

DISASTER VULNERABILITY ¹ ASSESSMENT: ALAMANCE COUNTY

ENST 698 Capstone

Spring 2012

Our Team

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Outline

- Background Tools: MDC Assessment Tool
- Social and Physical Vulnerability
- Vulnerability Maps
- Interview Methods and Findings
- Final Product
- Limitations
- Recommendations

MDC Tool

- Identify hazards
- Map risks
- Identify:
 - physically vulnerable people and property
 - socially vulnerable populations
 - environmental hazards
- Engage community
- Synthesize and present

Community Based Vulnerability Assessment

A Guide to Engaging Communities in Understanding
Social and Physical Vulnerability to Disasters

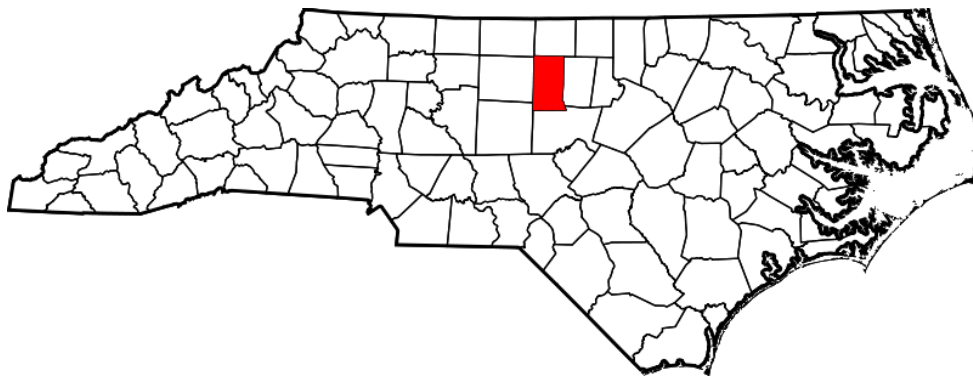


Emergency Preparedness Demonstration Project

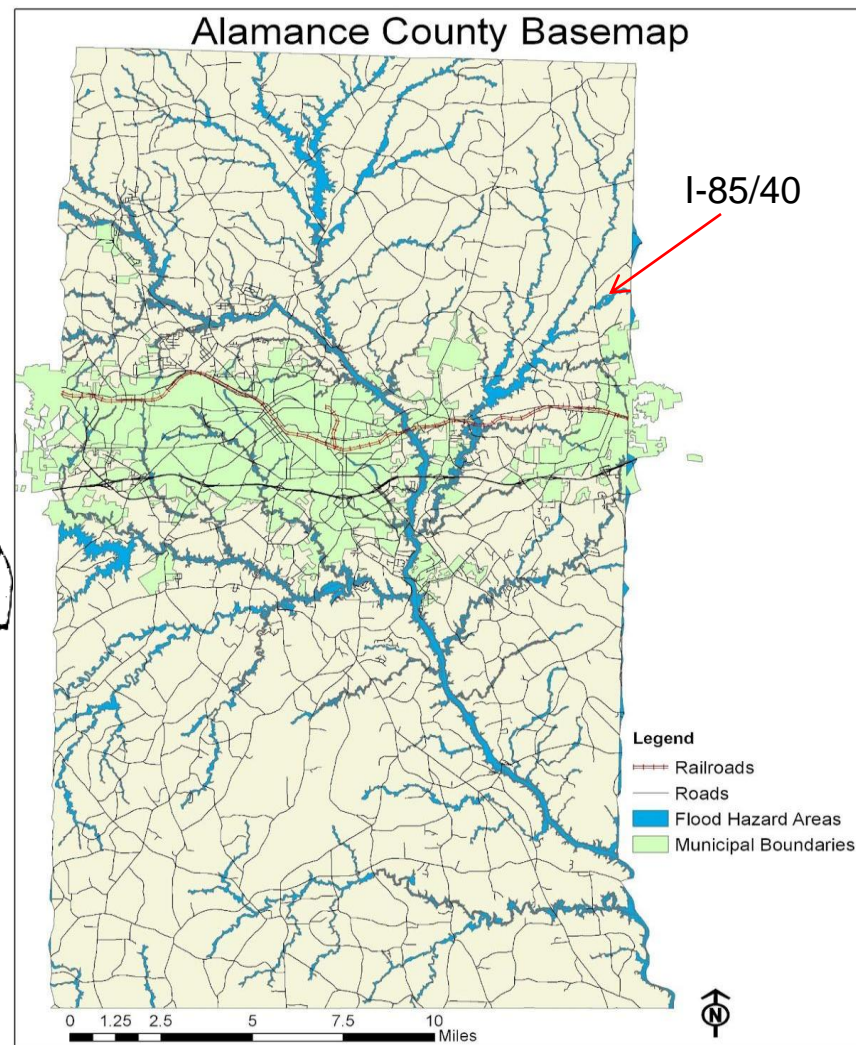
March 2009

Alamance County: Community Profile

- Historical Alamance
- Alamance County today



<https://www.familysearch.org/learn/wiki/en/images/6/6b/Nc-alamance.png>



Social vs. Physical Vulnerability

Social: based on social characteristics such as income, age, language ability, and physical disability

Physical: based on proximity to potentially hazardous facilities or risks and concentration of people or property

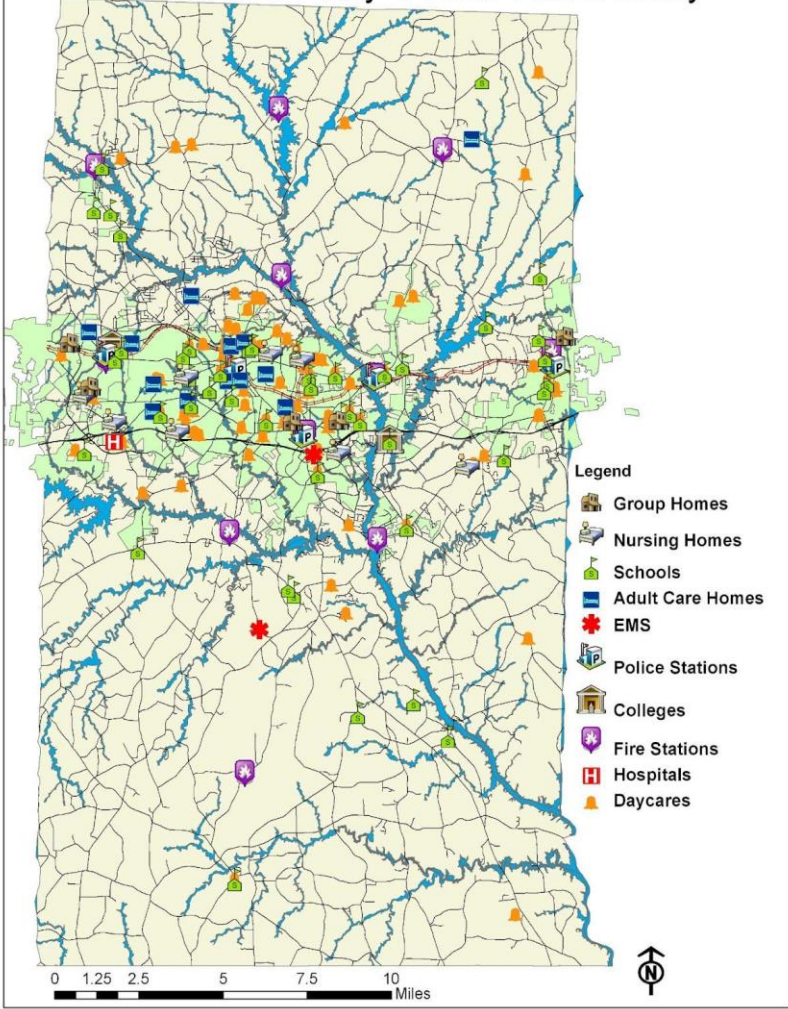
Social Vulnerability

Group	% Alamance County	% NC	% USA
Physically Vulnerable:			
Elderly (65+)	14.61%	12.94%	13.04%
Single Head of House*	10.69%	10.09%	9.56%
Physically Disabled	14.05%	13.20%	11.95%
Institutionalized Persons	0.56%	1.19%	1.10%
Economically Vulnerable			
Median household income	\$44,058	\$43,326	\$50,046
Households living below poverty line	12.13%	11.96%	10.49%
Vehicle unavailability	7.51%	6.59%	9.08%
Culturally and Historically Vulnerable			
Non-English speaking	5.89%	4.81%	8.72%
Ethnicity:			
Hispanic	11.00%	8.39%	16.35%
Non-Hispanic	89.00%	91.61%	83.65%
Race:			
African-American	18.77%	21.48%	12.61%
American-Indian	0.67%	1.28%	9.50%
Asian-American	1.22%	2.19%	4.75%
White	71.08%	68.47%	72.41%
Two or more races	2.08%	2.16%	2.92%
Other	6.18%	4.42%	6.19%
Structurally Vulnerable			
Residents living in mobile homes	13.98%	14.00%	6.55%
Other			

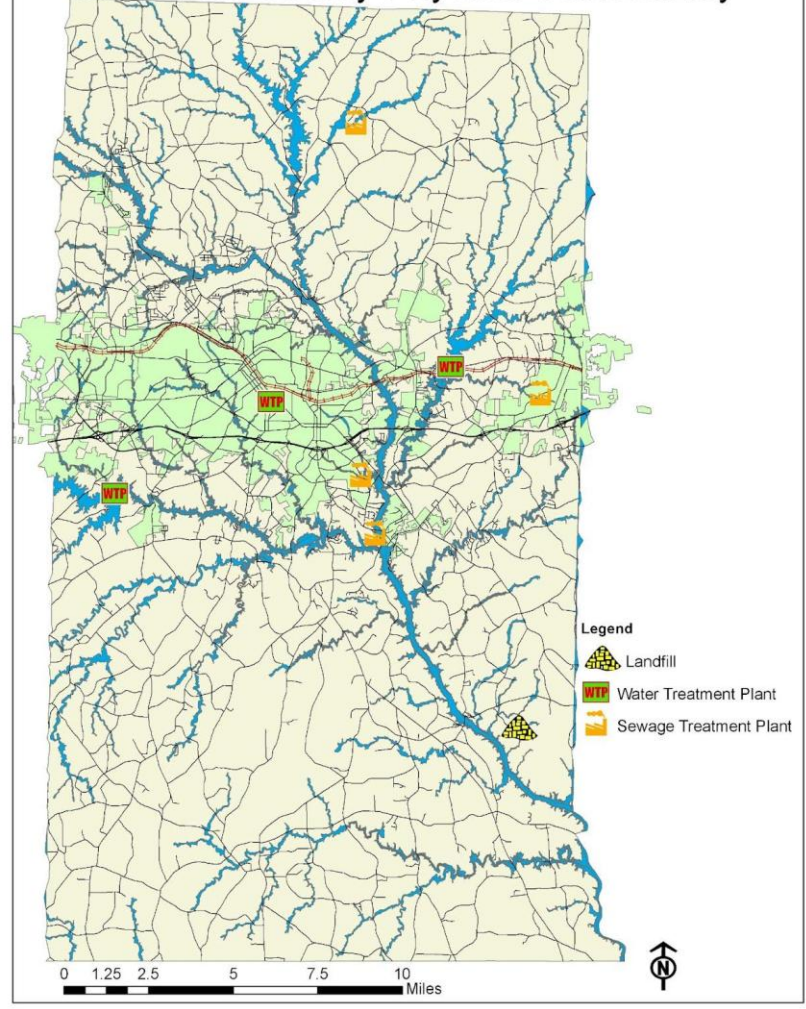
Physical Vulnerability

- Historical susceptibility to natural disasters
 - Thunderstorms
 - Flooding
 - Windstorms
- 133 mobile home parks in Alamance County
- Individuals living in close proximity to hazardous sites

Alamance County Social Vulnerability



Alamance County Physical Vulnerability



Interview Methods

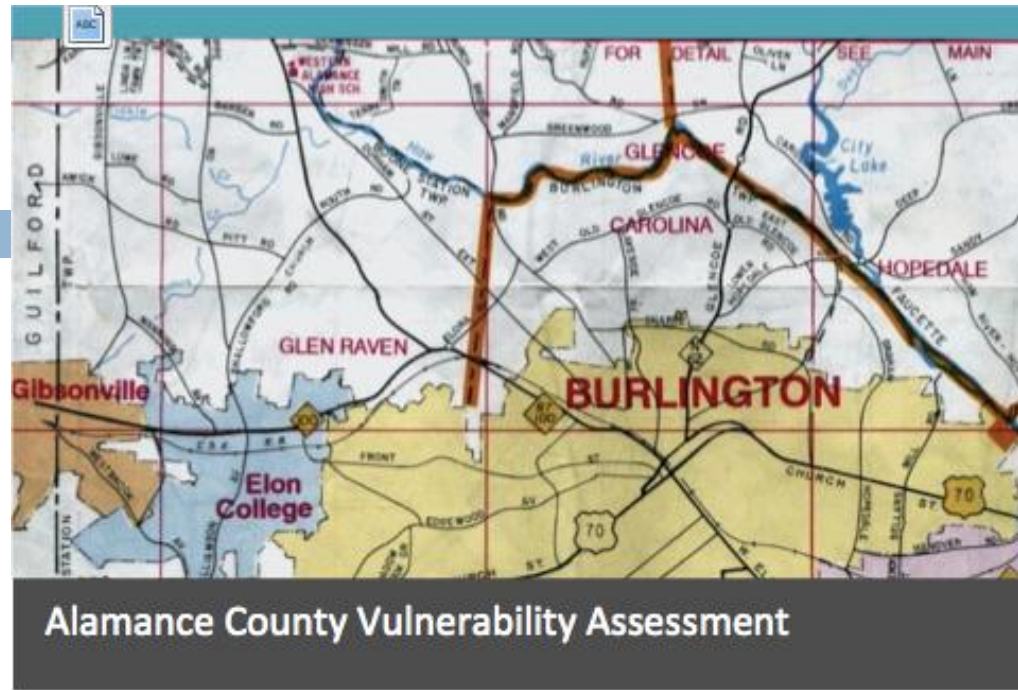
- Interview guides
- CITI Training and IRB Approval
- Interviews with key informants
- Coding

Interview Findings

- Common emergencies: weather-related, public health, and transportation
- Lack of mass notification system
- Need for further public education and awareness
- Desire for more fluid and cohesive plan

Final Product

Vulnerability Assessment



UNC Institute for the Environment
Spring 2012 Capstone



Alamance County Vulnerability Assessment Capstone Team

Limitations

- Limited data access
- Varying standards of 'natural disaster'
- Communication complications between team and key informant contacts
- Limited time, resources and access to community members

Recommendations

- Pertussis as a public health hazard
- Emergency call out system
- GIS layered maps of mobile home facilities and non-English speaking populations
- Disaster education

Acknowledgements

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