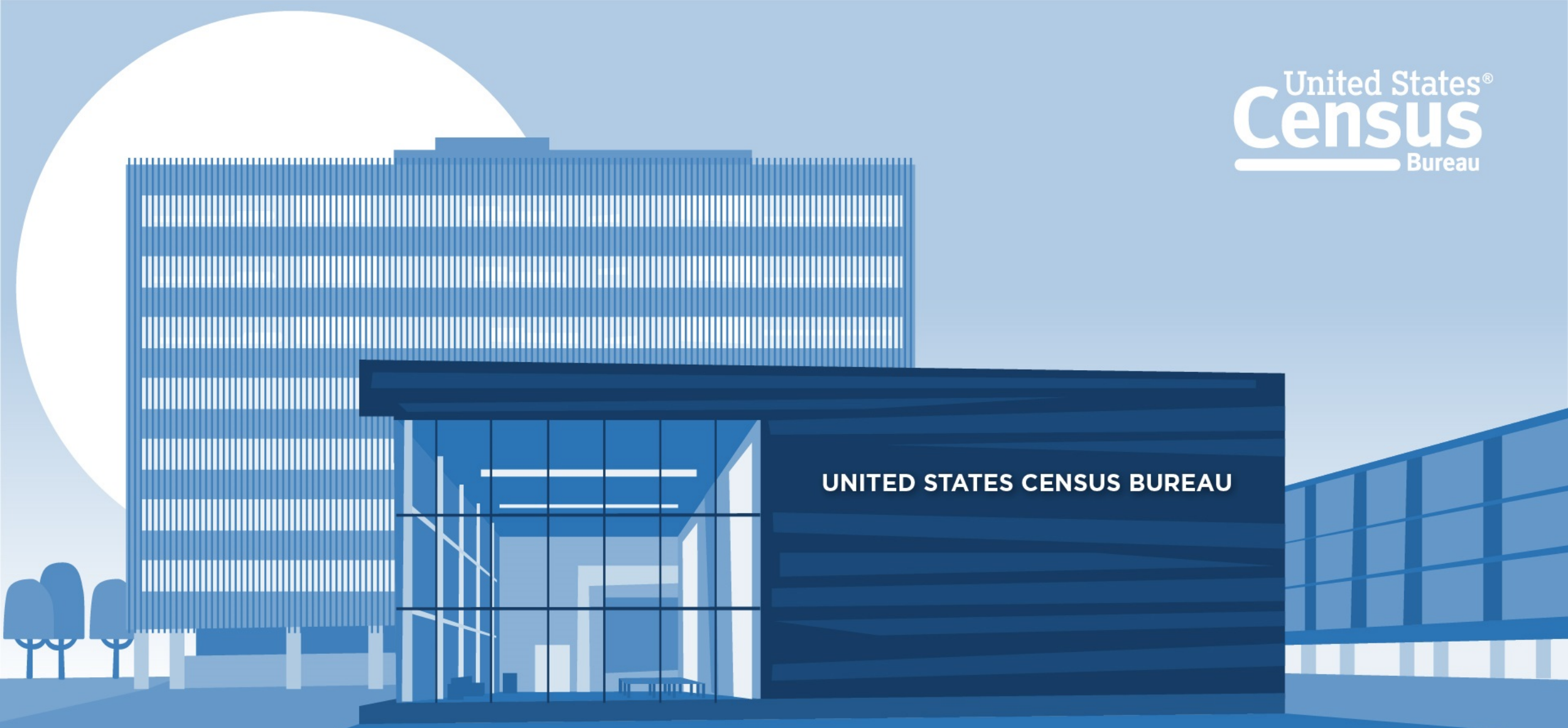


How Are ACS Data Being Used at the Census Bureau to Support Disaster Recovery?

Chase Sawyer, Bethany DeSalvo, Heather King, Joey Marshall

ACS Data User Conference

May 29th, 2025



Why is the Census Bureau measuring
resilience/social vulnerability?

What is the CRE?

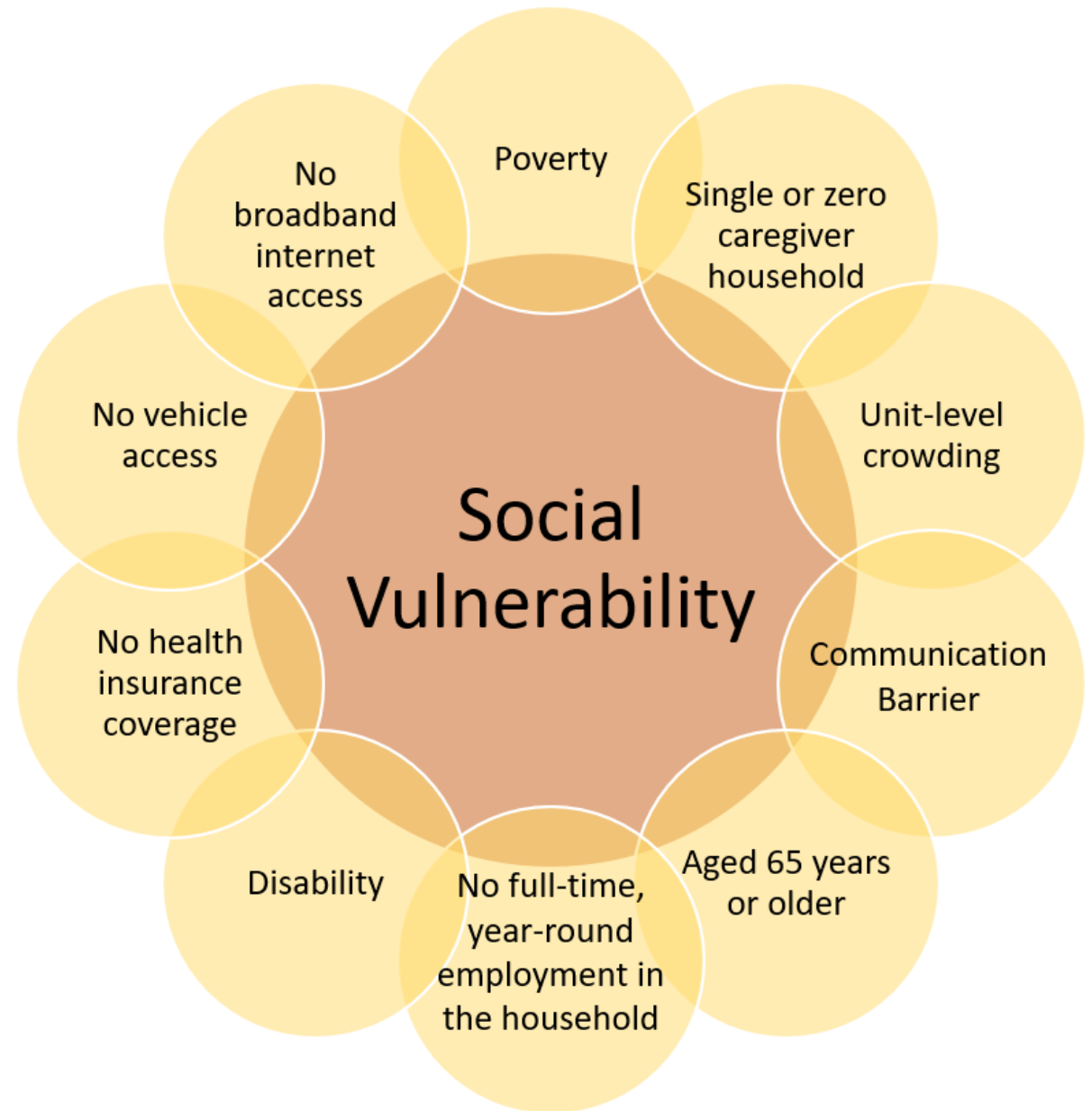
The Community Resilience Estimates (CRE) are modeled estimates of social vulnerability in the population:

- Nation, state, county, census tract

Uses data from the:

- American Community Survey
- Population Estimates Program
- 2020 Decennial Census

Ten components



ACS Without Vehicle Access Example

- CRE starts its analysis by looking at the individual and household responses to determine if an individual has a component of vulnerability.
- If person is found to have a component, it is flagged and tabulated.
- Small area modeling techniques are applied to create estimates.

12 How many automobiles, vans, and trucks of one-ton capacity or less are kept at home for use by members of this household?

- ☐ None
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6 or more

The Result

- An estimate of the number of individuals and the number of vulnerabilities they are living with, categorized into three groups:
 - Zero components.
 - One to two components.
 - Three or more components.
 - The most “vulnerable”.

National 2023 CRE Estimates

0 Vulnerabilities	1-2 Vulnerabilities	3+ Vulnerabilities
115,199,782 (+/-450,308)	147,507,580 (+/-489,705)	67,351,494 (+/-403,716)
34.9% (+/-0.1%)	44.7% (+/-0.2%)	20.4% (+/-0.1%)

Phases of Emergency Management

Before an event

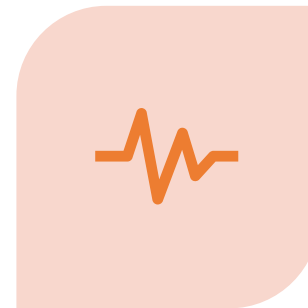


MITIGATION



PREPAREDNESS

After an event



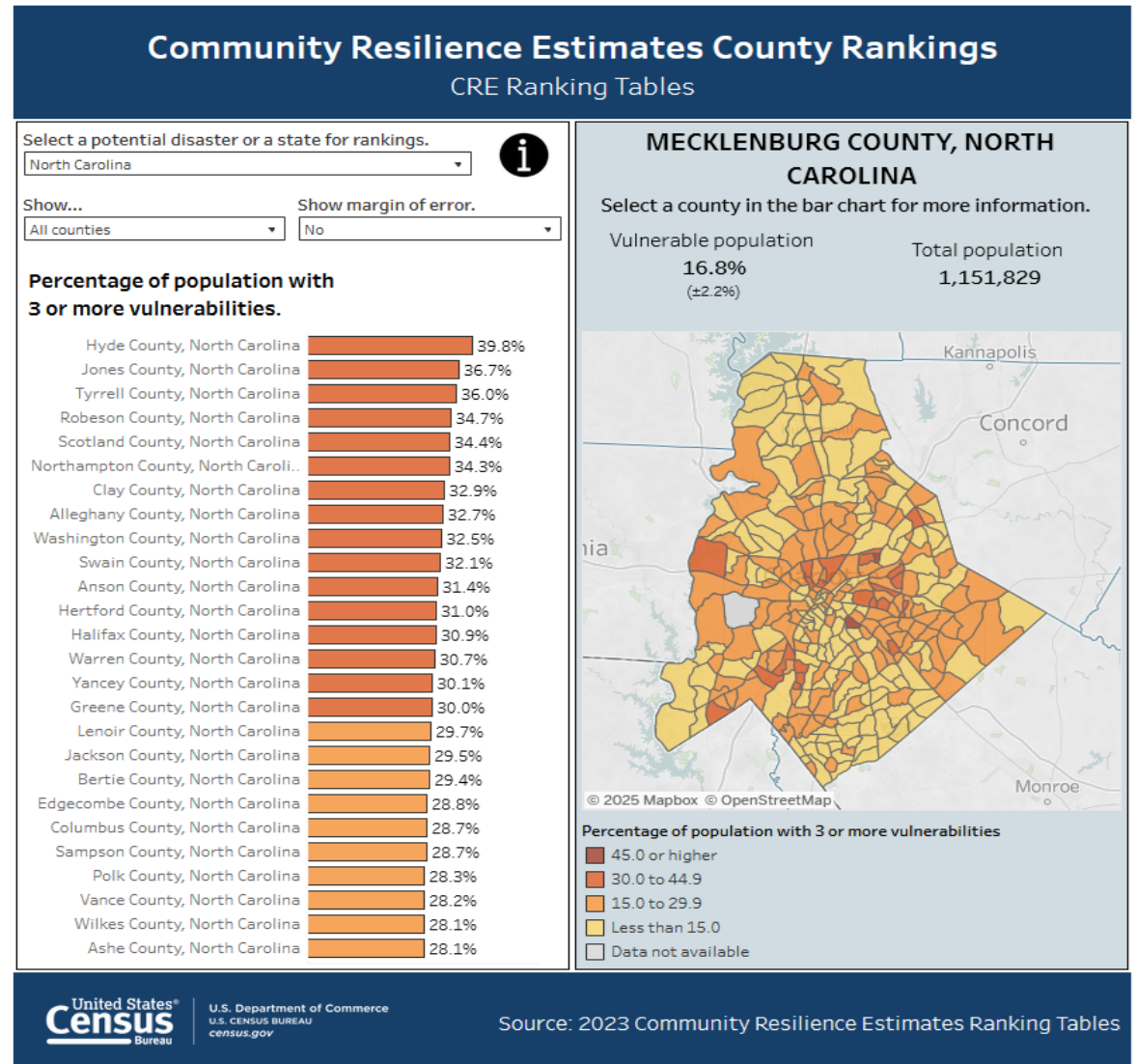
RESPONSE



RECOVERY

Helping State and Local Governments Before a Disaster

- Tools for Assisting Stakeholders:
 - [Datasets.](#)
 - [Community Resilience Estimates Viewer.](#)
 - [Community Resilience Estimates Ranking Tables.](#)

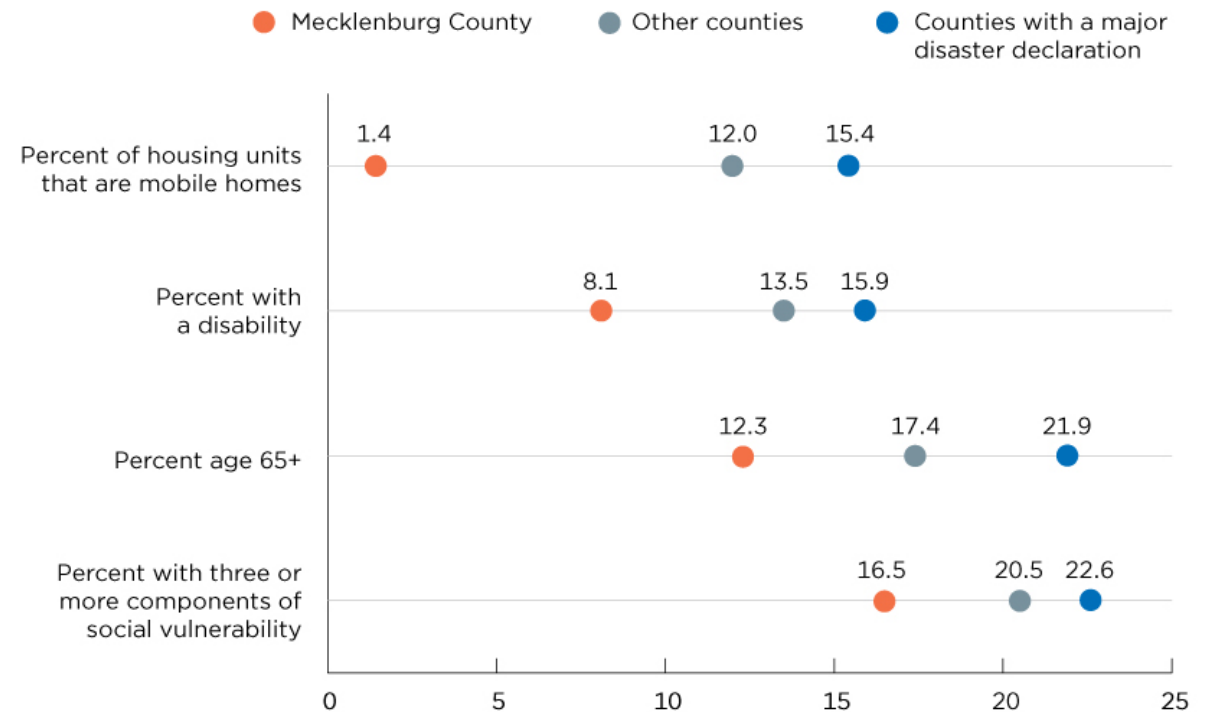


What Happens When Disaster Strikes?

- Contact our stakeholders.
 - Fulfill data needs.
- Write America Counts articles about impacted populations.
- Deployment to FEMA's National Response Coordination Center (NRCC).

Figure 2.

Social Vulnerability in Counties With a Major Disaster Declaration



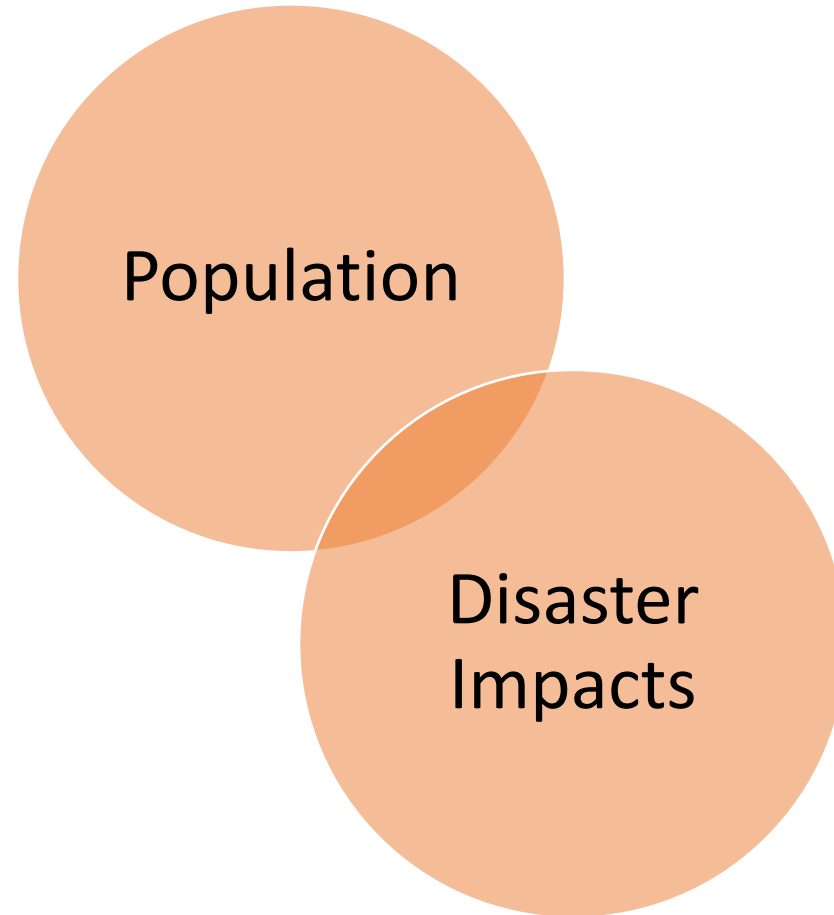
Notes: Major disaster declarations as of October 8, 2024.

Intersection of Population and Disasters

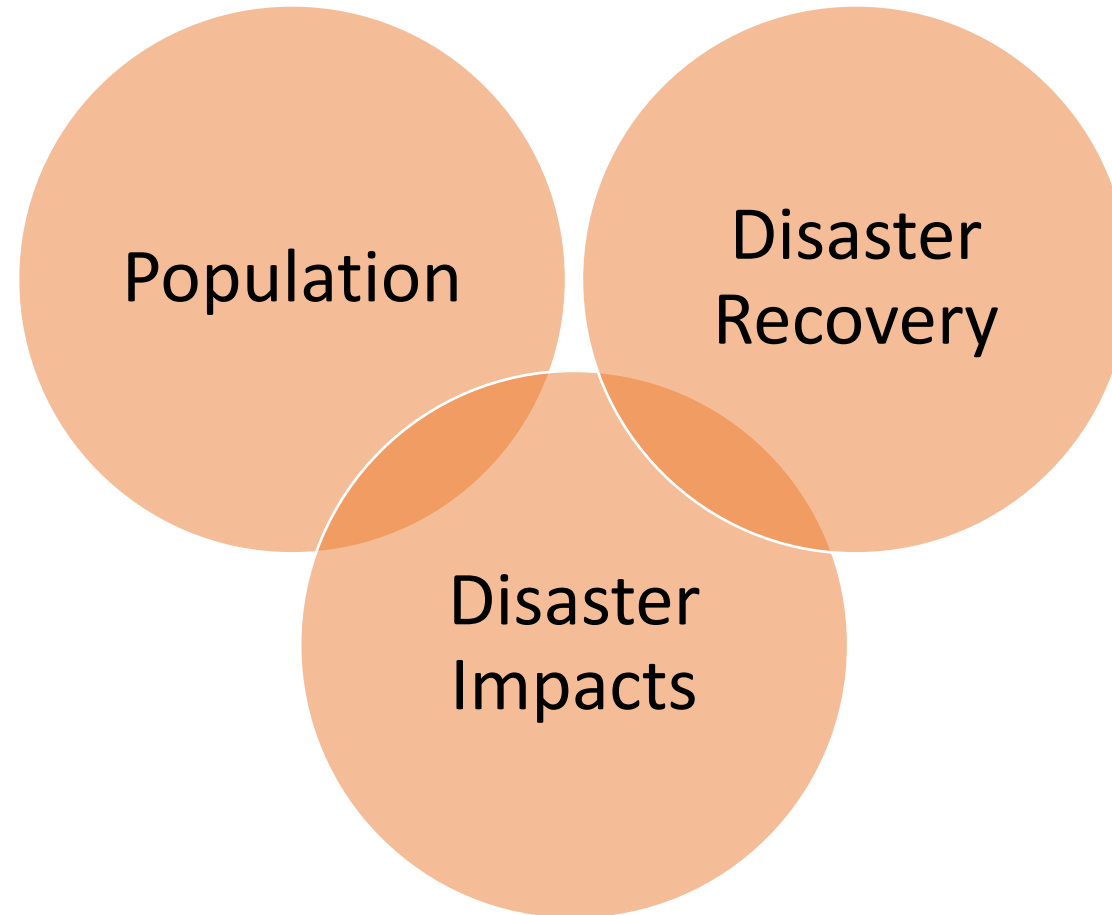


Population

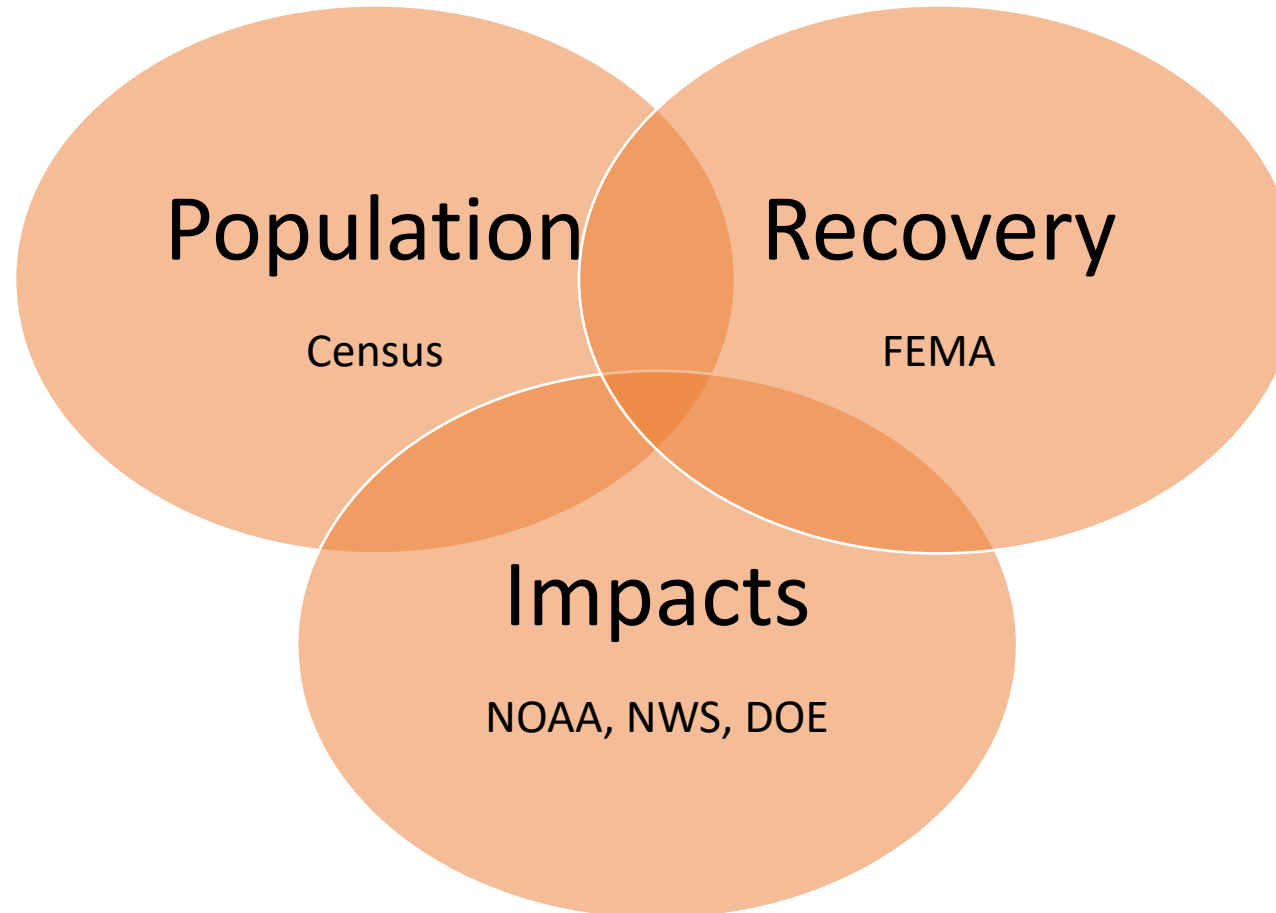
Intersection of Population and Disasters



Intersection of Population and Disasters



Recovery



Census Bureau's Assessment, Recovery, and Evaluation (CARE) Dataset



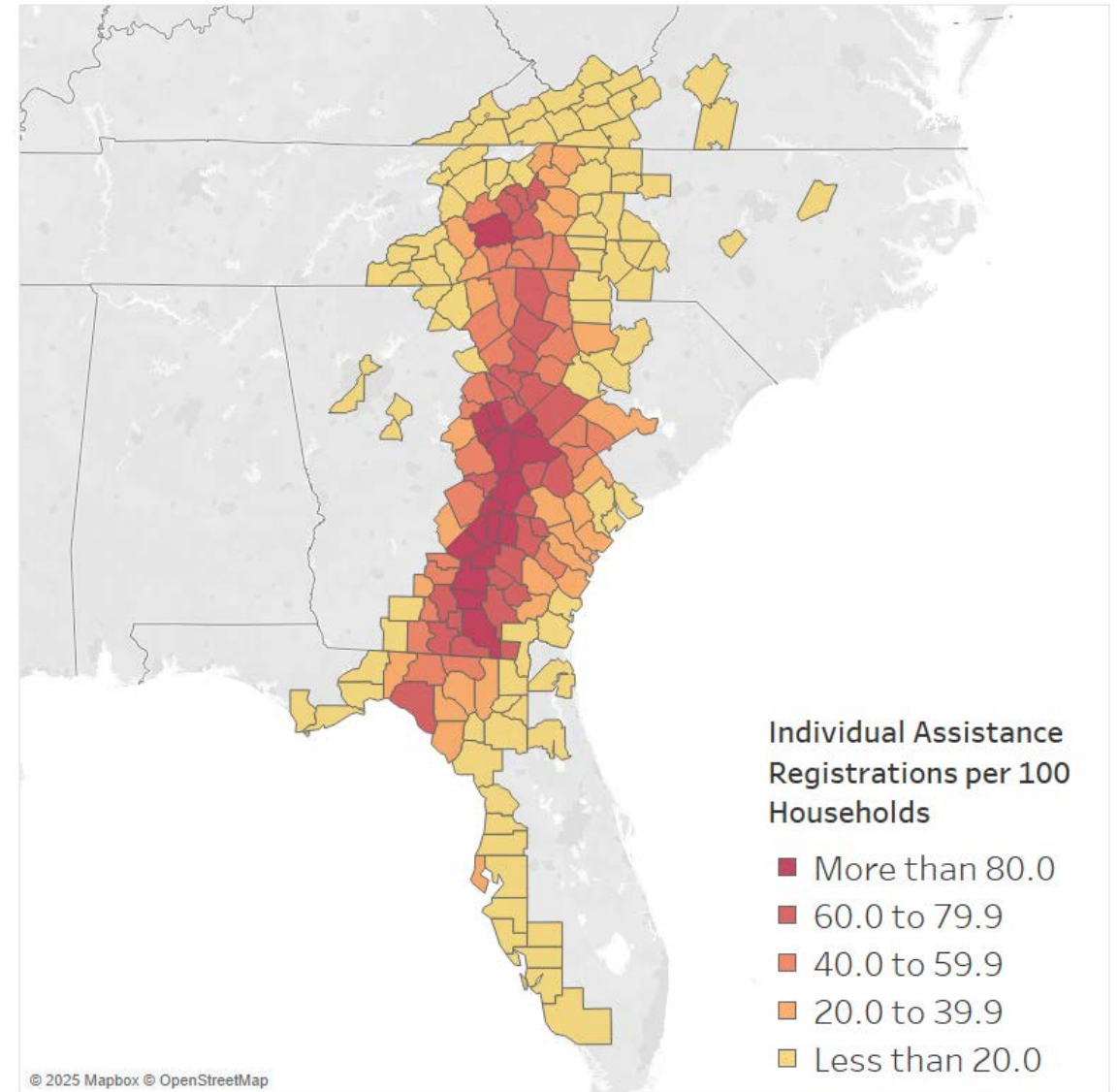
A dataset for every declared disaster.



Timely data to analyze community before and after a disaster with context on impact and recovery.

Comparing FEMA Assistance Registrations to Number of Households

- **OpenFEMA Data**
- 1,458,242 registrations in counties with a disaster declaration.
- **ACS 2023 5-year Estimates**
- 7,938,993 (+/-9,095) households in counties with a disaster declaration.
- **Individual Assistance Registrations Per 100 Households**
- 18.4 registrations per 100 in counties with a disaster declaration.



Future of CAREs

- Plan for continued development.
 - Working on a Hurricane Helene dataset.
 - Work on a dataset with an ACS 5-year dataset before and after the event.
 - Incorporate comments.



Thank you!

- **R. Chase Sawyer**

- Technical Lead for Modeled Data Product Development
- Social, Economic, and Housing Statistics Division
- United States Census Bureau

- **Contact Information**

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