



FEMA Community Resilience Challenges Index

Annual Update of Indicator Tables and Correlation Analysis

May 2023



FEMA

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List of 2022 Analysis of Community Resilience Indicators: Updated Census Data

The charts in this document provide details about each of the 22 indicators identified through the [2022 analysis of community resilience indicators](#) and available in the Resilience Analysis and Planning Tool (RAPT). A majority of the 22 indicators use data from the American Community Survey 5-year estimates 2017-2021. This summary is designed to provide transparency to users and includes details about how each indicator was calculated in RAPT, and what data is available for each indicator. RAPT enables emergency managers and community partners to quickly visualize relative differences in potential resilience by county, tribe and census tract. More information on RAPT can be found on the RAPT resource hub here: <https://rapt-fema.hub.arcgis.com/>.

Reference notes (lowercase letters) in the “Author rationale for including this indicator” sections indicate which of the resilience assessment methodologies identified in the analysis provided the explanation for why the indicator is an effective measure of community resilience. A key for the references (a through n) follows at the end of this document. A description of binning methods used in the analysis is also included.

For each indicator, the tables below include:

- Indicator metric;
- Data source;
- Calculation (numerator and denominator);
- National average;
- Binning methods;
- Data geography (available at county, census tract, tribal, Puerto Rico and other);
- Methodologies referencing this indicator; and
- Author rationale for including this indicator.

Each table notes which of the following methodologies used each indicator:

- Australian Disaster Resilience Index (ANDRI) ^a
- Baseline Resilience Indicators for Communities (BRIC) ^b
- Composite Community Disaster Resilience Index (CCDRI) ^c
- Community Disaster Resilience Index (CDRI) ^d
- Community Resilience Index (CRI2) ^e
- Comprehensive Disaster Resilience Index (CDRI2) ^f
- Disaster Resilience of Place (DROP) ^g
- Fraser ^h
- Nursey-Brey (N-B) ⁱ
- Resilience Capacity Index (RCI) ^j

- Regional Climate Resilience Index (RCRI) ^k
- Social Vulnerability Index (SoVI) ^l
- Social Vulnerability Index (SVI) ^m
- The Composite Resilience Index (TCRI) ⁿ

Indicator Binning Methodology

With such large datasets, binning the data and assigning consistent color ramps for the bins provides a visual cue to quickly grasp a data range. While the specific datapoint for the geography (county, census tract or tribe) is also available, the bins provide a more immediate high-level understanding of a geographic area's characteristics.

To bin each dataset for mapping, Argonne used the Python Spatial Analysis Library, PySAL, and its Exploratory Spatial Data Analysis sub-package. Python is an open-source, high-level programming language that is used in social science research. The package includes nine binning methods. Rather than make arbitrary "breaks" in the data, these binning methods allowed the research team to use the best binning method that would group data that are close in value to each other and maximize the variance between bins.

The team evaluated which of the nine binning methods 1) best fit the relationships of the breaks to each dataset's means and medians and 2) could be consistently replicated. This analysis identified four binning methods as the best fit for most datasets. For the county-level datasets, the research team binned the dataset into five bins. For the indicators with census tract data, the research team binned the dataset into seven bins, allowing greater differentiation with these substantially larger datasets.

The binning methods for the 22 commonly used indicators are:

- **Fisher–Jenks Breaks:** This method aims to return class breaks such that classes are internally homogenous while assuring heterogeneity among classes. The Python toolkit calculates squared deviations against class means.
- **Jenks–Caspall Breaks:** This method aims to minimize the absolute deviation from within-class medians. Python's calculation focuses on within-class absolute deviations from the median.
- **Head/Tail Breaks:** Algorithmically optimal breaks and the number of classes are based on the dataset itself. The Head/Tails Breaks method works well with heavily tailed datasets, iterating through the data to minimize around the mean.¹
- **Other:** In specific cases, the team used alternative criteria to select binning methodologies.

¹ Jiang, B., 2013, Head/tail Breaks: A New Classification Scheme for Data with a Heavy-tailed Distribution. *The Professional Geographer*, 65, 482-494.

- Income: A convention for displaying income data already exists: \$0–20,000, \$20,001–\$40,000, etc. (an intuitive methodology similar to equal intervals).
- Population Change: The population change dataset is provided by the U.S. Census as “net migration,” which provides a positive (increase in population) or negative (decrease in population) number.² Large population changes in either direction could cause challenges to resilience. The team chose to represent the population change data as standard deviations from zero, where less change is preferred to more change (regardless of whether the change is positive or negative)

² U.S. Census Bureau. https://www.census.gov/glossary/#term_Netmigration?term=Net+migration accessed March 20, 2023.

Population Characteristics: 3 Indicators

Population without High School Diploma														
Metric					Data Source									
Percentage of population over age 25 without a high school diploma or General Educational Development (GED)					American Community Survey (ACS) 2017-2021 five-year estimates, Table S1501									
National Average					Binning Methods									
11.1% of the population over age 25 do not have a high school diploma or GED.					Census Tract: Jenks Caspall					County: Jenks Caspall				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
11	X	X	X	X	X	X	X	X		X			X	X
Author Rationale for Including This Indicator														
Higher levels of education are associated with health, as well as an improved ability to communicate and comprehend information. ^{b,m}														
Education is included as an input to economic resilience as higher levels of education is a characteristic of a strong labor force and supports individuals' ability to access community resources. ^{d,j}														
Higher levels of education can improve the capacity to prepare for, and respond to, the stress of disasters. ^{a,g,n}														
For individuals with lower levels of education, the practical and bureaucratic hurdles to assist in coping with, and recovering from, a disaster are much more difficult to navigate. ^m														

Population Age 65 and Older														
Metric					Data Source									
Percentage of the population age 65 and older					ACS 2017–2021 five-year estimates, Table S0101									
National Average					Binning Methods									
16.0% of the U.S. population is age 65 and older.					Census Tract: Fisher Jenks					County: Jenks Caspall				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
9	X	X			X		X	X	X			X	X	X
Author Rationale for Including This Indicator														
Several methodologies noted that the percentage of elderly adults in the population could affect resilience. ^{a,b,g}														
Those over 65 tend to be less mobile. ⁿ														
Those over 65 may find it more difficult to prepare for disasters and adapt to extreme circumstances. ⁿ														
Many people over 65 require assistance from family, neighbors and others, which might not be available during a disaster. ^m														

Population with a Disability														
Metric					Data Source									
Percentage of the population with a disability ⁵					ACS 2017–2021 five-year estimates, Table S1810									
National Average					Binning Methods									
12.7% of the U.S. population has a disability					Census Tract: Fisher Jenks					County: Jenks Caspall Jenks				
Data Geography														
Data is available at the Census tract, county and Tribal level. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
7	X	X			X	X		X	X	X				
Author Rational for Including This Indicator														
Individuals with disabilities tend to be more vulnerable to physical, social and economic challenges. ^{b,j}														
Having functional, mobility, or access needs can make responding to disasters more challenging, including adapting to extreme circumstances and dealing with the increased stress. ^{a,j,n}														
During an emergency, family members, neighbors, or a caretaker may be less able to provide support to individuals with special needs that require the assistance of others. ^m														

⁵ Per the ACS question wording, this definition would include individuals with the following conditions: serious difficulty hearing, seeing, walking and/or dressing; serious difficulty because of a physical, mental or emotional condition; serious difficulty concentrating, remembering, making decisions, or doing errands alone.

Household Characteristics: 4 Indicators

Households Without a Vehicle														
Metric					Data Source									
Percentage of occupied housing units with no vehicles available					ACS 2017–2021 five-year estimates, Table B08201									
National Average					Binning Methods									
8.3% of households are without a vehicle.					Census Tract: Jenks Caspall					County: Head Tail Breaks				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
9	X	X	X		X		X	X	X		X			X
Author Rationale for Including This Indicator														
Access to transportation helps individuals support their livelihoods and provides critical mobility to adapt to the extreme circumstances of a disaster. ^{d,g,n}														
Communities where fewer individuals have access to a vehicle may have less resilience to a disaster. ^b														
Lack of access to vehicle can be especially problematic in terms of evacuation in urban areas where automobile ownership is lower, especially among inner city poor populations. ^m														

Households with Limited English															
Metric				Data Source											
Percentage of households in which everyone 14 and older has difficulty speaking English. ⁶				ACS 2017–2021 five-year estimates, Table S1602											
National Average				Binning Methods											
4.2% of U.S. households are limited English-speaking households where all members 14 or older have difficulty speaking English.				Census Tract: Fisher Jenks						County: Jenks Caspall					
Data Geography															
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.															
Methodologies Using This Indicator															
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser	
7	X	X	X		X		X	X	X						
Author Rationale for Including This Indicator															
Proficiency in English supports community resilience because of improved ability to communicate between individuals, as well as allowing individuals to better access community resources. ^{a,d,m}															
Greater numbers of proficient English speakers can be vital for effective communication interactions in the event of a disaster. ^{b,n}															
In communities where the first language is neither English nor Spanish, accurate translations of advisories may be scarce. ^m															
Communities with fewer English-speaking residents may demonstrate lower levels of resilience. ^g															

⁶ A “limited English-speaking household” is one in which no member 14 years and older speaks only English or speaks a non-English language and speaks English “very well.” In other words, all members 14 years and older have at least some difficulty with English (<https://census.gov/library/visualizations/2017/comm/english-speaking.html.html>, accessed August 7, 2018).

Single-Parent Households														
Metric					Data Source									
Percentage of households with single parents of children under 18 (no spouse/partner present)					ACS 2017 –2021 five-year estimates, Table B09005									
National Average					Binning Method									
25.1% of U.S. family households are single parent households.					Census Tract: Jenks Caspall					County: Jenks Caspall				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
7	X			X			X	X		X			X	X
Author Rationale for Including This Indicator														
Single-parent households are more vulnerable to a disaster because they tend to have lower socioeconomic status and fewer sources of social support than that of two-parent families. ^{f,m}														
Single-parent households are also vulnerable as all daily responsibilities fall to one parent, making recovery more difficult. ^m														

Households without a Smartphone														
Metric					Data Source									
Percent of households without a smartphone					ACS 2017–2021 5-year estimates, Table S2801									
National Average					Binning Method									
13.5% of U.S. households do not have a smartphone.					Census Tract: Jenks Caspall					County: Jenks Caspall				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
5	X	X	X		X						X			
Author Rationale for Including This Indicator														
Access to telephones enables communication which is vital during disaster events. ^b														
Communities with more access to telephone services will be better prepared for and will respond better before and during a disaster. ^c														
Availability and accessibility of natural hazard information and community engagement encourages risk awareness. ^a														

Housing: 2 Indicators

Mobile Homes as A Percentage of Housing Units														
Measure					Data Source									
Percentage of housing units that are mobile homes					U.S. Census American Community Survey (ACS) 2017–2021 five-year estimates, Table DP04									
National Average					Binning Methods									
5.9% of housing units in the U.S. are mobile homes.					Census Tract: Fisher Jenks					County: Fisher Jenks				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6	X	X			X		X	X			X			
Author Rationale for Including This Indicator														
Higher numbers of mobile homes in a community are related to lower levels of resilience because of the lower-quality construction of these homes and lack of basements, which makes them particularly susceptible to damage from hazards. ^{b,g,m}														
Mobile homes are frequently found outside of metropolitan areas that may not be readily accessible by interstate highways or public transportation. ^m														

Owner-Occupied Housing														
Metric					Data Source									
Percentage of housing units that are owner-occupied					ACS 2017–2021 five-year estimates, Table DP04									
National Average					Binning Methods									
57.4% of housing units in the U.S. are owner-occupied.					Census Tract: Jenks Caspall					County: Fisher Jenks				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6	X	X	X		X	X			X					
Author Rationale for Including This Indicator														
Home ownership is often included as a measure of a community’s economic strength and thus is a marker of community resilience. ^{b,d,g,n}														
Home ownership is also used to reflect residents’ levels of place attachment to their communities. ^{d,j}														
Low levels of home ownership can indicate a community with a faltering economy and a population with less long-term commitment to the community, which could hamper both individual and community mitigation actions to prepare for disaster as well as recovery efforts. ^{a,j}														

Healthcare: 3 Indicators

Number of Hospitals														
Metric					Data Source									
The number of hospitals per 10,000 people					U.S. Census Bureau, 2020 County Business Patterns, Table 00A1, NAICS code 622110									
National Average					Binning Method									
There are .17 hospitals per 10,000 people in the U.S.					Census Tract: Fisher Jenks					County: Head Tail Breaks				
Data Geography														
Data is available at the county level. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
9	X	X	X		X		X		X		X	X		X
Author Rationale for Including This Indicator														
This measure represents essential community infrastructure, both because it represents the capacity of the healthcare system to support residents' overall health and to provide critical emergency medical care. ^{a,b,d,g,n}														
Lack of this critical capacity negatively affects a community's ability to respond to and recover from disasters. ^d														

Medical Professional Capacity														
Metric					Data Source									
The number of health-diagnosing and treating practitioners per 1,000 population					ACS 2017–2021 five-year estimates, Table S2401									
National Average					Binning Methods									
There are 20.2 health diagnosing and treating practitioners per 1,000 population in the U.S.					Census Tract: Jenks Caspall					County: Fisher Jenks				
Data Geography														
Data is available at the county level. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
8	X	X	X	X	X						X	X		X
Author Rationale for Including This Indicator														
Availability of physicians is linked with the overall physical and mental health of community residents. ^{b,d,f,g}														
Lack of access to physicians is related to lower levels of overall community resilience as indicated by low birthweight and premature mortality. ^f														
Physicians are a critical emergency resource in the response to and recovery from a disaster. ^a														

Population without Health Insurance														
Metric					Data Source									
Percentage of the population without health insurance					ACS 2017–2021 5-year estimates, Table S2701									
National Average					Binning Methods									
8.8% of the U.S. population does not have health insurance.					Census Tract: Jenks Caspall					County: Fisher Jenks				
Data Geography														
Data is available at the Census tract, county and tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
7		X	X		X	X	X				X			X
Author Rationale for Including This Indicator														
Health is a critical component of community well-being. An unhealthy population has more difficulty accessing community support or engaging in the process of building disaster resilience. ^{d,g}														
Communities with more individuals covered by health insurance tend to have higher measures of physical and mental health. ^{b,g}														
Health insurance coverage is one indication of individuals' capacity to effectively respond to and recover from a crisis, both mentally and physically. ^j														
Communities with lower percentages of individuals with health insurance may have lower levels of resilience. ^g														

Economic: 6 Indicators

Unemployed Labor Force														
Metric							Data Source							
Percentage of the civilian labor force age 16 and over who are unemployed							ACS 2017–2021 five-year estimates, Table DP03							
National Average							Binning Methods							
5.5% of the civilian labor force age 16 and over are unemployed.							Census Tract: Jenks Caspall				County: Fisher Jenks			
Data Geography														
Data is available at the Census tract, county and tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
13	X	X	X	X	X		X	X	X	X	X	X	X	X
Author Rationale for Including This Indicator														
High levels of employment contribute to a healthy community economy, which supports community resilience. ^{a,b,f,g,n}														
Employment also provides residents with financial resources that contribute to their livelihoods. ^d														
Unemployed persons do not have the employee benefit plans that provide income and health cost assistance in the event of injury or death. ^m														
Counties with higher levels of unemployment may have fewer community resources to support residents’ needs and a population that is both less prepared for a disaster and less able to cope with the aftermath. ⁿ														

Income Inequality														
Metric					Data Source									
Gini Index of income distribution across a population; the closer to 1, the greater the income inequality. ⁷					ACS 2017–2021 five-year estimates, Table B19083									
National Average					Binning Method									
The average Gini Index in the U.S. is .48.					Census Tract: Jenks Caspall					County: Fisher Jenks				
Data Geography														
Data is available at the county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
10		X		X	X	X					X		X	
Author Rationale for Including This Indicator														
The economic environment is a major factor in a community’s resilience; and when income inequality is present, earnings tend to be distributed in a way that does not support broader community goals. ^{b,f,g}														
A skewed distribution of economic resources may negatively affect the cohesiveness of the residents’ response to a disaster. ^j														

⁷ The Gini Index or coefficient uses a scale of 0–1 to measure the difference between the ideal distribution of income (perfect equality [0] where 50 percent of the population would receive 50 percent of the available income) and the actual distribution. The closer the number is to 1, the greater the income inequality.

Median Household Income														
Metric					Data Source									
Median household income					ACS 2017–2021 five-year estimates, Table S1903									
National Average					Binning Methods									
The median household income in the U.S. is \$69,021.					Census Tract: Manual					County: Manual				
Data Geography														
Data is available at the Census tract, county and tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6	X		X	X					X	X			X	
Author Rationale for Including This Indicator														
There is a strong relationship between individuals’ financial resources and their resilience to a disaster. ^{b,d}														
Low-income households are at greater risk because they tend to live in lower-quality housing situated in higher risk areas, are less likely to have prepared for a disaster and have fewer resources to support recovery. ^d														
The median household income of a community may also reflect its economic resilience and the community resources available to support recovery. ⁿ														

Unemployed Women in the Labor Force														
Metric		Data Source												
Percent of women in the civilian work force age 16 and over who are unemployed		ACS 2017 – 2021 5-year estimates, Table DP03												
National Average		Binning Method												
5.6% of women in the workforce age 16 and over are unemployed.		Census Tract: Jenks Caspall					County: Fisher Jenks							
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6		X			X		X			X			X	X
Author Rationale for Including This Indicator														
Communities enhance disaster resilience through nondiscriminatory wage policies, ensuring that all groups have fair access to resources. ^b														
Economic stability at the community level, particularly the stability of livelihoods is an indicator of resilience. ^g														

Population Below Poverty Level														
Metric					Data Source									
Population below U.S. Census poverty level in past 12 months ⁸					ACS 2017–2021 5-year estimates, Table S1701									
National Average					Binning Method									
12.6% of the U.S. population lives below the poverty level.					Census Tract: Jenks Caspall					County: Jenks Caspall				
Data Geography														
Data is available at the Census tract, county and Tribal levels. Puerto Rico is included.														
Methodologies Using This Methodology														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
5	X					X	X	X					X	
Author Rationale for Including This Indicator														
Economic resources play an important role in boosting resilience and adaptive capacity. ^d														
Economically disadvantaged populations are disproportionately affected by disasters. The poor are less likely to have the income or assets needed to prepare for a possible disaster or to recover after a disaster. ^m														

⁸ For more on how the Census defines poverty see: <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>.

Workforce Employed in Predominant Sector														
Metric					Data Source									
Percent of workforce employed in the predominant sector					ACS 2017–2021 5-year estimates, Table DP03									
National Average					Binning Method									
24.6% of the workforce is employed in the dominant sector of their county.					Census Tract: Fisher Jenks					County: Fisher Jenks				
Data Geography														
Data is available at the Census tract, county and tribal levels. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
5	X	X		X	X	X								
Author Rationale for Including This Indicator														
Diversity is important for long term economic resilience; the local economy should not be overly dependent on continuing success in just one sector. ^b														
In a diversified environment, if one industry weakens or fails, there are others that can provide employment and sustain the regional economy. ^f														

Connection to Community: 4 Indicators

Percent of Inactive Voters														
Metric							Data Source							
Percent of inactive voters (defined differently by state) ⁹							2020 U.S. Election Assistance Commission - Election Administration and Voting Survey							
National Average							Binning Method							
9.0% of registered voters in the U.S. are inactive. ¹⁰							Census Tract: Fisher Jenks				County: Fisher Jenks			
Data Geography														
Data is available at the county level. Alaska, Puerto Rico and territorial data were provided at a State/Territorial level only so the data for counties within those areas were imputed from the State/Territorial number. ¹¹														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CR12	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
10	X	X	X	X	X	X					X	X	X	X
Author Rationale for Including This Indicator														
An active voting population is an indicator of having a community that is engaged, enhancing overall community resilience. ^c														
Participation in elections increases social and political trust. ^d														
Civic engagement, including voting, is an important form of bridging social capital. ^h														

⁹ Inactive voter is defined by each State. For more information see:

https://www.eac.gov/sites/default/files/eac_assets/1/1/2014_Statutory_Overview_Final-2015-03-09.pdf.

¹⁰ For more information on the Election Administration and Voting Survey 2020 Comprehensive Report see:

https://www.eac.gov/sites/default/files/document_library/files/2020_EAVS_Report_Final_508c.pdf.

¹¹ For more information on the Election Administration and Voting Survey 2020 Comprehensive Report see:

https://www.eac.gov/sites/default/files/document_library/files/2020_EAVS_Report_Final_508c.pdf.

Presence of Civic and Social Organizations														
Metric		Data Source												
Number of civic and social organizations per 10,000 people		U.S. Census Bureau, 2020 County Business Patterns, Table 00A1, NAICS Code 8134												
National Average		Binning Method												
There are .77 civic and social organizations per 10,000 people		Census Tract: Jenks Caspall					County: Head Tail Breaks							
Data Geography														
Data is available at the county level. Puerto Rico is included.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6		X	X	X	X	X								X
Author Rationale for Including This Indicator														
This measure indicates the level of community engagement by looking at the level of civic infrastructure through which residents support their communities. ^{b,f,g,j}														
Participation in civic organizations provides a mechanism for residents to invest in and take from their community and also increases networking and trusted relationships. ^{d,j}														
The availability of formal social networks can be critical during response and recovery to quickly mobilize resources and disseminate information. ^{b,d,f}														
Residents who participate in local civic organizations can use them for help and provide mutually beneficial cooperation during a crisis. ^{b,f}														

Population without Religious Affiliation														
Metric		Data Source												
Percentage of the population that do not affiliate with a religion		Association of Statisticians of American Religious Bodies. 2020 U.S. Religion Census. http://www.usreligioncensus.org/index.php												
National Average		Binning Method												
48.8 % of the U.S. population are not religious adherents.		Census Tract: Jenks Caspall					County: Jenks Caspall							
Data Geography														
Data is available at the county level.														
Methodologies Using This Indicator														
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser
6		X	X	X	X						X			X
Author Rationale for Including This Indicator														
Affiliation with a religious organization or civic organization can be used as a proxy measure for social connectedness, and how much a community may be able to rely on the good will of other local citizens, leading to reciprocity and mutually beneficial cooperation. ^{b,f,g}														
Religious adherents can access additional support beyond their family and neighbors. Religious organizations are often organized to actively provide physical and social support to their congregations and communities during times of individual and community crisis. ^{b,d,f}														

Population Change															
Metric								Data Source							
Net change in population from people moving in or out of the county relative to the U.S. mean.								U.S. Census Bureau, Population Division. Table: Cumulative Estimate of the Components of Resident Population Change (PEPTCOMP): 2017–2021							
National Average								Binning Method							
Not Applicable								Census Tract: Standard Deviation				County: Standard Deviation			
Data Geography															
Data is available at the county level.															
Methodologies Using This Indicator															
# of 14	ANDRI	BRIC	CDRI	CRI2	DROP	RCI	SoVI	SVI	TCRI	N-B	CCDRI	RCRI	CDRI2	Fraser	
6	X	X		X		X				X	X				
Author Rationale for Including This Indicator															
Communities where large numbers of residents have lived for extended periods are likely to have strong place attachment, be invested in the well-being of the community before a disaster and willing to respond to revitalize a community after a disaster. ^{b,j}															
Familiarity can help individuals navigate a community during an acute crisis, as well as know how to access services after the crisis has passed. ^j															
A rapid influx of new residents may result in lower levels of attachment to the community, less familiarity with local hazards and how to prepare for them and fewer community connections that can provide support during a crisis. ^{b,f,j}															
A reduction in population will reduce local tax income and community resources to respond to a disaster. ^b															

Key for Methodologies Cited under “Author Rationale for Including This Indicator”

- ^a **ANDRI:** Phil Morley, Melissa Parsons and Sarb Johal, 2017, “The Australian Natural Disaster Resilience Index: A System for Assessing the Resilience of Australian Communities to Natural Hazards,” Bushfire & Natural Hazards CRC. Available at <https://www.bnhcrc.com.au/research/hazard-resilience/251>, accessed March 20, 2023.
- ^b **BRIC:** Susan L. Cutter, Kevin D. Ash and Christopher T. Emrich, 2014, “Baseline Resilience Indicators for Communities, the Geographies of Community Disaster Resilience,” *Global Environmental Change* 29, 65–77.
- ^c **CCDRI:** Rifat, S. A. A., & Liu, W., 2020, “Measuring Community Disaster Resilience in the Conterminous Coastal United States.” *ISPRS International Journal of Geo-Information*. Available at <https://www.mdpi.com/2220-9964/9/8/469/pdf> accessed March 20, 2023.
- ^d **CDRI:** Walter Gillis Peacock, et al., 2010, “Advancing Resilience of Coastal Localities: Developing, Implementing, and Sustaining the Use of Coastal Resilience Indicators: A Final Report,” *Hazard Reduction and Recovery Center*, Available at https://www.researchgate.net/profile/Walter-Peacock/publication/346474442_Advancing_the_Resilience_of_Coastal_Localities_Developing_Implementing_and_Sustaining_the_Use_of_Coastal_Resilience_Indicators_A_Final_Report/links/5fc43376458515b79788e5cd/Advancing-the-Resilience-of-Coastal-Localities-Developing-Implementing-and-Sustaining-the-Use-of-Coastal-Resilience-Indicators-A-Final-Report.pdf, accessed March 20, 2023.
- ^e **CDRI2:** Marzi, S., Mysiak, J., Essenfelder, A. H., Amadio, M., Giove, S., & Fekete, A., 2019, “Constructing a Comprehensive Disaster Resilience Index: The Case of Italy.” *PloS one*. Available at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0221585>, accessed March 20, 2023.
- ^f **CR12:** Kathleen Sherrieb, Fran H. Norris and Sandro Galea, 2010, “Measuring Capacities for Community Resilience,” *Social Indicators Research* 99: 227–247.
- ^g **DR0P:** Susan L. Cutter, Christopher G. Burton and Christopher T. Emrich, 2010, “Disaster Resilience of Place, Disaster Resilience Indicators for Benchmarking Baseline Conditions,” *Journal of Homeland Security and Emergency Management* 7. Available at http://resiliencesystem.com/sites/default/files/Cutter_jhsem.2010.7.1.1732.pdf, accessed March 20, 2023.
- ^h **Fraser:** Fraser, T. , 2021, “Japanese Social Capital and Social Vulnerability Indices: Measuring Drivers of Community Resilience 2000–2017.” *International Journal of Disaster Risk Reduction*. Available at https://www.sciencedirect.com/science/article/pii/S2212420920314679?casa_token=oaC86iYRuwgAAAAA:ChyrqLcLG-4TT_ZqxEMMDP9oFyRMJODxQ6To9x5yfaLmZxYOMUb4qc3Ulx1UdteBCftuEd7d, accessed March 20, 2023.
- ⁱ **Nursey-Bray:** Nursey-Bray, M., Gillanders, B., & Maher, J. A., 2021, “Developing Indicators for Adaptive Capacity for Multiple Use Coastal Regions: Insights from the Spencer Gulf, South Australia.” *Ocean & Coastal Management*. Available at https://www.sciencedirect.com/science/article/pii/S0964569121002118?casa_token=ofxgFiTUUE0AAAA:qsHc0N1BtTDG_NR4w5Phl6g9B_QGfpCj1y-GaF1CottH2i3eLEsOzPKLGC40C39LABoed8qmK, accessed March 20, 2023.
- ^j **RCI:** Kathryn A. Foster, 2014, “Resilience Capacity Index, Disaster Resilience Measurements: Stocktaking of Ongoing Efforts in Developing Systems for Measuring Resilience,” *United Nations Development Programme*, 38. Available at

https://www.preventionweb.net/files/37916_disasterresiliencemeasurementsundpt.pdf, accessed March 20, 2023.

^k **RCRI:** Feldmeyer, D., Wilden, D., Jamshed, A., & Birkmann, J., 2020, "Regional Climate Resilience Index: A Novel Multimethod Comparative Approach for Indicator Development, Empirical Validation and Implementation." *Ecological indicators*. Available at https://www.sciencedirect.com/science/article/pii/S1470160X20307998?casa_token=VRVTAEajgUAAAA:pTCrOFbuAU7_Y7mjURGNV44_JYPRbhjy2cqXNXdiDcGhwt6SE-IUfzKFQOpJOpKyZ2wwwTYB accessed March 20, 2023.

^l **SoVI:** Cutter, Susan L., Bryan J. Boruff and W. Lynn Shirley., 2003, "Social Vulnerability to Environmental Hazards." *Social Science Quarterly* 84.2. Available at <https://onlinelibrary.wiley.com/doi/abs/10.1111/1540-6237.8402002>, accessed March 20, 2023.

^m **SVI:** Barry E. Flanagan, et al., 2011, "A Social Vulnerability Index for Disaster Management," *Journal of Homeland Security and Emergency Management* 8. Available at <https://svi.cdc.gov/Documents/Data/A%20Social%20Vulnerability%20Index%20for%20Disaster%20Management.pdf>, accessed March 20, 2023.

ⁿ **TCRI:** T. Perfrement and T. Lloyd, 2015, "The Resilience Index: The Modelling Tool to Measure and Improve Community Resilience to Natural Hazards," *The Resilience Index*. Available at <https://theresilienceindex.weebly.com/our-solution.html>, accessed March 20, 2023.

Correlation Analysis

The research team conducted a correlation analysis to measure and describe the strength and direction of the relationships among the 22 commonly used community resilience indicators. Correlation analysis shows how individual indicators may be related to each other. Understanding these correlations will help communities design resilience strategies that take these relationships into account.

The Pearson Correlation Coefficient¹² is a numerical measure of linear correlation from -1 to 1 .

- A coefficient closer to 1 indicates a positive correlation (variable A increases as variable B increases).
- A coefficient of 0 indicates no correlation.
- A coefficient closer to -1 indicates a negative correlation (variable A increases as variable B decreases).

As jurisdictions consider strategies to address those indicators that reveal challenges to resilience, they should consider relationships between indicators signifying populations that may face multiple challenges. For example, campaigns focusing on individuals that are unemployed should also consider that they are more likely to be single-parent households, have difficulty speaking English, lack a high school diploma and be without access to a vehicle.

Table 1 summarizes some highlights of the county correlation analysis.

Table 1: Highlighted County Correlation Relationships

Indicator	Positively Correlates With	Negatively Correlates With
Age (adults over 65)	<ul style="list-style-type: none"> ▪ No smartphone ($r = 0.45$) 	<ul style="list-style-type: none"> ▪ Limited English Speaking ($r = -0.26$) ▪ Household Income ($r = -0.26$)
Low Educational Attainment	<ul style="list-style-type: none"> ▪ Poverty ($r = 0.62$) ▪ No health insurance ($r = 0.46$) 	<ul style="list-style-type: none"> ▪ Household Income ($r = -0.56$) ▪ Medical Professional Capacity ($r = -0.45$) (access to healthcare)
Disability	<ul style="list-style-type: none"> ▪ No smartphone ($r = 0.53$) ▪ Presence of mobile homes ($r = 0.45$) ▪ Poverty ($r = 0.46$) 	<ul style="list-style-type: none"> ▪ Household Income ($r = -0.64$) ▪ Medical Professional Capacity ($r = -0.32$) (access to healthcare)

¹² Stangroom, J. "Pearson Correlation Coefficient Calculator." Social Science Statistics. <http://www.socscistatistics.com/tests/pearson/>.

Indicator	Positively Correlates With	Negatively Correlates With
Limited English Speaking	<ul style="list-style-type: none"> ▪ Low educational attainment (r = 0.43) 	<ul style="list-style-type: none"> ▪ Age over 65 (r = -0.26)
No Health Insurance	<ul style="list-style-type: none"> ▪ Low educational attainment (r = 0.46) ▪ Presence of mobile homes (r = 0.35) 	<ul style="list-style-type: none"> ▪ Medical Professional Capacity (r = -0.36) (access to healthcare) ▪ Home Ownership (r = -0.26) ▪ Household Income (r = -0.27)
No Vehicle	<ul style="list-style-type: none"> ▪ Poverty (r = 0.46) ▪ Unemployment rate (r = 0.45) ▪ Single parent household (r = 0.40) 	<ul style="list-style-type: none"> ▪ Home ownership (r = -0.34) ▪ Household income (r = -0.28) ▪ Population change (r = -0.28)
Unemployment Rate	<ul style="list-style-type: none"> ▪ Unemployed women (r = 0.87) ▪ Poverty (r = 0.66) ▪ Single parent household (r = 0.51) 	<ul style="list-style-type: none"> ▪ Household Income (r = -0.44) ▪ Home ownership (r = -0.27)
Household Income	<ul style="list-style-type: none"> ▪ Medical Professional Capacity (r = 0.37) (access to healthcare) 	<ul style="list-style-type: none"> ▪ No smartphone (r = 0.65) ▪ Disability (r = -0.64) ▪ Low Educational Attainment (r = -0.56)
Single-Parent Household	<ul style="list-style-type: none"> ▪ Poverty (r = 0.62) ▪ Unemployment rate (r = 0.51) ▪ Income inequality (r = 0.45) ▪ Unemployed women (r = 0.46) 	<ul style="list-style-type: none"> ▪ Household Income (r = -0.48) ▪ Home Ownership (r = -0.32)
Presence of Mobile Homes	<ul style="list-style-type: none"> ▪ Low educational attainment (r = 0.43) ▪ Disability (r = 0.45) 	<ul style="list-style-type: none"> ▪ Household income (r = -0.42) ▪ Medical professional capacity (r = -0.38) (access to healthcare)
Unemployed Women	<ul style="list-style-type: none"> ▪ Unemployment rate (r = 0.88) ▪ Poverty (r = 0.62) 	<ul style="list-style-type: none"> ▪ Household income (r = -0.40) ▪ Medical professional capacity (r = -0.22) (access to healthcare)
No Smartphone	<ul style="list-style-type: none"> ▪ Disability (r = 0.53) ▪ Poverty (r = 0.49) ▪ Age over 65 (r = 0.45) 	<ul style="list-style-type: none"> ▪ Household income (r = 0.65) ▪ Medical professional capacity (r = -0.33) (access to healthcare)
Poverty	<ul style="list-style-type: none"> ▪ Low educational attainment (r = 0.62) ▪ Unemployment rate (r = 0.66) ▪ Single parent household (r = 0.62) ▪ Unemployed women (r = 0.59) 	<ul style="list-style-type: none"> ▪ Household income (r = -0.74) ▪ Homeownership (r = -0.37)

In the tables below, the positive correlations have green shading, and the negative correlations have blue. Values that are too small to have statistical significance are marked with an asterisk.

Correlation Analysis: County

	Age over 65	Low Educational Attainment	Disability	Limited English Speaking	No Health Insurance	No Vehicle	Unemployment Rate	Household Income	Income Inequality	Home Ownership	Single-Parent Household	Presence of Mobile Homes	Medical Professional Capacity	Number of Hospitals	No Affiliation with a Religion	Presence of Civic and Social	Population Change	Inactive Voters	Unemployed Women	Employment in Dominant Sector	No Smartphone	Poverty
Age over 65		-0.13	0.39	-0.26	-0.16	-0.13	-0.05	-0.26	0.03*	-0.11	-0.10	0.12	-0.08	-0.02*	0.03*	0.03*	0.20	-0.07	-0.07	-0.07	0.45	-0.04
Low Educational Attainment	-0.13		0.40	0.43	0.46	0.30	0.42	-0.56	0.29	-0.23	0.44	0.43	-0.45	-0.04	-0.14	-0.26	-0.22	0.08	0.38	-0.02*	0.40	0.62
Disability	0.39	0.40		-0.21	0.08	0.15	0.36	-0.64	0.23	-0.18	0.31	0.45	-0.32	-0.05	0.02*	-0.14	0*	0.10	0.30	-0.03*	0.53	0.46
Limited English Speaking	-0.26	0.43	-0.21		0.32	0.10	0.02*	0.08	0.05	-0.15	0.03*	-0.04	-0.13	0.01*	-0.13	-0.05	-0.16	0.08	0.04	0.04	-0.15	0.04
No Health Insurance	-0.16	0.46	0.08	0.32		0.09	0.12	-0.27	0.14	-0.26	0.23	0.35	-0.36	-0.04	-0.18	-0.21	-0.06	0.06	0.09	-0.07	0.08	0.23
No Vehicle	-0.13	0.30	0.15	0.10	0.09		0.45	-0.28	0.34	-0.34	0.40	-0.04	-0.09	0.05	0*	0.04	-0.28	0.09	0.38	0.18	0.22	0.46
Unemployment Rate	-0.05	0.42	0.36	0.02*	0.12	0.45		-0.43	0.36	-0.27	0.51	0.15	-0.23	0.03*	0.09	-0.10	-0.10	0.12	0.87	0.02*	0.26	0.66
Household Income	-0.26	-0.56	-0.64	0.08	-0.27	-0.28	-0.43		-0.38	0.37	-0.48	-0.42	0.42	0.03*	0.11	0.14	0.21	-0.10	-0.38	-0.09	-0.65	-0.74
Income Inequality	0.03*	0.29	0.23	0.05	0.14	0.34	0.36	-0.38		-0.34	0.45	0.15	-0.02*	0.02*	-0.10	-0.10	-0.07	0.09	0.33	0.09	0.20	0.53
Home Ownership	-0.11	-0.23	-0.18	-0.15	-0.26	-0.34	-0.27	0.37	-0.34		-0.32	-0.10	0.27	-0.01*	0.03*	0.03*	0.20	-0.14	-0.23	-0.14	-0.21	-0.37
Single-Parent Household	-0.10	0.44	0.31	0.03*	0.23	0.40	0.51	-0.48	0.45	-0.32		0.27	-0.22	0.04	-0.09	-0.12	-0.20	0.09	0.46	0.02*	0.24	0.62

Community Resilience Indicator Analysis: 2022 Update

	Age over 65	Low Educational Attainment	Disability	Limited English Speaking	No Health Insurance	No Vehicle	Unemployment Rate	Household Income	Income Inequality	Home Ownership	Single-Parent Household	Presence of Mobile Homes	Medical Professional Capacity	Number of Hospitals	No Affiliation with a Religion	Presence of Civic and Social	Population Change	Inactive Voters	Unemployed Women	Employment in Dominant Sector	No Smartphone	Poverty
Presence of Mobile Homes	0.12	0.43	0.45	-0.04	0.35	-0.04	0.15	-0.42	0.15	-0.10	0.27		-0.38	-0.06	0.03*	-0.22	0.03*	0.01*	0.13	-0.02*	0.33	0.26
Medical Professional Capacity	-0.08	-0.45	-0.32	-0.13	-0.36	-0.09	-0.23	0.42	-0.02*	0.27	-0.22	-0.38		0.07	0.02*	0.17	0.10	-0.04	-0.20	0.17	-0.33	-0.33
Number of Hospitals	-0.02*	-0.04	-0.05	0.01*	-0.04	0.05	0.03*	0.03*	0.02*	-0.01*	0.04	-0.06	0.07		-0.02*	0.07	-0.02*	0.02*	0.02*	0.04	-0.02*	0*
No Affiliation with a Religion	0.03*	-0.14	0.02*	-0.13	-0.18	0*	0.09	0.11	-0.10	0.03*	-0.09	0.03*	0.02*	-0.02*		0.08	0.24	0.06	0.05	0.01*	0*	-0.05
Presence of Civic and Social Organizations	0.03*	-0.26	-0.14	-0.05	-0.21	0.04	-0.10	0.14	-0.10	0.03*	-0.12	-0.22	0.17	0.07	0.08		-0.05	-0.04	-0.11	0.10	-0.07	-0.18
Population Change	0.20	-0.22	0*	-0.16	-0.06	-0.28	-0.10	0.21	-0.07	0.20	-0.20	0.03*	0.10	-0.02*	0.24	-0.05		-0.07	-0.07	-0.25	-0.20	-0.20
Inactive Voters	-0.07	0.08	0.10	0.08	0.06	0.09	0.12	-0.10	0.09	-0.14	0.09	0.01*	-0.04	0.02*	0.06	-0.04	-0.07		0.10	0.03*	-0.01*	0.11
Unemployed Women	-0.07	0.38	0.30	0.04	0.09	0.38	0.87	-0.38	0.33	-0.23	0.46	0.13	-0.20	0.02*	0.05	-0.11	-0.07	0.10		-0.02*	0.20	0.59
Employment in Dominant Sector	-0.07	-0.02*	-0.03*	0.04	-0.07	0.18	0.02*	-0.09	0.09	-0.14	0.02*	-0.02*	0.17	0.04	0.01*	0.10	-0.25	0.03*	-0.02*		0.12	0.11
No Smartphone	0.45	0.40	0.53	-0.15	0.08	0.22	0.26	-0.65	0.20	-0.21	0.24	0.33	-0.33	-0.02*	0*	-0.07	-0.20	-0.01*	0.20	0.12		0.49
Poverty	-0.04	0.62	0.46	0.04	0.23	0.46	0.66	-0.74	0.53	-0.37	0.62	0.26	-0.33	0*	-0.05	-0.18	-0.20	0.11	0.59	0.11	0.49	

*Not statistically significant

Positive relationships have green shading

Negative relationships have blue shading

Correlation Analysis: Census Tract

	Age over 65	Low Educational Attainment	Disability	Limited English Speaking	No Health Insurance	No Vehicle	Unemployment Rate	Household Income	Income Inequality	Home Ownership	Single-Parent Household	Presence of Mobile Homes	Medical Professional	Number of Hospitals	No Affiliation with a Religion	Presence of Civic and Social	Population Change	Inactive Voters	Unemployed Women	Employment in Dominant Sector	No Smartphone	Poverty
Age over 65		-0.17	0.40	-0.17	-0.20	-0.07	-0.06	0*	0.15	0.25	-0.09	0.15	0.09	0.01	0.08	0.07	0.16	-0.08	-0.07	0.07	0.36	-0.15
Low Educational Attainment	-0.17		0.25	0.56	0.56	0.29	0.32	-0.48	0.11	-0.29	0.32	0.19	-0.39	-0.02	-0.10	-0.14	-0.15	0.12	0.28	-0.03	0.32	0.52
Disability	0.40	0.25		-0.09	0.12	0.19	0.28	-0.50	0.20	-0.08	0.31	0.30	-0.22	0*	0.02	0.04	0.07	-0.03	0.19	0.08	0.57	0.39
Limited English Speaking	-0.17	0.56	-0.09		0.39	0.30	0.12	-0.16	0.08	-0.30	0.11	-0.08	-0.17	0.01*	-0.08	-0.13	-0.22	0.13	0.14	0*	0*	0.24
No Health Insurance	-0.20	0.56	0.12	0.39		0.09	0.17	-0.41	0.03	-0.25	0.25	0.20	-0.28	-0.02	-0.17	-0.16	0.06	-0.01	0.16	-0.06	0.14	0.35
No Vehicle	-0.07	0.29	0.19	0.30	0.09		0.30	-0.28	0.35	-0.51	0.36	-0.14	-0.13	0.04	-0.05	0.05	-0.34	0.06	0.23	0.19	0.24	0.45
Unemployment Rate	-0.06	0.32	0.28	0.12	0.17	0.30		-0.32	0.19	-0.24	0.35	0.02	-0.22	0.04	-0.02	-0.05	-0.12	0.07	0.78	0.11	0.23	0.49
Household Income	0*	-0.48	-0.50	-0.16	-0.41	-0.28	-0.32		-0.24	0.48	-0.48	-0.24	0.40	-0.01	0.05	-0.02	-0.02	0.03	-0.24	0.01*	-0.50	-0.62
Income Inequality	0.15	0.11	0.20	0.08	0.03	0.35	0.19	-0.24		-0.32	0.21	0.03	0*	0.03	-0.06	0.02	-0.12	0.04	0.14	0.11	0.24	0.40
Home Ownership	0.25	-0.29	-0.08	-0.30	-0.25	-0.51	-0.24	0.48	-0.32		-0.38	0.12	0.24	-0.05	0.04	-0.01	0.19	-0.12	-0.20	-0.03	-0.08	-0.49
Single-Parent Household	-0.09	0.32	0.31	0.11	0.25	0.36	0.35	-0.48	0.21	-0.38		0*	-0.22	0.04	-0.10	-0.02	-0.11	0*	0.27	0.09	0.25	0.54
Presence of Mobile Homes	0.15	0.19	0.30	-0.08	0.20	-0.14	0.02	-0.24	0.03	0.12	0*		-0.16	-0.06	0.04	-0.08	0.18	-0.04	0.02	-0.03	0.27	0.10

Community Resilience Indicator Analysis: 2022 Update

	Age over 65	Low Educational Attainment	Disability	Limited English Speaking	No Health Insurance	No Vehicle	Unemployment Rate	Household Income	Income Inequality	Home Ownership	Single-Parent Household	Presence of Mobile Homes	Medical Professional	Number of Hospitals	No Affiliation with a Religion	Presence of Civic and Social	Population Change	Inactive Voters	Unemployed Women	Employment in Dominant Sector	No Smartphone	Poverty
Medical Professional Capacity	0.09	-0.39	-0.22	-0.17	-0.28	-0.13	-0.22	0.40	0*	0.24	-0.22	-0.16		0.04	-0.02	0.06	0*	-0.03	-0.19	0.23	-0.23	-0.32
Number of Hospitals	0.01	-0.02	0*	0.01*	-0.02	0.04	0.04	-0.01	0.03	-0.05	0.04	-0.06	0.04		-0.05	0.13	-0.07	0.04	0.02	0.03	0.01	0.04
No Affiliation with a Religion	0.08	-0.10	0.02	-0.08	-0.17	-0.05	-0.02	0.05	-0.06	0.04	-0.10	0.04	-0.02	-0.05		0.09	0.22	0.06	-0.02	-0.01	-0.01	-0.08
Presence of Civic and Social Organizations	0.07	-0.14	0.04	-0.13	-0.16	0.05	-0.05	-0.02	0.02	-0.01	-0.02	-0.08	0.06	0.13	0.09		-0.10	-0.03	-0.06	0.07	0.10	-0.04
Population Change	0.16	-0.15	0.07	-0.22	0.06	-0.34	-0.12	-0.02	-0.12	0.19	-0.11	0.18	0*	-0.07	0.22	-0.10		-0.19	-0.08	-0.12	-0.05	-0.12
Inactive Voters	-0.08	0.12	-0.03	0.13	-0.01	0.06	0.07	0.03	0.04	-0.12	0*	-0.04	-0.03	0.04	0.06	-0.03	-0.19		0.06	0*	-0.08	0.05
Unemployed Women	-0.07	0.28	0.19	0.14	0.16	0.23	0.78	-0.24	0.14	-0.20	0.27	0.02	-0.19	0.02	-0.02	-0.06	-0.08	0.06		0.06	0.16	0.39
Employment in Dominant Sector	0.07	-0.03	0.08	0*	-0.06	0.19	0.11	0.01*	0.11	-0.03	0.09	-0.03	0.23	0.03	-0.01	0.07	-0.12	0*	0.06		0.10	0.15
No Smartphone	0.36	0.32	0.57	0*	0.14	0.24	0.23	-0.50	0.24	-0.08	0.25	0.27	-0.23	0.01	-0.01	0.10	-0.05	-0.08	0.16	0.10		0.39
Poverty	-0.15	0.52	0.39	0.24	0.35	0.45	0.49	-0.62	0.40	-0.49	0.54	0.10	-0.32	0.04	-0.08	-0.04	-0.12	0.05	0.39	0.15	0.39	

*Not statistically significant

Positive relationships have green shading

Negative relationships have blue shading