan / Action Plan/Disaster Resilience Plan/Emergency Management Plan.

Hughes County is in the process of developing a new hazard mitigation plan with will include a structure for local emergency response.

C.2.1.5 Threat & Hazard Warning Systems

The identified Threat & Hazard Warning Systems for Hughes County include:

- Sirens
- Phone notification
- Emergency Broadcast System

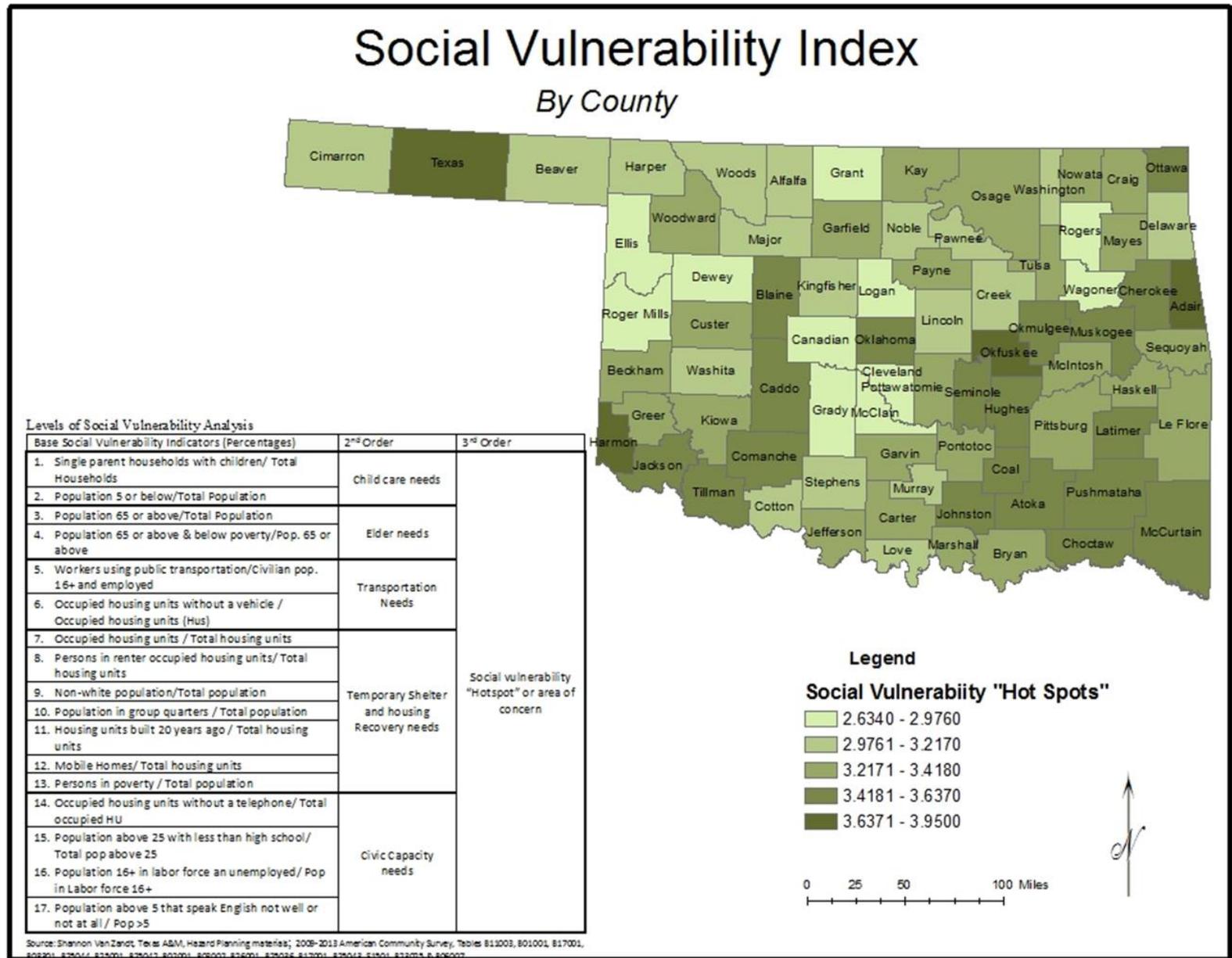
Social Vulnerability

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.

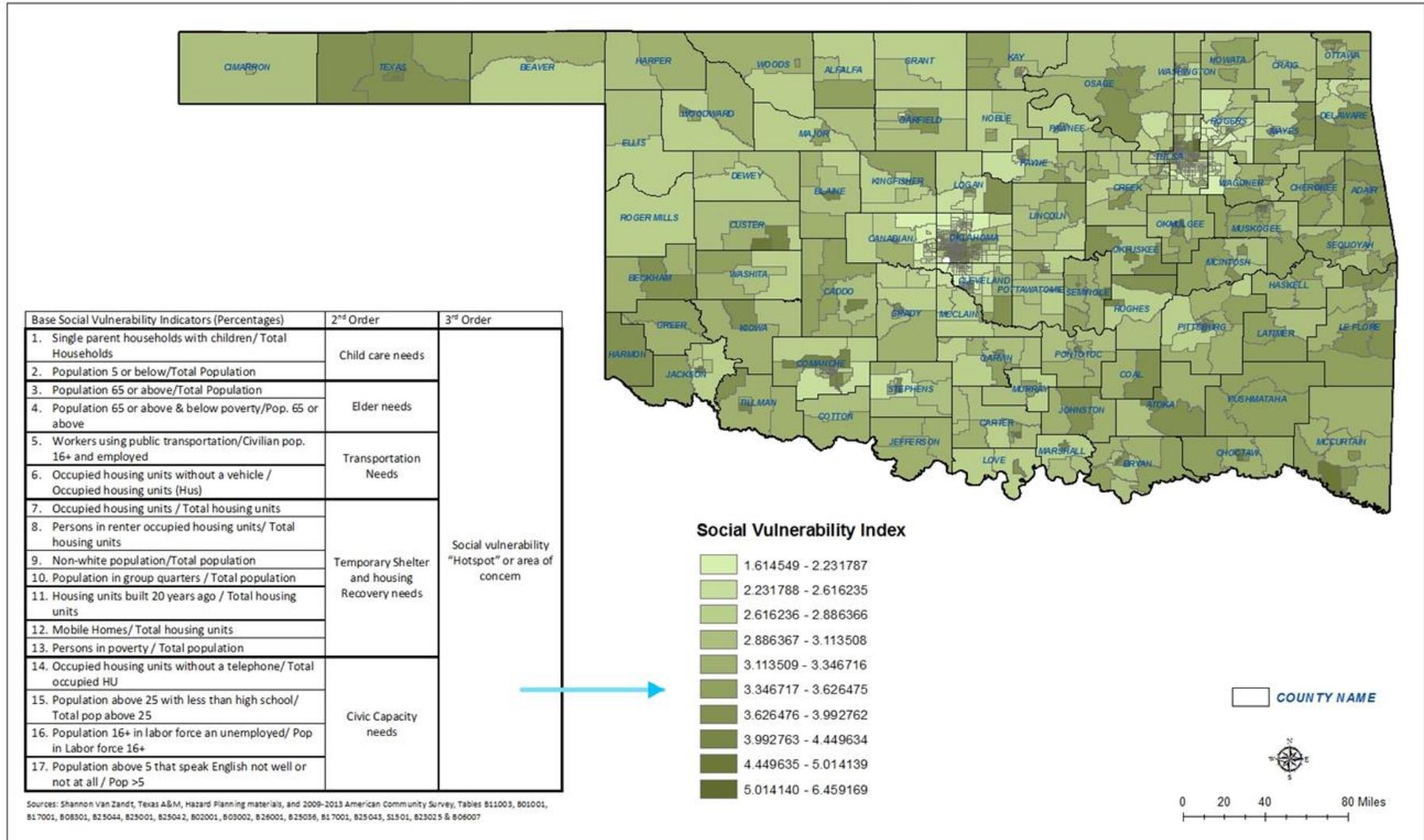
Social Vulnerability Analysis - Hughes County			
Base Social Vulnerability Indicators (%)		2nd Order	3rd Order
1.) Single Parent Households	14.18%	0.197	3.536 Social Vulnerability 'Hotspot' or Area of Concern
2.) Population Under 5	5.49%	(Child Care Needs)	
3.) Population 65 or Above	17.96%	0.321	
4.) Population 65 or Above & Below Poverty Rate	14.13%	(Elder Needs)	
5.) Workers Using Public Transportation	0.82%	0.069	
6.) Occupied Housing Units w/o Vehicle	6.10%	(Transportation Needs)	
7.) Housing Unit Occupancy Rate	79.24%	2.605 (Temporary Shelter and Housing Recovery Needs)	
8.) Rental Occupancy Rate	23.09%		
9.) Non-White Population	33.75%		
10.) Population in Group Quarters	12.26%		
11.) Housing Units Built Prior to 1990	75.69%		
12.) Mobile Homes, RVs, Vans, etc.	15.40%		
13.) Poverty Rate	21.08%		
14.) Housing Units Lacking Telephones	2.11%	0.345 (Civic Capacity Needs)	
15.) Age 25+ With Less Than High School Diploma	22.70%		
16.) Unemployment Rate	8.54%		
17.) Age 5+ Which Cannot Speak English Well or Not At All	1.10%		

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

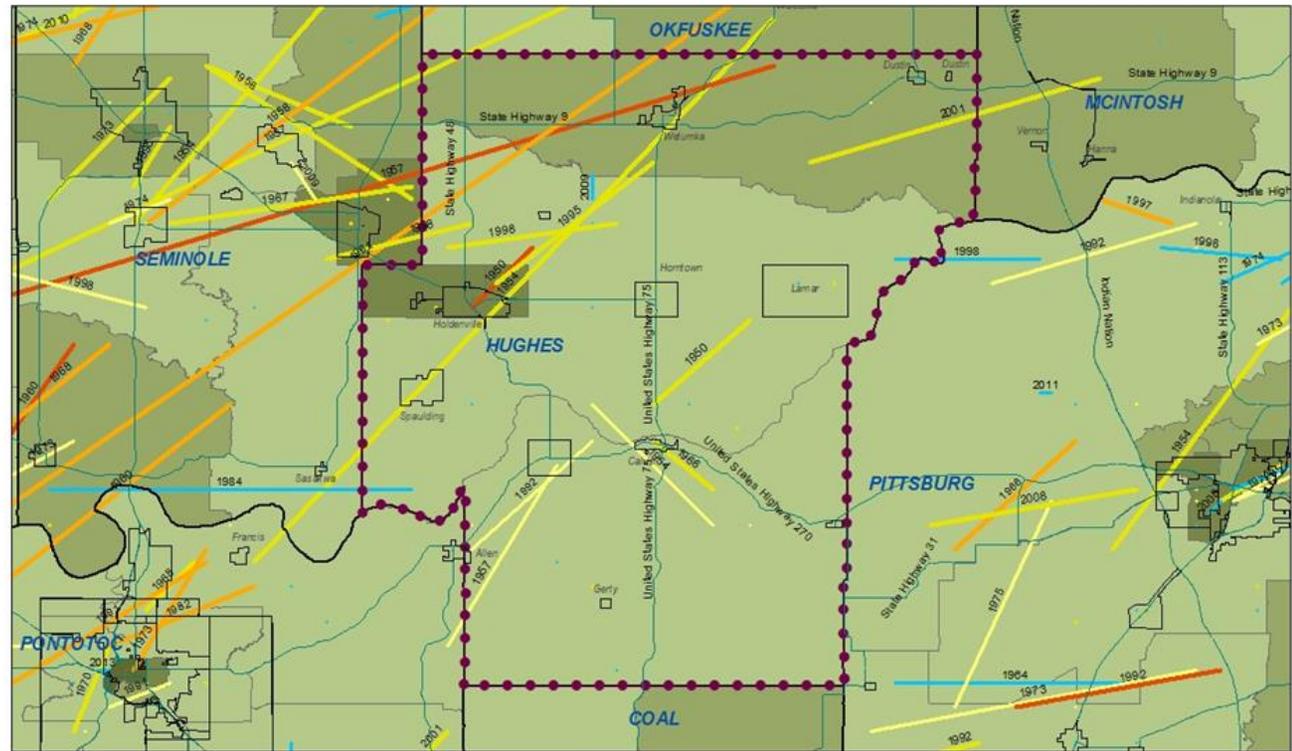
Tornado Events 1950 - 2014

Hughes County

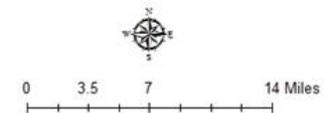
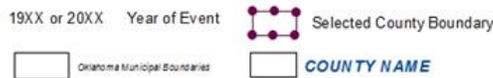
Tornado Magnitude



Social Vulnerability Index



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 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 above the average per this index for social vulnerability when comparing as a county to other counties in the state. At the census tract area around Holdenville has increased vulnerability which may negatively impact recovery after an event. Tornadoes have hit this area and therefore attention to these vulnerable populations for preparedness and recovery may be relevant.

Recommendations for this county:

- Complete development of new county HMP and continue to maintain the HMP. 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.
- Apply for grants / funding for additional public shelters once new HMP has been completed and has been accepted by the state and FEMA.