

Great Lakes Cities Vulnerability Assessment Tool

Data Sources and Methods, Winter 2017



Methods and Data Sources

This paper describes data collection and decisions made to produce the [Great Lakes Cities Vulnerability Assessment Tool](#).

Indicators of Hardship and Other Metrics

The indicators are from the U.S. Census Bureau's December 2016 release of the American Community Survey (ACS). The data are five-year estimates that represent the socioeconomic conditions during the 2011 to 2015 period.¹

- Families in poverty. Percentage of families in the census tract living below the poverty line. The Census defines a family as a group of two or more people who reside together and are related by birth, marriage, or adoption. The Census uses a set of income thresholds that vary by family size and composition to define who is poor.
- People with disabilities. Percentage of people in the tract estimated to have a disability, based on self-reporting questions in the American Community Survey.
- Housing units that are rentals. Percentage of housing units in the tract that are occupied by renters rather than owners.
- Children under 5. Percentage of people in the tract less than the age of 5.
- People over 65. Percentage of people in the tract over the age of 65.
- People of color. Percentage of people in the tract that self-identified as a race other than "white alone."
- People that have difficulty speaking English. Percentage of people in the tract estimated to have difficulty speaking English based on self-reporting questions in the American Community Survey.

Because ACS data result from a survey, the results fall within a range of possible values. For example, a neighborhood may have between 5 percent and 15 percent of families living in poverty. Your “At-Risk Populations” criteria will act on either the lower or upper estimate depending upon whether you select an “INCLUSIVE” or “RESTRICTIVE” map.

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Identify neighborhoods that meet socioeconomic vulnerability criteria.

City:

Set Criteria: (Default criteria are city-wide medians)

INDICATORS OF HARDSHIP

Families in poverty
 89%

People with disabilities
 4%

Housing units that are rentals
 100%

YOUNG AND ELDERLY

Children under 5 years
 27%

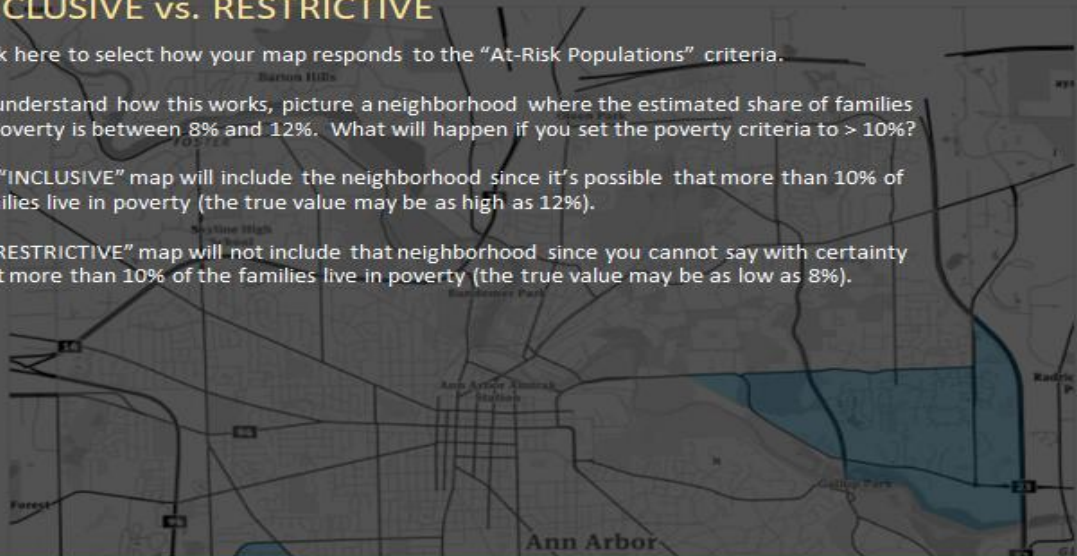
INCLUSIVE vs. RESTRICTIVE

Click here to select how your map responds to the “At-Risk Populations” criteria.

To understand how this works, picture a neighborhood where the estimated share of families in poverty is between 8% and 12%. What will happen if you set the poverty criteria to > 10%?

An “INCLUSIVE” map will include the neighborhood since it’s possible that more than 10% of families live in poverty (the true value may be as high as 12%).

A “RESTRICTIVE” map will not include that neighborhood since you cannot say with certainty that more than 10% of the families live in poverty (the true value may be as low as 8%).



Data Visualization: <https://headwaterseconomics.org/economic-development/climate-change/great-lakes-vulnerability-assessment-tool/>

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About Headwaters Economics

Headwaters Economics is an independent, nonprofit research group whose mission is to improve community development and land management decisions, <https://headwaterseconomics.org/>.

Endnotes

¹ U.S. Department of Commerce. 2016. Census Bureau, American Community Survey Office, Washington, D.C.