



MAP THE MEAL GAP

HIGHLIGHTS OF FINDINGS FOR OVERALL AND CHILD FOOD INSECURITY



GLOSSARY

AGENCY

A charitable organization that provides the food supplied by a food bank or food-rescue organization directly to clients in need, through various types of programs.

AMERICAN COMMUNITY SURVEY (ACS)

A sample survey of three million addresses administered by the U.S. Census Bureau. In order to provide valid estimates for areas with small populations, the county-level data extracted from the ACS for Map the Meal Gap was averaged over a five-year period.

AVERAGE MEAL COST

The national average amount of money spent per week on food by food secure people, as estimated in the **Current Population Survey**, divided by 21 (assuming three meals eaten per day).

CHILD FOOD INSECURITY

A condition assessed in the **Current Population Survey** and represented in USDA food security reports. It is the household-level economic and social condition of limited or uncertain access to adequate food, as reported for households with children under age 18.

CHILD FOOD INSECURITY RATE (CFI rate)

The approximate percentage of children (under 18 years old) living in households in the U.S. that experienced food insecurity at some point during the year. The **child food insecurity** measures reflected in this study are derived from the same set of questions used by the USDA to establish the extent of food insecurity in households with children at the national level. “**Child food insecurity**” and “CFI” are used interchangeably throughout this report.

CURRENT POPULATION SURVEY (CPS)

A nationally representative survey conducted by the U.S. Census Bureau for the Bureau of Labor Statistics providing employment, income, **food insecurity** and poverty statistics. Households are selected to be representative of civilian households at the state and national levels. The CPS does not include information on individuals living in group quarters, including nursing homes or assisted living facilities.

EMERGENCY FOOD ASSISTANCE

Charitable feeding programs whose services are provided to people in times of need. Emergency food programs may include food pantries, soup kitchens and shelters.

FEDERAL NUTRITION PROGRAM ELIGIBILITY THRESHOLD

The point at which household income is deemed too high to allow for eligibility for federal nutrition programs such as the National School Lunch Program (NSLP) or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

FOOD BANK

A charitable organization that solicits, receives, inventories and distributes donated food and grocery products pursuant to industry and appropriate regulatory standards. The products are distributed to charitable human-service **agencies**, which provide the products directly to clients through various programs.

FOOD BUDGET SHORTFALL

The weekly (or annualized) additional dollars **food insecure** people report needing to meet their food needs, as assessed in the **Current Population Survey**.

FOOD INSECURITY

A condition assessed in the **Current Population Survey** and represented in USDA food security reports. It is the household-level economic and social condition of limited or uncertain access to adequate food.

FOOD INSECURITY RATE

The percentage of the population that experienced **food insecurity** at some point during the year.

HIGH FOOD INSECURITY COUNTIES

The counties with **food insecurity** (or **child food insecurity**) rates falling into the top 10% as compared with the food insecurity (or child food insecurity) rates among all counties in the United States.

THE MEAL GAP

A conversion of the total annual **food budget shortfall** in a specified area divided by the **weighted cost per meal** in that area. The meal gap number represents the translation of the **food budget shortfall** into a number of meals.

METROPOLITAN/MICROPOLITAN

Metropolitan areas contain a core urban area of 50,000 or more residents and micropolitan areas contain a core urban area of at least 10,000 (but less than 50,000) residents, as defined by the U.S. Office of Management and Budget (OMB). Each metropolitan or micropolitan area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration with the urban core. In this report, rural counties are those that are neither represented as metropolitan or micropolitan by the OMB.

PERCENT OF POVERTY LINE

A multiple of the federally established poverty guideline, which varies based on household size. These percentages are used to set **federal nutrition program thresholds** for eligibility, such as the **SNAP threshold**.

PRICE INDEX/LOCAL COST OF FOOD INDEX

A number used to indicate relative differences in prices across geographies. In the case of this report, the index for any particular county is equal to the cost of a standard market basket of goods in that county divided by the average market basket cost across the U.S. as calculated by Nielsen.

SNAP ELIGIBILITY THRESHOLD

A dollar amount (based on **percent of poverty line**) at which a household's income is deemed too high to be eligible for the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program). Income eligibility is one aspect of eligibility, which also includes assets and net income. These income thresholds and other eligibility tests vary by state.

WEIGHTED COST PER MEAL

A local estimate of meal costs calculated by multiplying the **average meal cost** by the appropriate food cost **price index** for the specific geographic area.

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ABOUT FEEDING AMERICA

Feeding America is the nation's network of more than 200 food banks and the largest hunger-relief charity in the United States. Each year, Feeding America secures and distributes three billion pounds of food and grocery products through 61,000 agencies nationwide. Our agency network provides charitable food assistance to an estimated 37 million people in need annually.

Our strength is derived from our member food banks, which serve all 50 states, the District of Columbia and Puerto Rico, reaching nearly all metropolitan, suburban and rural communities. Hunger does not discriminate and neither does the Feeding America network—our

members serve people regardless of their race, age, religion or status. For more than 30 years, the Feeding America network has been assisting low-income people who struggle to meet their daily food needs.

HOW WE WORK



THE DONORS AND PARTNERS

Growers
Processors
Restaurants
Manufacturers
Distributors
Retailers
Convenience Stores
Wholesalers
Food Industry
Associations
Food Service Operators
Food Drives
United States Department
of Agriculture

FEEDING AMERICA

Using the latest technology, the Feeding America network distributes and tracks donated food to more than 200 certified member food banks nationwide.

THE AGENCIES

Food Pantries
Youth Programs
Community Kitchens
Senior Centers
Day Care Centers
Rehabilitation Centers
Homeless Shelters
Kids Cafes
Residential Shelters
Other Charitable Organizations

37 MILLION AMERICANS IN NEED

Victims of Disaster
Children
Working Poor
Single-parent Families
Unemployed
Homeless
Persons with Disabilities
Older Persons

Understanding Food Insecurity

A CLOSER LOOK AT FOOD INSECURITY IN THE U.S.*

50 MILLION

INDIVIDUALS ARE FOOD INSECURE

17 MILLION

OF THEM ARE CHILDREN

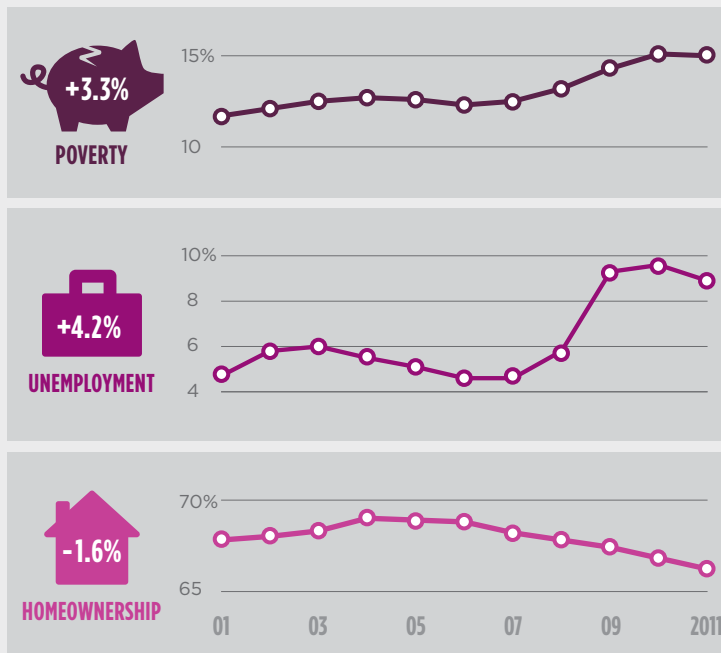


WE ESTIMATED FOOD INSECURITY FOR ALL

3,143 COUNTIES

IN THE UNITED STATES

KEY FOOD INSECURITY DRIVERS OVER THE PAST DECADE†,§



AS POVERTY AND UNEMPLOYMENT INCREASE, FOOD INSECURITY INCREASES. AS HOME OWNERSHIP DECREASES, FOOD INSECURITY INCREASES.

FOOD BUDGET SHORTFALL FOR FOOD INSECURE INDIVIDUALS

FOOD INSECURE INDIVIDUALS REPORT NEEDING AN ADDITIONAL FOOD BUDGET OF

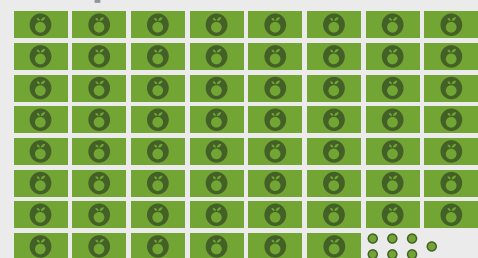
\$2.05 PER PERSON PER DAY



THAT'S \$14.35 PER WEEK



OR \$62.35 PER MONTH



* Coleman-Jensen, A., Nord, M., Andrews, M. & S. Carlson. Household Food Security in the United States in 2011. USDA Economic Research Service, 2012. Print.

† Percent African American and percent Hispanic are also key drivers of food insecurity.

§ U.S. Census Bureau, Current Population Survey, 2001-11 and Bureau of Labor Statistics, Current Population Survey, 2001-11



ABOUT MAP THE MEAL GAP 2013

Feeding America believes that addressing the problem of hunger requires a thorough understanding of the problem itself. For the third consecutive year, Feeding America has undertaken the Map the Meal Gap project to continue learning about the face of food insecurity at the local level. By understanding the population in need, communities can better identify strategies for reaching the people who most need food assistance.

Although Feeding America continually seeks to meet the needs of food insecure people, quantifying the need for food within a community can be challenging. In September of 2012, the Economic Research Service at the United States Department of Agriculture (USDA) released its most recent report on food insecurity, indicating that just over 50 million people in the United States are living in food insecure households, nearly

17 million of whom are children (Coleman-Jensen et al., 2012). While the magnitude of the problem is clear, national and even state estimates of food insecurity can mask the variation that exists at the local level. Prior to the inaugural Map the Meal Gap release in March 2011, Feeding America used state and national level USDA food insecurity data to estimate the need.

RESEARCH GOALS

In developing the Map the Meal Gap analysis, Feeding America identified several research goals for the project. These goals and the mechanisms for achieving them have remained unchanged.

Community-level analysis should be directly related to the need for food. The analysis estimates food insecurity at the county and congressional district level.¹

It should reflect major known determinants of the need for food, such as unemployment and poverty.

The model estimates food insecurity by examining the relationship between food insecurity and unemployment, poverty and other factors.

It should be based on well-established, transparent analytical methods. The statistical methods are well-known and use data from publicly available sources.

It should provide data on all counties in the U.S. Using the American Community Survey (ACS) data for all counties, this is possible.

It should help identify need by the income categories that inform eligibility for major federal nutrition programs so that communities can better understand what strategies can be leveraged in the fight against hunger. The model draws on information about income levels in counties. The income data is used to estimate the number of food insecure individuals whose resources suggest they are eligible for federal assistance programs. It also estimates the number of people whose incomes may be too high to qualify for federal nutrition programs but who still need help meeting their families' food needs.

It should be updated on an annual basis to reflect changing conditions. By using the national and annual USDA food insecurity data, county-level estimates can be calculated each year. The data presented in this report are drawn from 2011 Bureau of Labor Statistics data and the American Community Survey averages from the rolling 2007-2011 period (the most recent time data available across all counties).

However, food banks are rooted in their local communities and need specific information at the ground level in order to be responsive to unique local conditions. While state and national level food insecurity data were available, food banks used poverty rates as the default indicator of local food needs because it is one of few variables available at the county level. However, national data reveal that about 59% of those struggling with hunger actually have incomes above the federal poverty level and 58% of poor households are food secure (Coleman-Jensen et al., 2012). Measuring need based on local poverty rates alone provides an incomplete illustration of the potential need for food assistance within our communities. More accurate assessments of need across all income levels within our service areas assist

the Feeding America network in strategic planning for charitable food services, as well as inform the public policy discussion so that vital federal nutrition programs can better serve those in need.

Most importantly, better community-level data is an invaluable resource for engaging community leaders and partners in our quest to end hunger through a quantifiable and data-driven approach. In order to do this, Map the Meal Gap generates four types of community-level data: food insecurity estimates, child food insecurity estimates, food price variations and food budget shortfall.

A complete printable, interactive map of these data can be found online at feedingamerica.org/mapthegap.

¹ Because congressional districts were redrawn in 2012 and the most current data from the ACS reflect the former district boundaries, the current MMG estimates do not correspond with the current congressional districts. Because of this limited relevancy, the congressional district results are not included in this report. Congressional district data by state for 2011 are available upon request, email research@feedingamerica.org.

METHODOLOGY OVERVIEW

The following provides some additional information on the methodology for this study.

A more detailed technical brief is also available at feedingamerica.org/mapthegap.

FOOD INSECURITY ESTIMATES

Current Population Survey (CPS) data supplemented with data from the Bureau of Labor Statistics (BLS) were used to assess the relationship between food insecurity and its determinants at the state level. In particular, the following indicators were used: unemployment rate, poverty rate, median income, homeownership rates, percent African American and percent Hispanic. These variables were selected because they are publicly available at both the county

and state level and are associated with food insecurity. In addition, the model controls for state-specific and year-specific factors. County-level estimates were derived from the state-level relationships that exist between these indicators and food insecurity. Estimates were sorted by income categories associated with eligibility for federal nutrition programs such as the Supplemental Nutrition Assistance Program (SNAP) using American Community Survey (ACS) data on population and income at the county level.

MAP THE MEAL GAP FINDINGS, 2011

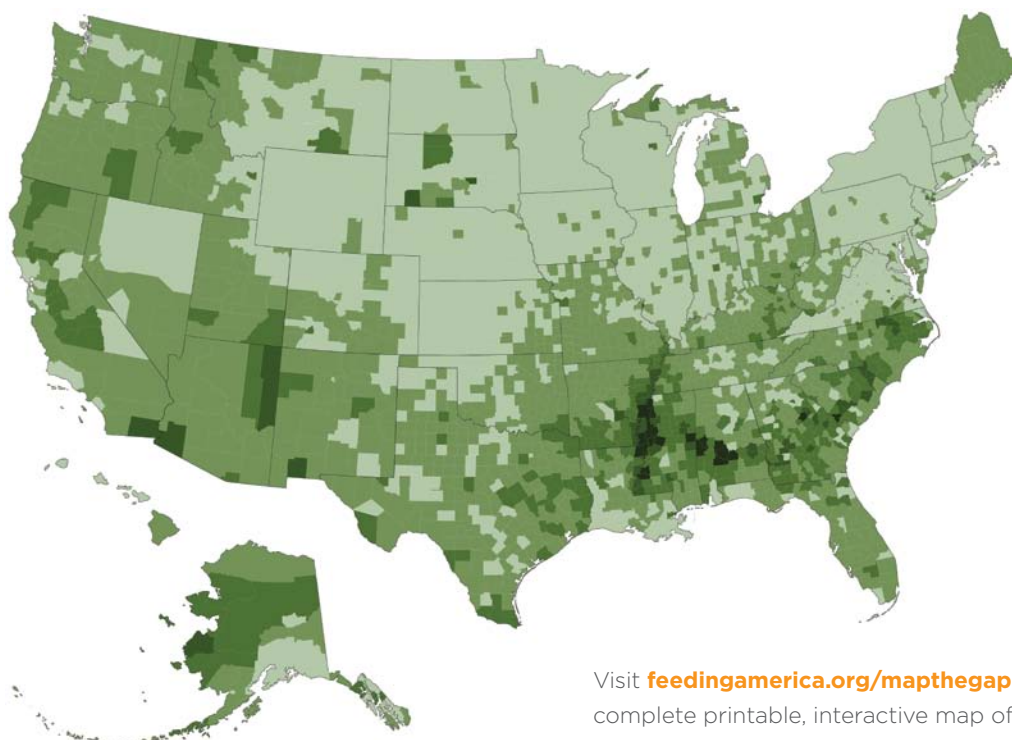
TABLE 01

Findings at Geographic Levels	State	County	Congressional District
OVERALL AND CHILD FOOD INSECURITY ESTIMATES	✓	✓	✓
A BREAKDOWN OF THE FOOD INSECURITY ESTIMATES BASED ON FEDERAL NUTRITION PROGRAM THRESHOLDS	✓	✓	✓
ESTIMATED FOOD BUDGET SHORTFALL THAT FOOD INSECURE INDIVIDUALS REPORT EXPERIENCING	✓	✓	
THE FOOD BUDGET SHORTFALL CONVERTED INTO AN ESTIMATE OF MEALS NEEDED, OR THE MEAL GAP	✓	✓	
WEIGHTED COST PER MEAL TO ILLUSTRATE FOOD PRICE VARIATION ACROSS THE COUNTRY	✓	✓	

ESTIMATING FOOD INSECURITY AT THE COUNTY LEVEL

FIGURE 01

Using the annual USDA Food Security Survey, we model the relationship between food insecurity and other variables at the state level and, using information for these variables at the county level, we establish food insecurity by county.



Visit feedingamerica.org/mapthegap for a complete printable, interactive map of county-level food insecurity and food cost data.

The food insecurity model illuminates the effect that the unemployment rate, the poverty rate and other factors (e.g., median income) have on food insecurity.

As expected, all else equal, higher unemployment and poverty rates are associated with higher rates of food insecurity. A one percentage point increase in the unemployment rate leads to a 0.63 percentage point increase in the overall food insecurity rate, while a percentage point increase in poverty leads to a 0.21

increase in food insecurity. Although the effect of a one percentage point increase in unemployment is larger than a one percentage point increase in poverty as described above, the mean value of poverty is higher than unemployment. To control for this we evaluate what occurs when unemployment and poverty are both at their mean values and consequently find that the relative effect of unemployment is higher than poverty for the full population.

THE ADDITION OF THE HOMEOWNERSHIP VARIABLE

Homeownership rates were added to the statistical model in 2013 to serve as a proxy for household assets.

Assets are a known factor that can help insulate households from the effects of poverty. Given the limited data available at the county level specific to assets, county homeownership rates are currently the best available substitute. Statistical tests reveal that the addition of this variable strengthens the accuracy of the estimates overall. Additionally, as national trends indicate that homeownership has declined in recent years, it is a timely and relevant inclusion in any

discussion of food insecurity and poverty. In general, all else equal, a county with higher rates of homeownership will have lower rates of food insecurity while a county with lower rates of homeownership will have higher rates of food insecurity. See the technical brief for more information on how homeownership fits into the current model, found online at feedingamerica.org/mapthegap.

CHILD FOOD INSECURITY ESTIMATES

Recognizing that children are particularly vulnerable to the economic challenges facing families today, Feeding America has replicated the food insecurity model used for the general population to reflect the need among children (see page 28 for results).

Similar to the methodology used to derive food insecurity estimates for the overall population, CPS data were used to assess the relationship between the proportion of children in any state living in food insecure households and key indicators of food insecurity. The following indicators were used to calculate estimates of child food insecurity at the county, congressional district and state levels: unemployment rates, child poverty rates, median income for families with children, homeownership rates for families with children, percent African American children and percent Hispanic children.

As with the overall food insecurity estimates, these variables were selected because they are associated with food insecurity and are publicly available at the county, congressional district and state levels through CPS, BLS and the ACS.

Estimates were also developed to sort the child food insecurity estimates into categories based on household income; for the child food insecurity portion

of this study, the categories are based on eligibility for child nutrition programs such as the National School Lunch Program (NSLP), the School Breakfast Program (SBP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (above and below 185% of the poverty line).

FOOD PRICE VARIATION

Nielsen, on behalf of Feeding America, analyzed nationwide sales data from Universal Product Code (UPC)—coded food items to establish a relative price index that allows for comparisons of food prices across the country.² Nielsen assigned each UPC-coded food item to one of the 26 food categories in the USDA Thrifty Food Plan (TFP). These categories were weighted within the TFP market basket based on pounds purchased per week by age and gender. This total market basket was then translated into a county-specific multiplier (normalized to a value of 1).

This multiplier can be applied to any dollar amount to estimate the relative local price of the item in question. The use of the TFP market basket is simply a standardized way to understand the relative differences in major food categories and was not selected to reflect any evaluation of the appropriate mix of food that people might purchase.

² In cases of counties with populations smaller than 20,000, Nielsen imputed a price based on data collected from all surrounding counties. This method differs slightly from 2012, where data were imputed only for counties missing data. See the technical brief for more information about imputation methods.



FOOD BUDGET SHORTFALL AND NATIONAL AVERAGE MEAL COST

There is a question on the CPS that asks respondents how much additional money they would need to buy enough food for their household (this follows questions regarding weekly food expenditures but precedes food insecurity questions). On average, food insecure individuals reported needing an additional \$14.35 per person per week.

A general estimate of the total budget shortfall among the food insecure can be arrived at by multiplying this amount by the number of food insecure persons. Because analyses of the CPS data by the USDA reveal that food insecure households are not food insecure every day of the year but typically struggle with hunger for about 7 months per year, 7/12 is used as a multiplier to arrive at an estimated annual food budget shortfall (Coleman-Jensen et al., 2012).

In recognition that food costs are not the same across the nation, the average food budget shortfall was adjusted by the local cost of food index for each county. The national cost of food index is set at 1. The national average is expressed as the equation above in Figure 02.

The food budget shortfall is then translated into an estimated meal shortfall, or “meal gap,” using a national average per-meal cost. The national cost per meal

estimate was derived from a question on the CPS asking how much the respondent’s household spends on a food in a week. We only include food expenditure data as reported by food secure households to ensure that the result reflects the cost of an adequate diet. We find that food secure individuals spend an average of \$56.07 per week, which is then divided by 21 (based on the assumption of three meals per day, seven days per week) to arrive at an average cost per meal of \$2.67.

As with the food budget shortfall, the per-meal cost of \$2.67 is adjusted for differences in food prices across counties by the cost of food index described previously in the Food Price Variation section. This local cost of a meal can then be used to translate the food budget shortfall into an estimated number of missing meals. The cost-per-meal and meal gap estimates are not intended to be definitive measures; however the concept of a “meal” provides communities with a context for the scope of need.

Although food prices are one of the many cost pressures that people face in meeting their basic needs (housing, utilities and medical expenses are other critical components), the ability to reflect differences in food costs across the country provides additional insight into the scope of the problems facing those who are food insecure and struggling to make ends meet.



COUNTY-LEVEL FOOD INSECURITY: RESULTS AND DISCUSSION

The Map the Meal Gap research provides detailed information for every county and congressional district in the United States,³ including the food insecurity rate, the number of individuals who are food insecure and their potential income-eligibility for federal programs.

TRENDS IN COUNTY FOOD INSECURITY RATES BETWEEN 2010 AND 2011

The following section reviews findings from the third year that Feeding America has conducted the Map the Meal Gap analysis. Food insecurity rates for 2010 and 2011 were compared to identify any notable shifts.⁴ Food insecurity estimates at the county level may be less stable from year to year than those at the state or national level due to smaller geographies, particularly in counties with very small populations. Efforts are taken to guard against unexpected fluctuations that can occur in these populations by using the

five-year averages from the ACS for key variables, including poverty, median income, homeownership and the percent of the population that is African American or Hispanic. However, the other key variable in the model—unemployment—is based on a one-year average estimate for each county as reported by the Bureau of Labor Statistics. The model looks at the relationship between all of these variables and the rate of food insecurity as reported by USDA in order to generate the estimates.

³ Because congressional districts were redrawn in 2012 and the most current data from the ACS reflects the former district boundaries, the current MMG estimates do not correspond with the current congressional districts. Because of this limited relevancy, the congressional district results are not included in this report. Congressional district data by state for 2011 are available upon request, email research@feedingamerica.org.

⁴ County-level estimates for 2010 were recalculated to include the new homeownership variable for year over year comparison.

Nationally, the food insecurity rate remained essentially unchanged between 2011 and 2010 at 16.4% and 16.1% respectively (Coleman-Jensen et al., 2012). Similarly, national and county-level economic indicators that influence food insecurity (such as unemployment and poverty, two key drivers of the Map the Meal Gap model) remained at near record levels during this period (see Table O2).

Similar to the national-level statistics, average county-level food insecurity rates across the country stayed approximately the same from 2010 to 2011, going from 14.9% to 14.7% for all counties and from 23.2%

to 23.4% for high food insecurity counties. Poverty rates for all counties and high food insecurity counties increased from 2010 to 2011 while unemployment rates decreased⁵ (see Table O2). Given the addition of the homeownership rate to the model (see page 9 for more information), specific county comparisons between 2010 and 2011 are not provided in this report.

The following sections explore county-level findings in greater detail. Please note that while substantial changes between 2010 and 2011 are highlighted, small changes are not.

**AVERAGE COUNTY-LEVEL
ECONOMIC INDICATORS, 2011⁶**

TABLE O2

County Grouping	Food Insecurity Rates		Unemployment Rates		Poverty Rates		Homeownership Rates		Median Household Income	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
High Food Insecurity Rate Counties	23.2%	23.4%	13.3%	12.7%	25.8%	26.4%	70.0%	66.3%	\$32,110	\$32,508
All U.S. Counties	14.9%	14.7%	9.2%	8.6%	15.5%	15.9%	73.3%	73.0%	\$44,270	\$43,417
National Average for All Individuals in the U.S.	16.1%	16.4%	9.6%	8.9%	15.1%	15.9%	65.4%	64.6%	\$50,046	\$50,502

⁵ The food insecurity module asks individuals about the prior 12 months, although it is plausible that individuals' responses may be most affected by their recent experience.

⁶ Averages for the high food insecurity rate counties and all U.S. counties are unweighted. All national average data come from the 2011 one-year ACS, except for food insecurity (USDA) and unemployment (BLS).

COUNTIES WITH THE HIGHEST RATES OF FOOD INSECURITY

To better understand those counties with the highest rates of food insecurity, we looked at those falling within the top 10% of the 3,143 counties in the United States (N=314; see Figure 03).⁷

Although the average of all the U.S. counties' food insecurity rates is nearly 15%, the average food insecurity rate for these 314 "high food insecurity rate" counties is 23%. In other words, within these highest risk counties, nearly one in every four residents is struggling with hunger.

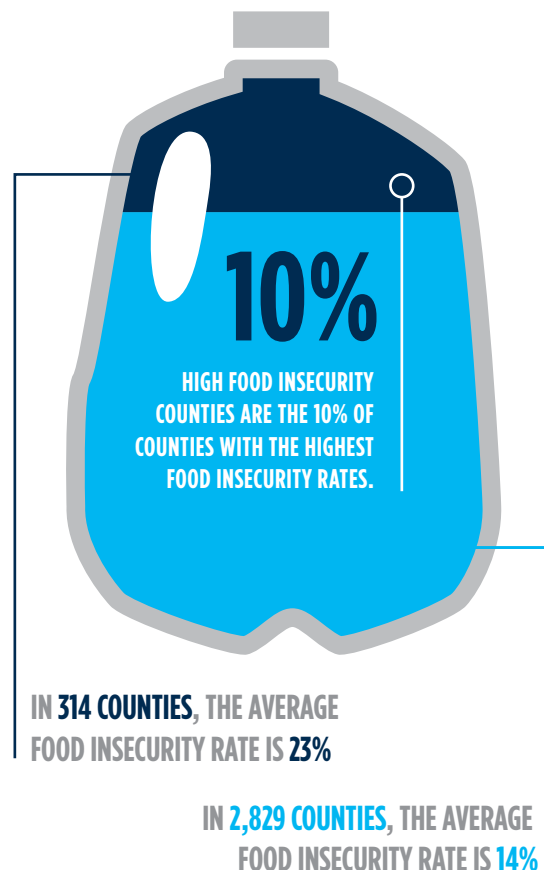
GEOGRAPHY

High food insecurity rate counties were analyzed according to the geographic classifications of metropolitan, micropolitan and nonmetropolitan ("rural").⁸ Consistent with findings in 2010, the high food insecurity rate counties were less likely to be metropolitan than the average county in the U.S. and more likely to be rural, as shown in Table 03 on page 14. In 2010, however, a greater proportion of high food insecurity counties were rural (55% versus 48% in 2011) and a fewer proportion were metropolitan (17% versus 23% in 2011).

The high food insecurity rate counties are found in eight of the nine Census geographic divisions identified by the U.S. Census Bureau (see Chart 01 on page 14),⁹ with the heaviest concentrations found in the South Atlantic and East South Central states. Although the New England division is not represented in the high food insecurity rate counties, this area includes some of the most populous counties in the U.S. and thus, has some of the largest numbers of food insecure individuals (see page 15).

FIGURE 03

THERE ARE 3,143 COUNTIES IN THE UNITED STATES.



IN HIGH FOOD INSECURITY COUNTIES
1 IN 4 INDIVIDUALS ARE
FOOD INSECURE

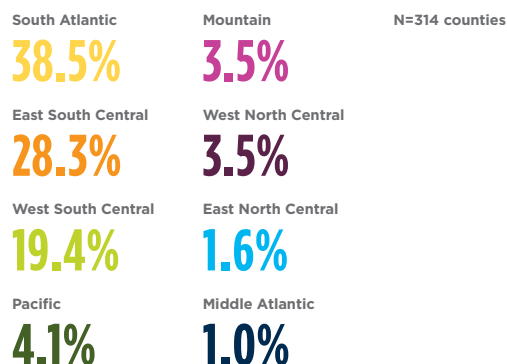
⁷ All 3,143 counties defined by the U.S. Census Bureau were included in the analysis of 2011 data.

⁸ These geographic entities are defined by the U.S. Office of Management and Budget (OMB). See Glossary for more information.

⁹ Information about the U.S. Census Bureau Regions and Divisions can be found online at www.census.gov/geo/www/reg_div.txt.

HIGH FOOD INSECURITY RATE COUNTIES BY CENSUS DIVISION¹⁰

CHART 01



UNEMPLOYMENT, POVERTY, MEDIAN INCOME AND HOMEOWNERSHIP IN HIGH FOOD INSECURITY AREAS

By definition, the high food insecurity rate counties are more economically disadvantaged than the national average for all counties and for the U.S. population as a whole, as seen in Table 02 on page 12. The average annual unemployment rates for this group of counties was 13% in 2011, compared to 9% across all counties. Imperial, California had the highest unemployment rate in 2011 at 30%. The average of county-level poverty rates among this group was also high, averaging 26% in 2011 compared to 16% for all counties, and as high as 54% in Shannon,

South Dakota. Not surprisingly, the average median household income in this group was lower: \$33,203 versus \$45,292 for all counties. The lowest median income in the group was in Owsley, Kentucky (\$19,344). Homeownership rates were also lower in the high food insecurity counties at an average of 66% compared to 73% for all counties, and dropping as low as 20% in Bronx, New York.

HIGH FOOD INSECURITY RATE COUNTIES BY GEOGRAPHIC AREAS, 2011

TABLE 03

County Type	High Food Insecurity Rate Counties	All Counties
METROPOLITAN	23.2%	35.0%
MICROPOLITAN	28.7%	21.9%
NON-METRO/RURAL	48.1%	43.1%

¹⁰ East North Central states include: IL, IN, MI, OH, WI; East South Central states include: AL, KY, MS, TN; Middle Atlantic states include: NJ, NY, PA; Mountain states include: AZ, CO, ID, MT, NV, NM, UT, WY; New England states include: CT, MA, ME, NH, RI, VT; Pacific states include: AK, CA, HI, OR, WA; South Atlantic states include: DC, DE, FL, GA, MD, NC, SC, VA, WV; West North Central States include: IA, KS, MN, MO, NE, ND, SD; West South Central states include: AR, LA, OK, TX.

FURTHER EXPLORATIONS OF COUNTIES

The following section provides detail on counties with low food insecurity rates as well as counties with high numbers of food insecure individuals.

LOW FOOD INSECURITY RATES

Twenty-three of the 27 counties with the lowest estimated food insecurity rates during 2011 are in North Dakota. This is consistent with the state's low unemployment rate and below average poverty rate. The number of food insecure individuals in these 23 North Dakota counties ranges from 20 to 1,460 and the food insecurity rate ranges from two percent to six percent. Loudoun, Virginia, with a rate of six percent, is one of the 27 counties with the lowest estimated food insecurity rate; however, there are still almost 17,000 people who are food insecure in this county. It is important to note, as described in Table O4, that populous areas low rates do not necessarily translate into few people.

COUNTIES WITH THE LARGEST NUMBER OF FOOD INSECURE INDIVIDUALS

While food insecurity rates among the population are an important indicator of the extent of need, there are a number of counties that may not have the highest food insecurity rates but in terms of population, represent some of the biggest challenges. As seen in Table O4, the top eleven counties with respect to the number of food insecure persons are all in large metropolitan areas, consistent with their large populations.

The average of the food insecurity rates for the 50 counties with the highest number of food insecure people is 18%, the average of unemployment rates is 10%, and the average of homeownership rates is 59%.

COUNTIES WITH THE HIGHEST NUMBER OF FOOD INSECURE INDIVIDUALS, 2011

TABLE O4

State	County (Metro area)	Number of Food Insecure Persons	Food Insecurity Rate
CA	LOS ANGELES	1,749,600	17.9%
NY	NEW YORK (FIVE BOROUGH, COLLECTIVELY)	1,442,640	17.7%
IL	COOK (CHICAGO)	860,670	16.6%
TX	HARRIS (HOUSTON)	784,010	19.5%
AZ	MARICOPA (PHOENIX)	613,720	16.2%
TX	DALLAS	484,510	20.6%
CA	SAN DIEGO	459,180	15.0%
FL	MIAMI-DADE	441,240	17.8%
MI	WAYNE (DETROIT)	405,610	22.0%
CA	ORANGE (ANAHEIM)	379,690	12.7%
PA	PHILADELPHIA	350,890	23.2%

The food insecurity and unemployment rates exceed the national average for all counties, and the homeownership rate is lower. The average poverty rate among these counties is on par with the national average at 16%.

Although most of the 50 counties with the largest number of food insecure individuals are associated with large urban cities, there are some exceptions, such as Hidalgo, Texas (157,120 food insecure), which is composed of many densely-populated smaller towns, and Kern, California (156,810 food insecure), which is

nearly the size of the state of New Jersey and includes the city of Bakersfield along with large expanses of rural areas. Of these top 50 counties, more than one-third (38%) are majority non-Hispanic white counties while 28% have at least one-third Hispanic residents and 12% have at least one-third non-Hispanic, African American residents. Because minority communities are often at higher risk of food insecurity, an analysis of counties with a high percentage of nonwhite residents is presented later in this brief.

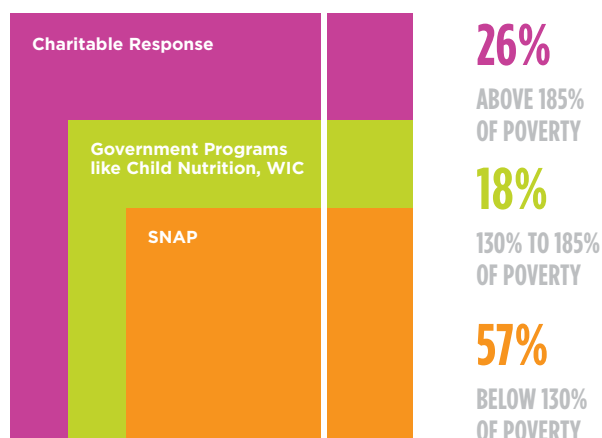
FOOD INSECURITY AND INCOME

Estimating food insecurity rates by level of income can provide important insight into the potential strategies that can be used to address hunger.

Eligibility for many food assistance programs is tied to multiples of the federal poverty line. The poverty thresholds, which vary by family composition, are set to reflect a minimum amount of money that is needed for a family to purchase basic necessities. The thresholds were first set in 1963 and were based on research that indicated that the average family spent about one-third of its annual income on food. The official poverty level was set by multiplying food costs for a “bare bones” subsistence meal plan by three (Blank & Greenberg, 2008). Since then the figures have been updated annually to account for inflation, but have otherwise remained unchanged, despite the fact that modern family budgets are divided very differently than they were more than fifty years ago (Blank & Greenberg, 2008), and now include myriad expenses that were virtually non-existent when the official poverty measure was created.

FOOD INSECURE INDIVIDUALS AND INCOME ELIGIBILITY, 2011¹¹

CHART 02



¹¹ Coleman-Jensen, A., Nord, M., Andrews, M. & Carlson, S. (2012). Household Food Security in the United States in 2011. USDA, ERS.

SNAP AND OTHER GOVERNMENT PROGRAMS

As a consequence, food assistance programs—SNAP, WIC, SBP and NSLP—determine eligibility by multiplying the official poverty line by 130% or 185% to provide a rough proxy for need beyond the scope of the official poverty level (see Chart 02 on page 16).¹² SNAP eligibility ceilings range from 130-200%, while WIC and reduced price lunches are typically not available for children in households with incomes above 185% of poverty. For example, the 2011 poverty guideline for a family of four in the lower 48 states was a pre-tax income of \$22,350. To determine the limit for SNAP eligibility, one would multiply \$22,350 by 130% to arrive at \$29,055, the income limit for a family of four to be eligible for SNAP benefits in 2011, among other eligibility criteria.¹³

Because of these commonly used federal nutrition program thresholds, the Map the Meal Gap analysis estimates the percentage of food insecure people who fall into each income bracket. Specifically, we estimate the percentage of food insecure individuals who fall below the SNAP eligibility level (130% of poverty or the state-specific threshold, when it is a higher multiple), the percentage of those whose incomes are below the threshold for other major federal nutrition programs (185% of poverty or the state-specific threshold) and those whose income places them above the ceiling for government food assistance (above 185% of poverty or above the state-specific threshold).

Areas with a particularly high percentage of food insecure individuals eligible for SNAP (based on gross income) might benefit from increasing awareness and outreach for enrollment in the SNAP program. Income banding provides context for determining what federal and state programs are available to food insecure people and what gaps are left to be filled by private emergency food assistance. Understanding the overlap between food insecurity and federal nutrition program thresholds also provides an additional level of information for concerned agencies to use when tailoring their programs to meet local need.

ELIGIBILITY FOR FEDERAL NUTRITION PROGRAMS

Nationally, 26% of food insecure individuals are above 185% of the poverty line and are typically ineligible for most food assistance programs (see Chart 02 on page 16). A closer look at income thresholds among the food insecure population reflects significant variations in program eligibility within states and across the nation. Across the country, there are 175 counties where the majority of food insecure people are likely ineligible for government assistance programs and most of these (77%) are in metropolitan areas with higher than average median incomes. For example, Douglas, Colorado, which is near Denver, Colorado, has 26,710 food insecure people, 73% of whom are ineligible for SNAP. Additionally, most states have counties where a majority of the food insecure population is likely SNAP eligible, as well as counties where the majority of food insecure people are likely ineligible for any federal food assistance. For example, there are 21 counties in the Commonwealth of Virginia where a majority (50% or more) of food insecure individuals are estimated to have incomes too high to be eligible for any assistance programs (above 185% of poverty), while there are 67 counties that have food insecure populations where a majority have incomes that likely make them SNAP eligible (at or below 130% of poverty).

Among the high food insecurity rate counties (those with food insecurity rates in the top 10%), the incidence of food insecure individuals with incomes above 185% of poverty is less common—on average, only about 18% of food insecure people have incomes too high for eligibility for food assistance programs in these counties. Still, even in high food insecurity counties there are a considerable number of food insecure people who may rely primarily on family, friends and charitable response when they need help.

¹² Note that these numbers remained the same between 2009 and 2010.

¹³ The SNAP gross income eligibility level varies across states, ranging from 130 to 200 percent of the federal poverty level. The SNAP net income eligibility level must fall at or below 100 percent of the federal poverty level.

FOOD INSECURITY AND RACE

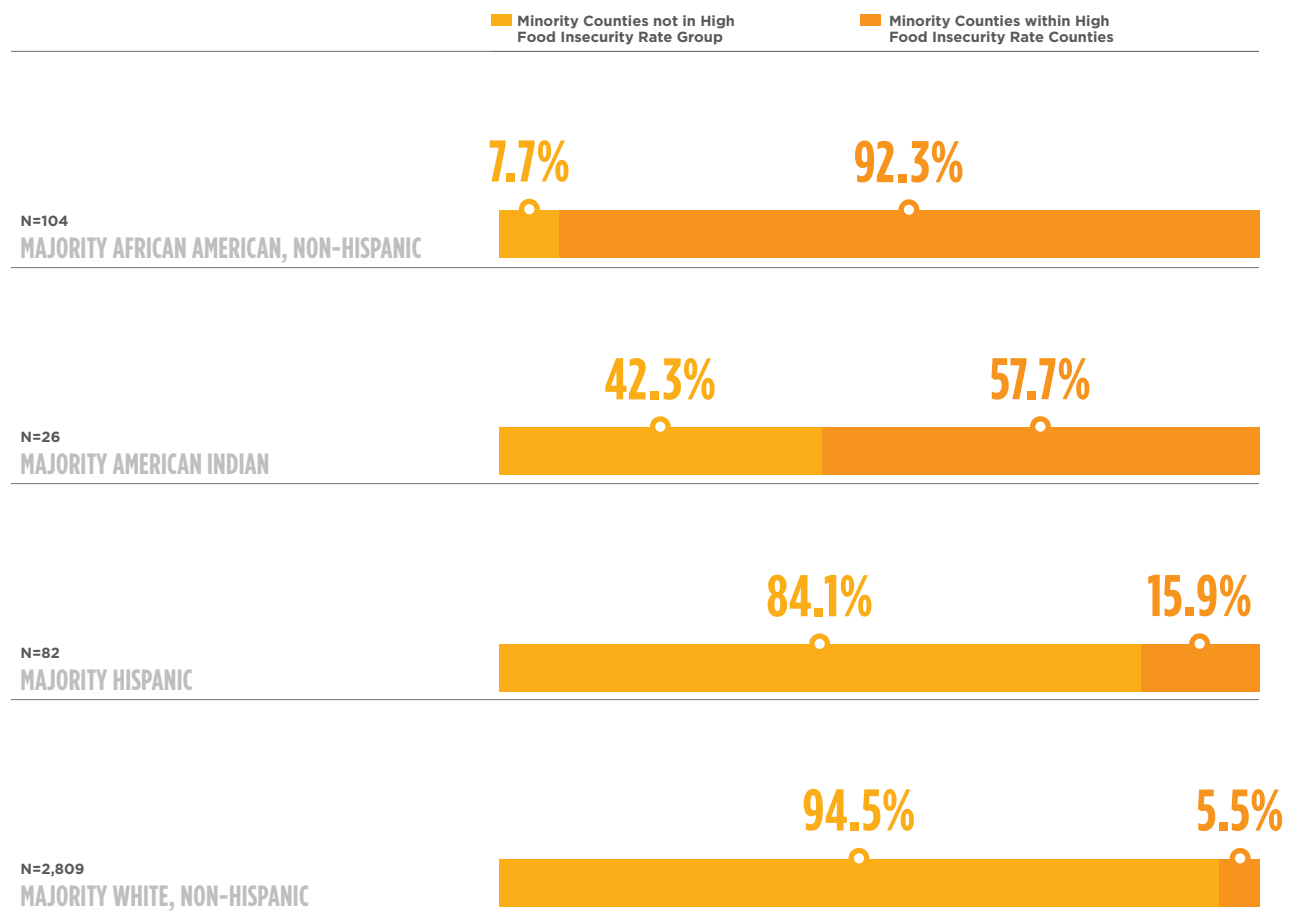
It is well-documented that some racial and ethnic groups in the U.S., including American Indians, Latinos and African Americans, are disproportionately at risk for food insecurity.

As illustrated in Chart 03, these discrepancies become especially striking at the county level.¹⁴ Further analysis of food insecurity with large populations of non-whites

provides some additional insight into the challenges faced by minority communities.

**MINORITY COUNTIES IN THE U.S.
VS. HIGH FOOD INSECURITY RATE COUNTIES, 2011**

CHART 03



¹⁴ For the purposes of this comparison, racial groups (i.e. African American, American Indian and White) are mutually exclusive of each other and of Hispanic ethnicity. However, because the U.S. Census Bureau counts Hispanic/Latino as an ethnicity rather than a race, majority Hispanic counties may include individuals of any race.

MAJORITY AMERICAN INDIAN COUNTIES

It is well known that the American Indian population has higher levels of food insecurity when compared to the U.S. average (Gordon & Oddo, 2012; Gundersen, 2008). Although a relatively small percentage of the food insecure population in the U.S. is identified as American Indian, county-level analysis brings into focus the challenges for these communities. Among the high food insecurity rate counties (those with food insecurity rates in the top 10%), 15 counties are majority American Indian (see Table O5), an increase from nine counties in 2010 (note that there are only 26

counties in the U.S. that are majority American Indian.¹⁵ These 15 counties face a disproportionately high level of poverty. The counties' average 2011 poverty rate is 34% versus an average of 26% for all high food insecurity rate counties and 16% for all U.S. counties. The counties with a sizeable, majority population of American Indians and high rates of food insecurity include McKinley, New Mexico, which includes parts of the Hopi, Zuni and Navajo Nation reservations, and neighboring Apache, Arizona, which includes Fort Apache and Zuni reservations.

**MAJORITY AMERICAN INDIAN COUNTIES
WITHIN HIGH FOOD INSECURITY RATE COUNTIES, 2011**

TABLE O5

State	County	Population	Unemployment Rate	Poverty Rate	Percent American Indian	Homeownership Rate	Food Insecurity Rate
SD	SHANNON COUNTY	13,544	13.5%	53.5%	95.0%	51.9%	27.8%
AK	WADE HAMPTON	7,473	20.4%	30.0%	90.7%	67.0%	25.4%
SD	TODD	9,640	7.6%	48.4%	85.5%	42.9%	24.0%
SD	BUFFALO	1,936	14.9%	40.8%	82.4%	30.7%	28.4%
AK	NORTHWEST ARCTIC	7,532	14.7%	19.6%	78.5%	54.4%	20.9%
WI	MENOMINEE COUNTY	4,262	16.8%	29.8%	76.0%	67.4%	21.4%
SD	DEWEY COUNTY	5,331	12.6%	30.3%	73.4%	57.9%	21.6%
NM	MCKINLEY COUNTY	71,290	9.2%	30.7%	72.6%	72.4%	21.2%
AZ	APACHE COUNTY	70,906	18.9%	34.7%	71.8%	76.2%	26.1%
AK	NOME	9,443	12.3%	25.0%	71.7%	52.9%	20.9%
SD	ZIEBACH	2,780	6.8%	43.5%	68.2%	55.3%	21.1%
AK	YUKON-KOYUKUK	5,613	15.7%	23.0%	67.6%	70.1%	20.6%
MT	GLACIER	13,329	11.8%	27.7%	64.5%	59.8%	21.0%
SD	CORSON	4,049	7.6%	38.8%	64.0%	57.3%	20.3%
MT	BIG HORN	12,776	12.4%	26.7%	60.7%	66.6%	20.3%

¹⁵ This analysis was completed for all non-Hispanic American Indians.

MAJORITY AFRICAN AMERICAN COUNTIES

Consistent with 2010, 104 counties in 2011 are African American majority counties, and 92% (N=96) fall into the “high food insecurity rate” county group (see Chart 03 on page 18). These 96 counties have a poverty rate of 29%, which is higher than the rate for all high food insecurity rate counties (26%) and all U.S. counties (16%). Table 06 illustrates the top 10 majority African American counties within the high food insecurity rate group. Holmes, Mississippi, the county with the highest food insecurity rate in the country, is 83% African American, has a poverty rate of 43% and unemployment rate of 19%. Although many of the African American majority counties are fairly small in population, there are still three high food insecurity rate counties with an estimated food insecure population in excess of 100,000, including Shelby, Tennessee; Dekalb, Georgia; and Baltimore City, Maryland. More detail about majority-African American counties—particularly the disproportional

impact of high food prices in these counties—can be found in the “High Food Insecurity and High Food Cost” section (see page 24).

MAJORITY LATINO COUNTIES

The number of Latino-majority¹⁶ counties in the U.S. grew from 76 counties in 2010 to 82 counties in 2011. Consistent with 2010, 13 of these counties (16%) were high food insecurity counties—see Table 07 on page 21 for a complete list of counties.

Latino-majority counties in the highest food insecurity rate group continue to have substantially higher poverty and unemployment rates when compared to the rest of the nation. The average poverty rate for these counties in 2011 is 32% (compared to 26% for all high food insecurity counties and 16% for all U.S. counties). This rate is also higher than the 29% poverty rate for high food insecurity counties that are majority African American. Latinos are additionally disproportionately affected by unemployment with

**TOP 10 MAJORITY AFRICAN AMERICAN COUNTIES
WITHIN HIGH FOOD INSECURITY RATE COUNTIES, 2011**

TABLE 06

State	County	Population	Unemployment Rate	Poverty Rate	Percent African American	Homeownership Rate	Food Insecurity Rate
MS	JEFFERSON	7,845	16.7%	42.8%	85.7%	71.7%	34.4%
MS	CLAIBORNE	9,775	15.6%	37.9%	84.9%	77.4%	31.9%
MS	HOLMES	19,372	18.5%	43.2%	82.8%	72.5%	35.2%
AL	MACON	21,489	12.5%	26.7%	81.9%	67.9%	28.2%
AL	GREENE	9,170	14.2%	31.7%	81.7%	71.4%	30.0%
VA	PETERSBURG CITY	32,337	12.2%	21.8%	78.7%	47.9%	26.6%
GA	HANCOCK	9,615	20.1%	24.8%	75.3%	77.8%	30.0%
MS	COAHOMA	26,376	15.0%	37.2%	75.0%	54.1%	32.8%
MS	HUMPHREYS	9,504	16.1%	42.0%	74.8%	58.6%	34.0%
SC	ALLEDALE	10,548	17.8%	40.2%	74.1%	61.3%	33.0%

¹⁶ The terms “Hispanic” and “Latino” are used interchangeably by the U.S. Census Bureau and throughout this document to refer to persons of Mexican, Puerto Rican, Cuban, Central and South American, Dominican, Spanish and other Hispanic descent; they may be of any race.

an average unemployment rate of 17% compared to 13% for all high food insecurity rate counties (and 13% for those that are majority African American or American Indian), and 9% for all U.S. counties. Unemployment for these Latino majority counties did decrease slightly from 18% in 2010.

Seven of the 13 high food insecurity rate, majority Hispanic counties are located in Texas, while other states represented include Arizona, California, New Mexico and New York. As with African American-majority counties, there are some Latino-majority counties that have relatively large populations. Five majority Latino counties have over 100,000 food insecure individuals: Miami-Dade in Florida; Bronx in New York; and Bexar, Hidalgo, and El Paso in Texas. Hidalgo and Bronx counties are both high food insecurity counties.

Another interesting detail about Latino-majority counties emerges when high food insecurity rates are compared to counties with the top agricultural sales in the United States. Merced, California falls into the top five for highest agricultural sales in the U.S. and is also in the top 10% highest food insecurity rate counties.¹⁷ Tulare, California is also in the top five counties, is majority Latino and has a food insecurity rate of 20%. Thus, there are significant numbers of food insecure families in areas of the country that produce some of the nation's greatest agricultural abundance and they are likely to be disproportionately Latino.

**MAJORITY HISPANIC COUNTIES
WITHIN HIGH FOOD INSECURITY RATE COUNTIES, 2011**

TABLE 07

State	County	Population	Unemployment Rate	Poverty Rate	Percent Hispanic	Homeownership Rate	Food Insecurity Rate
TX	STARR	60,525	16.9%	36.3%	98.4%	80.7%	22.6%
TX	MAVERICK	53,389	14.2%	31.5%	95.4%	69.7%	21.2%
TX	ZAVALA	11,700	15.4%	39.0%	92.4%	70.5%	23.6%
TX	BROOKS	7,297	8.9%	39.6%	92.1%	63.9%	20.4%
TX	HIDALGO	757,453	12.0%	35.3%	90.4%	70.1%	20.7%
TX	CAMERON	400,332	11.8%	34.9%	87.7%	68.3%	20.8%
TX	WILLACY	21,894	14.3%	42.3%	86.6%	73.5%	23.6%
AZ	SANTA CRUZ	46,727	17.1%	26.2%	82.3%	68.9%	21.5%
CA	IMPERIAL	171,343	29.7%	23.3%	79.6%	55.7%	27.8%
NM	LUNA	25,250	17.7%	30.8%	60.8%	69.4%	25.4%
AZ	YUMA	193,995	27.1%	20.8%	59.0%	70.4%	27.3%
CA	MERCED	253,606	18.3%	23.0%	54.4%	55.2%	21.5%
NY	BRONX	1,374,593	12.3%	28.5%	53.0%	20.1%	23.2%

¹⁷ Based on the market value of agricultural products sold from the 2007 USDA Agricultural Census.



FOOD PRICE VARIATION ACROSS THE UNITED STATES

The first phase of the Map the Meal Gap analysis focused on increasing understanding of the population in need by estimating county and congressional district level food insecurity rates. In conjunction, Feeding America sought to understand how much additional food those who are struggling with food insecurity feel they need and how the relative cost of meeting that need may vary due to food prices at the local level.

To address this goal, a local-level estimation of the additional food budget that food insecure individuals report needing was developed. In order to understand how regional and local variations in food costs may present challenges for the food insecure population, Feeding America worked with Nielsen to create a

county-level food cost index. Although the analysis does not imply causality between food costs and food insecurity, food prices are an important component of cost-of-living and relate directly to the research focus on food.

One methodological difference from the 2010 local food cost analysis is that Nielsen imputed data for all counties with populations under 20,000 based on local costs and costs in surrounding counties.¹⁸ The updated imputation methodology was adopted because smaller counties have fewer stores from which to gather food price data, potentially resulting in distorted prices. Due to the new methodology, many smaller counties with high food prices in previous years may have lower, more accurate prices this year.

In 2011, the average meal cost (the average amount that a food secure individual reports spending) across the continental U.S.¹⁹ is \$2.67, a slight increase from \$2.52 in

2010.²⁰ Results indicate that 2011 food prices vary from 67% to 164% of the national average, a cost variation ranging from as little as \$1.85 in Maverick, Texas to as much as \$4.37 in Leelanau, Michigan. Among the counties with the top 10% highest food insecurity rates in the nation, food prices reach as high as 121% of the national average (\$3.23 per meal in Richmond, Virginia). For a household struggling to afford housing, utilities and other necessities, the additional burden of expensive food can have a significant impact on a household's budget.

**HIGH COST COUNTIES
BY GEOGRAPHIC AREA, 2011**

TABLE 08

County Type	High Cost Counties	All Counties
METROPOLITAN	53.6%	35.0%
MICROPOLITAN	18.9%	21.9%
NON-METRO/RURAL	27.4%	43.1%

¹⁸ In previous years, Nielsen imputed a price for cases where there was missing or distorted data. In 2009, this imputation method was based on data collected from the next-nearest county. In 2010, Nielsen based imputations on data collected from all surrounding counties. In 2011, Nielsen again based imputations on data collected for all surrounding counties; however imputations were used for all counties with a population under 20,000. See the technical brief for more information about imputation methods.

¹⁹ Alaska and Hawaii were excluded from this analysis leaving 3,109 counties as opposed to 3,143.

²⁰ The national cost per meal is based on information gathered from the Current Population Survey. Additionally, the cost is not the same as a usual price index insofar as it measures how much people spend on food rather than the price of a market basket. Thus, while in general, we anticipate that the national cost per meal will go up over time and track inflation, it won't necessarily do so. This cost is also calculated only for those who are food secure rather than the full population. Thus, as the composition of this group changes, so too will the cost per meal. To calculate the 2011 national meal cost, in addition to restricting this calculation to food secure households we removed outliers by restricting the calculation to food secure households with food expenditures of at least \$1 per meal and no more than \$6 per meal. See the technical brief for more information about the national cost per meal calculation.

COUNTIES WITH HIGHER FOOD PRICES

The top 10% of counties with the most expensive food costs (317 in total) have an average meal cost of \$3.13, about 17% higher than the national average of \$2.67. There are 54 counties where the cost of a meal is at least 25% above the national average (\$3.34 or higher). Just over half (54%) of the high cost counties are located in metropolitan areas (versus 35% of all counties), while 27% are in rural areas (versus 43% of all counties). This is a shift from 2010 when half of the high cost counties were in rural areas and may be due to the updated methodology of basing prices for smaller counties (who generally have fewer stores) on prices in surrounding counties. See Table 08 on page 23 for a breakout of high cost counties by geographic area.

It is notable that despite the updated methodology, food prices are still high in many rural areas, for example in Jackson, Colorado (population 1,490), where the average meal cost is \$3.15, and Valley County, Montana (population 7,400) where the average meal cost is \$3.23.

In some cases, the high meal cost may be high primarily due to the expense of transporting food to a resort area or an island. For example, Nantucket, Massachusetts, where the average cost of a meal is \$3.14, is a popular vacation area with a high median income. There are a few other counties with a significant resort/vacation presence among the highest meal-cost areas, for example, Aspen in Pitkin, Colorado (\$3.05) and Napa, California (\$3.25). While households in areas with a significant resort/vacation presence typically have higher median incomes, the areas also include many service workers for whom higher costs can be particularly challenging. Another set of counties with relatively high costs per meal include major metropolitan areas such as New York (\$3.91), the District of Columbia (\$3.73) and the northern Virginia counties surrounding the nation's capital (\$3.22 in Fairfax, Virginia and \$3.52 in Alexandria, Virginia).

HIGH FOOD INSECURITY COUPLED WITH HIGH FOOD COST

There are nine high food insecurity counties that also have high meal costs (they fall into both the top 10% for highest food insecurity rates and highest prices) (see Table 09 on page 25). While these counties do not face the highest food prices in the nation, the average cost per meal is \$3.05, which is 14% above the national average of \$2.67. The highest meal costs in this group are Richmond, Virginia and Lake, California at \$3.23 and \$3.22, respectively. These nine counties also struggle with high poverty rates (24% compared to the national average of 16%), high unemployment rates (average is 11% compared to 9%) and low homeownership (61% compared to a 73% national average). Additionally, an average of nearly one in every four individuals in these counties is food insecure. It is notable that five of these nine counties are majority African American.

As previously noted, in 2011 nine counties were both high food insecurity and high meal cost, which is a substantial change from 2010, when 48 counties fell into this category. This shift is likely due to the new methodology which imputes prices for counties with smaller populations (below 20,000) based on local prices and prices in surrounding counties. In 2010, most of the high price and high food insecurity counties were in rural areas, perhaps due to inflated prices in the dataset. This year, only one rural county (Hyde, North Carolina with a population of 5,760) is in this group with the remaining eight split between metropolitan and micropolitan areas. With the exception of Lake, California, all of the counties are in the South Atlantic or South Central regions of the country.

HIGHEST FOOD INSECURITY AND HIGHEST FOOD COST COUNTIES, 2011

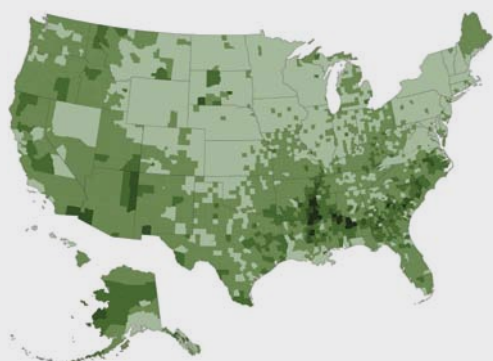
TABLE 09

State	County	Population	Unemployment Rate	Poverty Rate	Percent White, Non-Hispanic	Percent Hispanic	Percent African American, Non-Hispanic	Home-ownership Rate	Food Insecurity Rate	Local Weighted Cost per Meal
AL	MACON	21,489	12.5%	26.7%	15.2%	1.1%	81.9%	67.9%	28.2%	\$3.04
MS	YAZOO	28,238	12.9%	32.2%	37.6%	4.6%	55.7%	62.7%	27.2%	\$3.01
NC	NORTHAMPTON	22,120	12.2%	21.9%	39.0%	1.4%	56.7%	73.8%	23.7%	\$2.95
LA	ORLEANS	321,409	8.8%	25.7%	30.6%	5.2%	59.6%	48.3%	23.0%	\$3.13
VA	RICHMOND	203,165	9.3%	26.3%	38.9%	5.9%	50.1%	44.9%	22.8%	\$3.23
GA	MUSCOGEE	188,548	9.4%	18.8%	44.2%	6.2%	44.6%	54.9%	20.9%	\$3.00
GA	FULTON	907,811	10.5%	15.9%	41.5%	7.7%	43.7%	55.3%	20.7%	\$3.00
NC	HYDE	5,763	10.5%	25.1%	57.8%	7.0%	34.1%	75.0%	20.4%	\$2.91
CA	LAKE	64,392	16.7%	21.4%	74.4%	16.7%	2.2%	65.2%	20.2%	\$3.22

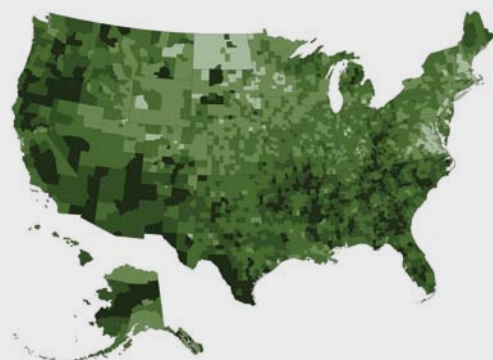
Map the Meal Gap at a Glance

PERCENTAGE OF PEOPLE PER COUNTY WHO ARE FOOD INSECURE

4 - 14% 15 - 19% 20 - 24% 25 - 29% 30% +




OVERALL




CHILD

FOOD INSECURITY EXISTS EVERYWHERE



CHILDREN ARE AT HIGHER RISK

FOOD INSECURITY RANGE



2%

Slope County, North Dakota

35%

Holmes County, Mississippi



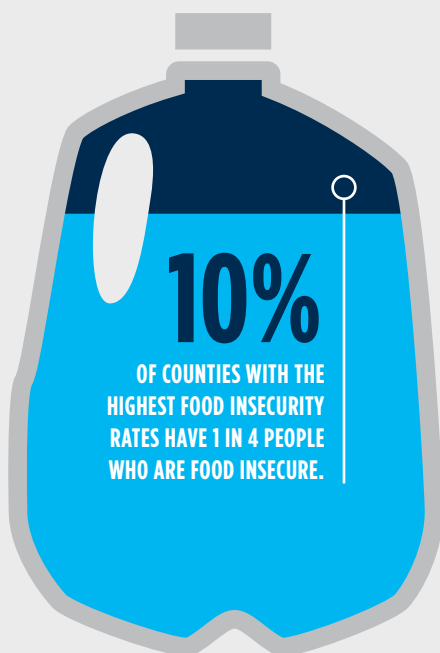
5%

Bowman County, North Dakota

46%

Zavala County, Texas

WHAT DOES "HIGH FOOD INSECURITY" MEAN?



FOOD INSECURITY AND RACE

314 COUNTIES

ARE HIGH FOOD INSECURITY COUNTIES

MINORITIES ARE DISPROPORTIONATELY AFFECTED

 Non-High Food Insecurity Counties  High Food Insecurity Counties

 96

There are 104 Majority African American Counties in the U.S.

 15

26 Majority American Indian Counties

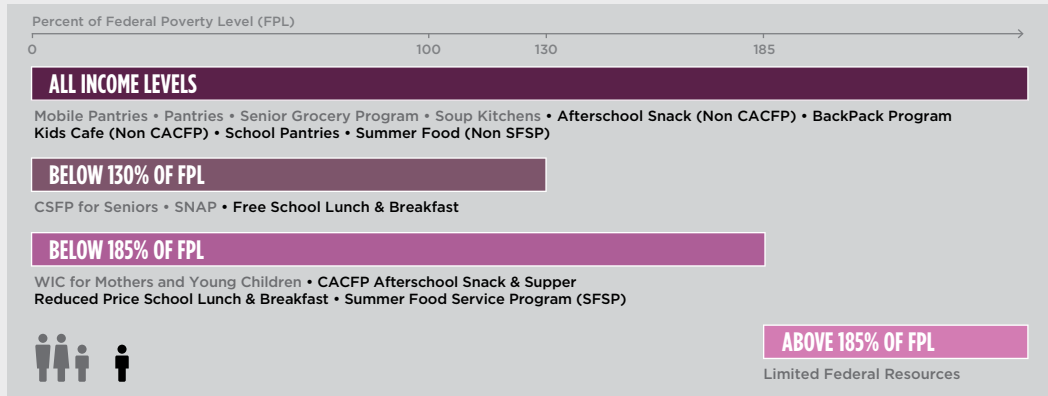
 13

82 Majority Hispanic Counties

2,809 Majority White, Non-Hispanic Counties

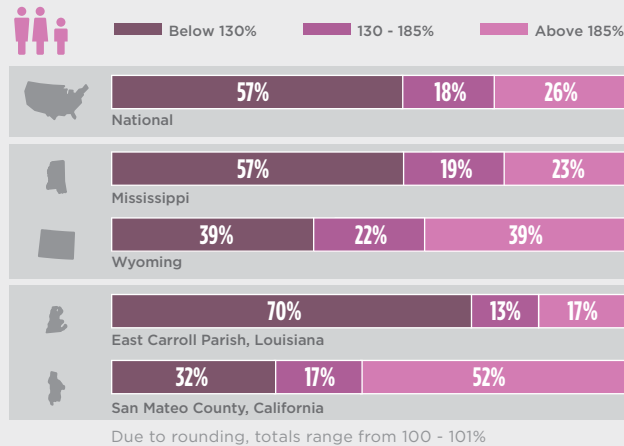
122 counties have no majority race and are therefore not represented in this data set.

SERVICES FOR FOOD INSECURE INDIVIDUALS BASED ON INCOME

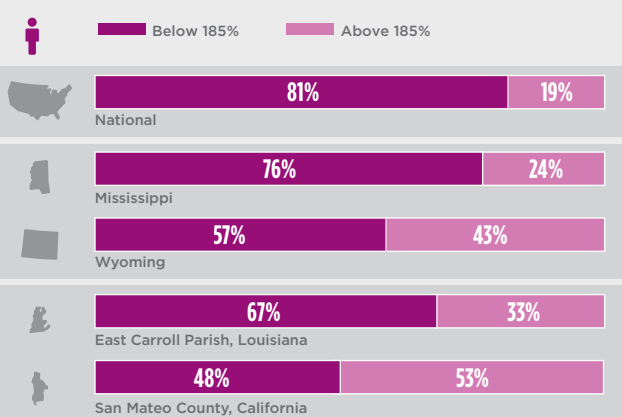


NATIONALLY,
26%
OF FOOD INSECURE
INDIVIDUALS
MAY BE INELIGIBLE
FOR GOVERNMENT
ASSISTANCE

OVERALL FOOD INSECURITY AND INCOME LEVEL VARIATION



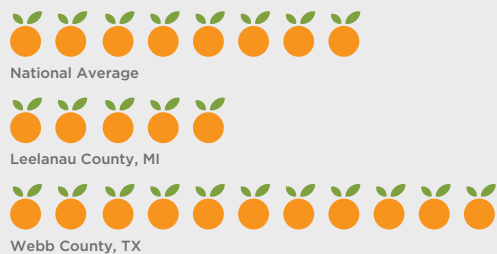
CHILD FOOD INSECURITY AND INCOME LEVEL VARIATION



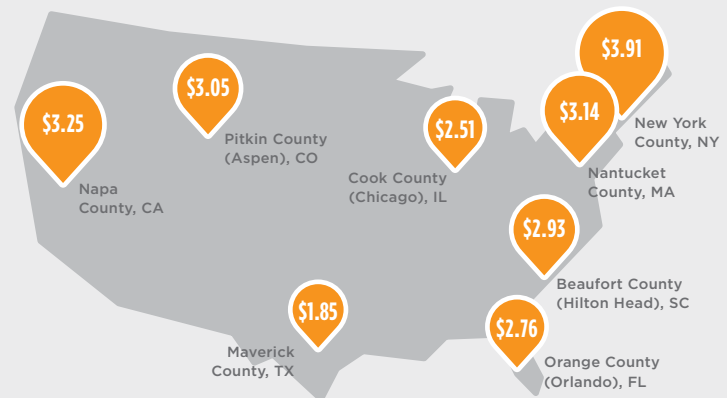
HOW FAR DOES A GROCERY BUDGET GO?

IN LEELANAU COUNTY, MICHIGAN, ONE DOLLAR PURCHASES

38% LESS FOOD
THAN THE NATIONAL AVERAGE



HOW DOES THE PRICE OF A MEAL VARY NATIONALLY?





CHILD FOOD INSECURITY: RESULTS AND DISCUSSION

The results of the *Map the Meal Gap 2013: Child Food Insecurity* research indicate that as with overall food insecurity, children are at risk of hunger everywhere in the United States.²¹

County-level child food insecurity rates ranged from a low of five percent in 2011 to a high of 46%. Food insecurity rates among households with children are substantially higher than those found in the general population.

The following summarizes key findings from state and county-level CFI results.²² These analyses focus on the income and regional variations illuminated by the results.

²¹ Results indicate that child food insecurity exists in every county in the U.S. with a population under age 18. The American Community Survey for 2011 estimates the child populations of Kalawao, HI and Loving, TX as 0.

²² County-level child estimates for 2010 were recalculated to include the new homeownership variable for year over year comparison.



STATE ESTIMATES

Child food insecurity rates are considerably higher than the overall food insecurity rates, a phenomenon observed at the national level in the annual USDA report and mirrored at the state and county level in this study. State-level estimates of child food insecurity are presented in Table 10 on pages 30-31. The state CFI rates range from a low of 10% percent in North Dakota to a high of 31% in New Mexico. Even in the most food secure state, one in ten children is struggling with hunger. Consistent with the first Map the Meal Gap study, 16 of the 20 states with the

highest CFI rates also have the highest-ranked overall food insecurity rates.²³ These 16 high-need states are dispersed throughout the U.S., representing all areas of the country except New England, Mid-Atlantic and the West North Central regions. Some states in the New England region,²⁴ however, have high absolute numbers of children living in food insecure households because they are densely populated. For example, New York State is home to over 900,000 food insecure children.

²³ Based on one-year state data aggregated from 2011 congressional districts rather than the three-year state averages provided in the USDA's annual report on household food security.

²⁴ See footnote on page 14 for a complete list of states included in each region.

CHILD FOOD INSECURITY BY STATE, 2011

TABLE 10

State	Rank	Total Child Population (Under 18)*	Child Food Insecurity Rate	Number of Children Living in Food Insecure Households	Overall Food Insecurity Rate
U.S. ²⁵		72,802,773	22.4%	16,658,000	16.4%
NM	1	512,460	30.6%	156,930	20.1%
DC	2	104,750	30.0%	31,460	15.7%
AZ	3	1,597,696	29.9%	478,420	19.1%
OR	4	843,651	29.1%	245,260	17.9%
GA	5	2,454,763	28.8%	707,390	20.0%
FL	6	3,933,991	28.4%	1,118,050	18.7%
AR	6	699,550	28.4%	198,750	19.7%
NV	8	653,766	28.0%	183,360	17.4%
TX	9	6,871,955	27.6%	1,894,060	18.7%
SC	10	1,067,813	27.4%	292,800	18.6%
MS	10	740,522	27.4%	202,980	21.4%
NC	12	2,265,313	27.3%	618,200	19.3%
CA	12	9,127,413	27.3%	2,487,750	17.4%
AL	14	1,112,128	26.3%	292,740	19.5%
OH	15	2,649,180	25.7%	679,900	17.8%
OK	16	920,763	25.3%	233,350	17.2%
TN	17	1,469,704	25.1%	369,020	17.6%
WA	18	1,546,720	24.3%	375,880	16.1%
ME	19	263,100	23.9%	62,810	15.7%
HI	20	299,170	23.7%	71,020	14.6%
MI	20	2,255,605	23.7%	533,470	17.9%
LA	22	1,103,269	23.5%	259,520	17.1%
ID	23	416,902	23.0%	96,090	17.3%
IN	24	1,566,350	22.7%	355,780	16.3%
IL	24	3,054,532	22.7%	692,100	15.2%

* The total child population is an aggregation of the child population (from whom poverty status is determined) for congressional districts in each state. These data come from the 2011 American Community Survey, U.S. Census Bureau.

²⁵ Coleman-Jensen, A., et al., (2012). Household Food Security in the United States in 2011. USDA ERS.

State	Rank	Total Child Population (Under 18)*	Child Food Insecurity Rate	Number of Children Living in Food Insecure Households	Overall Food Insecurity Rate
KS	26	709,806	22.6%	160,770	15.1%
MO	27	1,385,551	22.5%	312,440	17.1%
KY	28	1,004,058	22.4%	224,800	17.2%
RI	29	215,484	22.2%	47,780	15.3%
NY	30	4,213,420	22.0%	924,970	14.7%
CO	31	1,213,679	21.9%	266,090	15.5%
MT	32	218,867	21.8%	47,720	14.9%
WV	32	378,008	21.8%	82,220	15.3%
UT	34	869,967	21.4%	186,170	16.7%
NE	35	451,889	21.0%	94,940	13.7%
WI	36	1,297,579	20.8%	270,150	13.0%
PA	37	2,721,090	20.5%	559,120	14.9%
AK	38	185,165	20.3%	37,640	14.7%
CT	39	794,737	19.8%	157,550	14.5%
VT	40	122,636	19.3%	23,670	13.1%
IA	40	710,495	19.3%	137,120	12.9%
MD	42	1,322,889	19.0%	251,730	13.4%
NJ	42	2,019,945	19.0%	383,020	14.0%
SD	44	197,093	18.3%	36,110	12.5%
DE	44	201,591	18.3%	36,860	13.2%
WY	46	132,442	18.0%	23,820	12.0%
MN	47	1,260,357	16.6%	209,830	11.4%
VA	48	1,828,857	16.5%	301,980	12.7%
MA	48	1,390,897	16.5%	229,170	12.3%
NH	50	276,186	14.7%	40,490	10.6%
ND	51	149,019	10.2%	15,250	7.4%

COUNTY-LEVEL CHILD FOOD INSECURITY

The following section provides detail on county-level child food insecurity.

COUNTY CHILD FOOD INSECURITY RATES BETWEEN 2010 AND 2011

Nationally, food insecurity rates for households with children remained essentially unchanged, from 21.6% in 2010 to 22.4% in 2011 (Coleman-Jensen et al., 2012) (see Table 11). Consistent with this national trend, only one percent of all counties experienced meaningful changes in child food insecurity.²⁶ It is important to note that food insecurity estimates at the county level may be less stable from year to year than those at the state or national level due to smaller geographies, particularly in counties with very small child populations. Because of this, and given the addition of the homeownership rate to the model (see page 9 for more information), specific county comparisons between 2010 and 2011 are not provided in this report.

COUNTY ESTIMATES

State-level information provides a clearer picture of child food insecurity in the U.S. than a national average, and the estimates at the county level further demonstrate that the problem is much more pervasive in specific communities. In each of those counties that fall into the top 10% for the highest child food insecurity rates (N=319), or “high CFI counties,” nearly one-third of the children are struggling with food insecurity (ranging from 30% to 46%). In addition to having high child food insecurity rates, these counties are very poor in comparison to the rest of the nation. An average of 37% of children in each of these counties live in poverty compared to an average of 22% in all U.S. counties. These counties also suffer from low median incomes and high unemployment rates (see Table 11). Six counties—Yuma, Arizona; Imperial, California; Luna, New Mexico; Starr, Willacy and Zavala, Texas—have CFI rates of 42% or higher. All six are located near the Mexican border where over three quarters of the child population is Hispanic. Zavala County in Texas has the highest CFI rate (46%). Thirty-three counties across the

FOOD INSECURITY AND INDICATORS AMONG COUNTIES WITH THE HIGHEST RATES OF CHILD FOOD INSECURITY (UNWEIGHTED AVERAGES), 2011

TABLE 11

County Grouping	Child Food Insecurity Rates		Unemployment Rates		Child Poverty Rates		Homeownership Rates*		Median Household Income*	
	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011
High Food Insecurity Rate Counties	32.4%	32.2%	13.0%	12.2%	36.3%	37.3%	62.7%	60.2%	\$40,677	\$36,597
All U.S. Counties	23.1%	22.5%	9.2%	8.6%	21.3%	22.0%	69.2%	68.4%	\$54,278	\$51,439
National Average for All Individuals in the U.S.	21.6%	22.4%	8.9%	9.6%	21.6%	22.5%	65.4%	61.6%	\$57,085	\$58,035

* Among households with children

²⁶ County-level estimates for 2010 were recalculated to include the new homeownership variable for year over year comparison.

nation have higher CFI rates than the highest reported county-level food insecurity rate for the general population, which is 35% in Holmes County, Mississippi. The analysis also shows that child food insecurity is more pervasive in rural areas. Sixty-two percent of high CFI counties are classified as rural, compared to 43% of counties in the U.S. (see Table 12).

COUNTIES WITH THE LARGEST NUMBERS OF FOOD INSECURE CHILDREN

Although the child food insecurity rate is one important indicator of need, even counties with more modest rates may still be home to large numbers of children whose families are struggling with food insecurity. There are 17 counties in the U.S. with more than 100,000 food insecure children (see Table 13 on page 34). Two of these counties—Kings and Bronx—are located within the New York City metropolitan area; we considered all five of the counties that comprise the New York metro area for this analysis. Of the counties that are home to more than 100,000 food insecure children, only two of these (Hidalgo, Texas and Bronx, New York) are also among the top 10% of counties for high CFI rates. Hidalgo County has a CFI rate of 39%, and is located near Starr and Zavala counties along the border of Mexico; Bronx County has a CFI rate of 31%. Counties

with more than 100,000 food insecure children have an average child food insecurity rate of 26%, an average child poverty rate of 26% and an average unemployment rate of 11%. Each of these indicators is higher than the averages of all U.S. counties in 2011 (23%, 22% and 9%, respectively).

46% OF ALL CHILDREN LIVING IN ZAVALA COUNTY, TEXAS ARE FOOD INSECURE

Despite the fact that these counties may be perceived as less disadvantaged than counties with much higher rates of food insecurity, the counties with more than 100,000 food insecure children face real challenges in addressing the need in their communities because of the sheer number of children who may need assistance.

HIGH CHILD FOOD INSECURITY RATE COUNTIES BY GEOGRAPHIC AREAS, 2011

TABLE 12

County Type	High Child Food Insecurity Rate Counties	All Counties
METROPOLITAN	12.2%	35.0%
MICROPOLITAN	26.0%	21.9%
NON-METRO/RURAL	61.8%	43.1%

**COUNTIES WITH MORE THAN 100,000
FOOD INSECURE CHILDREN, 2011**

TABLE 13

State	County (Metro area)	Number of Children Living in Food Insecure Households	Child Food Insecurity Rate
CA	LOS ANGELES	650,480	26.8%
NY	NEW YORK (FIVE BOROUGH, COLLECTIVELY)	416,250	23.8%
TX	HARRIS (HOUSTON)	292,100	25.8%
IL	COOK (CHICAGO)	262,240	21.2%
AZ	MARICOPA (PHOENIX)	247,430	24.5%
TX	DALLAS	172,610	26.6%
CA	SAN DIEGO	162,320	22.5%
CA	RIVERSIDE	157,800	25.6%
CA	SAN BERNARDINO	156,230	26.1%
CA	ORANGE (ANAHEIM)	153,490	20.8%
FL	MIAMI-DADE	149,530	27.4%
NV	CLARK (LAS VEGAS)	129,040	26.6%
TX	BEXAR (SAN ANTONIO)	124,250	27.1%
TX	TARRANT (FORT WORTH)	116,370	23.3%
MI	WAYNE (DETROIT)	103,800	21.8%
TX	HIDALGO	103,750	39.4%

CHILD FOOD INSECURITY AND INCOME

In recognition of the importance of federal food assistance programs, *Map the Meal Gap 2013: Child Food Insecurity* provides CFI estimates broken down by household income: either above or below 185% of the poverty line, the typical eligibility cutoff for WIC and NSLP.

These breakouts provide insight into the safety net resources that may be available to food insecure children and their families, as well as the children who do not

qualify for assistance. Millions of food insecure children in America are in households with incomes above the eligibility threshold for federal food assistance programs.

These data can enable state and local legislators, food banks and other community leaders to tailor efforts to best address the need within their own communities and understand where they can strengthen the safety net to ensure no child suffers. Children's vulnerability to recessions and other economic shifts depends on the strength of the social safety net.

GOVERNMENT NUTRITION ASSISTANCE TARGETING FAMILIES WITH CHILDREN

Due to the continuing persistence of food insecurity, the number of families turning to the food assistance safety net remains at record levels. In 2009, nearly one in every five children in the United States lived in a family that received assistance from Feeding America pantries, kitchens and/or shelters. This represents approximately 14 million children nationwide, more than 3 million of whom were age five and under. Additionally, need for emergency food assistance grew substantially since it was last assessed in 2006—there was a 50% increase in the number of children being served by the Feeding America network between 2005 and 2009—as families began relying more heavily on the network to help address their needs (Cohen et al., 2010).

While charitable assistance plays a critical role in helping families meet their food needs, the first line of defense against hunger is enrollment in federal nutrition programs. SNAP provides electronic benefit cards to households to purchase groceries. In federal fiscal year 2011 (the year analyzed in this report), 45% (nearly 20 million children) of all SNAP participants were children (Eslami et al., 2012). WIC supports pregnant, breast-feeding and postpartum women and their infants and children up to age five. In federal fiscal year 2012, nine million women, infants and children participated in WIC (USDA FNS, 2013). The NSLP, SBP and Summer Food Service Program (SFSP) provide meals to low-income children in school and during school breaks. Over 101,000 schools operate NSLP and during federal fiscal year 2012, 21.4 million low-income children received free or reduced-price meals through NSLP.

Eligibility for these and other federal nutrition assistance programs is based on income criteria. These criteria require that households have incomes at or below a specified multiple of the federal poverty guideline,

which varies based on household size. As discussed previously in the “Food Insecurity and Income” section (page 16), persons in most states are eligible for SNAP if they live in households with incomes less than 130% of the federal poverty guideline. For the programs targeted specifically to children (WIC, NSLP and SBP), eligibility for benefits is typically set higher, at 185% of the poverty line.²⁷ As an example of applying these eligibility rules, the 2011 U.S. Health and Human Services poverty guideline for a family of four in the lower 48 states was a pre-tax income of \$22,350. A family of this size would have to be earning less than \$42,642 (\$23,050 * 185%) in order to qualify for WIC.

ELIGIBILITY FOR FEDERAL NUTRITION PROGRAMS

Because of commonly used program eligibility measures, *Map the Meal Gap 2013: Child Food Insecurity* estimates the proportion of food insecure children who fall into income brackets reflecting federal child nutrition program thresholds (below 185% of the poverty line and above 185% of the poverty line). Children in the former bracket are eligible for WIC, NSLP and SBP and many are also eligible for SNAP. Children in households with incomes above 185% of the poverty line are, in general, not eligible for any of these programs.

Ninety-four percent (N=2,961) of all counties in the U.S. have a majority of food insecure children living in households with incomes at or below 185% of the federal poverty line. Among the high CFI counties (top 10%), on average, more than three in four (79%) food insecure children live in households with incomes that place them below 185% of the poverty line. Consequently, the overwhelming majority of food insecure children in these counties are likely eligible to receive assistance from child nutrition programs. Understanding the income composition of the food insecure population can help flag where outreach may be needed to maximize participation in these programs.

Despite the fact that a large number of food insecure households are also low-income, it is important to note that food insecurity exists in households with incomes substantially higher than the poverty line. There may be a number of reasons why these households

²⁷ These rates can vary by state. SNAP gross income eligibility thresholds, for example, range from 130% to 200% of the poverty line.

struggle. As discussed in the Methodology Overview (see page 7), unemployment is a strong risk factor for food insecurity; however, other challenges such as medical expenses, living in a high cost area and under-employment of parents may also contribute to these households' struggles to meet their food needs.

In most counties in the U.S., at least some food insecure children live in households with incomes above 185% of the federal poverty level, and in six percent (N=182) of counties, the majority of food insecure children live in households with incomes above 185% of the poverty line. Examples of this income composition among food insecure children are found in diverse locations around the country. For example, in Sherman County, Oregon approximately 31% of all children are food insecure and 53% of these children come from households with incomes above 185% of the poverty line. Although Loudoun, Virginia, has a lower child food insecurity rate (10%) than the national average, there are an estimated 9,200 food insecure children, 72% of whom live in households with incomes greater than 185% of poverty. In Santa Clara, California half of the 83,200 food insecure children are living in households with incomes above 185% of the poverty level. Even very needy counties, such as Dimmit, Texas, which has a child food insecurity rate of 38% and a family median income of \$32,659, nearly 50% lower than the national average (DeNavas-Walt et al., 2012) is still estimated to have almost a third of its food insecure children (30%) in households with these higher incomes making them likely ineligible for the government food safety net.





IMPLICATIONS FOR POLICY

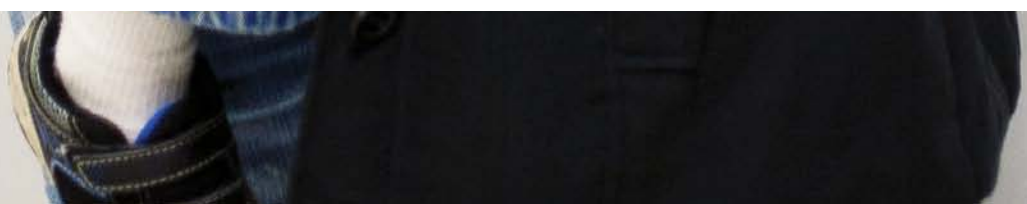
Feeding America conducts this research annually to gain a clearer understanding of food insecurity at the local level. The findings demonstrate a profound need for both public and private food assistance among people in every part of the country. The data also demonstrate that locally, as well as nationally, federal nutrition programs are not currently reaching all food insecure people.

The goals of the Map the Meal Gap project are focused on equipping communities, service providers and policymakers with additional analytical tools to help understand the dynamics of food insecurity at the local level and to use this information to better inform discussions about how to respond to the need. Map the Meal Gap data highlight the reality that food insecurity exists in every community. The findings presented here document the variation in food insecurity across communities for both the general population and for children and demonstrate the critical role of both the public and private sector in reducing food insecurity in America.

Map the Meal Gap 2013 shows that there are millions of food insecure households in counties across the United States that have incomes that render them ineligible for most federal food assistance programs. In order to weave a comprehensive nutrition safety net, the charitable sector can step in to serve these individuals

in need who are not eligible for federal assistance, as well as those families that see their SNAP benefits run out before the end of the month. However, these results demonstrate that while both federal and charitable food assistance reach millions there are still individuals in every corner of the country in need.

Food insecurity can have wide-ranging detrimental consequences on the physical and mental health of adults, including more vulnerable populations such as pregnant women and seniors. Lack of access to a nutritious and adequate food supply has implications not only for the development of physical and mental disease, but also behaviors and social skills. Food insecurity is associated with lower scores on mental and physical health exams (Stuff et al., 2004) and a range of chronic illnesses such as hypertension, hyperlipidemia and various cardiovascular risk factors (Seligman et al., 2009). Food insecure women may be at greater risk for major depression and other mental



health issues (Heflin et al., 2005). Additionally, food insecure adults have higher risk of developing diabetes (Nelson et al., 2001; Seligman et al., 2007).

Although food insecurity has the potential to lead to negative outcomes for individuals across the age spectrum, food insecurity can be particularly devastating among children due to their increased vulnerability and the potential for long-term consequences. The structural foundation for cognitive functioning is laid in early childhood, creating the underlying circuitry on which more complex processes are built. This foundation can be greatly affected by food insecurity. Inadequate nutrition can permanently alter a child's brain architecture and stunt their intellectual capacity, affecting the child's learning, social interaction and productivity. Several studies have demonstrated that food insecurity impacts cognitive development among young children and is linked to poor school performance in older children. (For a review see Gundersen et al., 2011.)

The consequences and costs of child hunger make addressing this issue an economic and societal imperative. Resources targeted at combating child food insecurity are an important investment not just for the individual child, but for society as a whole. The child food insecurity data presented in this report suggest several focus areas for policymakers and program administrators to more effectively address child food insecurity.

Currently, federal nutrition programs and the charitable sector, with support from business, work to meet the nutritional needs of struggling families. Federal nutrition programs, like SNAP, The Emergency Food Assistance Program (TEFAP) and the Community Supplemental Food Program (CSFP), target the poorest and most vulnerable households to provide them with critical

nutrition assistance. While SNAP is not a child nutrition program per se, the program continues to serve as the first line of defense against child hunger. In 2011, 45% of SNAP participants were children (Eslami et al., 2012). The NSLP, SBP, SFSP, and Child and Adult Care Food Programs (CACFP) also address child food insecurity by serving children in school and day care settings, after school, and during the summer. WIC improves nutrition by targeting young, low-income children at nutritional risk. Together, these programs weave a comprehensive nutritional safety net that reach children where they live, learn and play.

45% OF ALL SNAP PARTICIPANTS IN 2011 WERE **CHILDREN**

Existing child nutrition programs could do much more to address food insecurity among children simply by improving participation rates among those underserved. For example, WIC participation is high among infants (81% of eligible infants), but significantly lower for children ages one through four (47%) (Harper, et al., 2009). Similarly, compared to the 21.4 million children receiving free or reduced-price lunches each school day in 2012, only 10.8 million received breakfast and even fewer (2.3 million) received assistance through the Summer Food Service Program (USDA FNS, 2012).

Greater SFSP flexibility, improved coordination between nutrition programs and innovative strategies to increase program access for eligible children would go a long way to reducing food insecurity among children. For example, there are only 38 summer food sites for every 100 school lunch programs. As a result, just a fraction of the children receiving free or reduced-price lunches during the school year are getting the meals and snacks they are eligible to receive during the summer.

In rural areas, this gap is exacerbated by transportation barriers in accessing program sites. Consistent with existing research regarding access difficulties in rural areas, our findings reveal that child food insecurity is higher in nonmetropolitan counties. Several policy opportunities exist to improve program delivery in these areas, such as expanding mobile SFSP to reach children in rural communities and other low-access areas.

The Map the Meal Gap studies are intended to shed light on the issue of food insecurity as a problem that exists in all localities across the United States. Though we reviewed this variation in light of income, poverty and racial and ethnic composition of communities, we encourage others to examine how local-level food insecurity data relates to other indicators, such as health data, housing cost pressures and other measures of economic status. It is our hope that food banks, partner agencies, policy makers, business leaders, community activists and concerned citizens will use these tools to fully engage in the fight against hunger.



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