



St. Louis Metro Hunger Atlas¹

Jill Lucht, Jordan Dawdy, Colleen Heflin, Sandy Rikoon,
 Matt Foulkes, Joan Hermsen, and Nikki Raedeke²

Authors

Jill Lucht, Research Associate with Agricultural Extension-Social Sciences at the University of Missouri.

Jordan Dawdy, PhD. Student in the Department of Rural Sociology at the University of Missouri.

Colleen Heflin, Associate Professor at the Harry S Truman School of Public Affairs at the University of Missouri.

Sandy Rikoon, Professor and Curators Distinguished Teaching Professor of Rural Sociology at the University of Missouri.

Matt Foulkes, Assistant Professor of Geography at the University of Missouri.

Joan Hermsen, Associate Professor of Sociology and Chair of Women's and Gender Studies at the University of Missouri.

Nikki Raedeke, Director of the Coordinated Program in Dietetics in the Department of Nutrition & Exercise Physiology at the University of Missouri.

This brief assesses the extent of food insecurity and food uncertainty in the Missouri counties of the St. Louis metropolitan area. It also begins to gauge how well public programs are doing in meeting the needs of those of our fellow citizens who have difficulty acquiring sufficient amounts and qualities of food. The concept of food security, as defined by the Food Assistance and Nutrition Research Program within the United States Department of Agriculture, is access by all people at all times to enough food for an active, healthy life.

Food insecurity is on the rise in the U.S. While 11.1% of households were food insecure in 2007, just one year later that number jumped to 14.6% (Andrews and Nord, 2009). Many food insecure households seek assistance from food pantries. An estimated 4.1 million households accessed emergency food from a food pantry at least once in 2008, an increase from the previous year.

The recession has impacted Missouri like much of the rest of the country. The unemployment rate has nearly doubled since 2005 from 5.4% to 9.4% as of December 2009. According to the US Department of Agriculture, 15.8 percent of Missouri's nearly six million residents were food insecure in 2008. This suggests that 934,034 residents

Definitions:

Food secure: A household measure suggesting that all members of the household had adequate access to sufficient food at all times to lead active and healthy lives.

Low food security (or, prior to 2005, food insecure): Households that have problems or difficulties in accessing sufficient food.

Very low food security (or, prior to 2005, food insecure with hunger): Households that have problems or difficulties in accessing sufficient food and that experience reductions in the normal eating patterns and food intake of some household members due to lack of money and other resources.

Food uncertainty: This term is equivalent to low food security. However, the levels of food uncertainty reported are estimates based on statistical analysis by Drs. Colleen Heflin, Joan Hermsen and Matt Foulkes.

Source: Nord, Coleman-Jensen, Andrews, and Carlson. (2010) Household food security in the United States, 2009. Economic Research, Report No. (ERR-108) pp. 68.

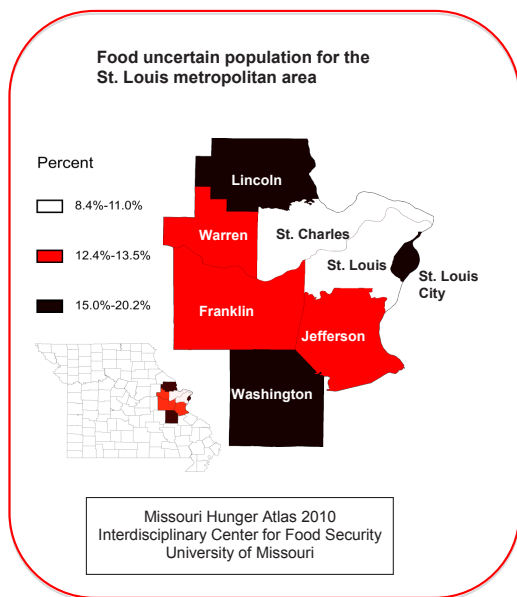
¹ This report was prepared by the Interdisciplinary Center for Food Security at the University of Missouri. The Center was established in 2004 in the College of Agriculture, Food and Natural Resources. Participating faculty come from four MU colleges and are engaged in integrated programs of research, training, and extension focused on domestic food security issues. For more information, see the entire Missouri Hunger Atlas at missourifamilies.org/mohungeratlas.

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faced uncertainty in acquiring sufficient food for their household. Further, the USDA estimates that 7.2 percent of the population, or roughly 425,636 Missourians, had “very low food security” (formerly “food insecure with hunger”) in 2008, suggesting they skipped meals, reduced portions, or experienced other evidence of hunger. Trends in food insecurity and hunger suggest cause for concern, as current averages for both measures have continuously increased over the first decade of this century.

County-level estimates for food uncertainty and hunger in Missouri reveal a pattern in the St. Louis metropolitan area where the most rural county in the region and the urban core experience very high rates of food uncertainty and hunger. Those counties traditionally considered suburban have some of the lowest percentages of food uncertainty and hunger in the state. Newly developing metropolitan counties fall between the urban/rural and suburban divide (see Map 1).

Map1: Food Uncertain Population



Washington County has the highest rate of food uncertainty in the region, and the second highest in the state, with 19.9% of the population facing food uncertainty in their household. Rates of hunger in Washington County (7.3%) are also higher than the state average of 7.2%. With 17.7% of households in St. Louis City experiencing food uncertainty, its numbers are also higher than the state average of 15.8%. However, at 5.9%, hunger rates in St. Louis City are lower than the state average.

In contrast, St. Louis County has a noticeably lower food uncertainty rate with 9.3%, and St. Charles County has the lowest food uncertainty rate in the entire state (8.4%). While the rates of food uncertainty are low in St. Louis and St. Charles counties, it is important to note that they are counties with relatively high populations. This translates into high numbers of people facing food uncertainty in the two counties. For example, we estimate the number of food uncertain individuals in 2008 in St. Louis County to be 92,240 people, with an additional 29,350 food uncertain individuals in St. Charles County. In comparison, our estimate for the number of food uncertain individuals in Washington County, with a much higher food uncertainty rate (19.9%), is 4,885. The rate of food uncertainty in Lincoln County (15.1%) more closely mirrors the state average. The rest of the counties in the region have relatively low rates of food uncertainty, including Franklin (12.4%), Jefferson (12.5%) and Warren (13.2%). Please see Table 1 for details on other Missouri counties in the region.

Table 1: Food Uncertainty

Food Uncertainty			
County	% Households Food Uncertain	% Households w/Children Food Uncertain	% Food Uncertain with Hunger
Franklin	12.4%	17.7%	4.4%
Jefferson	12.5%	16.5%	4.5%
Lincoln	15.1%	19.1%	5.4%
St. Charles	8.4%	11.7%	3.0%
St. Louis City	17.7%	25.7%	5.9%
St. Louis County	9.3%	13.8%	3.0%
Warren	13.2%	19.1%	4.6%
Washington	19.9%	27.7%	7.3%
State of Missouri*	15.8%	23.4%	7.2%

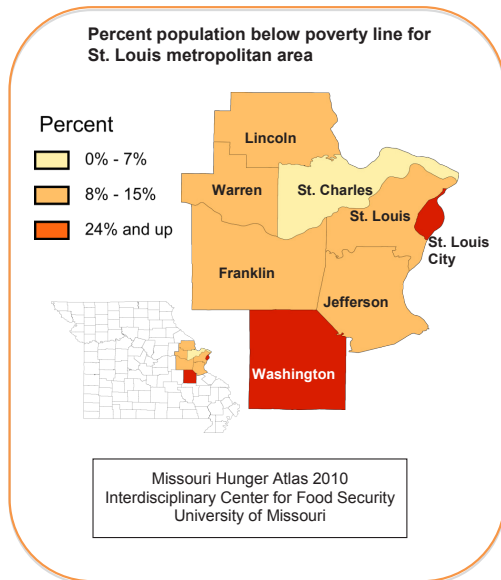
*At the state level, the term "food insecure" is equivalent to "food uncertain"

Food uncertainty estimates are based on modeling of variables related to citizenship, age, race, female headed households, poverty, median household income, and unemployment. Data on four of these variables are detailed for Missouri counties in the St. Louis metropolitan area in Table 2.

One of the key drivers of food insecurity is poverty. In 2008, the U.S. poverty rate was 13.2 percent, with the State of Missouri slightly higher than the national average at 13.5%. Poverty rates in the region follow a similar pattern to food

uncertainty and hunger in the region with Washington County and St. Louis City each having a rate of 24% while the poverty rate in St. Charles County is just 5%. The other counties in the region have poverty rates much lower than the state average, including 8% in Jefferson, 9% in St. Louis County and Franklin County, 10% in Lincoln County and 11% in Warren County. The overall poverty rate in the Missouri counties of the St. Louis Metropolitan region was 10.7%. (See Map 2).

Map 2: Population Below Poverty Line



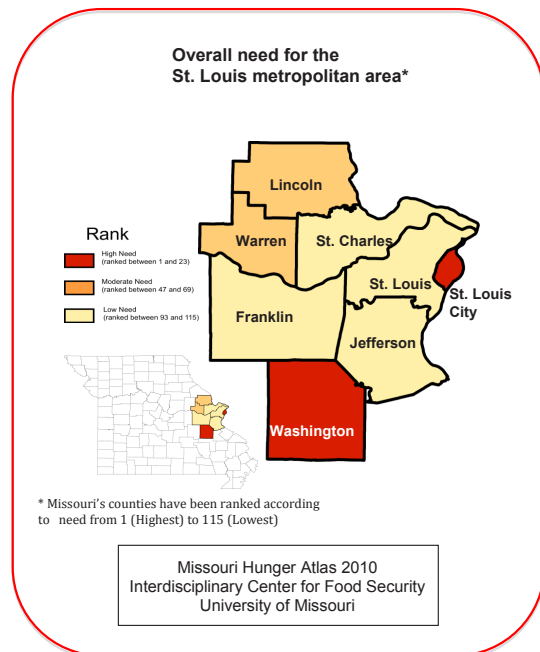
Median household income and unemployment rates are other key variables relating to poverty and food uncertainty that follow the established pattern. The lowest incomes in the region are found in Washington County (\$32,546) and St. Louis City (\$33,993). St. Charles County has the highest household income in the entire state at \$72,428, with Jefferson County and St. Louis County having the next highest income in the region with \$57,897 and \$57,782 respectively. The other counties in the region range from Warren County with \$45,779, Franklin County with \$49,064 and Lincoln County with \$54,740. In 2008, unemployment levels in the region varied from a low of 5.4% in St. Charles County and 5.9% in St. Louis County to a high of 10.2% in Washington County. The unemployment rate in St. Louis City in 2008 was 7.8%. Lincoln County, which is one of the more rural counties in the region and highly dependent on commuting for employment, had a slightly higher unemployment rate than St. Louis City (7.9%). The Metro unemployment rate among Missouri counties was 6.4% in 2008. (See Table 2).

Table 2: Economic Indicators

Economic Indicators					
County	Population Below Poverty	Population <18 Below Poverty	Median Household Income	Unemployment Rate (2008 Annual Rate)	Female Headed Households
Franklin	9.0%	12.3%	\$49,064	7.5%	5.9%
Jefferson	8.0%	11.0%	\$57,897	6.8%	7.4%
Lincoln	10.0%	14.4%	\$54,740	7.9%	8.4%
St. Charles	5.0%	6.6%	\$72,428	5.4%	5.6%
St. Louis City	24.0%	35.3%	\$33,993	7.8%	11.7%
St. Louis County	9.0%	12.0%	\$57,782	5.9%	7.4%
Warren	11.0%	14.8%	\$45,779	7.5%	5.6%
Washington	24.0%	32.9%	\$32,546	10.2%	7.7%
St. Louis Metro	10.7%	NA	NA	6.4%	NA
State of Missouri	13.5%	12.3%	\$46,847	6.1%	6.2%

Government agencies use a combination of economic indicators to determine if applicants are eligible for various types of food aid, including Supplemental Nutrition Assistance Program or SNAP (also known as food stamps), Free and Reduced School Lunch and the Women, Infants, and Children (WIC) program.³ In 2008, approximately 18.2% of the total Missouri population was income eligible for food stamps, 42.9% of school children were eligible for Free and Reduced School Lunch, and 42.8% of children under 5 were eligible to participate in WIC. Taken together with food uncertainty estimates for counties, these figures create a “need index” that demonstrates the level of need for food assistance in a county. (See Map 3).

Map 3: Overall Need



³ The federal special supplemental nutrition program for women, infants and children was enacted in 1972 to provide for low income pregnant women, breastfeeding women and children under the age of five.

The regional level of eligibility for government food assistance in the Missouri counties in the St. Louis metropolitan area are lower than the state average, with 15.2% of the population income eligible for SNAP and 36.7% of children under 5 eligible to participate in WIC. Eligibility rates for Free and Reduced School Lunch are not available at the regional level. However, despite lower average eligibility in the region than the state as a whole, there are pockets of the St. Louis metropolitan area that demonstrate much higher need for food assistance in terms of the percentage of people eligible for food assistance programs. Almost one third of residents in St. Louis City are income eligible for SNAP (31.0%), 74.3% of students are eligible for free and reduced school lunch, and 58.8% of their children under 5 are eligible for WIC. Washington County has the next highest income eligibility for SNAP, with 22.9% of their population eligible. Over half of their students are eligible for free and reduced school lunch (56.8%) and their WIC eligibility for children under 5 years (61.4%) is higher than St. Louis City.

In contrast, St. Charles County has some of the lowest levels of eligibility for food assistance programs in the entire state, with just 6.4% of their population eligible for SNAP, 16.6% of students eligible for free and reduced school lunch and 16.1% of children under 5 eligible for WIC. The rest of the counties in the region tend to form a mid-level cluster of eligibility for government food assistance, ranging from 11.6% income eligibility for SNAP in Jefferson County to 15.2% in Warren County, 31.3% of students eligible for free and reduced school lunch in Jefferson County to 38.9% in Warren County, and 30.0% children under 5 in Jefferson County eligible for WIC to 36.4% in Franklin County. (See Table 3).

Table 3: Need Indicators

Need Indicators				
County	Food Stamps/SNAP		Free & Reduced School Lunch	WIC
	% Total Population Income Eligible	% <18 Years Income Eligible	% Students Eligible	% <5 Years Eligible
Franklin	13.8%	18.1%	32.5%	36.4%
Jefferson	11.6%	15.8%	31.3%	30.0%
Lincoln	13.7%	19.5%	34.1%	32.7%
St. Charles County	6.4%	7.8%	16.6%	16.1%
St. Louis City	31.0%	45.1%	74.3%	58.8%
St. Louis County	12.8%	18.1%	37.4%	32.6%
Warren County	15.2%	19.2%	38.9%	35.8%
Washington	22.9%	26.0%	56.8%	61.4%
St. Louis Metro	15.2%	19.2%	NA	36.7%
State of Missouri	18.2%	24.7%	42.9%	42.8%

Participation rates in public and private programs intended to help residents cope with food insecurity are one measure of how well counties, states and regions are meeting the needs of their most vulnerable populations. The Missouri Hunger Atlas creates a “performance index” for each county based on participation rates in public food assistance programs (SNAP/ Food Stamps, Free and Reduced School Lunch and WIC), as well as pounds of food distributed through the regional food bank to local food pantries. Participation rates for public programs are based on the percent of eligible people who are participating in the program. The performance of the private sector food assistance network is measured by the number of pounds distributed through the food bank system per capita under the poverty line. (See Table 4).

Table 4: Performance Indicators

Performance Indicators									
County	Food Stamps/SNAP			Free & Reduced School Lunch	Summer Food Service Program	WIC	Child & Adult Care Food Program	Food Bank	Overall Performance
	# Monthly Participants	% Total Population Participating	% Income Eligible Population Participating	% Students Eligible Participating	# Sites	# Monthly Participants	Total Reimbursements	Lbs. per Capita <100% Poverty	
Franklin	9,238	9.2%	Average	75.5%	1	1,693	\$582,971	35	Very Low
Jefferson	19,357	8.9%	Very High	74.1%	1	3,295	\$1,274,330	38	Low
Lincoln	6,148	11.6%	Very High	80.6%	3	982	\$71,171	29	High
St. Charles County	15,400	4.4%	Average	63.4%	0	2,396	\$1,652,556	40	Very Low
St. Louis City	98,021	27.7%	Very High	64.2%	11	14,915	\$9,581,921	61	High
St. Louis County	90,492	9.1%	High	71.8%	15	8,487	\$6,147,512	39	Very Low
Warren County	3,767	12.1%	Very High	74.9%	0	1,056	\$146,693	46	Very High
Washington	6,276	25.6%	Very High	71.6%	4	1,091	\$561,325	40	High
St. Louis Metro	248,699	11.7%	78.7%	69.8%	35	33,915	\$20,018,480	47	NA
State of Missouri	758,421	12.8%	70.5%	NA	335	142,935	\$52,190,110	78	NA

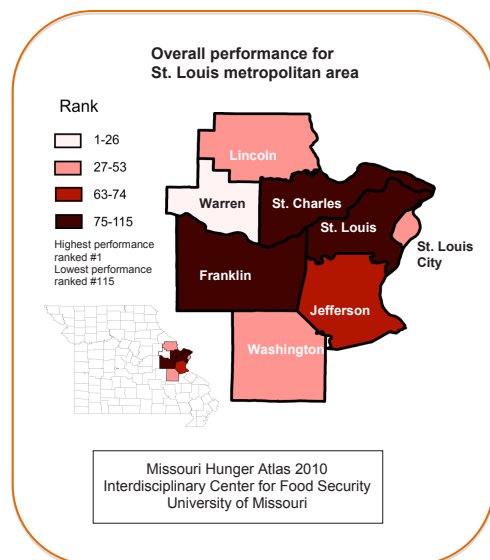
In 2008, the Missouri counties in the St. Louis Metropolitan Area included nearly one third (32.8% or 248,699 people) of the state's 758,421 SNAP/Food Stamp participants, with 78.7% of the income eligible population in the region participating in the program. The regional participation rate is higher than the state participation rate of 70.5%, which indicates that counties in the region are doing relatively well at meeting the demand for food stamps in the area. However, due to the large population in the metropolitan area, the participation rate means that around 67,305 people who were income eligible for food stamps in the region were not participating in 2008. County level participation rates in food stamps were very high in most counties in the region. Exceptions include St. Louis County, which ranked "high" in food stamp participation and Franklin and St. Charles counties that ranked "average" in participation rates compared with other counties in the state

Participation rates in Free and Reduced School Lunch range from 63.4% of eligible students participating in St. Charles County to 80.6% participating in Lincoln County. St. Louis City, where the largest number of students is eligible for free and reduced school lunch, includes just 64.2% of eligible students participating in the program. The regional rate of participation in Free and Reduced School Lunch was 69.8% in 2008. Nearly one quarter (33,915 or 23.7%) of the state's WIC recipients live in the region. The food pantries in the region that are tied to the regional food bank distributed fewer pounds of food per capita under the poverty line (47 pounds) than the state average of 78 pounds per capita under the poverty line. Pounds of food per capita under the poverty line varied greatly from just 29 pounds in Lincoln County to 61 pounds in St. Louis City. Other private food assistance may be available throughout the region, though these figures are unavailable.

Two additional federal food assistance programs bear mentioning, though they are not included in the performance index mentioned above. The Missouri counties in the St. Louis metropolitan area included 35 sites and \$2,195,820 in reimbursements for the Summer Food Service Program which offers meals to low-income children through the summer (when Free and Reduced School Lunch is unavailable). The Child and Adult Care Food Program (CACFP) is a program that provides snacks and meals to children and the elderly participating in day care programs. The St. Louis region has strong participation in this program, receiving \$20,018,480 (38.4% of the total state reimbursements of \$52,190,110 for CACFP).

Performance on measures of participation in public and private programs that address hunger varies widely throughout the region from very low in Franklin, St. Charles and St. Louis counties to very high in Warren County. While St. Louis City and Washington County are high in need, they are also ranked high in performance, suggesting that public and private institutions are well mobilized in those locations to help meet the needs of their most vulnerable citizens. As mentioned earlier, though St. Louis and St. Charles counties have low rates of need, their population bases are high, and their placement in the lowest performance quintile in the state suggests high numbers of unserved people in these counties. (See Map 4).

Map 4: Overall Performance



In sum, the Missouri counties of the St. Louis metropolitan area tend to follow a pattern where the most rural counties and the urban core experience very high levels of food uncertainty, hunger and poverty. In contrast, those counties traditionally considered suburban have some of the lowest levels of food uncertainty, hunger and poverty in the state. This pattern is very distinct when compared with the Kansas City metropolitan area, where the variation among counties in terms of food security and participation in public and private programs that alleviate hunger does not follow a discernable pattern.⁴

Across the nation, households find themselves accessing informal and formal sources of emergency assistance for

⁴ The information on the Kansas City metropolitan area is derived from the report, "Kansas City Metro Hunger Atlas", Report 03-2011 from University of Missouri Columbia, Institute of Public Policy Web site: <http://ipp.missouri.edu>

the first time as they cope with job loss and lower incomes. One of the key drivers of food insecurity and hunger in the St. Louis metropolitan area, the state of Missouri, and throughout the United States, is poverty. Further, income level is typically the primary eligibility criteria for participation in all public food assistance programs. Thus, economic, labor and income trends are most significant in the spatial distribution of need and program entitlement. The deterioration of the state (and national) economic picture over the past three years parallels our findings and suggests that the situation in 2010 was most likely worse than the levels documented in this brief. Reports for food banks and pantries reveal continued increases in numbers of clients (at a time when USDA contributions through commodity and other programs are flat or decreasing). Participation in WIC, Food Stamps and other programs also continues to grow. For example, trends in SNAP (food stamp) numbers almost always rise and fall following changes in unemployment rates, and US and Missouri levels of participation are both the highest in the history of the program. It follows from this that the most direct route to alleviating hunger is to develop successful strategies for raising the income of the poor.

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Institute of Public Policy
137 Middlebush
University of Missouri
Columbia, MO 65211
<http://ipp.missouri.edu>

