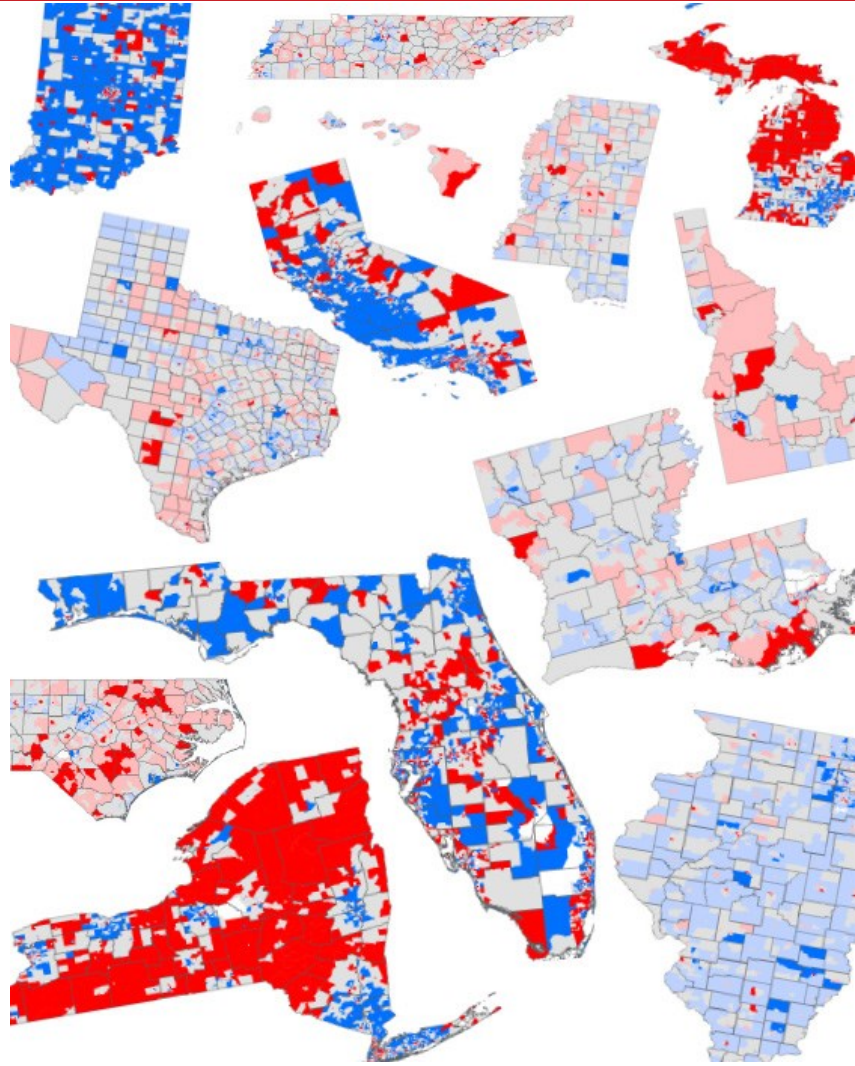


SOCIAL VULNERABILITY REPORT

2011-2015 Social Vulnerability Index (SoVI®) - Florida, All Counties (Tract Level)

WHAT IS VMAP?

This product was created by the **Vulnerability Mapping and Analysis Platform (VMAP)**, a system designed to streamline complex geospatial and statistical analysis for social, medical, and environmental vulnerability. VMAP implements current and historical methods for determining social vulnerability at various levels of geography for the entire nation. VMAP turns difficult and time-consuming mapping and analysis procedures into easily understood maps, charts, and graphical outputs of social vulnerability, compiling results in an easy to understand report. VMAP-v1 allows users to create tract level SoVI® maps and outputs for any state. Future versions of VMAP will allow users to apply a variety of social vulnerability methods (SoVI®, CDC-SVI, Georgetown Model) or create their own metric for specific areas of interest (county, city, zip code, watershed, congressional district).



MODEL DESCRIPTION

The [Social Vulnerability Index \(SoVI®\) model](#) is an empirically-based comparative assessment of social vulnerability for the geographic area chosen. The SoVI® model implemented by VMAP® uses a Principal Components Analysis of 27 socioeconomic variables derived from the U.S. Census Bureau's five-year American Community Survey (ACS) estimates. The selected variables are indicators, based on research literature, of what affects a community's ability to prepare for, recover from, and adapt to environmental hazards. The factors determined by the PCA process are given a description and a determination is made about the influence each factor has towards increasing or decreasing vulnerability for the region. The factor scores and identified influence are then placed into an additive model to derive a score for each geolocation of the area selected. Scores are then portrayed in either a 3 or 5 class colored scheme map based on the standard deviation from the mean of the area. SoVI® scores are relative to the area assessed and therefore cannot be independently compared to scores of a separately assessed region.

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DESCRIPTIVE STATISTICS

Name	Minimum	Maximum	Mean
Median Age	0.00	83.00	42.96
Percent Black	0.00	100.00	15.17
Percent Native American	0.00	13.60	0.21
Percent Asian	0.00	55.56	2.28
Percent Hispanic	0.00	100.00	21.34
Percent Population under 5 years or 65 and over	0.00	90.67	25.73
Nursing Home Residents Per Capita	0.00	29.38	0.42
Percent Female	0.00	100.00	51.11
Percent Female Headed Households	0.00	66.95	13.45
Percent Unoccupied Housing Units	0.00	100.00	18.58
Percent Renters	0.00	100.00	28.80
People per Unit	0.00	5.51	2.62
Per Capita Income	\$0.00	\$177,319.28	\$27,002.57
Percent Speaking English as a Second Language with Limited English Proficiency	0.00	76.92	10.75
Percent with Less than 12th Grade Education	0.00	71.71	13.29
Percent Employment in Extractive Industries	0.00	59.68	1.30
Percent Employment in Service Industry	0.00	100.00	20.77
Percent of Housing Units with No Car	0.00	65.25	7.59
Percent Civilian Unemployment	0.00	92.16	28.96
Percent Poverty	0.00	100.00	17.16
Percent Mobile Homes	0.00	100.00	9.49
Percent Female Participation in Labor Force	0.00	100.00	48.10
Percent Households Receiving Social Security Benefits	0.00	100.00	36.31
Percent of Children Living in 2-parent families	0.00	100.00	62.28
Percent Households Earning over \$200,000 annually	0.00	54.89	4.16
Median Gross Rent	\$0.00	\$3,501.00	\$1,076.02
Median Housing Value	\$0.00	\$2,000,001.00	\$179,424.14

What is Principle Component Analysis (PCA)?

Principle components analysis (PCA) is a statistical factor reduction procedure aimed at converting possibly correlated observations (variables) into a set of values of linearly uncorrelated variables called principal components. PCA as applied to SoVI® utilizes a rotated component matrix where the Kaiser Criterion determines the number of variables retained in the analysis. Utilizing factor rotation produces a more interpretable and simplified solution. Principle components analysis is primarily used to provide more easily interpreted results, and produce a solution that is more parsimonious.

Is Principle Component Analysis Suitable for my Data?

VMAP will not run on data that does not pass KMO & Bartlett's Test of Sphericity. These tests measure sampling adequacy and are recommended to check the case to variable ratio for the analysis being conducted. KMO & Bartlett's test are an important indicator of sample adequacy and prove suitability of the data for factor analysis. While the KMO ranges from 0 to 1, the general level of acceptability is > 0.6. Furthermore, Bartlett's Test of Sphericity indicates study significance thereby showing validity and suitability of the responses collected to the problem being addressed through the analysis. For Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05.

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STUDY AREA DESCRIPTION

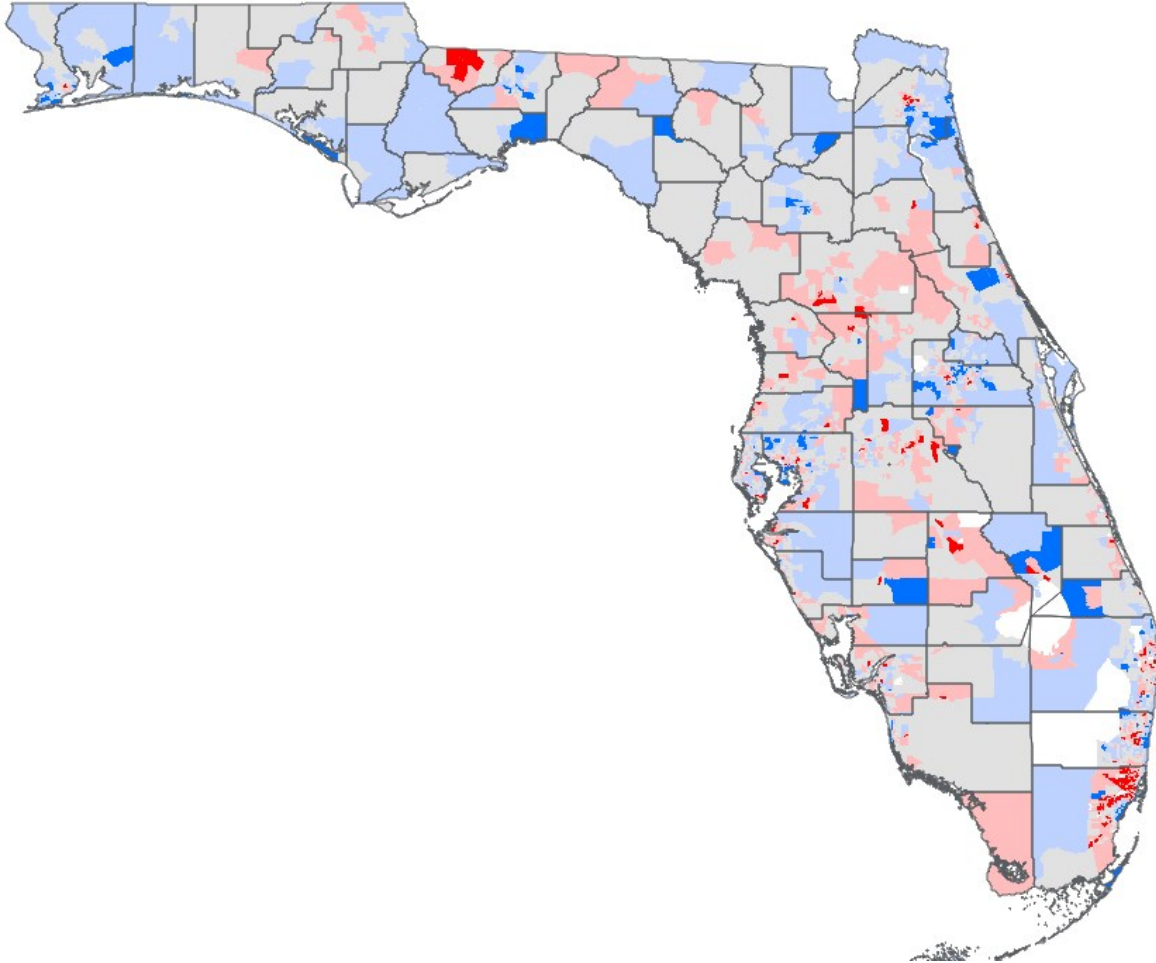
Type of Enumeration Unit	Tract			
Number of Enumeration Units	4,172			
Population in Study Area	Total: 19,645,772	Min: 8	Max: 38,169	Average: 4,708.96
Housing Units in Study Area	Total: 9,094,999	Min: 0	Max: 25,530	Average: 2,180.01

FACTOR AND VARIANCE SUMMARY

Factor	Vulnerability Influence	Description	% Variance Explained	Dominant Variables	Component Loading
1	↑	Race and Poverty	16.693	Race (Black) (QBLACK)	0.796
				Poverty (QPOVTY)	0.781
				Female Headed Households (QFHH)	0.715
				No Auto Access (QNOAUTO)	0.703
2	↑	Dependence and Age	14.788	Social Security Beneficiaries (QSSBEN)	0.920
				Age Dependent Populations (QAGEDEP)	0.896
				Median Age (MEDAGE)	0.854
3	↓	Wealth	12.897	House Value (MDHSEVAL)	0.887
				Wealth (QRICH200K)	0.877
				Wealth (PERCAP)	0.818
4	↑	Access Barrier and Ethnicity	9.226	English Language Proficiency (QESL)	0.922
				Ethnicity (Hispanic) (QHISP)	0.921
				Educational Attainment (QED12LES)	0.408
5	↑	Gender and Gendered Employment	7.968	Gender (Female) (QFEMALE)	0.783
				Gendered (Female) Employment (QFEMLBR)	0.711
				Low % Primary Sector Employment (QEXTRCT)	-0.558
6	↑	Household Size and Dependence	6.124	High Occupancy Housing (PPUNIT)	0.696
				Low nursing home residents per capita (QNRRES)	-0.447
				Lower % Renters (QRENTER)	-0.427
Total Variance Explained			67.696		

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5-CLASS MAP



5-CLASS MAP LEGEND: HIGH MEDIUM HIGH MEDIUM MEDIUM LOW LOW

Maps are generated using data and are for graphical illustration purposes only. The maps do not represent a legal survey. While every effort has been made to ensure that the data is accurate and reliable within the limits of the VMAP tool, UCF DOES NOT ASSUME LIABILITY FOR ANY DAMAGES WHATSOEVER OR ANY CLAIMS ARISING OUT OF THE USE OF THE MAPS, CAUSED BY ANY ERRORS OR OMISSIONS IN THE DATA, NOR AS A RESULT OF THE DATA BEING INCOMPATIBLE WITH A PARTICULAR SYSTEM. AUTHORS AND UCF MAKE NO REPRESENTATION AND EXTEND NO WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, RELATING TO THE MAPS OR USE OF THE MAPS.

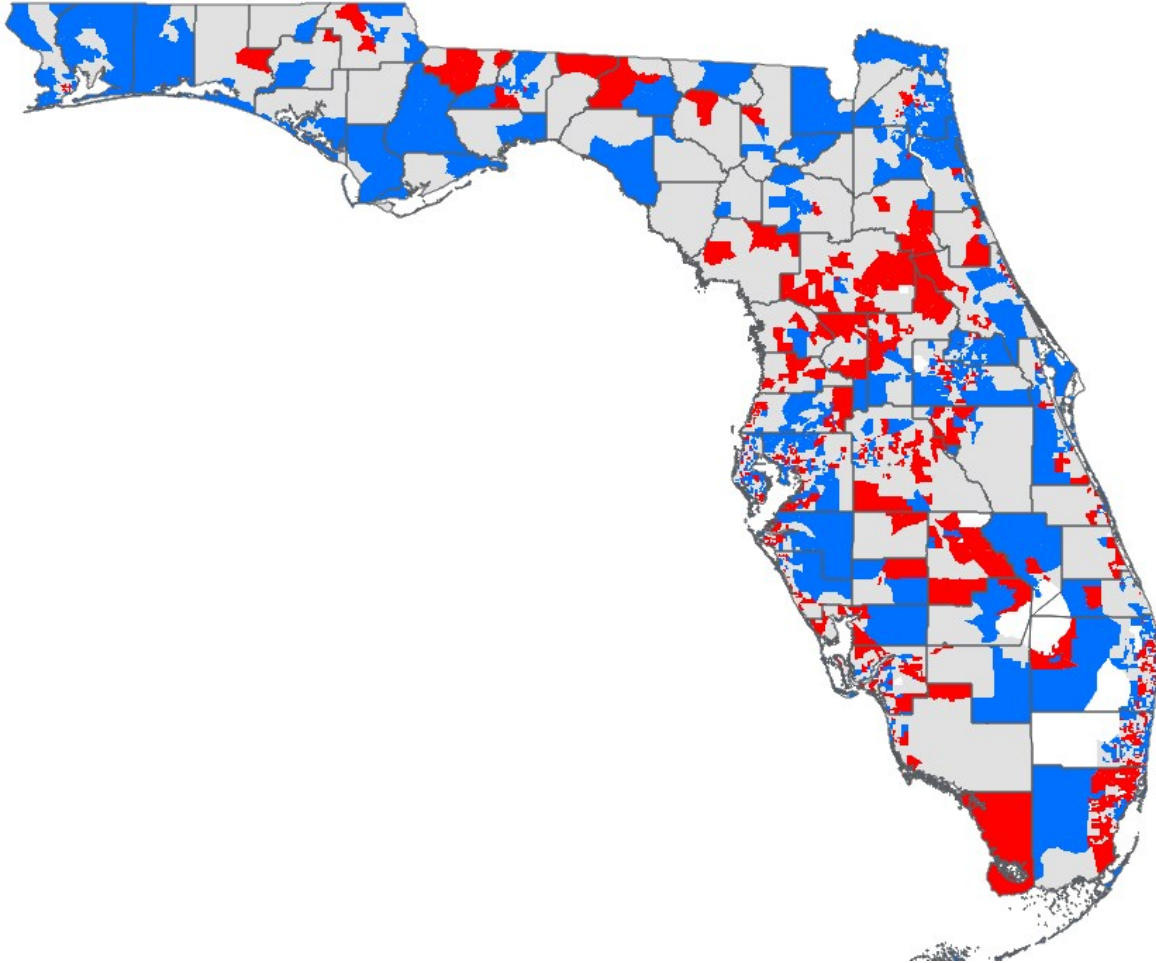
Produced By:
VMAPTM
 VULNERABILITY MAPPING
 ANALYSIS PLATFORM

SOCIAL VULNERABILITY CATEGORY

	High	Medium High	Medium	Medium Low	Low
Number of Tracts	321	876	1,750	983	242
Population	1,552,542	4,148,336	8,440,567	4,597,021	907,306
Housing Units	617,977	1,887,912	3,935,744	2,189,408	463,958

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3-CLASS MAP



3-CLASS MAP LEGEND: ■ HIGH ■ MEDIUM ■ LOW

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SOCIAL VULNERABILITY CATEGORY

	High	Medium	Low
Number of Tracts	1,197	1,750	1,225
Population	5,700,878	8,440,567	5,504,327
Housing Units	2,505,889	3,935,744	2,653,366