FEEDING AMERICA

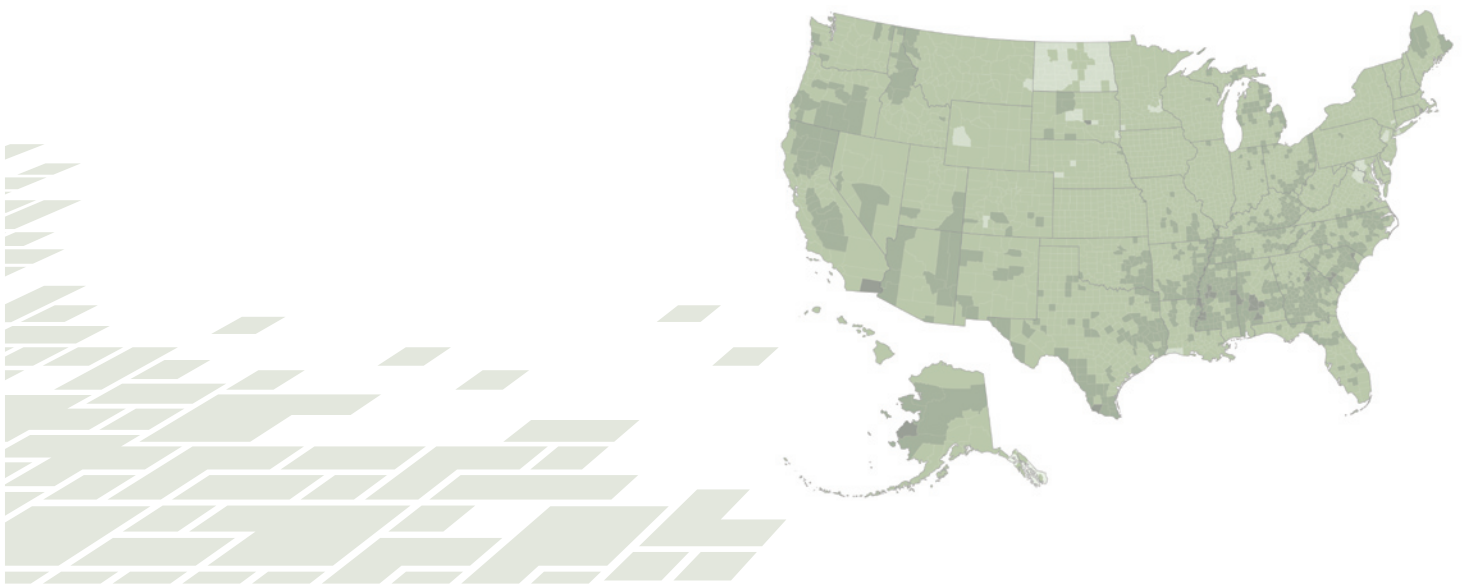# MAP THE MEAL GAP 2011
HIGHLIGHTS OF FINDINGS

MAP THE MEAL GAP

A Report on County Level Food Insecurity
and Food Cost in the United States in 2009

GLOSSARY OF KEY TERMS

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) The ACS is a sample survey of three million addresses administered by the Census Bureau. In order to provide valid estimates for areas with small populations, the data for *Map the Meal Gap* was collected and 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).

CURRENT POPULATION SURVEY (CPS) A nationally representative survey conducted by the 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 include food pantries, soup kitchens and shelters.

FEDERAL NUTRITION PROGRAM 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.

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 (as measured by commuting to work) 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 line, which varies based on household size. These percentages are often used to set **federal nutrition program thresholds** for eligibility, such as the **SNAP threshold**.

PRICE 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.

SNAP 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**.

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 emergency food assistance to an estimated 37 million Americans in need annually.

Our strength is derived from our member food banks, which serve all fifty 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 or religion. For more than 30 years, our members have 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

About *Map the Meal Gap 2011*

In order to address the problem of hunger, we must first understand it. Feeding America undertook the Map the Meal Gap project to learn more about the face of hunger at the local community level. By understanding the population in need, communities can better identify strategies for reaching the people who most need food assistance.

At Feeding America, our mission is to feed America's hungry through a nationwide network of member food banks and engage our country in the fight to end hunger. Although we seek to meet the needs of food insecure individuals and families, it is not always easy to identify the need for food within each of our communities. Traditionally, Feeding America has used state and national level USDA food insecurity data to estimate the need (e.g. "50 million Americans are at risk of hunger"), but food banks are rooted in their local communities and need better information at the ground level in order to be responsive to their unique local conditions. Until now, the number of people falling below the federal poverty threshold has been the indicator most typically used for identifying the need for food at the local level because it is one of the few indicators available at

the county level. However, national food insecurity data reveal that about 45% of those struggling with hunger actually have incomes above the federal poverty level and 53% of poor households are food secure.[1] Thus, 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 can assist Feeding America and our network of food banks in strategic planning for charitable food services that best support struggling families, 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 can serve as an important resource for engaging community leaders and partners in the journey from the

[1] Nord, M., Coleman-Jensen, A., Andrews, M. & Carlson, S. *Household Food Security in the United States, 2009.* USDA ERS. 2010.

aspiration of ending hunger to achievement through a quantifiable and data-driven approach.

Map the Meal Gap generates two types of community-level data:

County-level food insecurity estimates by income categories; and

An estimate of the food budget shortfall that food insecure individuals report they experience.

The food budget shortfall is drawn from national Current Population Survey (CPS) data reported by individuals experiencing food insecurity and is then translated into an estimated number of meals people report that they are unable to afford, using an average per-meal cost across the nation. The cost per meal estimate, while based on national

data on what food secure people spend on food, is not intended to be an absolute measure. The "meal" concept provides communities with a context for the scope of need in their area using a notion that is easily relatable and understood. In recognition that food costs are not the same across the nation, the per-meal cost is then adjusted for differences in food prices across counties.

The adjustment is based on a food cost index developed with the assistance of The Nielsen Company. Although food prices are not the most significant cost pressures that people face in meeting their basic needs (housing, utilities and medical expenses are all other critical components), the ability to reflect differences in food costs does provide additional insight into the scope of the problems facing those struggling with hunger.

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 are outlined below.

Community-level analysis should be directly related to the need for food.
To do this, we focused the analysis on estimating food insecurity at the county and congressional district level.

It should reflect major known determinants of the need for food, such as unemployment and poverty.
We developed a model to estimate county-level food insecurity by examining the relationship between food insecurity and unemployment, poverty and other factors.

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 also draws on information about income levels in counties. The income data will be used to estimate the number of food insecure individuals whose resources suggest they are eligible for federal assistance programs, such as SNAP (formerly known as the Food Stamp Program), WIC (Special Supplemental Nutrition Program for Women, Infants, and Children), the National School Lunch Program and the

Summer Food Service Program. 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 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.
With the release of the American Community Survey (ACS) data for all counties, up-to-date community estimates for all counties is possible.

It should be updated on an annual basis to reflect changing conditions.
By using the national USDA food insecurity data released each year, annual county estimates can be calculated each year. The data presented in this first report are drawn from 2009 (or American Community Survey averages from the rolling 2005-2009 period), the most recent time period available.

Methodology Overview

The following provides some additional information on the methodology for this study. A technical brief is also available at **feedingamerica.org/mapthegap** for those interested in greater detail.

FOOD INSECURITY ESTIMATES

Current Population Survey data on food insecurity was used to assess the relationship between food insecurity and key indicators of food insecurity at the state level. The following indicators were used: unemployment rates from the Bureau of Labor Statistics; and poverty rates, median income and percent African American and Hispanic from the ACS. These data points were selected because they are publicly available at both the county and state level and are associated with our area of interest. 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 the above indicators and food insecurity. Estimates were sorted by income categories associated with eligibility for federal nutrition programs using ACS data on population and income at the county level. **The results indicate that no county is free from food insecurity.** Counties ranged from a low of 5% of the population that experienced food insecurity in 2009 to a high of 38%.

CHART 1: **ESTIMATING COUNTY-LEVEL FOOD INSECURITY**
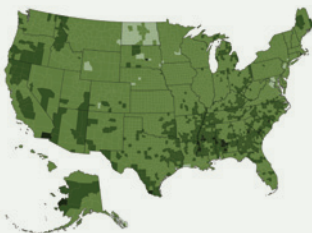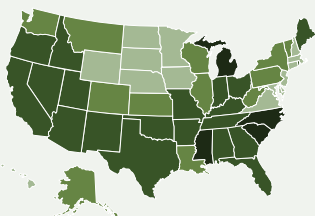
Food Insecurity by County

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.

COST OF FOOD INDEX

The Nielsen Company, 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. 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 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.

FOOD BUDGET SHORTFALL

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 $13.99 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 the USDA report indicates 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. For each county, the average food budget shortfall was adjusted by the cost of food index. The national average is expressed as the following equation:

FOOD INSECURE PERSONS X $13.99 X COST OF FOOD INDEX X 52 WEEKS X $7/_{12}$

EQUALS

Food budget shortfall reported by food insecure individuals in 2009

NATIONAL AVERAGE MEAL COST

Another question on the CPS (which precedes the food insecurity questions) asks respondents how much money their household usually spends on food in a given week. The average dollar amount that food secure individuals spent on food each week was divided by 21 (based on the assumption of three meals per day, seven days per week) to arrive at an average cost per meal ($2.54). It should be noted that the per-meal cost of $2.54 was derived from food expenditures reported by food secure individuals to ensure that the result reflected the cost of an adequate diet. The national average of $2.54 was then weighted by the cost of food index to estimate the cost per meal for each locality. This local cost of a meal is used in this analysis to translate the food budget shortfall into a representation of the number of meals food insecure people report that they are unable to afford.

2009 Map the Meal Gap Data

A complete printable, interactive map of county-level food insecurity and food cost data can be founded online at **feedingamerica.org/mapthegap**. Downloadable food insecurity information for congressional districts is also available.

County Level Food Insecurity: Results and Discussion

The Map the Meal Gap research results in detailed information for every county and congressional district examined, including the food insecurity rate, the number of individuals who are food insecure and their potential income-eligibility for federal programs. In order to further our understanding specifically within these geographies, we looked at counties and congressional districts through various lenses, including focusing on areas with exceptionally high food insecurity rates and those with very large numbers of food insecure individuals.

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 3,137 counties in the United States (N=318).[2] Although the average of all the U.S. counties' food insecurity rates is 16%, the average food insecurity rate for these 318 "high food insecurity rate" counties is 24%. In other words, within these highest risk counties, approximately 1 in every 4 residents is struggling with hunger.

TABLE 1: HIGH FOOD INSECURITY RATE COUNTIES BY GEOGRAPHIC AREAS

County Type	High Food Insecurity Rate Counties	All Counties
Metropolitan	13.5%	35.1%
Micropolitan	27.7%	21.9%
Non-metro/Rural	58.8%	43.0%
TOTAL	100%	100%

GEOGRAPHY

The group of high food insecurity rate counties was further analyzed according to the geographic classifications of metropolitan, micropolitan and nonmetropolitan ("rural").[3] 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 1.
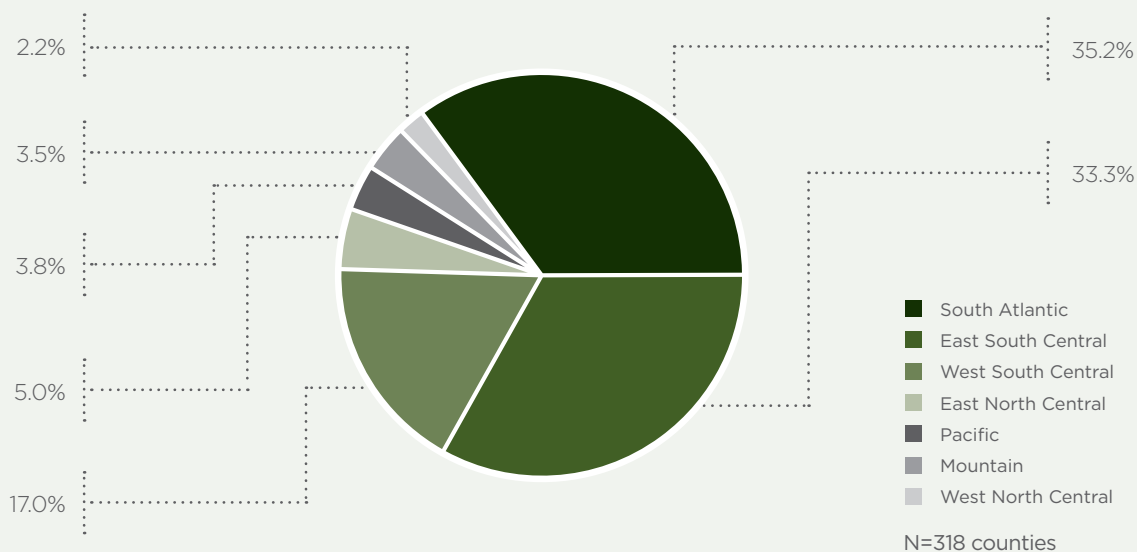
The high food insecurity rate counties are found in seven of the nine census geographic divisions identified by the U.S. Census Bureau (see Chart 2 on page 8). The heaviest concentrations of these counties are found in the East South Central and South Atlantic states. While neither the New England nor Middle Atlantic divisions are represented in the high food insecurity rate counties, it should be noted that some of these areas are among the most populous and thus, have some of the largest numbers of food insecure individuals (see the "Largest Numbers of Food Insecure Individuals" section).

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[2] All counties defined by the Census Bureau were included in the analysis with a very small number of exceptions. For three counties (two in Alaska and one in Hawaii), the BLS did not provide 2009 unemployment data. For three additional counties (all in Alaska), the county-defined area changed between 2008 and 2009. Therefore, a total of 3,137 counties were analyzed out of the 3,143 for which data is provided by the Census Bureau.

[3] These geographic entities are defined by the U.S. Office of Management and Budget (OMB). See Key Terms for more information.

2.2%

3.5%

3.8%

5.0%

17.0%

35.2%

33.3%

■ South Atlantic
■ East South Central
■ West South Central
■ East North Central
■ Pacific
■ Mountain
■ West North Central

N=318 counties

UNEMPLOYMENT, POVERTY AND MEDIAN INCOME IN HIGH FOOD INSECURITY COUNTIES

The high food insecurity rate counties are more economically disadvantaged compared to the national average for all counties and for the U.S. population as a whole, as seen in Table 2. The average of annual unemployment rates for this group of counties was 14% in 2009, compared to 9% across all counties. The highest unemployment rate among these counties was over 28% in Imperial, California. The average of county-level poverty rates among this group was also extraordinarily high, averaging 26% for the high risk group and as high as 52% in Kenedy, Texas. Not surprisingly, median household income in this group was considerably lower than for all counties—$31,078 versus $43,442. The lowest median income in the group was in Owsley, Kentucky ($18,869).

TABLE 2: AVERAGE COUNTY-LEVEL ECONOMIC INDICATORS (UNWEIGHTED AVERAGES)

County Grouping	Food Insecurity Rates	Unemployment Rates	Poverty Rates	Median Household Income
High Food Insecurity Rate Counties	22.1%	13.5%	25.9%	$31,078
All U.S. Counties	16.2%	9.0%	15.4%	$43,442

Further Explorations of Counties and Congressional Districts

As mentioned previously, we explored results across counties and congressional districts in the U.S. from a number of perspectives, including those with very large populations of food insecure individuals. Areas with large food insecure populations may face different challenges than those with high food insecurity rates.

LOW FOOD INSECURITY RATES

Nine of the ten counties with the lowest estimated food insecurity rates are in North Dakota. This is consistent with the low unemployment rate for this state during 2009. It is important to note, as described in the section below, in populous areas low rates do not always translate into few people.

Both the estimated rates and numbers of food insecure are important indicators of need—one shows the reach across a community in terms of prevalence, while the other indicates the absolute magnitude of individuals who may need help.

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. A number of large metropolitan areas rise to the top when examining the absolute number of food insecure people, as seen in Table 3 on page 10.

The average of the food insecurity rates for the 50 counties with the highest number of food insecure people was 17% and the average of unemployment rates in 2009 was 10%. In each of these cases, these indicators exceed the national average for all counties, even though they do not rise to the same level of disadvantage seen in the counties with the highest food insecurity rates. The poverty rates are on par with national averages at around 15%.

TABLE 3: COUNTIES WITH THE HIGHEST NUMBER OF FOOD INSECURE INDIVIDUALS

State	County (Metro Area)	Food Insecure Population	Food Insecurity Rate
CA	Los Angeles	1.7 million	17.4%
NY	New York (five boroughs, collectively)	1.3 million	16.2%
IL	Cook (Chicago)	846,000	16.1%
TX	Harris (Houston)	706,000	18.1%
AZ	Maricopa (Phoenix)	626,000	16.2%
MI	Wayne (Detroit)	471,000	23.8%
TX	Dallas	450,000	18.9%
CA	San Diego	442,000	14.8%
FL	Miami-Dade	433,000	17.6%

Although most of these top 50 counties are associated with large urban cities, there are some exceptions, such as Hidalgo, Texas (ranked 36 among the 50), which is composed of many densely populated smaller towns; and Kern, California (ranked 37), 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 the top 50 counties with the largest number of food insecure people, half are majority-white counties, one in four are at least one-third Hispanic and one in eight have at least one-third African American residents. Because minority communities are often at higher risk of economic disadvantage and food insecurity, an analysis of counties with a high percentage of nonwhite residents is presented later in this brief.
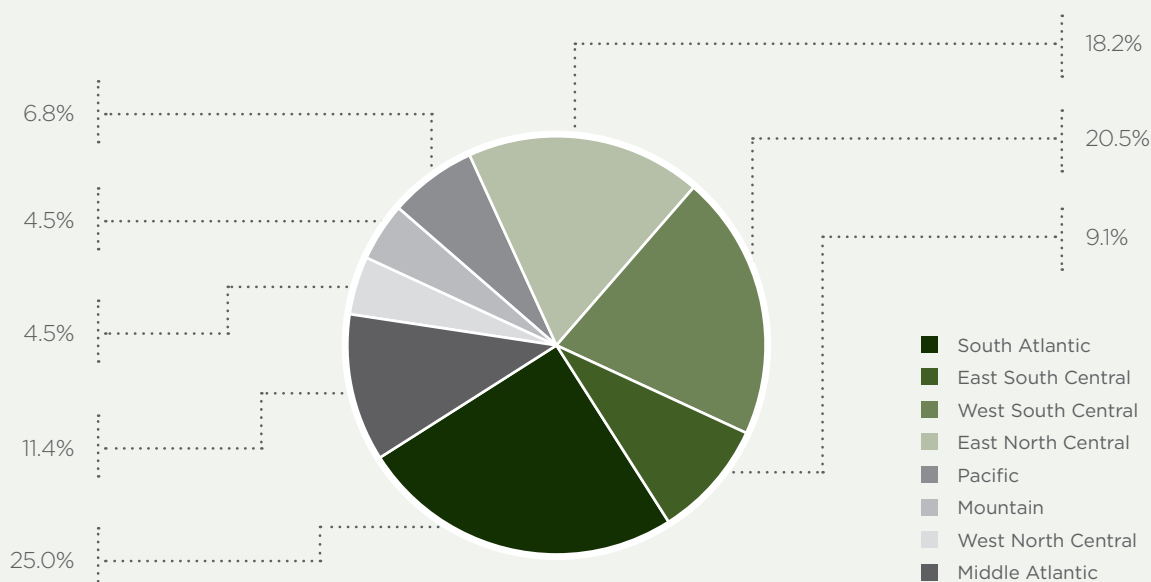
FOOD INSECURITY IN CONGRESSIONAL DISTRICTS

In addition to developing county-level food insecurity estimates, Feeding America developed estimates at the congressional district level using the same methodology. Because districts are constructed based on population size, food insecurity rates had a narrower range—from a low of 8% to a high of 33%—than the county-level food insecurity rates, which ranged from 5% to 38%. Consistent with the county-level data, those congressional districts that fell into the top 10% for high food insecurity rates (N=44) had an average food insecurity rate of 25%. These "high food insecurity rate districts" also had higher-than national average unemployment (14% vs. 9%) and poverty rates (24% vs. 15%) and lower-than average median income ($38,175 vs. $43,442).

While high food insecurity rate counties are heavily concentrated in the South (as noted above), the high food insecurity rate districts are much more geographically diverse, as shown in Chart 3.

As with counties, it is important to note that no congressional district is free of food insecurity. Even in the most food-secure district, North Dakota's "at-large" district, 8% of the population (over 50,000 individuals) is food insecure. Each of the wealthiest districts (the 10% of congressional districts with the highest median incomes) is home to an average of 84,000 people experiencing food insecurity. Cumulatively, those wealthiest districts are home to nearly 3.7 million food insecure men, women and children.

CHART 3: **HIGH FOOD INSECURITY RATE DISTRICTS BY CENSUS DIVISION**

18.2%

20.5%

9.1%

6.8%

4.5%

4.5%

11.4%

25.0%

- South Atlantic
- East South Central
- West South Central
- East North Central
- Pacific
- Mountain
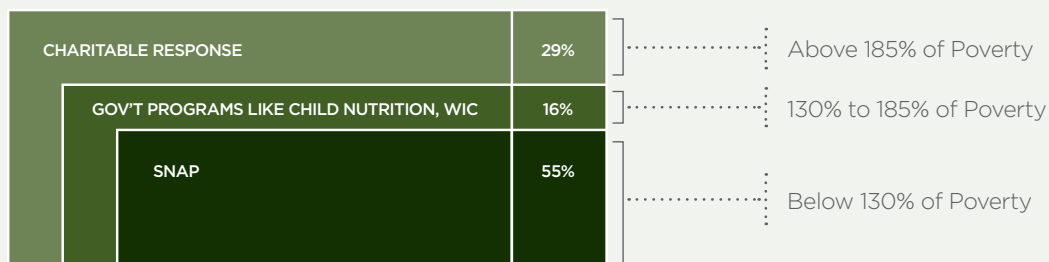- West North Central
- Middle Atlantic

Food Insecurity and Income Bands

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.[4] 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 fifty years ago,[5] and now include myriad expenses that were virtually non-existent when the official poverty measure was created.

Despite having incomes above the poverty line, millions of Americans are in need of food assistance for themselves and their families. As a consequence, food assistance programs—SNAP, WIC, School Breakfast and School Lunch—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 4).[6] For example, the 2009 poverty guideline for a family of four in the lower 48 states was a pre-tax income of $22,050. To determine the limit for SNAP eligibility, one would multiply $22,050 by 130% to arrive at $28,665. Thus, $28,665 is the income limit for a family of four to be eligible for SNAP benefits in 2009, among other eligibility criteria.

Because of these commonly used federal nutrition program thresholds, the Map the Meal Gap analysis estimates the number of food insecure people who fall into each income bracket. Specifically, we estimate the number of individuals who fall below the SNAP eligibility level (130% of poverty or the state-specific threshold), the number of food insecure 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).

CHART 4: FOOD INSECURE INDIVIDUALS AND INCOME ELIGIBILITY, 2009

CHARITABLE RESPONSE	29%	Above 185% of Poverty
GOV'T PROGRAMS LIKE CHILD NUTRITION, WIC	16%	130% to 185% of Poverty
SNAP	55%	Below 130% of Poverty

[4] Blank, R.M. & Greenberg, M.H. Improving the Measurement of Poverty. The Brookings Institution, Washington, D.C. 2008.

[5] ibid.

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

SNAP AND OTHER GOVERNMENT PROGRAMS

Understanding the income distribution of the food insecure population is valuable because it can inform discussion of what assistance programs may be available to help address the need. Households with income that places them above 185% of poverty have fewer government resources available to them because SNAP eligibility ceilings are typically closer to 130-150%. Additionally, reduced price lunches are typically not available for children in households with incomes above 185% of poverty. 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

Based on national statistics, about 29% of food insecure individuals are above 185% of the poverty line and are typically ineligible for most food assistance programs (see Chart 4).[7] 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, 40 states have counties where a majority of the food insecure population is likely SNAP eligible alongside counties where the majority of food insecure people are likely ineligible for any federal food assistance.

For example, there are 25 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 37 counties that have populations where a majority (50% or more) have incomes that likely make them SNAP eligible (at or below 130% of poverty). Counties with a higher proportion of food insecure people who are likely ineligible for government assistance programs are often found in metropolitan areas with higher median incomes (78% of the counties with majority ineligibles are metropolitan). 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% is less common—on average, only about one-fifth of food insecure people have incomes too high for eligibility for food assistance programs in these counties. Still, many high food insecurity counties have a considerable number of food insecure people who can only rely on family, friends and charitable response when they need help.

7 Nord, M., et al. *Household Food insecurity in the United States, 2009.* USDA ERS. 2010.

Food Insecurity and Race and Ethnicity

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 5, these discrepancies become especially striking at the county level. Further analysis provides some additional insight into the challenges faced by minority communities by examining food insecurity among counties with large populations of nonwhites.

Percent of all U.S. Counties   Percent of High Food Insecurity Counties
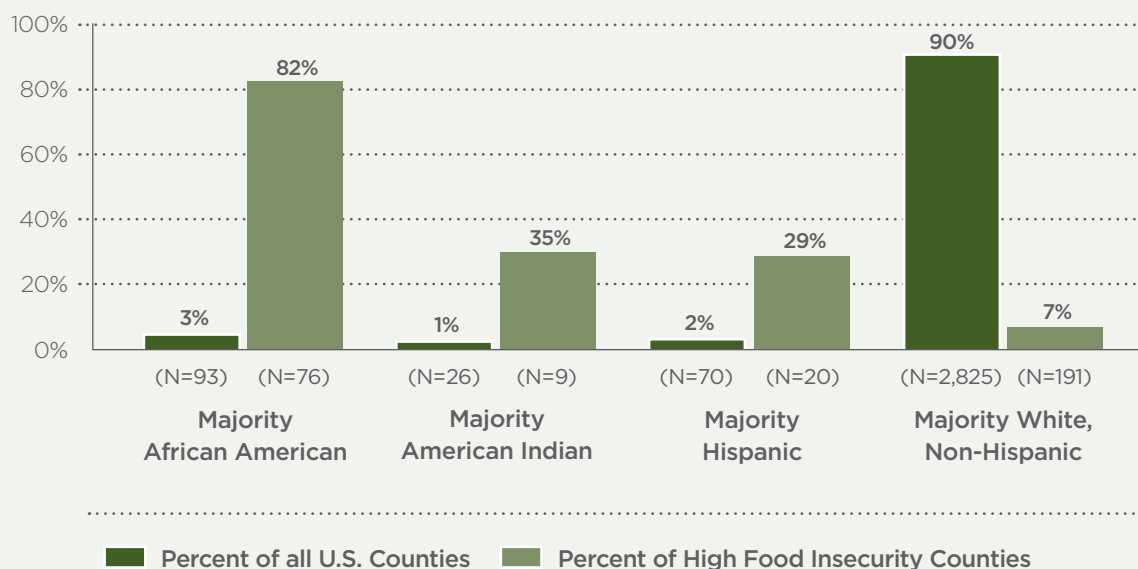
COUNTIES WITH HIGH PERCENTAGES OF AMERICAN INDIANS

Although a relatively small percentage of the food insecure population in the U.S. is identified as American Indian, county-level analysis brings into sharp relief the challenges for these communities in certain areas of the country. Among the high food insecurity rate counties (those with food insecurity rates in the top 10%) are 11 counties where American Indians make up more than a quarter of the population. In nine of these counties, they represent more than 50% of residents (note that there are only 26 counties in the U.S. that are majority American Indian). These 11 counties face a disproportionately high level of poverty: an average of their 2009 poverty rate was 35% versus

an average of 26% for all high food insecurity rate counties and 15% for all U.S. counties. The largest counties with a sizeable population of American Indians and high rates of food insecurity include Navajo, Arizona (45% American Indian, 25% food insecure), which includes parts of the Hopi, Fort Apache and Navajo Nation reservations; and Robeson, North Carolina (36% American Indian, 23% food insecure), which includes many Lumbee tribe members, one of the larger non-reservation tribes. Three of the counties with very high percentages of American Indians in the high food insecurity rate group are located in South Dakota (see Table 4).

TABLE 4: MAJORITY AMERICAN INDIAN COUNTIES WITHIN HIGH FOOD INSECURITY RATE COUNTIES

State	County	Population	Unemployment Rate	Poverty Rate	Percent American Indian	Food Insecurity Rate
SD	Shannon	13,593	10.7%	51.0%	92.9%	26.4%
AK	Wade Hampton	7,577	21.2%	31.7%	89.5%	30.4%
SD	Buffalo	2,091	14.8%	51.9%	89.4%	30.1%
SD	Todd	9,997	7.1%	47.3%	79.4%	22.7%
WI	Menominee	4,537	13.7%	28.9%	78.6%	22.0%
AZ	Apache	69,341	14.6%	36.8%	73.5%	28.5%
NM	McKinley	70,388	8.0%	33.7%	72.7%	22.9%
AK	Yukon Koyukuk	5,813	15.7%	24.1%	65.3%	24.1%
UT	San Juan	14,429	10.7%	28.7%	54.7%	23.8%
AZ	Navajo	110,458	14.1%	24.6%	44.5%	24.5%
NC	Robeson	127,686	11.4%	30.1%	36.3%	23.4%
	Unweighted Averages		12.9%	35.4%	70.6%	25.4%

COUNTIES WITH THE HIGHEST PERCENTAGE OF AFRICAN AMERICANS

Of the 93 counties in the United States where a majority of residents are African American, over 80% (N=76) have food insecurity rates which place them in the group of the highest food insecurity rate counties. The 15 highest food insecurity rate, majority African American counties are shown in Table 5. Many of these 76 African American-majority counties are fairly small in population, but there are several with an estimated food insecure population in excess of 100,000, including Baltimore City, Maryland; Dekalb, Georgia; Prince Georges, Maryland; and Shelby, Tennessee.

TABLE 5: **MAJORITY AFRICAN AMERICAN COUNTIES WITHIN HIGH FOOD INSECURITY RATE COUNTIES**

State	County	Population	Unemployment Rate	Poverty Rate	Percent African American	Food Insecurity Rate
MS	JEFFERSON	8,971	17.2%	32.8%	**86.8%**	**32.3%**
MS	CLAIBORNE	10,910	16.0%	38.6%	**85.2%**	**32.8%**
AL	MACON	22,304	11.2%	28.0%	**82.4%**	**25.6%**
MS	HOLMES	20,481	19.5%	42.7%	**80.9%**	**36.4%**
AL	GREENE	9,112	13.5%	31.2%	**78.7%**	**28.1%**
VA	PETERSBURG CITY	32,845	13.2%	17.8%	**77.0%**	**23.4%**
GA	HANCOCK	9,449	18.7%	21.7%	**76.0%**	**30.4%**
AL	BULLOCK	10,917	14.3%	32.3%	**75.0%**	**28.7%**
MS	COAHOMA	27,571	12.5%	36.0%	**74.3%**	**28.6%**
MS	HUMPHREYS	9,985	13.0%	39.0%	**74.0%**	**29.9%**
LA	EAST CARROLL	8,265	13.1%	44.7%	**73.5%**	**29.6%**
AL	WILCOX	12,552	24.2%	36.5%	**72.6%**	**37.6%**
MS	sharkey	5,184	11.0%	33.3%	**72.5**	**26.5%**
MS	LEFLORE	35,033	12.7%	41.6%	**72.4%**	**30.3%**
MS	SUNFLOWER	30,604	13.2%	35.0%	**71.8%**	**28.8%**
	Unweighted Averages		14.9%	34.1%	**76.9%**	**29.9%**

Although all of the African American majority counties suffer from a higher-than-average collective poverty rate (27%), the 76 counties that also have the highest food insecurity rates have an even higher average poverty rate at 29% (versus an average of 15% for all U.S. counties) and an above average unemployment rate at 13% (compared to an average of 9% for all U.S. counties). 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.

COUNTIES WITH THE HIGHEST PERCENTAGE OF HISPANICS/LATINOS

Of the 70 counties in the United States that have majority Latino populations, more than one in four have food insecurity rates which place them in the group of the highest food insecurity rate counties (see Table 6 on page 18). These counties have substantially higher poverty and unemployment rates when compared to the rest of the nation and slightly higher poverty and unemployment rates than African American high food insecurity counties.

The average of 2009 poverty rates in these high food insecurity rate, majority Hispanic counties is 32% (compared to 29% for all high food insecurity rate, majority African American counties; and 15% for all U.S. counties) and the unemployment rate is 14% (versus 13% for high food insecurity rate, majority African American counties; and 9% for all U.S. counties). An average of median incomes in these counties is somewhat higher than in the high food insecurity rate, majority African American counties, ($30,537 versus $27,876), but may reflect larger household size and is still well below the national average of $43,442. Thirteen of these 70 counties are located in Texas, while other states represented include New Mexico, California and Arizona.

As with African American-majority counties, there are some Latino-majority counties that have relatively large populations. Some of these do not fall into the high food insecurity rate counties, but are still worth noting due to their high absolute numbers of food insecure people. Five majority Hispanic counties have over 100,000 food insecure individuals: Miami-Dade in Florida; Bronx in New York; and Bexar, Hidalgo, and El Paso in Texas.

Another interesting detail about Hispanic-majority counties emerges when high food insecurity rates are compared to counties with the top agricultural sales in the United States. Three counties that fall into the top 5 highest agricultural sales in the U.S. are also in the top 10% highest food insecurity rate counties: Merced, Fresno and Tulare counties in California.[8] In each of these communities, more than 20% of the population is food insecure and all three have high percentages of Hispanics (nearly 50% or more). 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.

As with counties, congressional districts with majority populations of color are disproportionately impacted by food insecurity. Of the 337 majority White, non-Hispanic congressional districts, only 1% (N=3) of them are in the high food insecurity districts (top 10%). Of the 27 majority Hispanic and 26 majority African America districts, 48% (N=13) and 69% (N=18) are in the high food insecurity districts, respectively.

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[8] 2007 USDA Agricultural Census.

TABLE 6: MAJORITY HISPANIC COUNTIES WITHIN HIGH FOOD INSECURITY RATE COUNTIES

State	County Name	Population	Unemployment Rate	Poverty Rate	Percent Hispanic	Food Insecurity Rate
TX	STARR	60,936	16.7%	39.8%	98.6%	29.6%
TX	MAVERICK	51,300	14.4%	30.2%	94.5%	25.1%
TX	ZAVALA	11,620	14.9%	38.3%	89.8%	28.0%
TX	HIDALGO	702,697	10.6%	36.0%	89.4%	23.8%
TX	BROOKS	7,475	9.5%	35.1%	88.7%	23.0%
TX	ZAPATA	13,561	10.8%	41.4%	88.2%	25.7%
TX	DUVAL	12,199	11.1%	29.8%	87.6%	22.8%
TX	WILLACY	20,364	12.3%	46.9%	86.5%	28.4%
TX	CAMERON	383,171	9.9%	35.7%	86.0%	23.3%
TX	DIMMIT	9,833	10.2%	37.2%	84.1%	24.1%
TX	PRESIDIO	7,536	16.7%	29.5%	83.2%	27.0%
AZ	SANTA CRUZ	42,550	14.6%	22.1%	79.9%	22.6%
CA	IMPERIAL	160,034	28.2%	21.2%	76.1%	31.4%
TX	REEVES	11,100	11.8%	27.9%	72.7%	23.0%
TX	KENEDY	336	6.0%	52.4%	71.7%	25.1%
NM	LUNA	26,724	16.5%	33.4%	60.3%	28.5%
CA	TULARE	416,299	15.3%	22.6%	56.7%	21.9%
AZ	YUMA	188,983	21.3%	19.9%	55.7%	27.9%
CA	MERCED	242,235	17.2%	21.1%	52.1%	23.2%
CA	COLUSA	21,001	18.3%	15.7%	50.8%	22.4%
	Unweighted Averages		14.3%	31.8%	**77.6%**	**25.3%**

Food Price Variation Across the United States

In the work described previously, the Map the Meal Gap analysis focused on increasing understanding of the population in need. In conjunction, Feeding America sought to understand the additional food needs of the food insecure population and how those needs vary at the local level.

To address this goal, *Map the Meal Gap* developed a local-level estimation of the additional food budget needed by food insecure individuals.

In order to understand how regional and local variations in food costs may present challenges for the food insecure population, Feeding America worked with The Nielsen Company to develop a county-level food cost index. Although the analysis does not infer 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. The results indicate that food prices across the continental
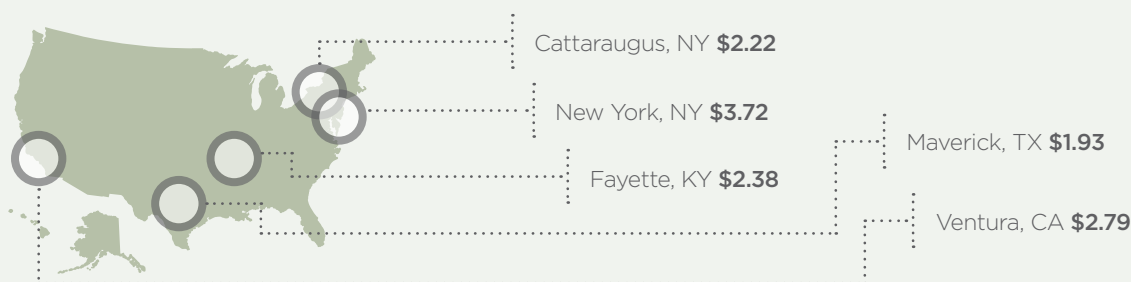
U.S. vary from 74% to 174% of the national average (see examples in Chart 6 on page 20).

A meal costing $2.54 on average can cost as little as $1.87 in Zavala, Texas or as much as $4.42 in Nantucket, Massachusetts. Among the counties with the top 10% highest food insecurity rates in the nation, food prices reach as high as 137% of the national average (or $3.48 per meal in Crook, Oregon). For a food insecure 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.

Counties with Higher Food Prices

The top 10% of counties with the most expensive food costs (313 in total) have an average meal cost of $3.12, meaning that the market basket of food in these counties is 23% more expensive than the national average. There are 74 counties where the cost of a meal is at least 25% above the national average ($3.18 or higher).

Cattaraugus, NY **$2.22**

New York, NY **$3.72**

Maverick, TX **$1.93**

Fayette, KY **$2.38**

Ventura, CA **$2.79**

As noted previously, the highest cost per meal in the U.S. is estimated to be $4.42 in Nantucket, Massachusetts. In this case, the high cost is primarily due to the expense of transporting food to the island. Nantucket 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 ($4.34); Sun Valley in Blaine, Idaho ($3.77); and Jackson Hole in Teton, Wyoming ($3.61). While households in these areas 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 ($3.72), the District of Columbia ($3.41), and the northern Virginia counties surrounding the nation's capital (as high as $3.81).

Finally, many of these counties are in rural areas (59% of all counties, versus the U.S. average of 43%). A breakout of counties by metropolitan,

TABLE 7: **HIGH COST COUNTIES BY GEOGRAPHIC AREA**

County Type	High Cost Counties	All Counties, U.S.
Metropolitan	26.2%	35.1%
Micropolitan	14.4%	21.9%
Non-metro/Rural	59.4%	43.0%
Total	100%	100%

micropolitan and rural/nonmetropolitan areas is shown in Table 7. These counties often have small populations and lower median incomes, such as Perkins, South Dakota ($4.15); Wheeler, Oregon ($4.07); and other counties in Idaho, Montana and North Dakota. Many of the rural high cost counties are in mountainous areas, where transportation may be more challenging and there may be fewer retail outlets.

High Food Insecurity Coupled with High Food Cost

There are 44 counties in the United States that fall into the top 10% categories for both food insecurity rates and food price costs, listed in Table 8 on page 22. While these counties do not face the highest food prices in the nation, the average cost per meal is $3.02, which is 19% above the national average of $2.54 (the maximum for this group is $3.48 in Crook, Oregon and the lowest is $2.91 in Martin, Kentucky). The higher-than-average meal cost in these counties is particularly notable because the average of these counties' household median incomes ($29,484) is well below the average of all U.S. counties ($43,442). These counties also struggle with high poverty rates (average is 27%) and high unemployment rates (average is 14%). Additionally, an average of one in every four individuals in these counties is food insecure.

WHERE ARE THE COUNTIES WITH HIGH FOOD COSTS AND HIGH FOOD INSECURITY RATES, AND WHO LIVES IN THEM?

The majority of the high cost/high food insecurity counties are non-metropolitan or rural areas (68% of this group versus 43% of all counties in the U.S.) and they are most often found in the Southeastern part of the United States (31 of the 44 counties). However, there are also counties in Western states, including California, Utah, Oregon, South Dakota and Texas. There are no counties from the Midwest or Northeast represented in this group. About 9% of these counties are metropolitan and 23% are micropolitan area counties. Overall, the counties are small in population—the largest county in this group is Lake, California, with a 2009 population of 64,756 and an estimated food insecure population of 14,350 (22% food insecure).

Often, state- or national-level population statistics mask racial and ethnic variation by county. One third (32%) of the counties that have both high food costs and high food insecurity rates are majority African American. This is particularly striking given that fewer than 3% of counties in the U.S. are majority African American. Within the 44 counties with both high food costs and high food insecurity rates, African Americans represent an average of 36% of the counties' populations. The percent African American reaches as high as 82% in Macon, Alabama.

Among the 44 counties with both high costs and high food insecurity rates, the average proportion of the population that is Hispanic is only 4%. However, the Hispanic rate reaches as high as 51% in Colusa, California.[9] The average percentage of non-Hispanic whites in these counties is 55%, but reaches as high as 98% in Pickett, Tennessee. The vast majority of these counties have a small America Indian population (4%, on average), but in Todd, South Dakota (which includes the Rosebud Sioux Reservation), the percentage identifying as America Indian is 79%.

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[9] Colusa also has a significant population that identify as "other/multiple races."

TABLE 8: **HIGHEST FOOD INSECURITY AND HIGHEST FOOD COST COUNTIES**[10]

State	County	Population	Unem-ployment Rate	Poverty Rate	Percent White, Non-Hispanic	Percent Hispanic	Percent African American	Food Insecurity Rate	Local Weighted Cost per Meal
AL	WILCOX	12,552	24.2%	36.5%	27.2%	0.0%	72.6%	**37.6%**	**$3.25**
MS	NOXUBEE	11,814	19.7%	32.3%	27.9%	0.2%	69.8%	**33.1%**	**$2.96**
GA	HANCOCK	9,449	18.7%	21.7%	23.2%	0.4%	76.0%	**30.4%**	**$2.95**
AL	SUMTER	13,267	13.8%	40.2%	26.1%	1.4%	70.9%	**30.3%**	**$3.06**
AL	LOWNDES	12,632	17.6%	25.8%	28.1%	0.2%	70.6%	**29.2%**	**$3.05**
AL	CONECUH	13,114	18.4%	29.0%	54.3%	0.2%	44.3%	**29.1%**	**$3.04**
AL	PERRY	10,689	18.2%	23.8%	30.4%	0.6%	68.9%	**29.1%**	**$2.95**
MS	ISSAQUENA	2,130	11.7%	42.7%	38.7%	0.0%	61.3%	**29.1%**	**$2.91**
AL	BULLOCK	10,917	14.3%	32.3%	22.2%	2.3%	75.0%	**28.7%**	**$3.04**
MS	TUNICA	10,406	14.4%	30.8%	24.5%	3.2%	70.6%	**28.3%**	**$3.06**
TN	PERRY	7,694	22.9%	23.2%	95.0%	0.6%	2.8%	**28.3%**	**$2.92**
AL	GREENE	9,112	13.5%	31.2%	20.1%	0.8%	78.7%	**28.1%**	**$2.92**
MS	SHARKEY	5,184	11.0%	33.3%	27.3%	0.2%	72.5%	**26.5%**	**$2.91**
MS	YALOBUSHA	13,646	14.6%	28.1%	59.2%	0.8%	40.2%	**26.0%**	**$3.13**
MS	YAZOO	28,296	11.8%	31.4%	38.0%	2.1%	58.2%	**25.8%**	**$2.91**
AL	MACON	22,304	11.2%	28.0%	15.3%	0.5%	82.4%	**25.6%**	**$3.08**
TN	HANCOCK	6,633	15.2%	34.5%	97.9%	0.3%	0.2%	**25.4%**	**$2.99**
AR	BRADLEY	11,967	9.1%	34.9%	59.2%	11.4%	28.7%	**24.8%**	**$2.92**
AL	HALE	17,994	12.8%	25.7%	40.3%	0.4%	58.7%	**24.7%**	**$2.96**
MS	KEMPER	9,998	12.6%	24.6%	37.0%	0.4%	58.3%	**24.6%**	**$3.07**
AL	PICKENS	19,528	12.7%	26.2%	38.5%	5.3%	0.0%	**23.8%**	**$3.07**
UT	SAN JUAN	14,429	10.7%	28.7%	76.8%	2.1%	19.9%	**23.8%**	**$3.03**
AR	WOODRUFF	7,677	10.4%	25.9%	68.4%	0.2%	30.1%	**23.8%**	**$2.96**

[10] This table is sorted in descending order by the food insecurity rate.

State	County	Population	Unem-ployment Rate	Poverty Rate	Percent White, Non-Hispanic	Percent Hispanic	Percent African American	Food Insecurity Rate	Local Weighted Cost per Meal
MS	WEBSTER	9,834	14.1%	26.5%	56.0%	1.0%	42.5%	**23.8%**	**$2.93**
TN	GRUNDY	14,262	14.1%	29.7%	89.1%	1.2%	0.5%	**23.2%**	**$2.94**
KY	MARTIN	13,300	10.8%	39.2%	93.1%	0.7%	3.8%	**23.1%**	**$2.91**
AL	COOSA	10,777	14.7%	20.1%	66.3%	0.1%	32.5%	**22.9%**	**$3.02**
CA	TRINITY	13,922	17.3%	15.1%	85.6%	5.1%	0.5%	**22.8%**	**$3.10**
SD	TODD	9,997	7.1%	47.3%	13.4%	4.5%	0.2%	**22.7%**	**$2.94**
CA	COLUSA	21,001	18.3%	15.7%	43.2%	50.8%	1.1%	**22.4%**	**$3.31**
MS	WALTHALL	15,304	11.3%	23.2%	53.3%	1.5%	45.3%	**22.3%**	**$2.95**
OR	CROOK	22,473	17.9%	13.6%	75.9%	15.4%	2.4%	**22.2%**	**$3.48**
CA	LAKE	64,756	15.6%	18.8%	89.2%	7.3%	0.1%	**22.2%**	**$3.01**
TN	PICKETT	4,803	15.2%	22.0%	98.4%	1.4%	0.1%	**22.0%**	**$3.05**
TX	HALL	3,455	8.5%	28.1%	46.5%	0.2%	52.4%	**21.9%**	**$2.96**
MS	JASPER	17,944	10.6%	21.7%	57.6%	31.4%	7.9%	**21.9%**	**$2.95**
AR	LAFAYETTE	7,715	8.9%	21.2%	60.8%	0.9%	37.7%	**21.8%**	**$2.94**
TN	MEIGS	11,747	14.5%	23.3%	96.1%	1.5%	1.6%	**21.7%**	**$3.07**
GA	QUITMAN	2,647	11.2%	18.8%	53.7%	1.8%	44.5%	**21.7%**	**$2.93**
TN	DECATUR	11,472	13.3%	25.8%	91.6%	3.4%	2.6%	**21.6%**	**$3.00**
TN	BLEDSOE	12,941	14.2%	22.9%	80.4%	2.7%	14.6%	**21.5%**	**$3.22**
AL	CLAY	13,769	15.3%	17.7%	93.1%	1.5%	4.1%	**21.5%**	**$3.08**
MS	CARROLL	10,301	11.0%	23.3%	63.9%	0.8%	34.2%	**21.5%**	**$2.94**
GA	GREENE	15,629	10.8%	21.4%	56.5%	3.7%	38.9%	**21.4%**	**$2.92**
	Unweighted Averages		14.0%	27.0%	55.4%	3.9%	35.9%	**25.1%**	**$3.02**

Implications

The goals of the Map the Meal Gap project have been focused on equipping communities 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. The findings presented here document the food insecurity variation across communities.

Though we reviewed this variation in light of income, poverty and racial and ethnic composition of communities, we encourage others to examine how county-level food insecurity data can be paired with other indicators, such as health data, housing cost pressures and other measures of economic status.

Understanding income distribution among the food insecure can inform discussions about what programs and strategies can be leveraged on behalf of those struggling with hunger. The Map the Meal Gap analysis also provides a way to talk about the food budget shortfall that food insecure individuals report and to show how food costs can vary across communities. 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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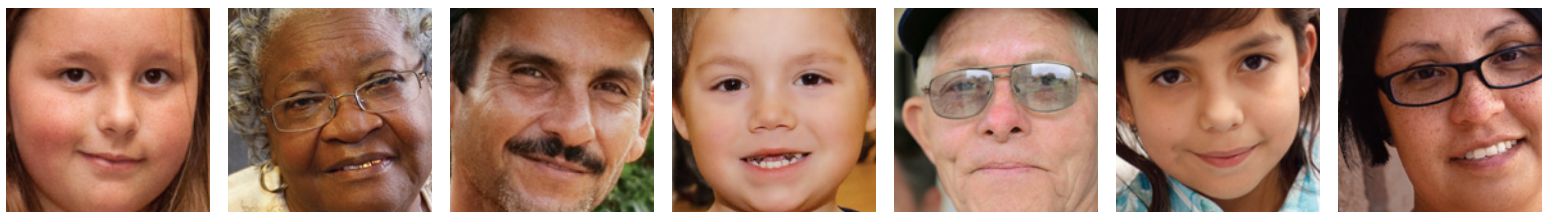Amy Satoh

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