

Acknowledgments

The project team would like to extend their thanks to the many stakeholder interviewees who have participated in this project, all of whom are listed in Appendix B of this report. We would especially like to thank the organizations who agreed to be profiled in these case studies, and shared information, time, and images to enrich this report. Finally, we would like to thank Feeding America for making their Map the Meal Gap datasets freely and publicly available; this data underpins much of the quantitative analysis provided in this report.

Prepared under Contract CO-20164-20 for:



KK&P

Founded as Karp Resources in 1990, Karen Karp & Partners (KK&P) is the nation's leading problem-solver for food-related enterprises, programs, and policies. Our personalized approach is designed to meet the unique challenges facing our clients. We apply a combination of analytic, strategic, and tactical approaches to every problem and deliver solutions that can be measured and are always meaningful.

Our Good Food Is Good Business division supports the healthy development, execution, and operations of food businesses and initiatives in the public and private sectors. Our services include strategic sourcing, feasibility analysis, market research, business planning, project management, and evaluation. Our Good People Are Good Business division builds leadership and organizational effectiveness in the food sector through talent and performance management, organizational assessment, capacity building, executive coaching, recruiting, and employee engagement services.

KK&P's clients include corporations, government agencies, small businesses, nonprofits, and educational organizations. For over 30 years, KK&P has spearheaded and has been integral to the development and execution of food businesses, policies, and partnerships.

Project Team

KK&P

Ben Kerrick, Managing Partner
Clare Bramhall, Analyst
Brian De Corte, Associate
Matthew Lichty, Associate Consultant
Erin Hostetler, Researcher
Gabo Halili, Designer
Kerol Kaskaviqi, Assistant Designer

Appalachian Regional Commission

Logan Thomas, Economist, Research & Evaluation

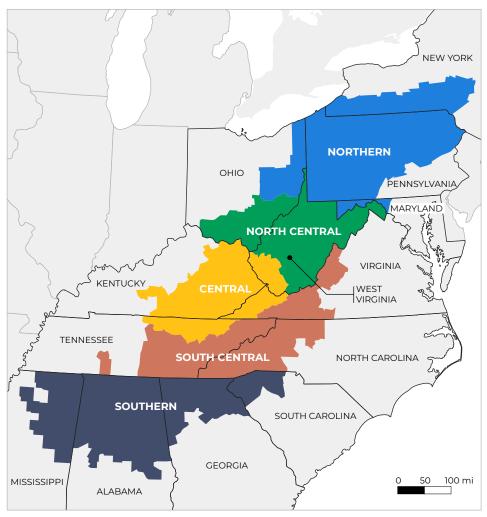
Kostas Skordas, Director, Research & Evaluation

Table of Contents

1. Executive Summary	7
Introduction	8
Food Insecurity in the Appalachian Region	8
Responses to Food Insecurity	9
2. Introduction to Food Insecurity	11
What is food insecurity?	12
Relationship Between Food Security and the Economy	16
Dynamics of Food Insecurity	19
3. Current Trends & Dynamics in Appalachian Food Insecurity	26
Introduction	27
Food Insecurity in Appalachia	28
Food Insecurity Among Children	33
SNAP Benefits & Poverty	34
SNAP Benefits & Demographics	36
SNAP Utilization and Food Insecurity	39
Food Access	41
4. Responding to Food Insecurity: Initiatives and Innovations in	
Appalachia	42
Introduction	43
The Bethlehem Center & Chattanooga Area Food Bank	45
Western North Carolina Food Justice Planning Initiative	51
Cowan Community Action Group & CANE Kitchen	55
Mountaineer Food Bank & Community Food Bank of Central Alabama	59

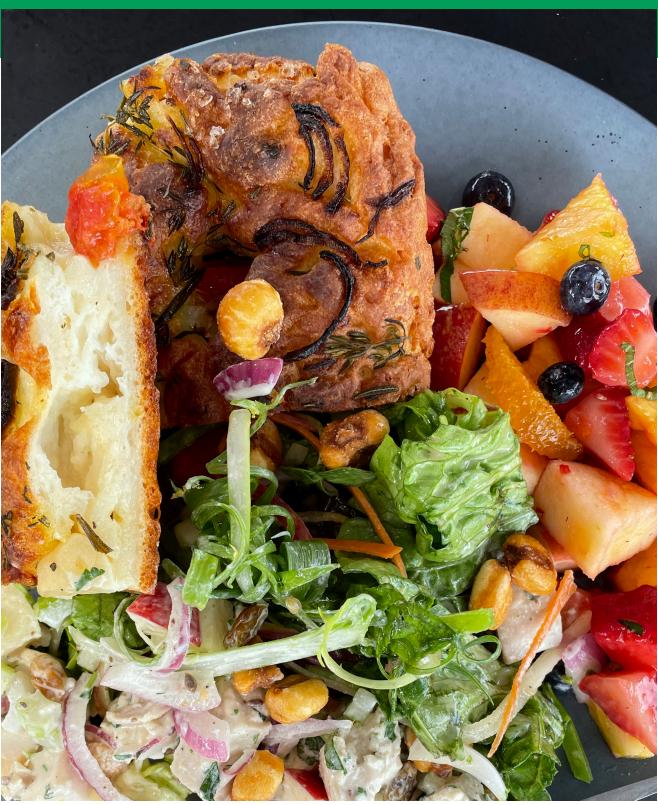
	412 Food Rescue	66
	Greater Good Grocery	70
	The Gus Schumacher Nutrition Incentive Program (GusNIP)	75
	Rural Action: Farm to Institution	80
5.	Appendices	86
	Appendix A: Data Sources	86
	Appendix B: Interviewees	88
	Appendix C: Databook	90
	Appendix D: State Profiles	102

THE APPALACHIAN REGION AND ITS SUBREGIONS



An interactive county-level map of ARC subregions can be accessed at ARC's website: https://www.arc.gov/map/subregions-in-appalachia/

Executive Summary



Credit: Food Justice Planning Initiative

Introduction

Food insecurity—defined as "a household-level economic and social condition of limited or uncertain access to adequate food"—afflicted more than 1 in 10 U.S. households in 2021. Poverty, lack of transportation, inequitable distribution of food access, racism, discrimination, and other systemic issues all contribute to the dynamics of a food system that does not adequately or equitably nourish all who rely on it. Appalachia, as a region with historically high poverty rates and a large rural population, faces distinct challenges with respect to food insecurity and food access.

The negative impacts of food insecurity are not limited to the experience of hunger. At the individual and household level. food insecurity can lead to health risks, higher health costs, difficult financial decisions (such as choosing between food and medical care or utilities), poor dietary quality, and mental health challenges. At the societal level, food insecurity leads to tremendous economic costs, in terms of both healthcare expenses and lost productivity. It is therefore also true that strategies that support food security can have profound benefits at the individual, household, and societal level. Food security is a critical component of economic wellbeing and a healthy workforce, and the benefits of food security ripple throughout the economy. One study estimated that \$1 billion in new SNAP benefits (formerly food stamps) would lead to a \$1.54 billion increase in national GDP. Initiatives that link food security investment to local food systems, such as Double Up™ Food Bucks programs that double SNAP spending power at farmers' markets, can keep those economic benefits closer to home.

This report intends to provide a quantitative assessment of food insecurity dynamics in the Appalachian Region (the Region), primarily through analysis of datasets from Feeding America, the American Community Survey (ACS), and the U.S. Department of Agriculture (USDA); and to highlight innovative and effective responses to food insecurity across the Region. Commissioned by the Appalachian Regional Commission (ARC) as part of its mission to build community capacity and strengthen economic growth in Appalachia, this report highlights the realities, risks, and opportunities related to food insecurity in the Region.

Food Insecurity in the Appalachian Region

The report's six thematic findings, which are described in more detail in the body of the report, are summarized below.

Although food insecurity in Appalachia declined from 2010 to 2020, its decline was slower than for the U.S. as a whole, with especially persistent food insecurity in Central Appalachia.

Appalachia was home to an estimated 3.4 million food insecure residents in 2020, or 13% of its population, a higher rate than the national average of 11.5%. Central Appalachia has the highest rates of food insecurity among Appalachian subregions. And while food insecurity rates declined both nationally and for Appalachia from 2010 to 2020, those declines were less pronounced in Appalachia.

While childhood food insecurity fell substantially from 2010 to 2020, one in six Appalachian children remain food insecure. The childhood food insecurity rate in Appalachia was 16.4% in 2020—slightly lower than the U.S. rate of 16.8%. Central Appalachia had particularly high childhood food insecurity at 21.2%, or more than one in five children. While childhood food insecurity in the Region declined from 2010 to 2020, those declines were most pronounced in the Southern and South Central subregions, with all other subregions seeing declines that lagged the U.S. overall.

The Appalachian Region has a higher rate of household SNAP participation than the U.S. as a whole.

Nearly 1.4 million Appalachian households—more than one in eight—rely on SNAP benefits, a higher rate of participation than for the U.S. as a whole. Higher SNAP participation rates among poor households in particular suggest that the Region overall may be more effective at enrolling eligible households when compared to the U.S. overall.

Household SNAP utilization varies substantially among demographic groups.

Households with children, persons with disabilities, and some racial/ethnic groups rely on SNAP benefits at higher rates when compared to the general population. Even among families with employed family members, more than one in nine families rely on SNAP benefits.

Although the Appalachian Region has a higher estimated SNAP utilization rate than the U.S. as a whole, the Region nevertheless likely has meaningful potential for expanded SNAP uptake, especially in the South Central and Southern subregions.

Variations in SNAP participation rates among likely-eligible populations can be revealed by evaluating the ratio of SNAP-enrolled households to the food insecure population. While the Region performs better than the U.S. by this metric, it nevertheless has substantial room for growth, with the two southernmost subregions in particular having low SNAP-uptake rates among its food insecure population.

While food access measures indicate that the Region has slightly better food access than the U.S. as a whole, about one in seven Appalachian residents are considered low income with low access to a large food store.

Southern and South Central Appalachia, however, have low-income low-access rates higher than the U.S. average. In the Region as a whole, there are 18.5 SNAP retailers for every 1,000 SNAP-enrolled households, compared to 18.1 for the U.S. overall.

Responses to Food Insecurity

This report also offers case studies of a range of innovative responses to food insecurity from across the Appalachian Region. Each case study summarizes the context, rationale, and key elements of the initiative, while also providing relevant takeaways and lessons learned to inform stakeholders in other regions who may want to replicate or adapt these approaches.

Initiatives profiled include:

• The Chattanooga Food Equity Project, which aims to identify and address the root causes of hunger in Chattanooga.



Credit: Food Justice Planning Initiative

- The Western North Carolina Food
 Justice Planning Initiative, a multiorganizational collaboration working to
 advance food justice and food security
 in Appalachia.
- Cowan Community Action Group & The CANE Kitchen's Summer Food Service Program, which in 2020 purchased over \$30,000 of food from local farmers in Letcher County, Kentucky.
- Mountaineer Food Bank in West Virginia and Community Food Bank of Central Alabama, two food banks that serve rural populations through innovative mobile pantry programs.
- 412 Food Rescue, a Pittsburgh-based volunteer-driven program that has rescued and redistributed 21 million pounds of food.
- Greater Good Grocery, a non-profit grocery store in Binghamton, New York.
- A selection of initiatives funded by the Gus Schumacher Nutrition Incentive Program (GusNIP), including examples in West Virginia and Kentucky.

 Rural Action's Farm to Institution program, which helps institutions leverage food purchasing to strengthen the local food economy and improve community food access in Appalachian Ohio.

This report is intended to be a resource for stakeholders and communities across the Appalachian Region—to help better understand the dynamics of food insecurity in Appalachia, and to inform and inspire creative and tactical responses to it. Food insecurity is a persistent challenge that affects everyone, even those who do not experience it directly. Robust and forceful responses to food insecurity, from both government and non-governmental actors, are required in order to realize the vision of a food system that effectively and fully nourishes all.

Introduction to Food Insecurity



Credit: Greater Good Grocery

What is food insecurity?

Defining food insecurity

Millions of Americans experience food insecurity each year. Food insecurity occurs when a person "lacks access to enough food for an active and healthy life." The U.S. Department of Agriculture (USDA) defines food insecurity as "a household-level economic and social condition of limited or uncertain access to adequate food."² Additionally, food security practitioners and experts highlight the importance of cultural relevancy or appropriateness—foods that are familiar or hold significance for a particular culture or subcultural group—as an important dimension of food security and health.3 For example, the Food and Agriculture Organization of the United Nations (FAO) hosted the 1996 World Food Summit and adopted a definition of food security that included the importance of meeting individuals' food preferences.4

In 2021, over 1 in 10 U.S. households experienced food insecurity at some time during the year, with nearly 4% of U.S. households experiencing a period of very low food security.5 The experience of food insecurity for a household may vary widely in terms of frequency, duration, and severity.⁶ In one five-year study, researchers found that about half of households

Degrees of food security as defined by the USDA

The USDA presents the following labels to define ranges or severity of food security. The frequency of incidences described in the definitions is in reference to the one-year study period utilized by the Current Population Survey—the source of national and state-level statistics used in the USDA's annual household food security reports.

- High food security: No reported indications of food-access problems or limitations.¹
- Marginal food security: One or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.2
- Low food security: Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.3
- Very low food security: Reports of multiple indications of disrupted eating patterns and reduced food intake.4

reporting a period of food insecurity only experienced food insecurity once during the time frame of the study.7 While this suggests food insecurity is relatively infrequent for many households, it also means many more households experience food insecurity than is likely to be recorded in any given year.8

Causes of food insecurity

Many factors contribute to food insecurity within any given population. Systemic issues such as poverty, lack of affordable housing, transportation barriers, disability, racism, and discrimination can all be underlying contributors to a household's experience of food insecurity. Many Americans are impacted by a combination

Overview. USDA ERS - Food Security in the U.S. (n.d.). Retrieved August 8, 2022, from https://www.ers.usda.gov/topics/food-nutrition-assistance/food-

USDA ERS. (n.d.). Definitions of Food Security. Retrieved August 8, 2022, from https://www.ers.usda.gov/topics/food-nutrition-as definitions-of-food-security/ 3 Harper, K., Lewis, E., & Gittelsohn, J. (2020). Exploring accessibility of culturally

relevant foods in a low-income neighborhood in Baltimore City. Current

Developments in Nutrition, 4(Supplement_2), 525-525.;

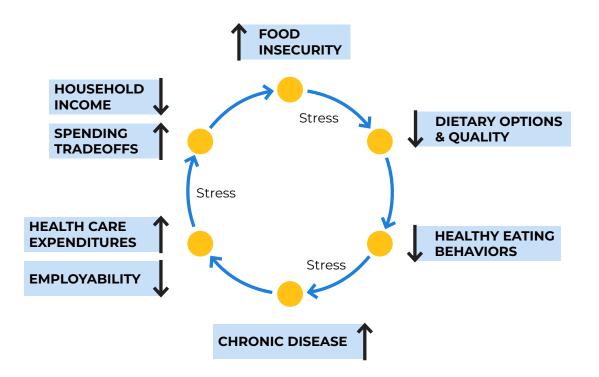
4 Bates, L., & Leopold Center for Sustainable Agriculture. (2017). Latino groceries in the rural Midwest: An examination of food security, cultural identity, and economics. Leopold Cent. Complet. Grant Rep, 529.

⁵ Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2022). Household food security in the United States in 2021. Amber Waves: The Economics of Food, Farming, Natural Resources, and Rural America, 2022 (Economic Research Report Number (ERR-309)).

⁶ Nord, M. (2013, June 3). Food insecurity in U.S. households rarely persists over many years. Retrieved August 8, 2022, from https://www.ers.usda.gov/amberwaves/2013/june/food-insecurity-in-us-households-rarely-persists-over-many-

USDA ERS. (n.d.). Definitions of Food Security.

FOOD INSECURITY: A SELF-REINFORCING CYCLE



Adapted from Seligman, H. K., & Schillinger, D. (2010). Hunger and socioeconomic disparities in chronic disease. New England Journal of Medicine, 363(1), 6-9. and Feeding America. (2022, May 5). Understand Food Insecurity. Hunger and Health. Retrieved August 8, 2022, from https://hungerandhealth.feedingamerica.org/understand-food-insecurity/

of these systemic pressures, many of which can both be a cause and a symptom of food insecurity. For example, living with limited financial resources can decrease the ability of a household to afford food. leading to household food insecurity. At the same time, the very experience of food insecurity for an individual may be a barrier to secure and steady employment, which further reduces a household's ability to afford food. Other conditions that can result from food insecurity include developmental delays in children, lower educational attainment, decreased productivity at work, and chronic disease. each of which are barriers in their own right to achieving and maintaining gainful employment, household financial stability, and food security.9 Further discussion on

the connection between food security and the economy can be found in Section 1.2. See the figure below for a visualization of how chronic disease and food insecurity can be self-perpetuating and self-reinforcing conditions.¹⁰

The effects of food insecurity

\$52.9 billion
-Estimated healthcare
costs associated with
food insecurity in 2016

Food insecurity has far-reaching implications at the individual and household levels. The effects

of food insecurity range from disruption of normal eating patterns to making difficult financial decisions between purchasing food or covering other household expenses such as medical care, utilities,

⁹ Blue Cross Blue Shield. (2017, January 12). Healthy Communities mean a better economy. Retrieved August 8, 2022, from https://www.bcbs.com/the-health-of-america/articles/healthy-communities-mean-better-economy

¹⁰ Gregory, C. A., & Coleman-Jensen, A. (2017). Food insecurity, chronic disease, and health among working-age adults (No. 1477-2017-3689).

Navigating the challenges of food insecurity

According to Hunger in America 2014, many households who use charitable food programs must make difficult choices to meet their basic needs. Specifically, households served by the Feeding America network reported choosing between:1

- Food and medical care (66%)
- Food and utilities (69%)
- Food and housing (57%)

Often, households must use coping strategies to meet their food needs, including:2

- Receiving help from friends (53%)
- Watering down food or drinks (40%)
- Purchasing inexpensive, unhealthy food
- Selling or pawning personal property (35%)
- Growing food in a garden (23%)

1 Feeding America. (2022, May 5). Causes and consequences of food insecurity. Understand Food Insecurity. Retrieved August 8, 2022, from https://hungerandhealth.feedingamerica.org/understand-foodinsecurity/hunger-health-101/ 2 Ibid.

transportation, and housing." Disrupted eating patterns can also cause hunger the physical discomfort resulting from prolonged and involuntary lack of food.¹² In many cases, food insecure households are forced to make decisions between healthier, often more expensive food, and fast food, which is often less expensive but can lead to diet-related chronic diseases. Common chronic health conditions associated with food insecurity include hypertension, heart disease, hepatitis, stroke, cancer, asthma, diabetes, arthritis, pulmonary disease, and kidney disease.¹³

In the short term, food insecure individuals experience higher health care costs

Food insecure adults incur annual healthcare expenses over \$1,800 more than food secure adults.

in the form of more frequent hospital visits and greater prescription drug use due to poor dietary quality.14 Annual healthcare costs for adults experiencing food insecurity averaged over \$1,800 more than for adults who were food secure in 2016.15 Over the long term, food insecure individuals may lose educational and professional development opportunities and experience chronic disease due to undernutrition.¹⁶ Furthermore, food insecurity can make chronic disease management more difficult and can increase psychological conditions, including stress and depressive symptoms.¹⁷ At the societal level, in 2016, approximately \$52.9 billion in healthcare costs were associated with food insecurity among American adults and children.¹⁸

Food security interventions

In the U.S., various sectors have responded to the issue of food insecurity with a range of interventions at various scales from federal to hyperlocal. The federal government administers 15 food and nutrition assistance programs through the

¹¹ Feeding America Research. (2019, July 17). The Healthcare Costs of Food Insecurity. Retrieved August 8, 2022, from https://public.tableau.com/app/ profile/feeding.america.research/viz/TheHealthcareCostsofFoodInsecurity,

HealthcareCosts
USDA ERS. (n.d.). Definitions of Food Security.

Gregory, C. A., & Coleman-Jensen, A. (2017). Food insecurity, chronic disease, and health among working-age adults

Hayes, T. O. N., & Gillian, S. (2020). Chronic disease in the United States: A worsening health and economic crisis. In American Action Forum (pp. 1-12). Feeding America Research. (2019, July 17). The Healthcare Costs of Food Insecurity

¹⁶ Feeding America. (2022, May 5). Causes and consequences of food insecurity. 17 Berkowitz, S. A., Basu, S., Gundersen, C., & Seligman, H. K. (2019). State-Level and County-Level Estimates of Health Care Costs Associated with Food Insecurity. Preventing chronic disease, 16.

Feeding America Research. (2019, July 17). The Healthcare Costs of Food Insecurity

FY 2021 USDA BUDGET DIVIDED BY SPENDING AREAS

\$269.4 Billion

Total USDA Spending in 2021

⊢\$67.4 Billion**⊢**

\$202 Billion-

USDA Food and Nutrition Service (FNS) Spending in 2021



Source: United States Department of Agriculture (2022). FY 2023 Budget Summary. Retrieved November 1, 2022, from https://www.usda.gov/sites/default/files/decuments/2023-usda-budget-summary.pdf

USDA.¹⁹ These programs, which vary by size, benefit type, and target population, amount to about two-thirds of the USDA's annual budget. The Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps) is the largest federal nutrition assistance program, with over 41 million people participating each month and a \$113.8 billion budget in 2021.²⁰ Federal nutrition assistance spending reached a historic high of \$212 billion in fiscal year 2021 in

response to the COVID-19 pandemic, over 50% greater than in fiscal year 2020.²¹ The increase in spending was primarily driven by increases in SNAP and the launch of the Pandemic Electronic Benefit Transfer (P-EBT) program, which offered food benefits to households with children eligible for free school lunches.²²

State and local governments also offer food security interventions. For example,

²¹ Ibid.

United States Department of Agriculture (2022). FY 2023 Budget Summary. Retrieved November 1, 2022, from https://www.usda.gov/sites/default/files/documents/2023-usda-budget-summary.pdf
22 | Ibid

¹⁹ Jones, J. W., Toossi, S., & Hodges, L. (2022). The Food and Nutrition Assistance Landscape: Fiscal Year 2021 Annual Report.

New York and Pennsylvania each operate programs (Nourish New York and the Pennsylvania Agricultural Surplus System) that connect agricultural surplus to emergency food provider networks, while New York City's Emergency Food Assistance Program (EFAP) provides food and funding allocations to emergency food relief organizations, such as soup kitchens and food pantries.

The charitable food sector includes institutions like food banks, food pantries. soup kitchens, and feeding programs that provide food at no cost to community members in need. For example, the Feeding America network includes 200 food banks and 60,000 food pantries and programs operating in communities across the nation. Notably, the charitable food sector can be an important source of food for those who are experiencing food insecurity but are ineligible for federal programs.

Relationship Between Food Security and the Economy

A critical component of economic well-being and a healthy workforce ecosystem

A strong economy requires a healthy and productive workforce both for workingage adults and for the workforce of the future.²³ Healthier workers are more likely to show up to work, be more engaged and effective in their roles, and engage in professional development such as education and skills training.²⁴ Food insecure employees can experience "presenteeism," or lost productivity, an

issue that occurs when employees are present but not fully functioning in the workplace because of an illness, injury, or other condition.²⁵ Furthermore, household food insecurity can reduce employee productivity when children don't have enough to eat. Child hunger is linked to child sick days, which can lead to parent employee lost workdays and high turnover in the workplace.²⁶

Childhood food insecurity weakens the workforce of the future through negative health outcomes and impacted development.²⁷ Childhood food insecurity is associated with lower educational attainment, reduced economic mobility. and negative health outcomes.²⁸ Studies examining adult health have found that those who do not graduate high school are at higher risk for chronic disease, more likely to be disabled, and have a shorter life expectancy overall. Food insecurity therefore translates into diminished human capital, or the full potential of our nation's youth.²⁹

Food insecurity initiatives that support economic development

Initiatives that combat food insecurity can have cascading benefits throughout the economy. For example, SNAP, the largest federal nutrition assistance program, has wide-ranging economic benefits across the economy. One USDA Economic Research Service (ERS) study found that \$1 billion in new SNAP benefits would lead to an increase of \$1.54 billion in GDP. demonstrating a multiplier effect from

²³ Williams, J. (2021, November 30). Healthy Workforce, healthy economy. Retrieved August 8, 2022, from https://www.newyorkfed.org/newsevents/

Blue Cross Blue Shield. (2017, January 12). Healthy Communities mean a

²⁵ Hickson, M., Ettinger de Cuba, S., Weiss, I., Donofrio, G., & Cook, J. (2013). Feeding Our Human Capital: Food Insecurity and Tomorrow's Workforce. Children's Healthwatch.

²⁶ Cook, J. T., & Jeng, K. (2009). Child food insecurity: The economic impact on our nation: A report on research on the impact of food insecurity and hunger on child health, growth and development. Feeding America

²⁷ Hickson, M., Ettinger de Cuba, S., Weiss, I., Donofrio, G., & Cook, J. (2013). Feeding Our Human Capital.

Who is eligible for SNAP benefits?1

The Supplemental Nutrition Assistance Program (SNAP) is a federal program that is restricted to low-income households across the U.S. Both eligibility rules and benefit levels are generally uniform across the country with some variation state by state. Under federal rules, the following criteria must be met to qualify for SNAP:

- Gross Monthly Income Household income must be at or below 130% of the federal poverty level (FPL) before any deductions are applied
- Net Income Household income must be at or below the FPL, after deductions are applied
- Assets Assets must fall below certain limits.
 Limits are higher for households with seniors or family member(s) living with a disability

In addition, SNAP benefits are limited to three months for most people, unless the individual is:

 Below 18, above 49, living with a disability, working at least 20 hours per week, or participating in a qualifying workfare or job training program

Who receives SNAP benefits? 2

In 2021, SNAP benefits were utilized by over 12% of the U.S. population each month.

Average monthly participation – 41.5 million individuals.

Nearly 90% of SNAP participants live in households with children, seniors, or an individual living with a disability.

- 66% live in families with children.
- Almost 36% live in families with seniors or a family member living with a disability.³

How much is the average monthly SNAP benefit?⁴

The average monthly SNAP benefit for a participating household is based on an expectation that families spend 30% of their net income on food. Families with no net income receive the highest monthly benefits and families with net income receive benefits based on the difference between the maximum SNAP benefit for the household size and the household's expected contribution of 30% of its net income.

Average monthly benefit per participant in recent years:

- FY 2019 \$129.83
- FY 2020 \$154.86
- FY 2021 \$217.61
- FY 2023 Projection \$186⁵

FY 2023 Projected Benefits by Household Size

Household Size	Maximum Monthly Benefit	Average Monthly Benefit
1	\$281	\$197
4	\$939	\$718

¹ Center on Budget and Policy Priorities. (2022, June 9). Policy Basic: The Supplemental Nutrition Assistance Program (SNAP). Retrieved November 1, 2022, from https://www.cbpp.org/research/food-assistance/the-supplemental-nutrition-assistance-program-snap#::ctext=On%20average%2C%20SNAP%20participants%20received.benefits%20in%20fiscal%20year%202021.

² Ibid.

³ Ibia.

⁴ Center on Budget and Policy Priorities. (2022, October 4). A Quick Guide to SNAP Eligibility and Benefits. Retrieved November 1, 2022, from <a href="https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-bad-bag-fitted-f

⁵ Center on Budget and Policy Priorities. (2022, October 4). A Quick Guide to SNAP Eligibility and Benefits. Retrieved November 1, 2022, from https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits# [ftn1]

\$1 billion in additional SNAP benefits would lead to a \$1.54 billion increase in GDP.

food assistance spending.³⁰ The economic multiplier effect results from indirect support to the industries that support agriculture including transportation and marketing of food. Food assistance benefits also increase the purchasing power of low-income households (SNAP is restricted to low-income households who earn less than 185% of the federal poverty level), causing immediate household food spending increases that circulate through the economy and lead to job creation and increased economic activity. In addition to SNAP, food and nutrition assistance programs that involve direct procurement by the federal government the Commodity Supplemental Food Program, Food Distribution Program on Indian Reservations, The Emergency Food Assistance Program, and USDA Foods in Schools Program—create institutional markets for U.S. producers to sell goods, contributing to the national economy.³¹

Furthermore, food assistance programs function as an economic stabilizer during economic downturns when employment and wages fall. Food assistance benefits increase the purchasing power of those impacted and generate income for those involved in producing, transporting, and marketing the food purchased by food

assistance benefit recipients.³² Due to this multiplier effect, one study found that a 10% reduction in the size of SNAP would cause more than 96,000 job losses.³³ Beyond SNAP, the same economic principles apply to other food assistance programs that similarly create economic growth and stability.

Shifting food assistance program spending to locally or regionally produced foods can create economic benefits concentrated at the local level. The theory of revenue circulation posits that when local farmers have more money to spend, a portion of this money will be spent at other local businesses used to increase hiring and other forms of investment in their businesses.³⁴ A 2018 study from the journal Renewable Agriculture and Food Systems found a positive, though modest, economic impact at the state level correlated with a hypothetical shift of SNAP food purchases toward local foods.35 Awareness of the economic benefits of local food procurement has led to a series of public and private investments into programs that attempt to leverage nutrition assistance-oriented food procurement spending to support local food economies. Increasingly, local food retailers, including farmers' markets are accepting SNAP benefits from their customers. The USDA Food and Nutrition Service (FNS) listed 3,210 SNAP-authorized farmers' markets in the U.S. as of September 2022.³⁶ Programs such as Double Up™ Food Bucks

³⁰ Canning, P., & Mentzer Morrison, R. (2019). Quantifying the Impact of SNAP Benefits on the U.S. Economy and Jobs. Retrieved August 8, 2022, from https://www.ers.usda.gov/amber-waves/2019/july/quantifying-the-impact-of-snap-benefits-on-the-u-s-economy-and-jobs/
31 USDA Food and Nutrition Service. (2021, August 23). Commodity

³¹ USDA Food and Nutrition Service. (2021, August 23). Commodity Supplemental Food Program: Vendor. Retrieved October 7, 2022, from https://www.fns.usda.gov/csfp/vendor

³² Canning, P., & Mentzer Morrison, R. (2019). Quantifying the Impact of SNAP Benefits on the U.S. Economy and Jobs.

Thompson, J., & Garrett-Peltier, H. (2012). The economic consequences of cutting the Supplemental Nutrition Assistance Program. Political Economy Research Institute, University of Massachusetts at Amherst.
 Karen Karp & Partners. (2022). Agriculture and Local Food Economies in the

³⁴ Karen Karp & Partners. (2022). Agriculture and Local Food Economies in the Appalachian Region. Appalachian Regional Commission. https://www.arc.gov/wp-content/uploads/2022/04/Agriculture-and-Local-Food-Economies-in-the-Appalachian-Region-April-2022.pdf
35 ARC-FS-212: Can a shift in the purchase of local foods by Supplemental

³⁵ ARC-FS-212: Can a shift in the purchase of local foods by Supplemental Nutrition Assistance Program (SNAP) recipients impact the local economy?
36 USDA Food and Nutrition Service. (n.d.). Farmers' markets accepting SNAP benefits. Food and Nutrition Service U.S. Department of Agriculture. Retrieved October 11, 2022, from https://www.fns.usda.gov/snap/farmers-markets-accepting-snap-benefits

How the USDA defines "local food"

A food product that is raised, produced, aggregated, stored, processed, and distributed in the locality or region in which the final product is marketed.¹

1 Tropp, D. (2016). Why local food matters: views from the national landscape. USDA, AMS, Washington, DC, January, 19.

partner with local markets to increase the purchasing power of SNAP users to incentivize local food purchases. Fruit and vegetable prescription (VeggieRx) programs allow medical care providers to write healthy food prescriptions for patients who are currently experiencing, or are at high risk for chronic illness. Many VeggieRx programs, such as the Produce Prescription Program of South Central New York, provide patients with vouchers that can be used at local food retailers.³⁷ Individual states including New York and Pennsylvania offer programs that provide funding for emergency food providers to purchase excess agricultural products from farms within their respective states.

Dynamics of Food Insecurity

Background

In the U.S., food insecurity conversations have historically focused on geographic access to food, or distance from one's residence to the nearest grocery store, to explain food insecurity; this framing has often led to an emphasis on the concept of "food deserts," or areas with limited access to healthy and affordable food. In more recent years, studies have challenged the centrality of geographic access to food security and demonstrated an increased

importance on economic access or affordability of food. Recent studies have shown that most individuals forgo the closest food store to patronize a preferred grocery store farther away, sometimes closer to one's workplace.³⁸ These studies have helped shift the consensus among experts toward economic access as the primary dimension of food security, given that food shopping behaviors vary widely.

Over the past two decades, the annual food insecurity rate among U.S. households has fluctuated between the current low of 10.2% and its 2011 peak of 14.9% in the aftermath of the Great Recession.³⁹ Most recently, the Covid-19 pandemic caused shockwaves across the food system and changed the food security outlook for millions of Americans. Initially, food insecurity increased markedly as many individuals lost their jobs, food prices increased, and school closures disrupted critical programs like the National School Lunch Program (NSLP) and School Breakfast Program (SBP), which combine to serve meals to over 30 million children daily.⁴⁰ The dramatic increase in food insecurity during the initial days of the Covid-19 pandemic highlights the large number of Americans who are usually food secure but are highly vulnerable to food insecurity in times of crisis. In emergency response to the pandemic, the USDA expanded existing programs and implemented new temporary programs to increase national food assistance and increase coverage for Americans. While the economy

³⁷ Food and Health Network of South Central New York. (2022, June 2). Fruit and vegetable prescription program: Food and Health Network. Produce Prescription Program of South Central NY. Retrieved October 11, 2022, from https://foodandhealthnetwork.org/south-central-ny-fruit-vegetable-prescription-program/.

³⁸ George, C., & Tomer, A. (2022, March 9). Beyond 'Food Deserts': America needs a new approach to mapping food insecurity. Brookings. Retrieved November 1, 2022, from https://www.brookings.edu/research/beyond-food-deserts-america-

needs-a-new-approach-to-mapping-food-insecurity/
39 Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2022).
Household food security in the United States in 2021. Amber Waves: The
Economic of Food, Farming, Natural Resources, and Rural America,
2022 (Economic Pessarch Report Number (EDP-309))

²⁰²²⁽Economic Research Report Number (ERR-309)).
40 USDA Food and Nutrition Service. (2022, February 4). Building back better with school meals. Retrieved November 1, 2022, from https://www.fns.usda.gov/building-back-better-school-meals.

rebounded significantly by 2022, inflation and rising food costs remain a barrier for lower-income Americans to meet their dietary needs.⁴¹ Contemporary events, including the Covid-19 pandemic, have brought hunger and food insecurity into the forefront of American public policy conversations, leading to the first White House Conference on Food, Nutrition, and Health since 1969.⁴² The conference was held on September 28, 2022, and convened elected officials, advocates and activists, and leaders of the business, faith, and philanthropy communities to highlight the current nutrition and health challenges facing America. At the conference, President Biden advocated for an extension of the child tax credit. increased minimum wage, and expanded nutrition assistance programs as primary strategies for decreasing hunger and diet-related disease.⁴³ The White House simultaneously released their National Strategy on Hunger, Nutrition, and Health, which is intended to serve as a playbook to achieve the Biden-Harris administration's goal to "end hunger in America and increase healthy eating and physical activity by 2030 so fewer Americans experience diet-related diseases."44

Introduction to demographic dynamics

Food insecurity is not evenly distributed across the U.S. population. Below, we describe the interactions between various demographics and food insecurity in America. Many individuals may self-identify across one or more of these

demographic areas, which highlights the complex interactions between identity and food security. While the following demographic categories are not comprehensive, these sections illustrate how systemic factors make it more or less likely for an individual or household to experience food insecurity.

Intersection with poverty

In 2021, **32%** of households with incomes below the FPL experienced food insecurity



Source: Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2022). Household food security in the United States in 2021. Amber Waves: The Economics of Food, Farming, Natural Resources, and Rural America, 2022

Food insecurity and poverty are closely related, although not everyone living in poverty is food insecure and not everyone living above the poverty line is considered food secure. 45 Over onethird of U.S. households with incomes below the federal poverty level (FPL) were food insecure in 2020, while lowincome households (incomes below 185% FPL) constitute just over half of all food insecure households, demonstrating the close connection between poverty and food insecurity in the U.S.⁴⁶ Poverty and food insecurity rates are also strongly correlated across geographies. For example, counties with the highest rates of food insecurity tend to have higher rates of unemployment, lower home ownership, and lower median incomes compared to the U.S. as a whole.⁴⁷ Households with low incomes must choose between food

⁴¹ Wamsley, L. (2021, November 9). Rising food prices have resulted in both food insecurity and improvisation. Retrieved November 1, 2022, from https://www.npr.org/2021/11/09/1054032209/rising-food-prices-have-resulted-in-both-food-insecurity-and-improvisation

⁴² U.S. White House. (n.d.). White House Conference on Hunger, Nutrition, and Health. Retrieved November 1, 2022, from https://health.gov/our-work/nutrition-physical-activity/white-house-conference-hunger-nutrition-and-health.

43 Bustillo, X. (2022, September 28). Key takeaways from Biden's conference on hunger and nutrition in America. NPR. Retrieved January 25, 2023, from https://www.npr.org/2022/09/28/1125575122/biden-hunger-america-conference)

44 White House. (2022). Biden-Harris Administration National Strategy on Hunger, Nutrition, and Health.

⁴⁵ Feeding America. (2022, May 5). Causes and consequences of food insecurity 46 Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020. USDA-ERS Economic Research Report, (298).

⁴⁷ Gunderson, C. et al., (2020) Map the Meal Gap 2020. Feeding America. Retrieved from https://www.feedingamerica.org/sites/default/files/2020-06/Map%20the%20Meal%20Gap%202020%20Combined%20Modules.pdf

and other household essentials or may lack the financial means to purchase food. Federal nutrition assistance programs, including SNAP, are important interventions to combat food insecurity among low-income households in the U.S. As mentioned previously, the major federal programs require that households have low incomes (below 185% FPL) in order to be eligible to receive food assistance benefits

Childhood food insecurity

In 2020. 17% of children lived in food insecure households



Sources: Hake, M., Engelhard, E., & Dewey, A. (2022). Map the Meal Gap 2022: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2020. Feeding America. Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020. USDA-ERS Economic Research Report, (298).

Food insecurity is much more prevalent in households with children compared to the national average for all households.⁴⁸ Similarly, the rate of food insecurity among children is also higher than the average rate of food insecurity for all age groups in the U.S. More than 15% of children (11 million) lived in food insecure households in 2018.49 Rates of food insecurity for children are unevenly distributed by geography with rates varying from as low as 2% to as high as 44% in some counties.⁵⁰ Food insecurity among children leads to increased rates of sickness and hospitalization, developmental impairments, social and behavioral challenges, and decreased academic

achievement.51 Adolescents and young adults who experienced developmental obstacles are also more likely to struggle to graduate high school and acquire additional education.52 Childhood food insecurity is also a risk factor for chronic diseases in adults. Federal programs that specifically target nutrition assistance to children include Women, Infants, and Children (WIC), which serves 3.5 million young children monthly. At school, the NSLP serves about 30 million children daily and the SBP serves nearly 15 million children each day.⁵³

Food insecurity in seniors

In 2020, **6.8%** of seniors experienced food insecurity



Source: Vollinger, E., & Jones, L. M. (2022, June 29). Hunger among older adults. Retrieved November 1, 2022, from https://frac.org/hunger-poverty-america/senior-

Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020. USDA-ERS Economic Research Report, (298).

Food insecurity is prevalent in households with seniors (age 60+) in the U.S., with individuals age 60-69 having the highest rate of food insecurity amongst all seniors.54 Of all food insecure households, over 20% were households that included elderly adults.⁵⁵ In total, nearly 7% of the 76 million seniors living in America are food insecure, with nearly 3% of seniors experiencing very low food security.56 Seniors are less likely to work full-time and

⁴⁸ Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020.

Gunderson, C. et al., (2020) Map the Meal Gap 2020.

Hickson, M., Ettinger de Cuba, S., Weiss, I., Donofrio, G., & Cook, J. (2013). Feeding Our Human Capital

Ibid.

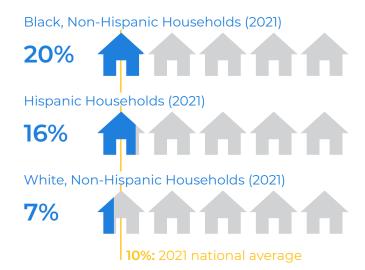
⁵³ FitzSimons, C. (2022, February 15). The reach of breakfast and lunch: A look at pandemic and pre-pandemic participation. Retrieved November 1, 2022, from

https://frac.org/blog/the-reach-of-breakfast-and-lunch-report.
54 Ziliak, J. P. and Gundersen, C. G. (2022). The State of Senior Hunger in 2020. Feeding America. Retrieved November 1, 2022, from https://www.feedingamerica. org/sites/default/files/2022-05/The%20State%20of%20Senior%20Hunger%20in%20

Ibid. 56 Ibid.

more likely to have limitations on daily living, which increase the likelihood they will experience food insecurity. Those living below the FPL are the most likely group of seniors to experience food insecurity.⁵⁷ Beyond major federal programs like SNAP, which benefits over 5 million households with at least one older adult,⁵⁸ nonprofit organizations such as Meals on Wheels help overcome transportation and financial barriers to food access for 2.4 million seniors in communities across the U.S. each year.⁵⁹

Food insecurity by race and ethnicity



American Indian/Alaskan Native Population (2020)



Sources: Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2022). Household food security in the United States in 2021. Amber Waves: The Economics of Food, Farming, Natural Resources, and Rural America, 2022(Economic Research Report Number (ERR-309)); Hake, M., Engelhard, E., & Dewey, A. (2022). Map the Meal Gap 2022: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2020. Feeding America.

The relationship between race, ethnicity, and food security is complex and interconnected with other social and economic factors that determine food security. For populations that have experienced concentrated social and economic disadvantage, and/ or discrimination, food insecurity rates are often higher. For example, policies that have led to economic disadvantage among people of color have inherently increased food insecurity within households of color compared to white households. In 2020, rates of food insecurity were higher in Black, non-Hispanic, and Hispanic households compared to the national average.⁶⁰

⁵⁷ Ibid

⁵⁸ Vollinger, E., & Jones, L. M. (2022, June 29). Hunger among older adults. Retrieved November 1, 2022, from <a href="https://frac.org/hunger-poverty-america/senior-bunger-poverty-ameri

⁵⁹ Meals on Wheels America. (n.d.). What we deliver. Retrieved November 1, 2022, from https://www.mealsonwheelsamerica.org/learn-more/what-wedeliver#:~text=DELIVERING%205O%20MUCH%20MORE%20THAN%20JUST%20A%20MEAL&text=What%20started%20as%20a%20compassionate.every%20community%20in%20the%20country.

⁶⁰ Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020.

In addition, one study estimated that the American Indian/Alaska Native population was food insecure at twice the rate compared to white Americans between 2000 and 2010.61 SNAP and other federal nutrition assistance programs are the primary food assistance support to low-income households across race and ethnicity categories. Charitable emergency food assistance programs provide a particularly important lifeline to Hispanic families because they are significantly less likely than white and Black families to access SNAP. For every ten white families receiving SNAP, there are only about seven Hispanic families of a similar socioeconomic profile using this resource.62

Food insecurity and gender

In 2020, **28%** of households with children headed by a **single woman** experienced food insecurity...



while only 16% of households with children headed by a **single man** experienced food insecurity



Source: Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020. USDA-ERS Economic Research Report, (298).

The relationship between food insecurity and gender in the U.S. is complex and related to household income and the presence of children in a household. Households with children headed by a

single woman experience food insecurity at a higher rate (27.7%) than those headed by a single man (16.3%)⁶³ with both categories experiencing food insecurity at a higher rate than the national average (10.2%). Plausible explanations for single mothers experiencing food insecurity at higher rates are tied to gender-based economic disparities, including the wage gap (women earn only 80 cents for every dollar a man earns)64 and inadequate paid leave policies. About 80% of single-parent households with children in the U.S. are headed by a single mother, and over 26% of these families live below the poverty line, compared to about 15% of single father households. Beyond SNAP, the WIC program is a federal nutrition assistance program available to low-income women who are pregnant or have recently given birth.

Food insecurity and LGBTQ individuals

In 2014, **27%** of LGBTQ individuals experienced food insecurity



Source: Coleman-Jensen, A., Rabbit, M., Gregory, C., & Singh, A. (2015). Food Security in the United States in 2014. Amber Waves: The Economics of Food, Farming, Natural Resources, and Rural America, 2015(Economic Research Report Number (ERR-1941))

Lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals are more likely to experience food insecurity than non-LGBTQ adults. One study found that more than 25% of LGBTQ adults (approximately 2.2 million people) experienced food insecurity at some time in the last year,

⁶¹ Odoms-Young, A. M. (2018). Examining the impact of structural racism on food insecurity: implications for addressing racial/ethnic disparities. Family & community health, 41 (Suppl 2 Food Insecurity and Obesity), S3.
62 Feeding America (2010). When the Pantry is Bare: Emergency Food Assistance and Hispanic Children. Retrieved November 1, 2022, from https://www.feedingamerica.org/sites/default/files/research/latino-hunger-exec-summ.pdf

Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020.
 Shrider, E. A., Kollar, M., Chen, F., & Semega, J. (2021). Income and poverty in

⁶⁴ Shrider, E. A., Kollar, M., Chen, F., & Semega, J. (2021). Income and poverty in the United States: 2020. US Census Bureau, Current Population Reports, (P60-273).

compared to 17% of non-LGBTO adults.65 Food insecurity rates in the LGBTQ population are also closely linked to other social and economic factors and are not distributed evenly across the community. The LGBTQ population as a whole experiences poverty at higher rates than the non-LGBTQ population. LGBTQ individuals are also less likely to receive supplemental food assistance from family or charitable institutions such as food banks and pantries. LGBTO youth and young adults may not have the same family support networks as non-LGBTQ people due to stigma, and older LGBTO adults are less likely to have children and broader family support networks. Many charitable food programs (e.g., pantries and soup kitchens) are operated by religious institutions where LGBTQ people may not feel welcome.⁶⁶ SNAP is the nutrition assistance support most commonly utilized by LGBTQ individuals. A recent Center for American Progress survey found that 22% of LGBTQ individuals participated in SNAP in 2017, a far greater rate than the non-LGBTQ population at less than 10%.67

Food insecurity and disability status

During 2009–2010, **33%** of households with an adult unable to work due to disability experienced food insecurity



Source: Coleman-Jensen, A., & Nord, M. (2013, May 6). Disability is an important risk factor for food insecurity. Retrieved November 1, 2022, from https://www.ersusda.gov/amber-waves/2013/may/disability-is-an-important-risk-factor-for-food-insecurity/

Living with a disability is a risk factor for food insecurity in America due to, on average, higher household expenses as well as reduced earnings.⁶⁸ One third of U.S. households with an adult who was unable to work due to disability experienced food insecurity in 2009-2010. Furthermore, nearly 40% of households with very low food security included an adult with a disability.⁶⁹ Geographies with high food insecurity rates are correlated with high rates of disability. For example, in counties with the highest rates of food insecurity (top 10%), rates of disability are much more prevalent than the national average (18% compared to 13%).70 Living with a disability can increase healthcare costs and simultaneously make it harder to find and retain work, which can increase the likelihood of financial hardship.⁷¹ In many cases, food insecurity can be a contributor to disability, including chronic disease which creates a reinforcing cycle between food insecurity and disability.⁷²

⁶⁵ Brown, T., Romero, A., and Gates. G. (2016). Food Insecurity and SNAP Participation in the LGBT Community. Williams Institute. Retrieved November 1, 2022, from https://williamsinstitute.law.ucla.edu/publications/lgbt-food-insecurity-snap/

⁶⁶ Wilson, B., Lee Badgett, M., and Gomez. A.G. (2020). "Were Still Hungry" Lived Experiences and Food Insecurity and Food Programs Among LGBTQ People. Williams Institute. Retrieved November 1, 2022, from https://williamsinstitute.law.ucla.edu/wp-content/uploads/LGBTQ-Food-Bank-Jun-2020.pdf

⁶⁷ Rooney, C., Whittington, C. and Durso, L. (2018). Protecting Basic Living Standards for LGBTQ People. Center for American Progress. Retrieved November 1, 2022, from https://cdn.americanprogress.org/content/uploads/2018/08/10095627/LGBT-BenefitCuts-report.pdf? ga=2.237496899.2140593264.1614185216-1838510457.1614185216

⁶⁸ Feeding America. (2020). Health, Disability and Food Insecurity. Retrieved November 1, 2022, from https://www.feedingamerica.org/sites/default/files/2020-06/Map%20the%20Meal%20Gap%202020%20Health_Disability_and%20Food%20Insecurity%20Module.pdf

⁶⁹ Coleman-Jensen, A., & Nord, M. (2013, May 6). Disability is an important risk factor for food insecurity. Retrieved November 1, 2022, from https://www.ers.usda.gov/amber-waves/2013/may/disability-is-an-important-risk-factor-for-food-insecurity/

⁷⁰ Feeding America. (2020). Health, Disability and Food Insecurity 71 Coleman-Jensen, A., & Nord, M. (2013, May 6). Disability is an important risk factor for food insecurity. 72 Ibid.

Food insecurity among veterans

During 2015-2019, 11% of workingage veterans lived in food insecure households



Source: Rabbitt, M., and Smith, M. (2021) Food Insecurity Among Working-Age Veterans. USDA Economic Research Service. Retrieved November 1, 2022, from https://www.ers.usda.gov/webdocs/publications/101269/err-829.pdf?v=581.9

Veterans also experience food insecurity at a rate higher than the national average. Veteran status is associated with a 7% increase in the likelihood of living in a household with food insecurity and a 9% increase in the likelihood of living in a household with very low food security.73 One possible explanation is that veterans have an increased risk of living with a work-limiting disability compared to nonveterans, which is correlated with lower household incomes.74 Additionally. veterans are less likely to participate in food assistance programs (e.g., SNAP usage is lower among veterans.).75 Beyond the major federal nutrition assistance programs, the U.S. Department of Veterans Affairs (VA) Nutrition and Food Services and USDA FNS are working together to refer food insecure individuals to support services and provide education. The VA also launched the Veterans Pantry Pilot (VPP) program in 2017 to provide food assistance to veterans at VA Medical Centers.

Geography and food access: urban and rural dynamics

In 2020, 10% of urban residents experienced food insecurity...



11%: 2020 national average

while **12%** of rural residents experienced food insecurity



Source: Vollinger, E., & Jones, L. M. (2021, September 8). Rural hunger. Retrieved November 2, 2022, from <a href="https://frac.org/hunger-poverty-america/rural-hunger-coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020. USDA-ERS Economic Research Report, (298).

Across urban, suburban, and rural residential classifications, individuals strugale with food insecurity. Food insecurity rates in the U.S. are highest in rural areas (11.6%) and metropolitan areas (10.4%), with the lowest rates in suburbs. exurbs, and other metro areas outside principal cities (8.8%).76 Both poverty and health outcomes are worse, on average, in rural areas compared to urban settings.⁷⁷ Rural counties make up 63% of all U.S. counties but 87% of counties with the highest rates of food insecurity. Nevertheless, counties with large populations and comparatively low rates of food insecurity are home to some of the largest absolute numbers of food insecure people.78

⁷³ Rabbitt, M., and Smith, M. (2021) Food Insecurity Among Working-Age Veterans. USDA Economic Research Service. Retrieved November 1, 2022, from https://www.ers.usda.gov/webdocs/publications/101269/err-829.pdf?v=581.9
74 Ibid.

⁷⁴ Ibid. 75 Ibid.

⁷⁶ Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020.

⁷⁷ Food Research and Action Center (2018) Rural Hunger in America: Get the Facts. Retrieved November 1, 2022, from https://frac.org/wp-content/uploads/rural-hunger-in-america-get-the-facts.pdf

⁷⁸ Coleman-Jensen, A., Rabbitt, M., Gregory, C., & Singh, A. (2021). Household food security in the United States in 2020.

Current Trends & Dynamics in Appalachian Food Insecurity



Credit: Food Justice Planning Initiative

Introduction

The following food insecurity findings examine data, primarily from Feeding America and the American Community Survey, from 2010 to 2020. The most recent county-level data available from these sources is from 2020, given the time needed to collect, analyze, and release the data. Therefore, the following analysis helps to illustrate the trends of food insecurity across the U.S. in 2020 and the preceding decade, but given the limitations in data availability, unfortunately excludes the profound impacts of the COVID-19 pandemic. However, more recent national-level data sources can give us an indication of directional dynamics in food insecurity in the U.S. in the years since 2020.

During the pandemic, national trends related to food insecurity included an increase in the number of adults and children experiencing food insecurity, an increase in the number of people utilizing SNAP, and unprecedented levels of federal funding to address food insecurity. According to the National Bureau of Economic Research, at the onset of COVID-19, food insecurity rates for households with children almost tripled compared to pre-pandemic rates, soaring from 13% to 34% in April of 2020. In addition, the overall rate of food insecurity rose to 23%, which was double the prepandemic level. In 2021, the number of SNAP participants was up 5.8 million from 2019, for a total of 41.5 million people.²

To address the heightened food insecurity during the pandemic, the

federal government increased funding significantly. Most notably, the federal government funded a 15% increase in SNAP benefits and eliminated incomebased tiered benefit levels, providing participants the maximum benefit level for their household size.³ In addition, a Pandemic-EBT (P-EBT) program was developed to help cover the cost of meals for children who no longer had access to school meals due to school closures.⁴

As the pandemic has receded, however, so have the elevated benefits for food insecure Americans. According to the Center on Budget and Policy Priorities, the average SNAP user's benefits will decrease by \$90, while some participants will see a reduction of closer to \$250 a month.5 The reduction of benefits amid soaring food prices and high inflation has had a tremendous impact on households experiencing food insecurity. In fact, the USDA's recent report on household food insecurity (released October 2023) found that in 2022, 17 million households were food insecure, a statistically significant increase from 13.5 million in 2021. The rate of food insecurity among households with children also rose from 2.3 million in 2021 to 3.3 million in 2022.6

¹ Bitler, M. P., Hoynes, H. W., & Schanzenbach, D. W. (2020). The Social Safety Net in the Wake of COVID-19. Brookings Papers on Economic Activity, 119–145. https://www.jstor.org/stable/26996638

² Cheyne, A. & Vollinger, E. (2022). New Data Underscore Importance of SNAP Benefit Redemptions During COVID-19. FRAC. https://frac.org/blog/new-data-snap-benefit-redemptions

³ USDA Food and Nutrition Service. (2021). SNAP Benefits - COVID-19 Pandemic and Beyond. USDA FNS. https://www.fns.usda.gov/snap/benefit-changes-2021

⁵ Rosenbaum, D.,Bergh, K., & Hall, L.(2023). Temporary Pandemic SNAP Benefits Will End in Remaining 35 States in March 2023. Center on Budget and Policy Priorities. https://www.cbpp.org/research/food-assistance/temporary-pandemic-snap-benefits-will-end-in-remaining-35-states-in-march

⁶ Rabbitt, M.P., Hales, L.J., Burke, M.P., & Coleman-Jensen, A. (2023). Household Food Security in the United States in 2022. U.S. Department of Agriculture, Economic Research Service, Report No. ERR-325. https://www.ers.usda.gov/publications/pub-details/?publid=107702

Food Insecurity in Appalachia

Although food insecurity in Appalachia declined from 2010 to 2020, its decline was slower than for the U.S. as a whole, with especially persistent food insecurity in Central Appalachia.

According to estimates by Feeding America, nearly 3.4 million residents of the Appalachian Region were food insecure in 2020, meaning that they lacked access, at times, to enough food for an active, healthy lifestyle. The Region's overall food insecurity rate was 13% — more than one out of every eight residents, and higher than the U.S. rate of 11.5%.

Within the Region, while Southern Appalachia has the highest number of food insecure people (1.0 million), Central Appalachia has the highest concentration, with a food insecurity rate of 17.5%. All Appalachian subregions have food insecurity rates that exceed the U.S. average.

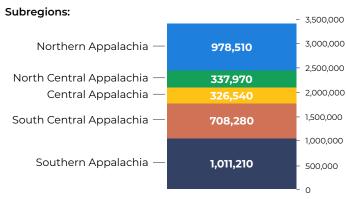
The Region's small metro counties are home to over 40% of the Region's food insecure residents (1.4 million), while rural counties have the highest rate of food insecurity, at 16.2%. Only large metro counties have a food insecurity rate that is lower than the U.S. average.

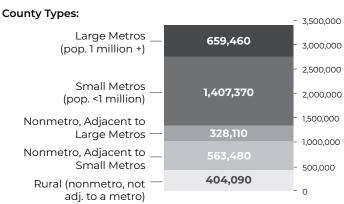
The Appalachian portions of Alabama, Kentucky, Maryland, Mississippi, North Carolina, Ohio, Tennessee, and Virginia all have food insecurity rates that exceed the Region's average.

FOOD INSECURE POPULATION, 2020

3,362,510

Food Insecure Population in the Appalachian Region

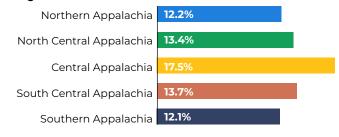




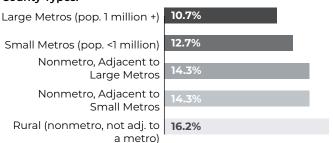
FOOD INSECURITY RATE, 2020

11.5% 13.0%
United States Appalachian Region

Subregions:



County Types:



TOP 25 COUNTIES WITH HIGHEST FOOD INSECURITY, 2020: U.S.

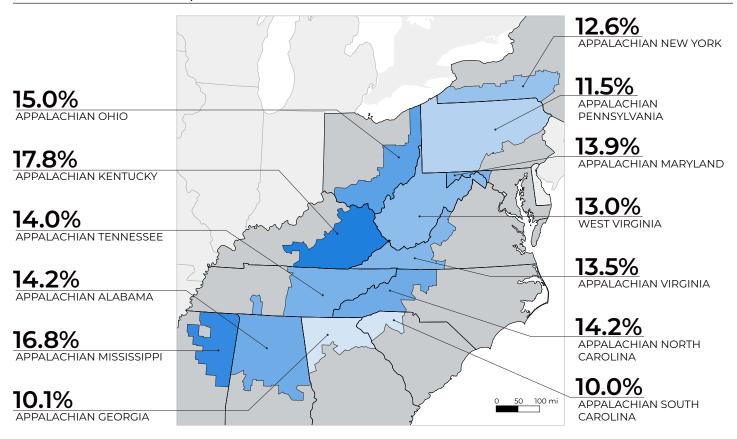
Entries in **bold** are counties within the Appalachian Region.

County	State	Appalachian Subregion	Rate
Presidio County	Texas		28.7%
Holmes County	Mississippi		27.6%
Kusilvak Census Area	Alaska		26.8%
Todd County	South Dakota		26.4%
East Carroll Parish	Louisiana		25.9%
Wolfe County	Kentucky	Central Appalachia	25.9%
Oglala Lakota County	South Dakota		25.8%
Harlan County	Kentucky	Central Appalachia	25.4%
Humphreys County	Mississippi		25.4%
Magoffin County	Kentucky	Central Appalachia	25.1%
Breathitt County	Kentucky	Central Appalachia	24.5%
Loving County	Texas		24.3%
Brooks County	Texas		23.9%
Starr County	Texas		23.6%
Clay County	Kentucky	Central Appalachia	23.5%
Coahoma County	Mississippi		23.3%
King County	Texas		23.2%
Dimmit County	Texas		23.1%
Issaquena County	Mississippi		23.1%
San Augustine County	Texas		23.0%
Tunica County	Mississippi		23.0%
Washington County	Mississippi		22.9%
Leslie County	Kentucky	Central Appalachia	22.9%
Perry County	Alabama		22.9%
Zavala County	Texas		22.8%

TOP 20 COUNTIES WITH HIGHEST FOOD INSECURITY, 2020: APPALACHIAN REGION

County	State	Subregion	Rate
Wolfe County	Kentucky	Central Appalachia	25.9%
Harlan County	Kentucky	Central Appalachia	25.4%
Magoffin County	Kentucky	Central Appalachia	25.1%
Breathitt County	Kentucky	Central Appalachia	24.5%
Clay County	Kentucky	Central Appalachia	23.5%
Leslie County	Kentucky	Central Appalachia	22.9%
Letcher County	Kentucky	Central Appalachia	22.6%
Mingo County	West Virginia	Central Appalachia	22.5%
Knott County	Kentucky	Central Appalachia	22.2%
McDowell County	West Virginia	Central Appalachia	22.0%
Bell County	Kentucky	Central Appalachia	21.9%
Jackson County	Kentucky	Central Appalachia	21.9%
Lee County	Kentucky	Central Appalachia	21.8%
Hancock County	Tennessee	Central Appalachia	21.7%
Owsley County	Kentucky	Central Appalachia	21.7%
Elliott County	Kentucky	Central Appalachia	20.8%
Floyd County	Kentucky	Central Appalachia	20.8%
Knox County	Kentucky	Central Appalachia	20.6%
Clay County	West Virginia	North Central Appalachia	20.6%
Noxubee County	Mississippi	Southern Appalachia	20.5%

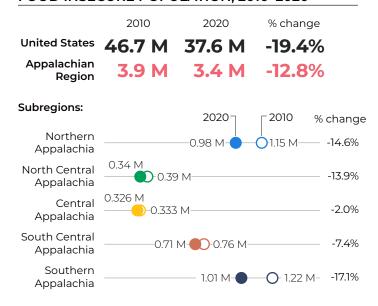
FOOD INSECURITY RATES, 2020: APPALACHIAN PORTIONS OF STATES



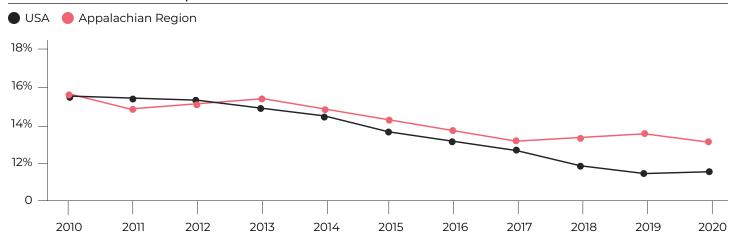
Of the 25 U.S. counties with the highest food insecurity rates (ranging from 22.8% to 28.7%), six are in Appalachia, all in Kentucky. Of the Region's 20 counties with the highest food insecurity rates, all are in the Central subregion except for one county in North Central Appalachia and one county in Southern Appalachia. None of the 100 U.S. counties with the lowest food insecurity rates are located in Appalachia.

From the post-recession highs of 2010 to the beginning of Covid in 2020, the U.S. as a whole saw a steady decline in food insecurity, in terms of both total numbers of food insecure people, which dropped by nearly 20% from 46.7 million to 37.6 million, and the food insecurity rate itself, which dropped from 15.3% to 11.5%. While the Appalachian Region also saw declines in food insecurity over the same

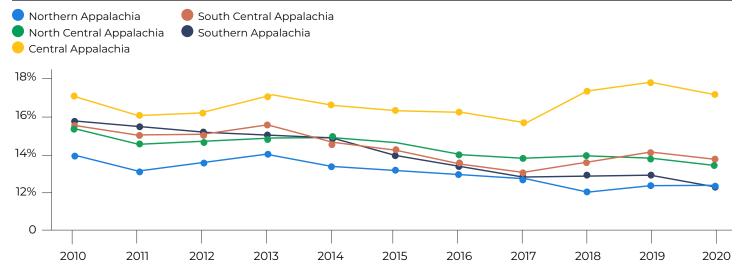
FOOD INSECURE POPULATION, 2010-2020



FOOD INSECURITY RATES, 2010-2020: APPALACHIA AND US

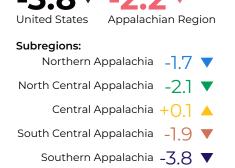


FOOD INSECURITY RATES, 2010-2020: APPALACHIAN SUBREGIONS



period, its declines were not as substantial. The Central Appalachia subregion had especially persistent food insecurity rates over this 10-year period; in fact, its 2020 food insecurity rate is slightly higher than its 2010 rate, whereas all other Appalachian subregions saw declines.

PERCENTAGE POINT CHANGE IN FOOD INSECURITY RATE, 2010–2020





Food Insecurity Among Children

While childhood food insecurity fell substantially from 2010 to 2020, one in six Appalachian children remain food insecure.

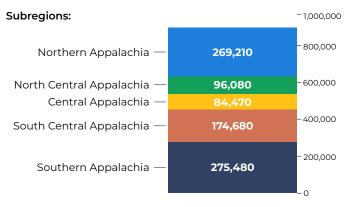
Nearly one in six Appalachian children, or about 900,000, experience food insecurity. While the Southern and Northern subregions have the highest numbers (both exceeding a quarter of a million food insecure children), Central Appalachia has the highest childhood food insecurity rate of 21.2%, or more than 1 in 5. When compared to the overall food insecurity rate, children are more likely than the general population to be food insecure.

The Appalachian Region saw substantial declines in its childhood food insecurity rates from 2010 to 2020, cutting its number of food insecure children by a third, and reducing its childhood food insecurity rate by 7.6 percentage points—a steeper decline than seen for the U.S. as a whole. The Region's decline was driven by significant reductions in the South Central and Southern subregions; the other three subregions saw reductions of less than five percentage points, smaller declines than for the U.S. as a whole.

FOOD INSECURE CHILDREN, 2020

899,920

Food Insecure Children in the Appalachian Region



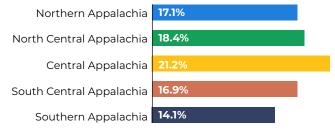
PERCENTAGE OF CHILDREN THAT ARE FOOD INSECURE, 2020

16.8% United States

16.4%

Appalachian Region

Subregions:



PERCENTAGE POINT CHANGE IN CHILDHOOD FOOD INSECURITY RATE, 2010–2020

-5.5 ▼

-7.6 ▼

United States Appalachian Region

Subregions:

Northern Appalachia -4.3

North Central Appalachia -4.6 ▼

Central Appalachia −4.6 ▼

South Central Appalachia -8.5 ▼

Southern Appalachia -11.3 ▼

SNAP Benefits & Poverty

The Appalachian Region has a higher rate of household SNAP participation than the U.S. as a whole.

SNAP participation rates among poor households suggest that the Region overall does a better job than the U.S. at enrolling eligible households, but that the South Central and Southern subregions could enroll more of their low-income residents to maximize benefit uptake.

Nearly 1.4 million Appalachian households received SNAP benefits annually, according to ACS 2016-2020 estimates. This amounts to 13.3% of all households, a higher SNAP enrollment rate than the U.S. rate of 11.4%. SNAP enrollment rates can be somewhat challenging to interpret as they are driven by complex dynamics. For example, high SNAP enrollment can be an indicator of high poverty and high food insecurity (in other words, where SNAP eligibility is high), while it can also be driven by successful efforts to enroll all eligible people. Analysis of SNAP enrollment by poverty level and the ratio of food insecure people to SNAP enrollment numbers (on the following pages) reveal some of these dynamics with greater nuance.

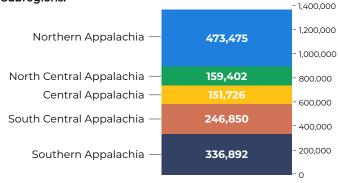
Household SNAP enrollment varies substantially across subregions and county type. More than one in five households in Central Appalachia receive SNAP benefits,

HOUSEHOLDS RECEIVING SNAP, 2016-2020

1,368,345

Appalachian households receiving SNAP benefits

Subregions:

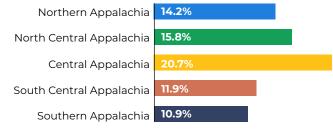


PERCENTAGE OF HOUSEHOLDS RECEIVING SNAP, 2016–2020

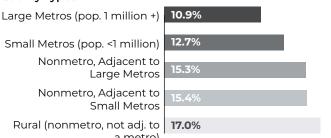
11.4% United States **13.3**%

Appalachian Region

Subregions:



County Types:



while about half that number receive SNAP benefits in Southern Appalachia. The Region's large metro counties have the lowest household SNAP enrollment rate (10.9%), while its rural counties have the highest rate, at 17%.



Credit: Rural Action

Since most households with income below the federal poverty level are likely to be eligible for SNAP benefits, the percentage of those households that actually receive SNAP is an indicator of the extent to which eligible populations are getting access to their benefits. For example, low SNAP enrollment among poor households might suggest that local outreach efforts to educate and enroll eligible families are not achieving their potential, or that the enrollment process is prohibitively complicated or time-consuming.

About 47% of poor households in Appalachia were enrolled in SNAP during the 2016–2020 period, a higher rate of participation than for the U.S. (41.6%). Northern, North Central, and Central Appalachia all had participation rates above 50%, while South Central and Southern Appalachia had much lower participation rates, indicating that more effective outreach and enrollment efforts in those subregions may be needed to maximize SNAP enrollment.

PERCENT OF HOUSEHOLDS IN POVERTY USING SNAP, 2016–2020

41.6%

46.9%

Appalachian Region

Subregions:

Northern Appalachia	51.0%
North Central Appalachia	53.3%
Central Appalachia	55.4%
South Central Appalachia	42.3%
Southern Appalachia	40.2%

County Types:

Large Metros (pop. 1 million +)	43.0%
Small Metros (pop. <1 million)	45.7%
Nonmetro, Adjacent to Large Metros	50.2%
Nonmetro, Adjacent to Small Metros	50.4%
Rural (nonmetro, not adj. to	49.4%

SNAP Benefits & Demographics

Household SNAP utilization varies substantially among demographic groups. Households with children, persons with disabilities, and some racial/ethnic groups rely on SNAP benefits at higher rates when compared to the general population.

Even among families with employed family members, more than one in nine families rely on SNAP benefits.

As previously discussed, children are more likely than the general population to face food insecurity, and this dynamic is also seen in SNAP utilization among households with children. In the Appalachian Region, more than one in five households with children (21.2%) utilize SNAP benefits, a higher rate than for the U.S. as a whole (18.2%). While Southern Appalachia has a lower rate of SNAP participation among households with children compared to the U.S. as a whole, the North Central and Central subregions have notably higher rates, with nearly a third of Central Appalachian households with children relying on SNAP benefits.

Among households with older adults (age 60 or older), Appalachia has a slightly higher rate of SNAP participation (10.7%) than does the U.S. as a whole (10%). Trends among the subregions follow similar patterns as for other SNAP metrics, with lower participation in the South Central and Southern subregions, and higher participation in Central Appalachia.

PERCENT OF HOUSEHOLDS RECEIVING SNAP BENEFITS, 2016–2020

	One or more children under age 18	One or more people 60 or older	One or more people with disability
United States	18.2%	10.0%	20.7%
Appalachian Region	21.2%	10.7 %	22.8%
Subregions:			
Northern Appalachia	22.1%	11.6%	25.8%
North Central Appalachia	24.9%	12.3%	25.7%
Central Appalachia	30.7%	15.3%	28.5%
South Central Appalachia	21.0%	9.2%	20.2%
Southern Appalachia	17.4%	9.0%	18.3%

PERCENT OF FAMILIES WITH ONE OR MORE WORKERS RECEIVING SNAP, 2016–2020

	Families with one or more workers
United States	10.9%
Appalachian Region	11.6%
Subregions:	
Northern Appalachia	12.0%
North Central Appalachia	13.3%
Central Appalachia	16.8%
South Central Appalachia	11.1%
Southern Appalachia	10.1%

Households with persons with a disability are especially likely to rely on SNAP benefits, and the rate of SNAP participation among those households is higher in Appalachia (22.8%) than for the U.S. at large (20.7%). Among the Northern, North Central, and Central subregions, at least one in four households with a disabled household member utilize SNAP benefits.

PERCENT OF HOUSEHOLDS RECEIVING SNAP BY RACE/ETHNICITY OF HOUSEHOLDER, 2016-2020

	White alone	Black/African American alone	American Indian/ Alaskan Native alone	Asian alone	Native Hawaiian/ Pacific Islander alone	Other race alone	Two or more races alone	Hispanic/ Latino (any race)
United States	7.7%	24.4%	23.3%	7.1%	18.5%	19.7%	16.3%	18.5%
Appalachian Region	11.9%	24.8%	20.4%	6.0%	14.8%	18.3%	20.9%	17.4%
Subregions								
Northern Appalachia	12.5%	36.3%	30.6%	7.6%	10.0%	30.6%	27.2%	30.0%
North Central Appalachia	15.4%	26.3%	34.8%	7.2%	19.8%	17.2%	23.9%	15.3%
Central Appalachia	20.5%	27.5%	34.7%	3.4%	33.9%	17.6%	28.8%	21.8%
South Central Appalachia	10.5%	25.7%	16.2%	5.8%	16.8%	19.0%	19.9%	16.2%
Southern Appalachia	7.9%	21.5%	14.5%	5.1%	12.2%	13.7%	14.6%	12.5%

Employment does not universally safeguard against food insecurity, and many low-wage workers rely on SNAP benefits. Among Appalachian families with one or more workers, more than one in nine utilize SNAP, a higher rate than for the U.S. as a whole. At the subregional level, SNAP enrollment by families with workers ranges from 10.1% (Southern Appalachia) to 16.8% (Central Appalachia).

SNAP utilization rates also vary widely by race/ethnicity of householder, as shown in the table above, consistent with dynamics of inequity and marginalization wherein BIPOC (Black, Indigenous, and people of color) communities face greater barriers to food security. Households with Black householders are most likely to rely on SNAP benefits in both the Appalachian Region and the U.S. as a whole, though in the North Central and Central subregions, households with American Indian householders have the highest SNAP participation rates.



SNAP Utilization and Food Insecurity

Although the Appalachian Region has a higher estimated SNAP utilization rate than the U.S. as a whole, the Region nevertheless likely has meaningful potential for expanded SNAP uptake, especially in the South Central and Southern subregions.

The USDA uses a metric called the SNAP Program Access Index (PAI) to measure how well states perform at reaching and enrolling their SNAP-eligible populations. The PAI first estimates the number of SNAP-eligible people in a state, based on income levels and other factors, and then compares that number to the actual number of SNAP-enrolled people. When a state has a relatively higher PAI, that means more of its eligible residents are receiving the SNAP benefits for which they are eligible. Not only does higher SNAP utilization mitigate against food insecurity at the individual and household levels, but it also has broader economic impacts as those SNAP dollars ripple through the economy.

A lack of readily available county-level data prevents exact replication of the PAI here, but a similar index has been created by calculating a ratio of SNAP-enrolled households to the food insecure (FI) population ("SNAP-FI ratio"). Even though not all food insecure people are eligible for SNAP benefits, the SNAP-FI ratio allows for directional comparisons across geographies.

RATIO OF SNAP HOUSEHOLDENROLLMENT (2016–2020) TO FOOD INSECURE POPULATION (2020)

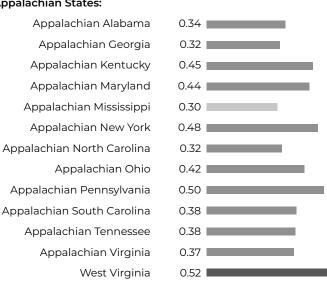
Higher values indicate that a higher proportion of food insecure individuals are accessing SNAP benefits. Lower values indicate that likely SNAP-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization

Appalachian Region

Subregions:

	0 (0	
Northern Appalachia	0.48	
North Central Appalachia	0.47	
Central Appalachia	0.46	
South Central Appalachia	0.35	
Southern Appalachia	0.33	

Appalachian States:



The Appalachian Region has a SNAP-FI ratio of 0.41, higher than the U.S. ratio of 0.37. Nevertheless, the Region likely has substantial room for growth in expanding its SNAP uptake and impact. As a reference benchmark, the state of Rhode Island, which has the highest PAI of all states, has a SNAP-FI ratio of 0.56.

South Central and Southern Appalachia both have SNAP-FI ratios lower than that for the U.S. as a whole, indicating that they likely have especially meaningful potential for expanded SNAP access, and that its food insecure populations are not accessing all the benefits and SNAP dollars for which they are eligible. These trends align with state-level numbers where the SNAP-FI ratios in the Appalachian portions of Alabama, Georgia, Mississippi, and North Carolina are the lowest in the Region. West Virginia and the Appalachian portions of Pennsylvania and New York have the highest SNAP-FI ratios in the Region.

Food Access

While food access measures indicate that the Region has slightly better food access than the U.S. as a whole, about 1 in 7 Appalachian residents are considered low income with low access to a large food store.

The USDA's Food Access Research Atlas measures food access in terms of both income and physical distance to large food stores (supercenters, supermarkets, and large grocery stores). Individuals are counted as **low income** if their annual family income is at or below 200% of the federal poverty line for their family size. The USDA offers a few different measures for low access; here, we use the measure where individuals are considered **low access** if they are living more than a half mile from a large food store in an urban setting, or more than 10 miles from a large food store in a rural setting.

In the Appalachian Region, 14.4% of the population (about one in seven people) is considered low income and low access. a somewhat smaller share than the U.S. rate of 15%. Both South Central and Southern Appalachia have low income and low access rates exceeding the national rate (15.9% and 16.5% respectively), while the share of Central Appalachia's population considered low income and low access is as low as half the national rate. Because Central Appalachia has higher poverty rates relative to the other subregions, its lower share of low income/low access population is likely driven by a greater density or more effective distribution of qualifying food stores.

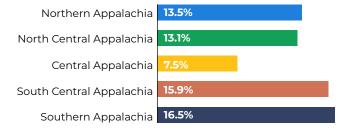
PERCENT OF POPULATION WITH LOW INCOME AND LOW ACCESS, 2019

15.0%

14.4%

Appalachian Region

Subregions:



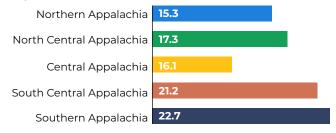
SNAP RETAILERS (2022) PER 1,000 SNAP HOUSEHOLDS (2020)

18.1

18.5

ited States Appalachian Region

Subregions:



Another lens through which to consider access to retail food is the ratio of SNAP retailers (food retailers that accept SNAP/EBT as a form of payment and are registered with the federal government) to households utilizing SNAP benefits. In the Appalachian Region overall, there are 18.5 SNAP retailers for every 1,000 SNAP households, compared to 18.1 for the U.S. as a whole. South Central and Southern Appalachia both have more than 21 SNAP retailers per 1,000 SNAP households, though as has been previously observed, these subregions have low SNAP-FI ratios, suggesting their higher SNAP retailer ratio could be driven more by low SNAP household enrollment than by a prevalence of SNAP retailers.

Responding to Food Insecurity: Initiatives and Innovations in Appalachia



Introduction

The following section profiles several initiatives that respond to the dynamics of food insecurity in Appalachia. These case studies were identified through in-depth interviews with stakeholders across various sectors and industries. Each case study examines a unique approach to addressing food insecurity in the Appalachian Region, including the challenges and key takeaways for advancing food security. The case studies highlight entities of various scales and models that operate across the food value chain, including food banks, social enterprises, non-profit organizations, and more. The organizations and initiatives profiled demonstrate innovative approaches to addressing a range of challenges—some specific to the Appalachian context, others more

broadly common in regions across the United States. Initiatives addressing the nuances of the Appalachian Region include mobile pantries to transport food to more remote and rural areas; innovative sourcing strategies to provide food retail in disinvested urban areas; and harnessing the power of Appalachian communities to build a strong volunteer base to rescue edible food so it does not go to waste. Efforts to address challenges of food insecurity that are more broadly common across the U.S. include institutional procurement to strengthen local food systems and increase resilience; holistic, equity-based programming to address food security more comprehensively and intentionally; and rapid emergency food response during times of crisis. While an acknowledgement of poverty as the root cause of hunger underpinned all strategies, some of the initiatives profiled



 $Credit: The \ Bethlehem \ Center. \ Students \ in \ the \ Urban \ Cultivator's \ course \ plant \ a \ blueberry \ bush \ on \ The \ Beth's \ farm.$

focus more specifically on poverty in their efforts to reduce food insecurity.

Across the interviews and case studies two cross-cutting threads emerged: the continued impact of COVID-19 and the strength of Appalachian culture and pride. Many of the organizations interviewed witnessed an immediate increase in food insecurity in Appalachia resulting from the pandemic. This increase included many individuals and families who were experiencing food insecurity for the first time. In parallel, federal food assistance funding increased markedly to expand SNAP benefits and funding for the charitable food sector. As federal food assistance funding has now receded closer to pre-pandemic levels, organizations are grappling with increased food assistance needs within their communities along with increasing costs.

The strong sense of community pride is a regional asset that helps Appalachian food security organizations meet the needs of their clients. Appalachian culture emphasizes "community" and belongingness, and food security organizations benefit from large numbers of committed volunteers and community partners. Leveraging these dedicated networks is fundamental to supporting food security in Appalachia. In addition, there is a strong agricultural heritage in the Region, along with high literacy regarding food preservation techniques, which stakeholders consider an advantage to improving food security.

These case studies illustrate a diverse range of approaches to addressing food insecurity in Appalachia. While not a comprehensive view, the case studies profiled here demonstrate the myriad and innovative opportunities to advance food security in the Region.

Included Case Studies:

Addressing the Root Causes of Hunger, p.45

- The Bethlehem Center & Chattanooga Area Food Bank
- Western North Carolina
 Food Justice Planning Initiative

Leveraging Networks for Emergency Response, p.55

 Cowan Community Action Group & CANE Kitchen

Mobile Pantries Distributing Food in Underserved Appalachia, p.59

 Mountaineer Food Bank & Community Food Bank of Central Alabama

Supporting Food Security Through Food Rescue, p.66

· 412 Food Rescue

Mission-Driven Food Retail, p.70

· Greater Good Grocery

Federal Funding to Incentivize Healthy Food, p.75

 The Gus Schumacher Nutrition Incentive Program (GusNIP)

Bolstering the Regional Food Economy to Address Food Insecurity, p.80

· Rural Action: Farm to Institution

The Bethlehem Center & Chattanooga Area Food Bank

Chattanooga, Tennessee



Credit: The Bethlehem Center. Joel Tippens of City Farms Grower Coalition talks fall planting with students attending the Urban Cultivator's course at The Beth

The Chattanooga Food Equity Project is a planning effort led by The Bethlehem Center and partner organizations seeking to identify and develop holistic solutions to the root causes of food insecurity in the city.

The Chattanooga Food Equity Project, initiated in 2022, is a collaboration between nonprofit organizations that seeks to identify and develop solutions to the primary food access barriers impacting communities of color in Chattanooga, Tennessee. Funded by the Feeding America Food Security Equity Impact Fund, the project is led by the Bethlehem Center with support from the Chattanooga Area Food Bank (Food

Bank) and City Farms Grower Coalition as primary project implementation partners. Working closely with community members who are experiencing food insecurity, the Chattanooga Food Equity Project seeks to develop community-driven food security solutions through a combination of gardening education and assistance, economic development, emergency services, and increased physical access to food. The project will produce a video that outlines food security dynamics and an action plan to improve food access within the city.

The Bethlehem Center

Founded in 1920, the Bethlehem Center originated through a merger between two woman-led Methodist ministries in Chattanooga that had been serving the community for decades prior. Inspired by

the gospel, the Bethlehem Center serves as a community hub in Chattanooga providing direct services, leadership development, workforce readiness, and youth education programming to the community. The organization strives to serve entire families to support a connected, empowered, and abundant Chattanooga.

Chattanooga Area Food Bank

The Food Bank serves 20 counties in Southeast Tennessee and Northwest Georgia. The organization sources millions of pounds of food from food retailers, manufacturers, farmers, buying alliances, and individual donors for distribution, at significantly reduced or no cost. Food is received at the Food Bank's three regional warehouses and then distributed to community partners such as churches, community centers, and food pantries in the Chattanooga area. With help from thousands of volunteers and donors, the Food Bank distributed over 17 million pounds of food to community partners in 2022.

Feeding America Equity Impact Fund

The Feeding America Food Security Equity Impact Fund (Equity Impact Fund) was established in 2021 to address the root causes of hunger for communities of color across the United States. The fund supports planning or implementation projects for members of the Feeding America network that are collaborating with community-based organizations led by and serving people of color. The Equity Impact Fund specifically attempts to address health and economic disparities in food insecure communities by centering

Key Stats

Grant Details:

- Grant Amount: \$250,000
- Project Duration: August 1, 2022– June 1, 2023

Increased Capacity:

- The Bethlehem Center: Funding for 2.5 new staff members, upgrades to commercial kitchen, community assessment and feedback from African American churches, strengthened relationships with Latino faith-based leaders, increased direct services for community members experiencing food insecurity
- City Farms Grower Coalition: Funding to develop a 12-week gardening course informed by community feedback
- Chattanooga Community Co-op: Funding for business planning and technical assistance for incorporation
- Latino Faith leaders: Funding to develop a strategic business model and professional training to better serve community members experiencing food insecurity
- Chattanooga Area Food Bank:
 Receive 15% of project budget to provide technical assistance and support throughout the project

Survey Response Target:

 100 community members experiencing food insecurity

the voices of community members most impacted by hunger. In 2022, the Equity Impact Fund awarded nearly \$10 million to 25 projects in 22 states and Puerto Rico.

Community-Based Partnerships

The Chattanooga Food Equity Project leverages existing community-based partnerships to increase the scope of the project beyond what a single organization could accomplish.

The Bethlehem Center

- Areas of Expertise: Community networks, direct services
- Project Contributions: Primary project lead

City Farms Growers Coalition

- Areas of Expertise: Urban food production
- Project Contributions: 12-week gardening course for community members interested in producing their own food

Chattanooga Community Co-op

- Areas of Expertise: Community owned and operated food retail so that growers can more easily distribute locally grown food
- Project Contributions: Planning for co-op launch

Chattanooga Area Food Bank

- Areas of Expertise: Charitable food distribution
- Project Contributions: Project support, sourcing food

Chattanooga Food Equity Project

The Chattanooga Food Equity Project takes a multi-faceted, collaborative, and equity-based approach to analyzing food insecurity within the city. The Chattanooga Area Food Bank, a Feeding America member food bank, originally learned of the Equity Impact Fund and presented the funding opportunity to a group of 11 potential community partners. According to the Director of Community Impact at the Food Bank, the Bethlehem Center immediately distinguished themselves as the right fit to lead the project. The Bethlehem Center, led by Executive Director Reginald Smith, designed the food equity planning project to develop food security solutions grounded in the lived experience of community members who experience systemic food access barriers in Chattanooga.

The Chattanooga Food Equity project attempts to understand food security dynamics in Chattanooga through a combination of community engagement, economic development, urban food production, and direct food assistance. The project is divided into four phases of work:

Eat the Word

The Bethlehem Center will partner with a network of Black churches to lead partner assessments and conduct surveys to better understand the primary barriers to food security in Chattanooga.

Chattanooga Community Co-op (CCC)

With a vision to become only the second food cooperative in the state of Tennessee, the CCC was initiated by a steering committee of local community leaders who intend to address food insecurity while strengthening the local economy. The project provides resources to support the CCC to officially incorporate, develop a business plan, and take steps toward an eventual launch, planned for 2025.



Credit: The Bethlehem Center. Marcus Mosely, Building Manager at The Beth, picks up meals for residents of Boynton Towers, a public housing building for the elderly. A collaboration with LAUNCH Kitchen Incubator was formed in 2020 to distribute meals

Urban Food Production Exploration

City Farms Grower Coalition, a nonprofit working to strengthen food security in low-income Chattanooga neighborhoods through experiential gardening education, will receive project funding to support community members who have expressed an interest in household-scale food production. Community members will be offered the opportunity to attend a 12-week urban gardening course and weekly discussion groups with the intention to increase household food production, thereby increasing affordable healthy food access and agency over household food consumption.

Generous Portions

The Bethlehem Center is developing and implementing a food assistance and wraparound services program for community members in need. The program expands upon the existing food pantry, with the intention of initiating a meal delivery program, transportation services to those who lack reliable private or public transportation options, and in-home safety checks for vulnerable households. With the whole person in mind, this program also offers free wellness opportunities such as yoga and walking.

Latino Faith Leader Support

In Chattanooga, pastors serve as the cornerstone for many Latino individuals and families in crisis. With recent growth in the Latino population and an increase in new arrivals in the city, Latino faith leaders have been stretched to capacity as they provide food assistance and wraparound services for those in need. This project is helping to increase support

The 5 A's of Food Security: A New Framework

The project seeks to address food security as defined by the 5 A's of Food Security, a framework developed by the Bethlehem Center in the planning stage of the grant proposal. According to Reginald Smith, the Bethlehem Center believes that in order to address the root causes of food insecurity, the community-based organizations and the Feeding America network must share a holistic understanding of food security. The Bethlehem Center developed the 5 A's Framework, adapted from the public health sector, and presented it to Feeding America to complement their existing food security definition.

Availability: Sufficient food for all people at all times

Adequacy: Access to food that is nutritious and safe, and produced in environmentally sustainable ways

Agency: The policies and processes that enable the achievement of food security

Accessibility: Physical and economic access to food for all at all times

Acceptability: Access to culturally acceptable food, produced and obtained in ways that do not compromise people's dignity, self-respect, or human rights

and professional training for Latino faith leaders who provide essential support for those experiencing food insecurity.

Transportation Planning

Initial community input has highlighted a lack of transportation as a primary barrier to food security in Chattanooga, especially for less densely populated areas. The Chattanooga Food Equity Project will produce a roadmap to support those without reliable access to transportation.

49

Key Takeaways

Addressing the root causes of food insecurity requires a multi-faceted approach centered on equity.

Using the 5 A's of Food Security framework, the Chattanooga Food Equity Project seeks to holistically address food security through community input, gardening assistance, economic development, emergency services, and increased physical access to food. Successful food security collaborations often require partnerships that leverage diverse areas of expertise provided by several partner organizations. Centering equity within food security is required to holistically address barriers for communities experiencing food access barriers.

Planning grants are a unique opportunity for nonprofits seeking to create systems-level change.

Dedicated resources for planning efforts allow for experimentation, testing out new partnerships, and the exploration of new ideas without significant risk. Furthermore, planning projects afford organizations a chance to understand their work within the context of a broader food security ecosystem and time horizons that precede and extend beyond the present moment. In the words of Executive Director Reginald Smith, planning projects allow for organizations to "measure twice and cut once," increasing the chances that an organization's programs are effective.

Planning for the future can require a mindset shift for many grassroots, direct services organizations.

While planning projects rarely provide tangible returns in the short term, they offer the potential for organizations to identify leverage points that can more effectively target the fundamental needs of those they serve. The Bethlehem Center staff cited a notable transition as part of the project to go from "doing" to "planning." Effective planning efforts also require a different skill set than providing direct services.

Planning projects provide opportunities to formalize partnerships between complementary organizations taking different approaches to food security.

Before the Chattanooga Food Equity project, many of the nonprofit leaders in Chattanooga were already familiar with each other. A pre-existing network within the Chattanooga nonprofit sector made it easier for the Food Bank and the Bethlehem Center to connect and launch a more formal partnership. Having worked together on this project, partner organizations are likely to continue partnering beyond the grant period.

Western North Carolina Food Justice Planning Initiative

18 Counties in Western North Carolina



Credit: Western North Carolina Food Justice Planning Initiative

The WNC Food Justice Planning Initiative is a multiorganizational collaboration working to advance food justice and food security in Appalachia.

In 2019, a group of organizations and institutions originating from the Buncombe County Community Health Improvement Plan's (CHIP) Food Security Working Group brought together food system leaders from across western North Carolina to develop a regional food system planning effort called the Western North Carolina Food Justice Planning Initiative (FJPI). The goal for the initiative was to bring together historically siloed organizations, businesses, and agencies leading food justice work in western

North Carolina. In addition, the initiative sought to create a unified approach to achieving a more equitable food system by increasing capacity across the region. Over the last few years, the initiative conducted a series of key informant interviews across stakeholder groups, created a leadership team, developed a set of strategic priorities, and is in the process of developing a non-profit vehicle to continue to house the initiative's work long-term. FJPI is a collaborative of approximately sixty organizations, businesses, and individuals across an 18-county area in western North Carolina who "envision a thriving, regenerative, resilient local food system with food justice for all."

Building a Collaborative Approach to Food Justice

The overarching goal of FJPI is to build capacity within food system organizations and businesses that are providing direct services addressing food insecurity and food justice in western North Carolina. FJPI is focused on developing and implementing systems that promote the long-term sustainability of these organizations. FJPI is in the process of transitioning from a planning initiative to a 501c3 organization, which they anticipate being finalized by 2024. The newly formed non-profit organization will go by the name "WNC Food Systems Coalition."

The WNC Food Systems Coalition aims to help develop "an abundant, collaborative, responsive, community-led food system for all in WNC." In addition, the coalition aims to become a "bolstering backbone" and "web of support" for direct service organizations through an array of services. For example, the WNC Food Systems Coalition will serve as a re-granting agency and fiscal sponsor for newly formed nonprofit organizations, providing financial management and administrative capacity often needed for newer organizations. In addition, the coalition will advocate for policy change within the food system, promote land access, provide conservation resources for farmers, and create programs to help the region adapt to and mitigate the effects of climate change.

When asked about the main challenges to achieving the long-term goals of FJPI, representatives commented on the politicization of the term "food justice" and how this can be a barrier to advancing work in the region. Western North Carolina is predominantly rural, with the population

Key Stats

Number of Counties Involved in Western NC:

- 18 counties, including Buncombe, Haywood, Henderson, Madison, Transylvania, Avery, Burke, McDowell, Mitchell, Polk, Rutherford, Yancey, Cherokee, Clay, Graham, Jackson, Macon, and Swain
- This region includes the Qualla Boundary of the Eastern Band of the Cherokee Indians (EBCI), which overlaps Swain, Jackson, and Haywood counties

Number of Regional Organizations Participating:

Approximately 60

Number of Strategy Areas:

. 6

Number of New Food Councils Created:

4

Total Gift Amount to Community Groups:

· \$57,100

Total Participant Compensation:

. \$31,000+

centers in Asheville and Boone. The region has a mix of progressive and conservative views, often split across the urban/rural divide. FJPI's experience has indicated the term "food justice" can be politically divisive in more rural communities, which could become a hurdle for advancing the work of FJPI in those communities. That said, community members across political lines have rallied behind the idea of food sovereignty and the notion that food is a human right. FJPI notes this idea resonates in communities across



Credit: Western North Carolina Food Justice Planning Initiative

western North Carolina especially, as it promotes the "mountain attitude" and strong identity of resilience and neighbors helping neighbors—a throughline of Appalachian culture. While the FJPI and the future WNC Food Systems Coalition are united in addressing the principles of food justice within the 18-county, Western North Carolina region, their language has evolved to speak more inclusively about these principles.

Collaborative Governance: An Inside Look

Within FJPI is a leadership structure promoting collaboration, flexibility, and fairness across operations. FJPI's leadership team is composed of a Project Supervisor, Project Manager, two to three Project Coordinators, and representation from the six working groups referred to

as Strategy Areas (SAs). FJPI is focused on developing resources across the following food system strategy areas:

- 1. Regional Food Council Development
- 2. Healthy Food Distribution
- 3. Cooking and Nutrition Education
- 4. Collaborative Agriculture Network
- 5. Community Gardens
- 6. Food Waste Reduction

Each strategy area (SA) works autonomously and is composed of representatives from organizations working across the 18-county region. The SA selects their own leadership; votes on decisions surrounding budgeting and funding; determines their focus; and develops their strategic action plan. The Community Gardens SA, for example, is leading an assessment of all community gardens working within the 18 counties. The goals of this assessment are threefold. First, the SA wants to understand where all current gardens are located, to identify sites for future gardens that would be most beneficial in providing land resources, sharing fresh produce, and coordinating donations of produce to the wider community. Second, the assessment aims to understand how these gardens operate, their missions, and how they distribute food; and the third goal is to identify the key needs of the existing gardens and how WNC Food Systems Coalition can best support them.

As part of FJPI's focus on equity, inclusion, and fairness, all participants in meetings and formal conversations are invited to submit a request for participatory compensation in recognition of their time

and expertise shared with FJPI. By offering compensation, FJPI acknowledges that some members are engaging outside of their professional roles and would otherwise not receive payment for their time and knowledge. FJPI also seeks to increase coordination and build stronger ties with the Eastern Band of Cherokee Indians living within the Qualla Boundary in western North Carolina. FJPI is focused on building these key relationships, which will lead to sustainable change and interorganizational support in the long term.

FJPI employs a consent-based decision-making model as a tool to expedite decision-making across the membership. Distinct from a consensus-based approach, consent-based decision-making is a process in which all deciding members of the group consent to moving forward. In other words, a decision moves forward

if no members feel the proposal is outside their "range of tolerance." There is still ample room for discussion, modification, and amendments to the decision proposal at hand, but the overall goal is to move through the decision-making process efficiently. This model allows many views to be expressed without getting snagged too frequently with the finer details, as these finer details are left to be resolved by smaller groups and strategy areas once the decision is made. While consentbased decision making is an important tool in the working structure for FJPI, it does present a few unique challenges. Most challenges faced by FJPI through the consent-based process revolve around keeping a balance of new ideas, input, and concepts while ensuring initial plans, goals, and action items remain on target.

Key Takeaways

Investing in bringing a diverse community of stakeholders to the table promotes equity and is a powerful tool for engagement, planning, and building capacity among organizations.

By engaging a wide range of stakeholders, FJPI allows for a range of thoughts, leadership, and considerations with representatives across the food system in Western North Carolina. FJPI compensates all participants for the time spent to drive the work of the organization forward. This acknowledges the value of time, expertise, and knowledge contributed by stakeholders as the community works together to build capacity across the food system.

Consent-based decision making can be an effective tool to work with large, diverse groups of stakeholders.

Consent-based decision-making helps create efficiency for FJPI. It allows the organization to rally 60+ organizations across an 18-county region, from diverse backgrounds and with varying priorities for advancing food system development, to achieve a unifying direction that is "good enough" to try and experiment. This allows FJPI to make decisions relatively quickly and try new approaches to complex problems with support from their participants.

Cowan Community Action Group & CANE Kitchen

Letcher County, Kentucky



Credit: Valerie Horn

Cowan Community Action Group's 2020 Summer Food Service Program, in partnership with CANE Kitchen, provided meals to residents of eight eastern Kentucky counties in response to rapidly increased rates of food insecurity brought on by the COVID-19 pandemic.

Cowan Community Action Group

Located in Letcher County, Kentucky, the Cowan Community Action Group (CCAG) is a nonprofit community service organization with a mission to "provide educational, social, cultural, and recreation

experiences for the community in order to sustain a healthy lifestyle that promotes inter-generational relationships." CCAG was founded in 1964 and created the Cowan Community Center utilizing the space of a local elementary school that had closed down. The nonprofit offers a broad range of programming for eastern Kentucky communities, including a USDA Summer Food Service Program, Kids on the Creek Summer and Afterschool Camps, Grow Appalachia, Cowan Creek Mountain Music School, Levitt AMP Whitesburg Music series, and Cowan Creek Internships that support the aforementioned programs.

CCAG has a history and tradition of providing food security-related programming, starting with a free lunch program over 50 years ago. CCAG launched their first Summer Food Service

Program (SFSP) in 2014 at the City of Whitesburg Farmers Market in partnership with Community Farm Alliance, an Eastern Kentucky-based nonprofit, and Letcher County Public Schools. According to CCAG Director Valerie Horn, the 2014 program was the first SFSP located at a farmers' market in the nation. The program originated in response to a significant need within the community to provide meals for children when school was out of session and families lacked access to free and reduced-price meals through schools. In Letcher County School District, more than 9 in 10 students qualify for the Free and Reduced Lunch Program based on household income. From its inception, CCAG's SFSP was designed to connect the harvest season for local farms with increased food access needs from the community during the summer. By connecting increased demand and supply in the local community through the SFSP, CCAG seeks to increase community food access and strengthen the local food economy.

CANE Kitchen

In 2018, CCAG was a key partner in establishing the Community Agricultural Nutritional Enterprises (CANE) commercial kitchen to develop new markets and expand agricultural opportunities in Letcher County and surrounding communities. The CANE Kitchen is located at the former Whitesburg High School building which is now owned by the Mountain Comprehensive Health Corporation (MCHC), a medical clinic in Whitesburg, Kentucky. MCHC is leasing the former high school building to CANE Kitchen for 20 years, for a nominal onedollar fee. The intention behind the CANE Kitchen is to strengthen the local food

economy by creating a lasting market outlet for local farmers, along with a space farmers can use to create value-added products. In addition, the commercial kitchen space has served as the prep space for CCAG's Summer Food Service Program, including for the 2020 Summer Food Service Program.

2020 Summer Food Service Program

In the early days of the COVID-19 pandemic, CCAG engaged in discussions with community partners to expand their Summer Food Service Program to address rapidly increasing rates of food insecurity in the region. In previous years, CCAG hosted their Summer Food Service Program at the City of Whitesburg

2020 Summer Food Service Program Key Stats

2020 SFSP Funding:

\$2.2 million

Number Served:

 Meals: 750,000 total; average of 10,000 daily

· Children: 5,000

• Families: 2,500

Weekly Distribution:

· \$100,000 of food

Geography Served:

· 8 eastern KY counties

Program Dates:

· May 11 to August 26, 2020

CANE Commercial Kitchen Size:

· 6,000 sq ft

Farmers' Market. However, with a significant program expansion in the works, CCAG turned to CANE Kitchen as a host location due to its convenient location and microprocessing capacity on site. This partnership facilitated an expansion of the SFSP from 700 meals served in 2019 to 700,000 meals in the summer of 2020. This remarkable expansion, which was funded by the USDA Summer Food Service Program (CCAG's 2020 SFSP was allocated \$2.2 million), relied heavily on trusted relationships with regulators and food providers. In addition, existing relationships with local farmers enabled the 2020 SFPS to direct over \$30,000 of funding to local food purchases from farmers in the area. CANE Kitchen had a refrigerated trailer on site that was used to store perishable items, including local produce.

Pandemic Response within a Complex Regulatory Environment

The 2020 Summer Food Service Program launched within a dynamic regulatory environment that was responding to the COVID-19 pandemic. Typically, SFSPs are required by the federal government to provide meals in a congregate setting where children eat the meals on site. In response to the COVID-19 pandemic, the federal government waived the congregate meal requirement allowing for SFSP providers to send meals home with families. CCAG began sending home enough food for 14 meals per child, per week.

The Kentucky Department of Education (KY DOE) provides oversight of SFSPs in the state. CCAG had developed a relationship with the agency over the years

During the 2020 SFSP, CCAG and CANE Kitchen purchased over \$30,000 of food from local farmers to support the program.

through operating their annual SFSP. With the major 2020 program expansion, CCAG initiated conversations early on with the KY DOE to gain guidance on how to navigate the complex rules and regulations while scaling the program. With a small staff and limited resources to cover additional administrative support, CCAG and CANE Kitchen utilized the guidance of the KY DOE to ensure they were in compliance with SFSP rules throughout the program expansion and had sufficient financial and food distribution records.

Setting the Stage for Flood Response

In addition to the challenges associated with the COVID-19 pandemic, Letcher County residents faced a second crisis in the summer of 2022. In late July, a major flooding event impacted thousands of eastern Kentucky residents who once again faced increased food access barriers, particularly for those who lost transportation, housing, gardens, food reserves, and farms in the floods. The successful 2020 expansion of the SFSP helped set the stage for a swift response to increased rates of food insecurity, orchestrating another emergency feeding program from July 28, 2022 until January 1, 2023. The 2020 SFSP established CANE Kitchen as a trusted organization the community could turn to in times

of crisis for reliable, safe, and dignified support. With an operational commercial kitchen and a reputation for supporting the community, CANE Kitchen began preparing and distributing meals for community members in need. In addition, CANE Kitchen received significant support from community partners, including the Kentucky-based LEE Initiative that provided resources to support a rapid flood response. The program provided over 100,000 free meals to displaced community members and flood recovery workers during that period.



Credit: Valerie Horn

Key Takeaways

Large-scale pandemic response was facilitated by pre-existing networks and relationships.

According to CCAG Director and CANE Kitchen Board Chair Valerie Horn, scaling the 2020 Summer Food Service Program required pre-existing relationships with the community, regulators, and food providers. The successes of the 2020 SFSP established CANE Kitchen as a trusted source for community support in times of crises and enabled a swift response to the foods in 2022.

Rapidly scaling up a program in response to a crisis requires communication with regulators and thorough recordkeeping to manage risk.

Scaling up a federally funded program brings increased attention for regulators and requires compliance within often complex program rules and regulations. Proactive communication with regulatory agencies and operating with transparency can help an organization manage risk.

Cultivating emergency preparedness can take many forms.

Network building can set organizations up to respond quickly and effectively in times of crises in addition to other types of preparedness including financial planning. CANE Kitchen learned that keeping two to three days' worth of resources (food, water, administrative documents) can facilitate emergency response in the early days of an emergency when the need is often highest.

Mountaineer Food Bank & Community Food Bank of Central Alabama

Gassaway, West Virginia and Birmingham, Alabama



Credit: Mountaineer Food Bank

Within rural and remote Appalachian communities, mobile food pantries can help bridge gaps in food access for households experiencing financial and transportation barriers to healthy food.

Many Appalachian communities are remote with few nearby food retail options and limited or no public transportation. Mobile pantry programs are one approach to making food more accessible, both physically and financially—especially for community members who live further away from grocery stores or emergency food distribution centers. Mobile food pantries equipped with refrigeration can distribute fresh protein, produce,

milk and dairy, and other perishable products. This capacity allows for mobile pantries to provide patrons with a balanced assortment of fresh items and nonperishable staples. In many Appalachian communities, mobile pantries are a strategy to provide more nutritious and healthy options to families with children, elderly community members, and people who live on limited or fixed incomes.

The case studies below profile two
Feeding America network food banks
that are expanding access to healthy
foods through mobile pantry programs
in Appalachia. Food banks rely on their
partner agencies to provide critical
support for the operation of mobile food
pantries, including hosting the mobile
pantries, managing logistics, and providing
volunteers. These partner agencies are

typically brick-and-mortar locations such as community centers, schools, veteran support agencies, churches, clinics, or non-profit organizations operating food pantries. Mobile pantry programs provide a collaborative and targeted approach to expand access to healthy food in rural communities.

Mountaineer Food Bank

Mountaineer Food Bank utilizes a strong partner network across West Virginia to offer a rotating schedule of mobile pantries providing free food to rural communities where public transportation and access to food are limited.

Founded in 1981, Mountaineer Food Bank (MFB) is the largest emergency food distributor in West Virginia. Their mission is to "feed West Virginia's hungry and

Mountaineer Food Bank Mobile Pantry Program Key Stats

Number of WV Counties Served:

48

Pounds of Food Distributed in 2022:

· 2.8 million

Total Households Served in 2022:

. 60,000

Average Number of Households Served Per Pantry:

. 200

Total Mobile Pantries Operated in 2022:

342

Number of Trucks:

· 10 box trucks on the road daily



Credit: Mountaineer Food Bank

empower communities to end hunger." MFB reports at least 217,000 people face hunger daily in West Virginia, including more than 63,000 children. MFB operates in 48 out of 55 counties in West Virginia and partners with over 450 brick-andmortar agency partners. Food donations are sorted, repackaged, and distributed by staff and volunteers to partner agencies for distribution. In addition to supplying agency partners with food for distribution, MFB oversees several programs focused on supporting food access for veterans, seniors, and children. These programs include Veterans Table, Feeding Families Prime ("a holistic approach to the traditional food pantry," as stated by MFB), Mountaineer Meals (summer feeding program), Fresh Initiative Market, the USDA's Commodity Supplemental Food Program, a Backpack Program, a Mobile Pantry Program and Food for Health (a food-as-medicine approach). Annually, MFB distributes over 17 million meals.

Mobile Pantry Program: Partnership-Powered Community Reach

In 2008, MFB began a mobile pantry program to better address food insecurity in communities where transportation is limited or where communities are farther away from traditional food retailers. In an interview, the MFB Director of Community Partnerships noted many of their mobile pantries reach clients who would otherwise need to drive up to an hour to reach a brick-and-mortar pantry operated by MFB or another organization as well as a traditional food retailer like a grocery store or supermarket. On average, MFB can distribute 10,000 to 30,000 pounds of fresh food across their daily mobile pantry distribution route. The mobile pantry program allows MFB to offer services in harder-to-reach communities where

feeding program options are limited or more challenging to operate.

MFB attributes the efficacy of their mobile pantry program to their strong community partner network. MFB relies on 40 partners to take responsibility of on-site management and logistics of food distribution, as well as the marketing of the mobile pantry to community members seeking food assistance. While MFB is responsible for providing the partner materials and information about the program, as well as transporting the food to each mobile site, they report that 90% of a mobile pantry operation is led by volunteers. Volunteers typically come from a community partner organization, although sometimes they are a group of individuals who are committed to leading a pantry in the community. MFB reports that municipal government, financial institutions, insurance companies, health care clinics, and hospitals provide volunteers and support for these programs across West Virginia. Because of MFB's strong reliance on the community partner to operate and market the mobile pantry, community partners need to be consistent and reliable. MFB's ability to develop a strong partner network is partially attributed to the sense of community pride, a throughline of West Virginian and Appalachian culture.

When asked to highlight a unique community partnership, MFB provided an example of a large window manufacturing company in Ritchie County. The company was approached by MFB while staff were driving around looking for a new mobile site in the area. The industrial site hosts a large staff parking lot, ideal for operating a mobile pantry. After learning about the need for more food distribution options in the county, the business agreed to serve

as a community partner. This business was also able to leverage the opportunity to share their job and workforce training opportunities with MFB clients who visit the pantries.

Community Food Bank of Central Alabama

Community Food Bank of Central Alabama expanded their mobile pantry program in response to the COVID-19 pandemic and continues to utilize mobile pantries to reach community members living in areas that are underserved by the brick-and-mortar food assistance landscape.

Founded in 1982, the Community Food Bank (CFB) of Central Alabama is the largest hunger-relief organization serving central Alabama. The organization's mission is to "feed people in need today and foster collaborative solutions to end hunger tomorrow." To achieve their mission, CFB operates as a food distribution center, receiving donated and low-cost food at their warehouse from a variety of sources, including the USDA, community food drives, grocery stores, and food brokers. Food bank staff and volunteers sort and pack meal boxes. which are then distributed to partner agencies, including food pantries, soup kitchens, community centers, shelters, and other organizations, who offer direct service programs within CFB's 12-county Central Alabama service area. In addition to supplying food for direct-service partner agencies, CFB distributes millions of additional meals through direct meal programs, including Mobile Pantries, Disaster Relief, Kids Cafe and Family Markets, Senior Meals, and Holiday Boxes. In 2022, the food bank distributed nearly 17



Credit: CFB of Central Alabama

Community Food Bank of Central Alabama Mobile Pantry Program Key Stats

Number of Counties Served:

• 12

Meals served in 2022:

· 3.37 million

Individuals served in 2022:

48.000

Average Number of Individuals Served Per Pantry:

• 150-300

Total Mobile Pantry Events in 2022:

469

Number of Trucks:

9 box trucks on the road daily

million meals, at no cost, to an estimated 200,000 community members in need.



Credit: CFB of Central Alabama

The Mobile Model: Expanding the Program in Response to the Covid-19 Pandemic

In 2016, CFB began a mobile pantry program to increase emergency food access in communities that were underserved by the existing network of agency partners. CFB works with a group of volunteers to operate a mobile pantry site hosted in the same location once per month. Each mobile pantry client typically receives a meal box valued at approximately \$25-30 that contains enough vegetables, protein, and shelfstable staples to feed a family of four for 7 to 10 days. Notably, mobile pantries also allow CFB to tailor the composition of meal boxes to meet the specific needs of the primary demographic served. For example, CFB mobile pantry events at senior centers provide specific foods and informational materials that are curated to meet the nutritional needs of seniors.

The Community Food Bank of Central Alabama implemented a major expansion of their mobile pantry program in response to the COVID-19 pandemic. Prior to the pandemic, CFB offered 43 total

mobile pantry events in 2019, averaging between 3 and 4 events per month. In the early days of the COVID-19 pandemic, several partner agencies temporarily shut down, leaving many central Alabama community members without access to essential food. With an increase in USDA food, federal funding, crisis funding, and community support, CFB launched a massive mobile pantry program expansion to offer a total of 431 mobile pantry distributions in 2020, filling the gaps left by partner agency closures and ensuring community members had access to necessary food through a no-contact distribution mechanism. In the wake of the COVID-19 pandemic, CFB plans to continue utilizing the mobile pantry program at its current scale (about 44 monthly pantries) to serve communities that are underserved by the network of brick-and-mortar partner agencies.

In response to the COVID-19 pandemic, CFB expanded their mobile pantry from 43 mobile distributions serving under 4,500 individuals in 2019, to 431 mobile distributions serving over 130,000 individuals in 2020.

Mobile Pantry Site Selection

For both MFB and CFB, establishing new mobile sites is an intentional process to effectively meet community needs and ensure the sustainability of a distribution site over time. CFB, for example, determines which communities are good candidates for a new mobile pantry location based on household income data and the availability of emergency food resources within an area. CFB compares Feeding America data and their existing partner agency and mobile pantry network to determine which geographic areas have insufficient access to emergency food resources. Within geographies under consideration for a new mobile pantry site. CFB evaluates the relative need using another Feeding America metric—meals per person in need (MPIN) which compares local community need to the availability of emergency food resources. The combination of evaluating local need and availability of emergency food resources enables food banks to meet community needs while reducing service duplication.

After determining the geography for a new site, both food banks prioritize finding a partner site that meets the physical specifications to ensure convenient, efficient, and safe distribution events. Considerations include parking lot size, proximity to major roadways, and traffic considerations. MFB trucks carry up to 24 pallets of food (weighing about 40,000 pounds), which requires well-maintained and paved locations to ensure

safe and efficient delivery. In addition, mobile pantry distributions often bring in hundreds of clients, which require sufficient room for cars to line up without causing congestion on a main road. As such, mobile pantry sites need to be large, open spaces such as fairgrounds or schools. MFB and CFB vet prospective pantry sites before starting a new mobile pantry site, to ensure the community partner is set up for the logistics of hosting a mobile pantry.

In addition to careful site selection, effective management and communication is critical to mobile pantry success. Both CFB and MFB rely heavily on dedicated volunteers to staff mobile pantry distributions. Patrons drive through a distribution line and a volunteer loads each patron car with a food box; box contents are based on patron household information. This not only helps provide efficient logistics, but also maintains a sense of anonymity in visiting a mobile pantry, which can increase the utilization of these emergency food programs by reducing the stigma that can be associated with seeking food assistance. MFB also allows individuals to pick up for other households as well, making the process more convenient for neighbors to share the time required to grocery shop or pick up food items. Lastly, CFB shared the importance of considering organizational capacity when establishing a new mobile pantry site to ensure that the food bank has sufficient food and delivery capacity to support a monthly pantry location.



Credit: Mountaineer Food Bank

Key Takeaways

Mobile pantries are a cost-effective way to broaden the service reach of food banks to rural and remote areas of Appalachia.

For areas where food retailers, brick-and-mortar food assistance, and public transportation are limited, mobile pantries can bring emergency food resources closer to households in need. Brick and mortar pantry locations can be expensive to manage given the high costs associated with operating and maintaining permanent facilities. In contrast, mobile pantries are temporary distribution sites that require less investment per site and can share equipment and infrastructure costs across multiple sites. For example, distribution vehicles can be used to distribute food to many mobile pantry locations, sharing the vehicle costs across several distribution sites. In 2022, CFB utilized mobile pantries to expand the total number of individuals served by approximately 25% through mobile distribution sites.

Strong community partnerships, streamlined logistics, and dedicated volunteers are essential to many mobile food pantry operations.

Both CFB and MFB manage the logistics to bring food to the mobile pantry site but depend on volunteers to manage the on-site operations. CFB highlighted the importance of dedicated volunteers who commit to managing and marketing the event each month. CFB leadership shared a concern about the ongoing availability of dedicated volunteers to staff mobile pantries. The dedicated volunteer population is primarily composed of older adults with fewer young volunteers to fill in as existing volunteers age out of participation. If these trends continue, CFB may not have the necessary volunteers to offer mobile pantries.

Mobile pantries offer opportunities to tailor services to the needs of specific demographic groups.

When partnering with local partner agencies that serve a specific population, the mobile pantry can be more targeted in what they offer. For example, a mobile pantry site hosted at a senior center allows CFB to cater the composition of food boxes and informational materials to a senior audience. The nimbleness of the mobile model allows for increased flexibility and responsiveness to diverse and dynamic emergency food needs within communities.

412 Food Rescue

Pittsburgh, Pennsylvania



Credit: 412 Food Rescue

Pittsburgh-based 412 Food Rescue assembles a robust volunteer force to fight hunger, reduce food waste, and advance nutrition equity.

Founded in 2015, 412 Food Rescue (412) was created as a local response to the global issues of food waste and food injustice. 412 works in a 5-county area surrounding Pittsburgh, Pennsylvania to provide residents safe and convenient access to nutritious and affordable food. With a focus on rescuing fresh food, 412 utilizes volunteers to pick up food that would otherwise be wasted from various partners including grocery stores, convenience stores, hospitals, and schools. Instead of storing the food in warehouses, 412 takes it directly to non-

profit organizations such as housing authorities, community kitchens, and other distribution partners to be used immediately. To streamline their volunteer engagement, 412 developed the Food Rescue Hero App to coordinate food rescue pick-ups and drop-offs. The app was designed to be adapted by other cities and regions interested in employing a similar model for food rescue in their communities. To date, the Food Rescue Hero App is utilized in sixteen cities across the U.S. and Canada.

Making Healthy Food Convenient for All

412 Food Rescue looks at the social and economic structures leading to food insecurity and seeks to identify ways to make healthy food more accessible and convenient. In their understanding of

Case Study 412 Food Rescue

412 Food Rescue Key Stats

Number of Registered Volunteers:

. 20,000+

Amount of Food Rescued:

- 21 million pounds, or 18 million meals
- Valued at \$53 million

Number of Food Rescue Sources:

 2,300+ (businesses, schools, hospitals, etc.)

Number of Non-Profit Food Rescue Recipient Organizations:

. 980+

Average Amount of Food Rescued at a Time:

· 90–100 pounds

Portion of Total Food Rescued That Is Fresh/Perishable:

80-90%

Portion of Total Food Rescued That Is Fruits or Vegetables:

. 55%

Food Rescue Hero App Key Stats

Impact from 412 Food Rescue use, plus partners across the U.S. and Canada

Number of Cities / Communities in Network:

· 16 in U.S. and Canada

Amount of Food Rescued:

· 100 million pounds

Amount of CO2 Emissions Mitigated:

· 54.3 million pounds



Credit: 412 Food Rescue

food security, in addition to the cost and nutritional value of food, 412 also considers the degree of convenience or ease in accessing food, including time constraints and transportation needs. The notion of "time as a premium" became a key problem to solve within 412 Food Rescue's food distribution structure, as some community members had to take two buses to the nearest store, while others were limited based on work schedules and childcare availability. One targeted solution 412 identified was providing food to people on routes they were already traveling, such as along their commute to work. Housing authorities and other congregate sites frequented by community members became important distribution partners for 412, providing convenient access points to those who needed affordable fresh food. Case Study 412 Food Rescue

412 Food Rescue is also focused on promoting health equity through their programming. During the COVID-19 pandemic, many households shifted to home delivery services to reduce the health risk associated with many indoor public settings, such as grocery stores. But food insecure individuals were often not able to afford the expense of food delivery. or other direct-to-home services that were popularized in 2020. 412 Food Rescue observed this trend in Pittsburgh, noting that food insecure individuals were more likely to need to visit public spaces, such as crowded food retailers or food assistance lines, to get food for their families, thus increasing their risk of exposure to COVID-19. In response, 412 Food Rescue began piloting a home-delivered food rescue program to address these public health concerns, while also getting fresh food to neighbors in need.

Volunteerism, Retention, & Technology

The backbone of 412 Food Rescue's work is a robust volunteer network, which they have been able to amplify through technology. When the organization first began, volunteer recruitment occurred on social media via Facebook and Twitter. Volunteers who were able to pick up food on a given day were recruited for one or two rescues. As the organization grew and began to take on more rescues, managing the volunteers through social media became challenging. In 2015, 412 entered a Carnegie Mellon University pitch contest and was selected to receive \$100,000 to fund the development of an app to support their food rescue operation. Since then, 412 has created and continues to update an app that provides real-time



Credit:412 Food Rescue

Case Study 412 Food Rescue

data to track opportunities for food rescue, document how many food rescues are completed and where the deliveries occur, and any issues regarding missed rescues. While the app continues to evolve, the easy-to-use volunteer platform has allowed the work of 412 to grow. The next version of the app will include an algorithm for prioritizing food distribution locations to ensure food is delivered to non-profit organizations who may be underserved by other donation streams.

The Food Rescue Hero App provides a sophisticated platform for 412 to engage and streamline volunteer efforts. Interested individuals can commit to a weekly food rescue or decide in real-time if they are interested in volunteering. There is also an ability to "fill in" as a substitute for a regular food rescue pickup if someone is unable to participate.

The user interface allows volunteers to see the food rescue needs for the day; accept the responsibility for a food rescue; access directions to the business with instructions for how to pick up the food rescue; report the amount and type of food being picked up on site; and guide the volunteer to the drop-off location with instructions on how to deliver the fresh food. The app also encourages and celebrates the volunteers along the way. In an interview, 412 Food Rescue leadership noted that the app has helped to retain volunteers, not only through the celebration of each complete rescue, but also through the ease it creates for volunteers to participate.

Key Takeaways

Convenient access to nutritious food is a critical component of community food security.

Food assistance organizations typically schedule services during limited times and at a single location and are often located in communities where food insecurity is higher. However, service hours may conflict with work, childcare, and/or transportation schedules of those in need. Adapting food distribution models with these considerations in mind, such as through home delivery or new distribution locations that are more convenient for community members, can contribute to program efficacy and reach.

Technology can help streamline logistics and facilitate unique and flexible opportunities for volunteers to support local food security.

The use of an app provides a clear, easy, and convenient way to engage volunteers. Individuals can select their preferred days and times for volunteering, receive clear instructions for their rescue, and are celebrated for their contributions. Utilizing an app with streamlined logistics and an easy-to-use platform can provide organizations an opportunity to grow their volunteer base and expand their reach.

Greater Good Grocery

Binghamton, New York



Credit: Greater Good Grocery

The nonprofit Greater Good Grocery utilizes an innovative sourcing strategy to provide a full line of affordable and healthy food options on the North Side of Binghamton, New York.

Founded in 2021, the Greater Good Grocery (GGG) is a nonprofit grocery store with a mission to expand healthy food access in the North Side neighborhood of Binghamton, New York. The Broome County Council of Churches (BCCC) created the GGG to address a food access gap within the neighborhood where, according to Founder Dr. Joseph Sellepack, 46% of households live at or below the federal poverty level and a

Key Statistics

Launch Date:

· January 2021

Grocery Store Size:

· 5,920 sa ft

Total Number of Customers Served:

. 6.000

2022 Sales

• \$320.000

Returns Reinvested into the community

. \$10,000

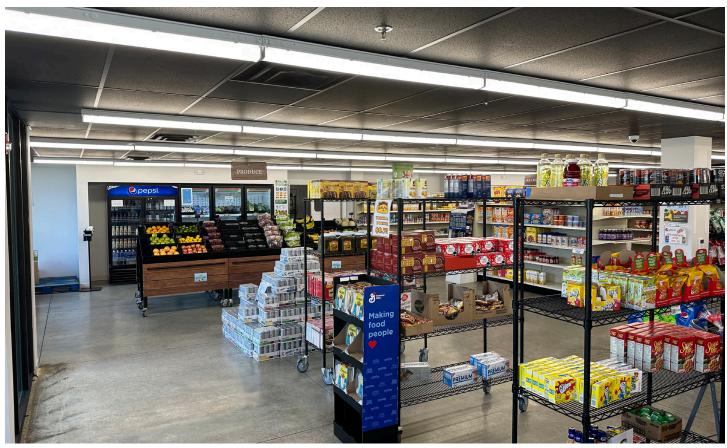
Start-up Investment

· ~\$1.5 million

Current Staffing

• 9 (8 full-time, 1 part-time)

Case Study Greater Good Grocery



Credit: Greater Good Grocery

grocery store has not existed in the area in the preceding 25 years. Inspired by Bargain Grocery, a project of the Compassion Coalition that serves a community in Utica, New York with similar demographics, BCCC began pursuing a grocery model to serve the North Side community. The model includes an innovative food sourcing strategy that provides a full line of products at competitive prices. Profits from the grocery store are reinvested back into the community through a range of BCCC programs.

Broome County Council of Churches

The Broome County Council of Churches is a nonprofit network of 150 Christian congregations, three Jewish synagogues, an Islamic mosque, and several non-denominational congregations that

provide resources and support for Broome County community members experiencing sickness, injury, poverty, incarceration, and homelessness. Founded in 1941, the BCCC offers a range of programming from emergency food distribution to support for individuals impacted by the criminal justice system. Food-related programming has been a central tenet of the Council's work for over 40 years. The BCCC's flagship food program, the Community Hunger Outreach Warehouse (CHOW), distributes 2.2 million meals annually to over 100 local food pantries and meal sites free of charge. In addition to CHOW, the BCCC recovers over 2 million pounds of food each year and distributes it to food pantries, provides skills-based job training for up to 48 individuals annually, and distributes 30,000 meals each summer for children who rely on free and reduced

Greater Good Grocery

lunch during the school year. The BCCC created the Greater Good Grocery in 2021 to increase food access within the North Side neighborhood of Binghamton, New York.

Food Sourcing

The Greater Good Grocery (GGG) utilizes a blended product sourcing strategy to offer nutritious and culturally relevant food at competitive prices. Their strategy incorporates the purchase of factory seconds from a partner organization, Bargain Grocery in Utica, New York, and direct purchasing from food brands and manufacturers. Factory seconds, or products from damaged pallets where the food itself has not been damaged or reduced in quality, can be sourced at lower cost to the grocery store. This sourcing strategy offers cost savings to the grocery store and customers but given the unpredictable nature of which factory seconds will be available, does not provide the grocery store with the ability to offer consistent products on a continuous basis.

The GGG also purchases directly from food companies and distributors to ensure continuous availability of key products that would not be possible by sourcing factory seconds alone. The GGG has relationships with Goya, Boar's Head, Ben and Jerry's, and other companies, enabling them to get bulk pricing discounts on many products. For example, the GGG is able to offer Goya products at a \$0.20 average discount per can, and Ben and Jerry's ice cream for around an 80% discount, compared to most retailers. Purchasing seconds and buying direct from food companies allows the Greater Good Grocery to offer a full selection of groceries at rates competitive with major food retailers.



Credit: Greater Good Grocery

A Competitive Food Retail Landscape

The national food retail landscape is highly competitive and consolidated with only a handful of companies owning the majority of grocery stores across the country, making it difficult for independent grocers to enter and remain competitive in the market. Due to their consolidation, major grocery store chains are able to negotiate lower pricing with food wholesalers based on large order volumes, whereas independent retailers with smaller orders struggle to compete on price. According to Dr. Sellepack, while the GGG cannot compete on pricing for every product, their unique sourcing strategy allows the grocery store to price certain items below market rate, making the price of a typical grocery bag competitive with

major retailers across Binghamton. To further increase affordability, the GGG offers a Double Up™ Food Bucks program which provides individuals and families who use SNAP benefits with a dollar-fordollar match on locally grown fruits and vegetables, up to \$20 per day.

Alongside affordability, a dignified and welcoming food shopping environment is key to attracting customers. General Manager Kinya Middleton credits friendly staff and a well-organized, clean store as critical to cultivating a shopping environment where customers can procure their household needs. The GGG collects feedback from their customers on what they want to buy, which helps ensure the retailer offers products desired by the community. The GGG's goal is to provide a shopping experience where all customers can conveniently and affordably shop for all their grocery needs within the North Side neighborhood, without having to drive long distances or visit multiple stores. In order to achieve this goal, the GGG aims to dispel the misconception among some customers that mission-driven grocery stores only serve lower-income community members.

Benefits of the Nonprofit Model

The financial benefits of the nonprofit structure have allowed BCCC to establish a grocery store in a community with limited food access. Fiscally sponsored by a nonprofit, GGG is legally allowed to accept funding from charitable organizations. While the store's goal is to become financially self-sustaining in the next five vears, charitable donations were essential to the grocery store's launch. In addition, charitable donations currently cover a portion of the operating expenses and support supplementary programming including occasional no-cost food giveaways for customers. In total, the GGG currently requires \$100,000 in additional revenue each year to break even. Nonprofits also have a tax-exempt status, which reduces expenses for the store. The BCCC serves as the fiscal sponsor for the GGG and shares staffing and other administrative expenses across the two nonprofits.



Credit: Greater Good Grocery

Case Study Greater Good Grocery

Key Takeaways

Innovative food sourcing strategies can create opportunities for competitive product pricing while offering additional benefits to the community.

Food sourcing strategies that leverage reduced-cost food sources can generate retailer savings that can be shared with customers while also reducing food waste of high quality products.

Independent or mission-driven grocers must cultivate an affordable, convenient, and welcoming shopping environment to attract customers in a highly competitive food retail landscape.

From name recognition to price competition, small retailers face obstacles to compete with major grocery chains. Accepting SNAP and other food assistance benefits and employing diversified food sourcing strategies can increase affordability for customers. Offering a full line of grocery options is important for many customers who have limited time and want to meet their shopping needs by visiting one store. Lastly, a clean store and welcoming staff provide a dignified shopping experience that increases the chances of repeat customers.

The nonprofit grocery model can increase economic viability for mission-based food retail establishments in areas that do not meet the population density or household income characteristics that attract investment from for-profit food retail chains.

Nonprofits are tax exempt and can leverage charitable contributions to increase the economic viability of a grocery store in low income, low access geographies. For the Greater Good Grocery, the nonprofit model enabled them to leverage charitable financial contributions to support the launch of the grocery store. In addition, GGG has a longer runway to financial sustainability than may have been possible using a for-profit model.

The Gus Schumacher Nutrition Incentive Program (GusNIP)



Credit: West Virginia Food and Farm Coalition

GusNIP is a primary funding source to increase produce consumption by low-income households in Appalachia and across the nation.

The Gus Schumacher Nutrition Incentive Program (GusNIP), a program of the USDA's National Institute of Food and Agriculture, was established in 2014 to increase the affordability of fruits and vegetables for low-income households through nutrition incentive programs. Since its inception, GusNIP has provided \$270 million to projects that improve health and nutrition, bring together food and healthcare systems stakeholders, and increase nutrition security for communities across the United States.

The Farm Bill provides annual funding for GusNIP, which is distributed through three competitive grant programs: the Nutrition Incentive Program; the Produce Prescription Program; and the National Training, Technical Assistance, Evaluation, and Information Centers Program (NTAE). The Nutrition Incentive Program and Produce Prescription Program offer competitive grant funding to directly improve community access to fresh foods, and the NTAE program offers technical support and evaluation services to grant recipients. NTAE data analysis has shown that the local economic benefits (\$41 million) associated with incentive spending were more than double what was invested (\$20 million) across a September 2020 to August 2021 evaluation period.

The Gus Schumacher Nutrition Incentive Program (GusNIP)

GusNIP provides competitive grants for projects offering produce incentives to individuals participating in SNAP (Supplemental Nutrition Assistance Program). Organizations operating nutrition incentive programs work with grocery stores, farmers' markets, and other retailers to provide point-of-sale discounts or dollar-for-dollar matches on produce to SNAP users. Nonprofits and government agencies in all 50 states plus several U.S. territories are eligible to apply for GusNIP nutrition incentive grants to support SNAP or Nutrition Assistance Program¹ (NAP) participants. Incentive programs often specifically incentivize the purchase of locally grown foods, which supports the regional economy and local producers.

West Virginia Food and Farm Coalition SNAP Stretch Program

Following a 2018 USDA National Institute of Food and Agriculture (NIFA) Food Insecurity Nutrition Incentive (FINI) Program Grant that piloted SNAP Stretch, the West Virginia Food and Farm Coalition (WVFFC) received GusNIP grants in 2020 and a supplemental GusNIP Covid Relief and Response grant in 2021 to expand the SNAP Stretch program.

SNAP Stretch stretches household food budgets for SNAP recipients for purchases of fruit and vegetables at farmers' markets, on-farm stands, mobile markets, Community Supported Agriculture (CSA) programs, and local food retailers. SNAP Stretch provides a one-to-one match (doubles SNAP benefits) for all SNAP

Key Stats

GusNIP Projects in the United States

- · Number of projects: 89
- Amount invested: \$162,433,555
- Geographic distribution: 43 States

GusNIP Projects in Appalachian States

- Number of projects: 20 (22% of GusNIP projects)
- Amount invested: \$16,274,519 (10% of total GusNIP funds)
- · Geographic distribution:
 - 13 states (100% of Appalachian states)
 - Appalachian portion of Appalachian states: 11 projects, \$7,683,946 (5%)

participants and an additional oneto-one match (triples SNAP benefits) for customers who are seniors or have children. SNAP Stretch has 35 participating implementation partners, including farm stands, mobile markets, farmers' markets, and local farms.

In 2021, SNAP Stretch provided almost \$500,000 in produce benefits while capturing nearly another \$500,000 in federal food assistance dollars for the local agriculture economy. Due to budgetary constraints, these outcomes were slightly decreased in 2022, redeeming \$409,000 in SNAP Stretch and capturing \$345,000 in SNAP and other federal benefits to support the West Virginia food economy.

¹ NAP, in lieu of SNAP, is the primary federal nutrition assistance program for low-income households in the U.S. territories of Puerto Rico, American Samoa, and the Northern Mariana Islands.



Credit: Community Farm Alliance

The GusNIP Produce Prescription Program

GusNIP Produce Prescription Programs are designed to increase consumption of fresh produce for patients with diet-related health conditions, and to evaluate impacts to procurement and consumption of fresh produce, food insecurity, and healthcare usage and expenses. Organizations operating produce prescription programs work with health care partners, such as hospitals, health centers, clinics, or provider groups, to serve community members who are eligible for SNAP, Medicaid, Medicare, or VA healthcare, and other low-income individuals who suffer from at least one diet-related health condition. Grantees must also design their projects to measure their effectiveness in achieving goals

related to increased produce consumption and decreased health care expenditures. The program fosters collaboration between the food, agriculture, and healthcare sectors with the goals to improve dietary health through increased consumption of fruits and vegetables; reduce individual and household food insecurity; and reduce healthcare use and associated expenses.

Community Farm Alliance Fresh Rx for MOMs Program

The Community Farm Alliance (CFA) in Berea, Kentucky, was awarded a Produce Prescription grant to expand a pilot fruit and vegetable prescription (FVRx) program, the Fresh Rx for MOMs (Mothers-to-be on Medicaid). For this program, CFA partners with local organizations Community Farmers' Market and WellCareHealth Plans, to

provide incentives for expectant mothers across Kentucky. The program provides a \$20 token weekly for 21-40 consecutive weeks that can be used at participating farmers' markets. Over the 2020-2022 grant period, CFA reported that 85% of participating mothers regularly purchased local produce, 80% showed improved health outcomes, and 65% reduced their healthcare use and expenses. Additionally, the 11 participating farmers' markets showed a 15% annual increase in sales of local fruits and vegetables over the grant period. Beyond weekly produce tokens, the Fresh Rx for MOMs program also provides nutrition education from dieticians on-site. seasonal recipe recommendations, and cooking kits to ensure expectant mothers can actualize health benefits from the program.

Program Expansion in Response to COVID-19

In response to the COVID-19 pandemic, the federal government expanded GusNIP program funding through the GusNIP COVID Relief and Response (GusCRR) program and additional American Rescue Plan Act (ARPA) funding. GusCRR awards were limited to organizations with a current GusNIP nutrition incentive grant or produce prescription grant, or a Food Insecurity Nutrition Incentive (FINI) grant (a competitive grants program that was the precursor to GusNIP). The GusCRR program awarded 35 projects nearly \$69 million to increase the reach of GusNIP programs during the pandemic. In addition, ARPA supported another 72 GusNIP nutrition incentive and produce prescription programs with over \$34 million in funding.

Key Takeaways

GusNIP is a major funder for food access programs across the United States and is an especially important funder in Appalachia.

The federal government is the primary food assistance funder in the United States through SNAP and other nutrition assistance programs. The GusNIP program increases the amount of fresh produce accessed by low-income households through matching benefits, coupons, vouchers, and other methods. Nonprofits, government agencies, and healthcare providers across Appalachia are eligible to apply for funding. Federal grant opportunities are an especially important funding source for geographies with fewer private funding sources.

The GusNIP program distributed additional funding in response to the COVID-19 pandemic and expanded capacity for GusNIP-funded projects to meet pandemic-induced increases in food insecurity across Appalachia.

The GusCRR program and ARPA funding supported nearly 100 projects with \$100 million of funding in response to the pandemic. Early GusNIP grantees who had projects in place during the onset of the pandemic were uniquely situated to receive additional funding through the GusCRR program and expand the reach of their programs.

Local implementation of federally funded projects has been able to significantly expand food access in several Appalachian communities and offer continued funding opportunities in the future.

Through GusNIP nutrition incentive and produce prescription programs, Appalachian nonprofits, government agencies, and other entities can increase the affordability of fruits and vegetables for low-income households. GusNIP grant recipients can target the needs of specific demographic groups in need of food assistance with co-benefits for local farmers and food economies. For example, the West Virginia Food and Farm Coalition utilized GusNIP funding to increase benefits for households with children and seniors, both demographics experiencing disproportionately high rates of food insecurity. Furthermore, the Fresh Rx for MOMs program provides additional food assistance to expectant mothers, which is critical to both maternal health and fetal development.

Rural Action: Farm to Institution

Appalachian Ohio



Credit: Rural Action

Rural Action's Farm to Institution program helps institutions leverage food purchasing to strengthen the local food economy and improve community food access in Appalachian Ohio.

Rural Action is a nonprofit organization that promotes sustainable and equitable development in Appalachian Ohio. Founded in 1991, the organization aims to increase local influence over the region's natural assets and build resilience in communities negatively impacted by natural resource extraction and the community divestment associated with the decline of the coal, timber, and other natural resource industries. Rural Action

Key Statistics

Institutional Buyers

- School districts: 8
- Food banks: 2
- Universities: 2
- Health care institutions: 5

Geography Served

· 9 counties in OH and WV

Chesterhill Produce Auction

• Gross sales institutions in 2022: \$450,000

Appalachian Accessible Food Network

 Pounds of food procured and distributed in 2022: 80,000

has 600 members, including individuals, businesses, and partners, and serves all 32 Appalachian counties of Ohio, as well as the Mid-Ohio Valley region of West Virginia. Rural Action focuses on creating a more just, resilient, and sustainable economy in the sectors deemed most important by their members: food and agriculture, forestry, zero waste and recycling, environmental education, watershed restoration, and energy. Rural Action advances food security and strengthens local agriculture primarily through their Farm to Institution Program and membership within the Appalachian Accessible Food Network. In addition, Rural Action operates several social enterprises, including the Chesterhill Produce Auction that aggregates and sells produce from local farms at their twiceweekly auction.

Rural Action's Farm to Institution Program

Established with support from the Appalachian Regional Commission (ARC) in 2003, Rural Action's Farm to Institution is one of the organization's primary programs promoting sustainable agriculture and local food access within the region. The program aims to harness the buying power of K-12 schools, food banks, universities, and healthcare providers to support the economic viability of local farms while increasing access to local, nutritious food in Appalachian Ohio and West Virginia. Of these institution types, schools and food banks are particularly important food access channels for Appalachian residents who face the most significant barriers to healthy food access, including financial and transportation barriers.



Credit: Rural Action

While institutional buyers present a significant market opportunity for local farmers and important food access channel for residents, institutions often face barriers when seeking to buy locally, such as food safety requirements, minimum order volumes, connections to growers, and technical expertise. Rural Action collaborates with organizations and initiatives such as the Farm to OHIO Working Group, Community Food Initiatives, and Ohio University to address institutional local food purchasing barriers and expand access to healthy food options. The Farm to Institution program also offers support for agricultural producers, including Good Agricultural Practices (GAP) training and certification for local farms, an on-farm food safety certification often required by institutional buyers. In addition, Rural Action offers a wide array of educational programming for the public, including workshops and tastings to increase demand for local food, along with convening a network of institutions to support local food procurement. Lastly, Rural Action's Farm to Institution program connects institutional buyers with the Chesterhill Produce Auction, which serves as a primary marketplace for local wholesale food buyers in southeast Ohio.

Chesterhill Produce Auction

The Chesterhill Produce Auction (CPA) was originally founded in 2004 by Jean and Marvin Konkle to create a rural food destination and economic hub in Morgan County, Ohio. When the couple retired in 2010, Rural Action purchased the CPA with the help of community investors, a loan from the Mountain Association for Community Economic Development, and a grant from ARC. Today, the CPA hosts twice-weekly produce auctions, and monthly livestock and locally made

Each auction event includes a community donation station for buyers who purchased too much of an item and wish to donate a portion of their purchase. Donations are distributed to 40 local food pantries, free meal sites, churches, and schools.

furniture auctions, where hundreds of growers and ranchers in Appalachian Ohio and West Virginia can sell wholesale to both individuals and regional institutions, including restaurants, schools, food banks, and hospitals. By aggregating products from many farms, the auction creates cost and time efficiencies that translate to savings for institutional buyers. Many institutions, including food banks and schools, have tight food budgets and the service CPA provides is essential to provide local, healthy food options for their clients—many of whom lack reliable access to healthy food. Additionally, Rural Action uses the CPA platform to facilitate education for growers, host an annual field trip for local students, and distribute donated food to surrounding areas with high food insecurity.

Institutional Procurement at Schools

A Healthy Food Access Opportunity

Schools are a primary food access channel for Appalachian children, especially for those living in low-income households.

The majority of schools served by Rural Action's Farm to Institution program are considered economically disadvantaged with most students eligible for free and reduced-price meals. According to Tom Redfern, Director of Sustainable Agriculture at Rural Action, over 65% of Athens County K-12 students were eligible for free and reduced-price lunches in 2020. For the schools served by Rural Action, local food sourcing offers an opportunity to increase access to healthy, local food for children and simultaneously support the local agriculture economy.

Launching Local Food Procurement at Schools

Initiating local food sourcing at schools often requires advocacy from stakeholders and understanding which opportunities

might exist for an individual school or district. In most cases, initiating local food purchasing at an institution requires identifying a champion. A champion is a stakeholder connected to the institution who believes in purchasing local and healthy food, and who will advocate for changes in policies and procedures needed to enable local food procurement. At schools, common champions include cafeteria directors, parents, staff, and students.

In addition to identifying a champion, initiating institutional local food procurement requires understanding a school's positionality and what local purchasing opportunities might be "low hanging fruit." Each school is unique and has different opportunities for local food procurement based on funding, kitchen

Common Barriers and Opportunities for Institutional Procurement

Local food procurement by institutions can convey a broad range of benefits to a community, including increased access to healthy food, economic benefits associated with supporting local businesses, and building community capacity by increasing self-reliance and food production capacity. However, depending on an institution's budgetary considerations and food preparation capacity, they may experience barriers to procuring fresh and local food. Primary barriers for institutions to purchase local food stem from the often-higher cost of local food, and the competition with processed foods offered by food distributors. Major distributors carry food products at relatively low prices (due to economies of scale during production

and distribution), which can be difficult to match for Appalachian food producers who typically farm at a smaller scale.

Rural Action increases the capacity of producers and institutions to capitalize on opportunities for institutional local food procurement and expand food access. According to Tom Redfern, working with producers to perform value-added processing—activities that add value to their products (chopping, freezing, bagging, etc.)—can narrow the gap between what institutions are able to pay for produce and the price points required for local food producers to remain viable. Similarly, the availability of local, value-added products allows institutions that lack in-house food processing capacity to offer fresh, local produce at their cafeterias. On the institutional side, Rural Action works with kitchens to increase their processing and food preparation capacity, which can unlock additional opportunities to purchase local, unprocessed food.

83



Credit: Rural Action

capacity, staff training, procurement processes, partnerships, and other factors. For many schools, the first entry point to purchasing local food is experiential learning for children, which can lead to discussions with school leadership about the possibility of expanding local purchasing in the future. USDA funding, including the Food and Nutrition Service (FNS) Farm to School Program and National Institute of Food and Agriculture (NIFA) Food and Agriculture Service Learning Program, have been primary funders of experiential education offered by Rural Action in area schools. Additionally, Rural Action has raised experiential education funds through pie auctions at the Chesterhill Produce Auction.

Key Partnerships: The Appalachian Accessible Food Network

Rural Action is a member of the Appalachian Accessible Food Network (AAFN), an initiative working to increase local food access, production, and distribution in Appalachian Ohio. The two other members of the AAFN are the Appalachian Center for Economic Networks (ACEnet) Food Ventures Center and Community Food Initiatives. ACEnet provides business incubation, training opportunities, and essential infrastructure that supports institutional procurement. For example, ACEnet operates a shareduse cold storage facility and processing space where farmers and local food businesses can process raw agricultural products into formats preferred by institutional buyers. Community Food Initiatives (CFI) facilitates local food donations at local farmers' markets, and through their Donation Station Program that operates out of the CPA. Donations are distributed to local food pantries to ensure those experiencing food insecurity have access to fresh, local produce. In 2022, AAFN partners collaborated to procure and deliver over 80,000 pounds of local food to Eastern Kentucky flood victims, the Athens County Food Pantry, the Southeast Ohio Food Bank, Athens City Schools, and the Donation Station.

Key Takeaways

Institutions serve a broad range of demographic groups and can achieve varying degrees of food security impacts depending on their service population. In particular, schools and emergency food organizations are well positioned to simultaneously increase healthy, local food access for those in need while supporting the local food economy.

Institutional local food procurement can increase food access for groups experiencing barriers, especially for low-income individuals and households. For example, school meals are a primary food access point for children experiencing food access barriers. Leveraging school food budgets for local food purchasing can support the local food economy while increasing opportunities for children to access local produce with additional opportunities for experiential gardening and nutrition education.

Institutions are not a monolith; varying funding, administrative capacity, kitchen capacity, and other factors impact an individual institution's ability to implement local food procurement and preparation.

Each institution (school, hospital, food bank, etc.) has unique capacity and opportunities for purchasing local foods. Institutions often face budgetary constraints and limitations to kitchen and staff capacity that can make it difficult to integrate local food into cafeteria menus. However, interested institutions can most often find opportunities to explore local food procurement. For example, schools can often hook local food purchasing to experiential learning opportunities. Third-party organizations, like Rural Action, can provide resources and technical support to address barriers to institutional local food procurement.

Initiating institutional local food procurement most often requires a champion who will advocate for policy and practice changes within an institution.

Finding a champion at an institution, or someone who will advocate for local and healthy food, is key to initiating local food procurement. Purchasing local food often requires changing or augmenting existing procurement policies and practices, which can require investment (e.g., financial and staff time) from the institution. Identifying a champion who will commit the time and energy required is often essential to successfully launching local food procurement and sustaining it over the long term.

Appendix A: Data Sources

Feeding America

Gundersen, C., E. Waxman, E. Engelhard, T. Del Vecchio, & A. Satoh. *Map the Meal Gap 2012: A* Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2010. Feeding America, 2012.

Gundersen, C., E. Waxman, E. Engelhard, A. Satoh, & N. Chawla. *Map the Meal Gap 2013: Food Insecurity Estimates at the County Level.* Feeding America, 2013

Gundersen, C., E. Engelhard, A. Satoh, & E. Waxman. Map the Meal Gap 2014: Food Insecurity and Child Food Insecurity Estimates at the County Level. Feeding America, 2014.

Gundersen, C., E. Engelhard, A. Satoh, & E. Waxman. Map the Meal Gap 2015: Food Insecurity and Child Food Insecurity Estimates at the County Level. Feeding America, 2015.

Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. Map the Meal Gap 2016: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2014. Feeding America, 2016.

Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. *Map the Meal Gap 2017: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2015.* Feeding America, 2017.

Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. *Map the Meal Gap 2018: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2016.* Feeding America, 2018.

Gundersen, C., A. Dewey, M. Kato, A. Crumbaugh & M. Strayer. Map the Meal Gap 2019: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2017. Feeding America, 2019.

Gundersen, C., A. Dewey, E. Engelhard, M. Strayer & L. Lapinski. *Map the Meal Gap 2020: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2018.* Feeding America, 2020.

Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. Map the Meal Gap 2021: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2019. Feeding America, 2021.

Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. Map the Meal Gap 2022: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2020. Feeding America, 2022.

United States Census Bureau (USCB)

American Community Survey (https://www.census.gov/programs-surveys/acs), 2016-2020, 2011-2015, and 2006-2010 Five-Year Estimates.

United States Department of Agriculture (USDA)

Food Access Research Atlas (https://www.ers.usda.gov/data-products/food-access-research-atlas/), accessed Oct. 20, 2022.

SNAP Retailer Locator Data (https://www.fns.usda.gov/snap/retailer-locator), accessed Dec. 7, 2022.

Appendix B: Interviewees

Interviewee List

The following individuals were interviewed over the course of this project for general qualitative research and/or during the development of case studies.

Anna Baker

Director of Community Impact Chattanooga Area Food Bank

Rachel DeVore

Director of Education
The Bethlehem Center

Jennifer England

Program Director, Food Recovery Operations 412 Food Rescue

Noah Fulmer

Senior Fellow Fair Food Network

Jill Hanson

Chief Operating Officer MANNA FoodBank

David Holben

Professor and Director of the Office of Food and Nutrition Security The University of Mississippi

Valerie Horn

Director

Cowan Community Action Group

Lori King

Mobile Pantry Coordinator Mountaineer Food Bank

Leah Lizarondo

Founder and Chief Executive Officer 412 Food Rescue

Kinya Middleton

General Manager Greater Good Grocery

Lillian Moore

Food Insecurity Grant Coordinator The Bethlehem Center

Chad Morrison

Chief Executive Officer Mountaineer Food Bank

Laura Phillips

Director of Community Programs Mountaineer Food Bank

Tom Redfern

Director of Sustainable Agriculture Rural Action

Martin Richards

Executive Director Community Farm Alliance

Jesse Rosenblum

Project Manager Western North Carolina Food Justice Planning Initiative

Gabri Schoolcraft

Communications Coordinator Mountaineer Food Bank

Joseph Sellepack

Executive Director Broome County Council of Churches

Reginald Smith

Executive Director
The Bethlehem Center

Jennifer Weeber

Northfork Local Food Coordinator Community Farm Alliance

Nicole Williams

Chief Executive Officer Community Food Bank of Central Alabama

Appendix C: Databook

Table 1. Food Insecurity Estimates (2010-2020)

	F	ood insecur	e populatio	1	Percentage of population that is food insecure				
	2010	2015	2020	Percentage change from 2010 to 2020	2010	2015	2020	Percentage point change from 2010 to 2020	
United States	46,659,430	42,822,910	37,584,340	-19.4%	15.3%	13.5%	11.5%	-3.8	
Appalachian Region	3,855,230	3,603,250	3,362,510	-12.8%	15.2%	14.0%	13.0%	-2.2	
Subregions									
Northern Appalachia	1,145,600	1,076,560	978,510	-14.6%	13.9%	13.1%	12.2%	-1.7	
North Central Appalachia	392,760	375,530	337,970	-13.9%	15.5%	14.7%	13.4%	-2.1	
Central Appalachia	333,320	315,630	326,540	-2.0%	17.4%	16.6%	17.5%	+0.7	
South Central Appalachia	764,480	715,590	708,280	-7.4%	15.6%	14.2%	13.7%	-1.9	
Southern Appalachia	1,219,070	1,119,940	1,011,210	-17.1%	15.9%	14.0%	12.1%	-3.8	
County Types									
Large Metros (pop. 1 million +)	817,350	774,120	659,460	-19.3%	14.2%	13.0%	10.7%	-3.5	
Small Metros (pop. <1 million)	1,576,350	1,511,730	1,407,370	-10.7%	14.7%	13.9%	12.7%	-2.0	
Nonmetro, Adjacent to Large Metros	378,760	337,150	328,110	-13.4%	16.4%	14.7%	14.3%	-2.1	
Nonmetro, Adjacent to Small Metros	632,680	562,820	563,480	-10.9%	15.9%	14.1%	14.3%	-1.6	
Rural (nonmetro, not adj. to a metro)	450,090	417,430	404,090	-10.2%	17.6%	16.5%	16.2%	-1.4	
Appalachian States									
Alabama	810,260	826,960	718,320	-11.3%	17.2%	17.1%	14.7%	-2.5	
Appalachian Alabama	486,300	490,900	444,410	-8.6%	16.1%	15.9%	14.2%	-1.9	
Non-Appalachian Alabama	323,960	336,060	273,910	-15.4%	19.1%	19.3%	15.6%	-3.5	
Georgia	1,692,220	1,581,740	1,186,850	-29.9%	17.9%	15.8%	11.3%	-6.6	
Appalachian Georgia	418,040	343,500	330,680	-20.9%	14.7%	11.3%	10.1%	-4.6	
Non-Appalachian Georgia	1,274,180	1,238,240	856,170	-32.8%	19.3%	17.8%	11.8%	-7.5	
Kentucky	708,310	672,220	602,940	-14.9%	16.5%	15.3%	13.5%	-3.0	
Appalachian Kentucky	218,270	204,140	207,190	-5.1%	18.5%	17.3%	17.8%	-0.7	
Non-Appalachian Kentucky	490,040	468,080	395,750	-19.2%	15.8%	14.5%	12.0%	-3.8	
Maryland	660,040	668,070	589,970	-10.6%	11.6%	11.3%	9.8%	-1.8	
Appalachian Maryland	30,050	30,450	34,730	15.6%	12.0%	12.1%	13.9%	+1.9	
Non-Appalachian Maryland	629,990	637,620	555,240	-11.9%	11.5%	11.2%	9.6%	-1.9	
Mississippi	597,960	607,080	499,360	-16.5%	20.3%	20.3%	16.8%	-3.5	
Appalachian Mississippi	134,310	123,930	104,990	-21.8%	21.4%	19.7%	16.8%	-4.6	
Non-Appalachian Mississippi	463,650	483,150	394,370	-14.9%	20.0%	20.5%	16.7%	-3.3	
New York	2,530,610	2,391,540	2,293,060	-9.4%	13.2%	12.2%	11.8%	-1.4	
Appalachian New York	136,630	135,550	128,260	-6.1%	12.8%	12.8%	12.6%	-0.2	
Non-Appalachian New York	2,393,980	2,255,990 1,584,190	2,164,800	-9.6% -18.0%	13.2%	12.1%	11.7% 12.9%	-1.5 -4.8	
North Carolina Appalachian North Carolina	1,637,730 324,850	290,890	1,342,940 286,980	-11.7%	17.7% 16.9%	16.1%	14.2%	- 4.6 -2.7	
Non-Appalachian North Carolina	1,312,880	1,293,300	1,055,960	-19.6%	17.9%	16.4%	12.6%	-5.3	
Ohio	1,925,180	1,777,360	1,511,960	-21.5%	16.7%	15.4%	13.0%	-3.7	
Appalachian Ohio	358,060	311,630	298,660	-16.6%	17.5%	15.4%	15.0%	-2.5	
Non-Appalachian Ohio	1,567,120	1,465,730	1,213,300	-22.6%	16.6%	15.3%	12.5%	-4.1	
Pennsylvania	1,719,280	1,614,410	1,370,710	-20.3%	13.6%	12.6%	10.7%	-2.9	
Appalachian Pennsylvania	776,490	736,970	652,710	-15.9%	13.4%	12.8%	11.5%	-1.9	
Non-Appalachian Pennsylvania	942,790	877,440	718,000	-23.8%	13.8%	12.5%	10.1%	-3.7	
South Carolina	778,560	709,880	504,990	-35.1%	17.3%	14.9%	9.9%	-7.4	
Appalachian South Carolina	180,420	161,610	131,130	-27.3%	15.4%	13.1%	10.0%	-5.4	
Non-Appalachian South Carolina	598,140	548,270	373,860	-37.5%	17.9%	15.5%	9.9%	-8.0	
Tennessee	1,016,640	998,090	879,100	-13.5%	16.3%	15.4%	13.0%	-3.3	
Appalachian Tennessee	415,840	404,620	407,610	-2.0%	15.1%	14.3%	14.0%	-1.1	
Non-Appalachian Tennessee	600,800	593,470	471,490	-21.5%	17.2%	16.2%	12.2%	-5.0	
Virginia	903,430	884,110	725,510	-19.7%	11.5%	10.7%	8.5%	-3.0	
Appalachian Virginia	105,890	98,220	100,640	-5.0%	13.8%	12.8%	13.5%	-0.3	
Non-Appalachian Virginia	797,540	785,890	624,870	-21.7%	11.3%	10.5%	8.0%	-3.3	
West Virginia	270,080	270,840	234,520	-13.2%	14.7%	14.6%	13.0%	-1.7	

Map 1. Percentage of the Population That Is Food Insecure (2020)

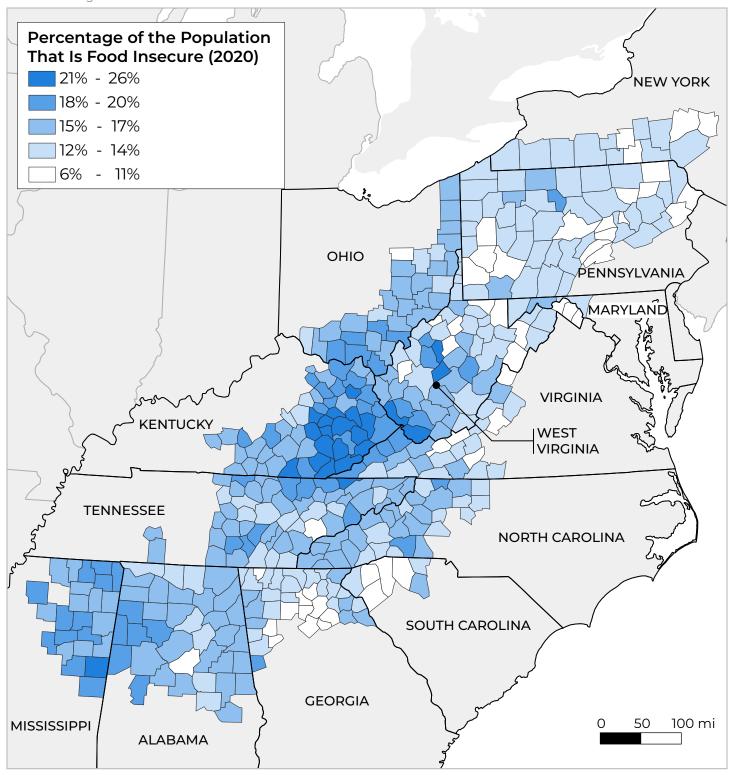


Table 2. Childhood Food Insecurity Estimates (2010-2020)

		Food insecu	re children		Percentage	of children	that are foo	d insecure
	2010	2015	2020	Percentage change from 2010 to 2020	2010	2015	2020	Percentage point change from 2010 to 2020
United States	16,237,390	14,490,920	12,309,690	-24.2%	22.3%	19.7%	16.8%	-5.5
Appalachian Region	1,353,850	1,212,740	899,920	-33.5%	24.%	21.6%	16.4%	-7.6
Subregions								
Northern Appalachia	369,170	329,820	269,210	-27.1%	21.4%	19.9%	17.1%	-4.3
North Central Appalachia	125,900	116,310	96,080	-23.7%	23.%	21.4%	18.4%	-4.6
Central Appalachia	109,740	100,740	84,470	-23.0%	25.8%	24.3%	21.2%	-4.6
South Central Appalachia	266,600	235,440	174,680	-34.5%	25.4%	22.4%	16.9%	-8.5
Southern Appalachia	482,440	430,430	275,480	-42.9%	25.4%	22.2%	14.1%	-11.3
County Types								
Large Metros (pop. 1 million +)	294,700	270,920	184,280	-37.5%	21.5%	19.6%	13.4%	-8.1
Small Metros (pop. <1 million)	547,640	496,220	376,630	-31.2%	23.4%	21.3%	16.4%	-7.0
Nonmetro, Adjacent to Large Metros	140,080	120,460	87,130	-37.8%	27.%	24.%	17.9%	-9.1
Nonmetro, Adjacent to Small Metros	221,590	192,310	148,900	-32.8%	25.8%	22.9%	18.4%	-7.4
Rural (nonmetro, not adj. to a metro)	149,840	132,830	102,980	-31.3%	26.6%	24.3%	19.8%	-6.8
Appalachian States								
Alabama	264,700	262,560	219,080	-17.2%	23.7%	23.6%	20.%	-3.7
Appalachian Alabama	165,360	163,160	126,480	-23.5%	23.4%	23.2%	18.2%	-5.2
Non-Appalachian Alabama	99,340	99,400	92,600	-6.8%	24.2%	24.4%	23.3%	-0.9
Georgia	613,070	567,330	379,750	-38.1%	25.3%	22.8%	15.2%	-10.1
Appalachian Georgia	201,260	171,390	85,230	-57.7%	26.2%	21.5%	10.5%	-15.7
Non-Appalachian Georgia	411,810	395,940	294,520	-28.5%	24.8%	23.4%	17.4%	-7.4
Kentucky	214,580	196,000	173,860	-19.0%	21.5%	19.3%	17.3%	-4.2
Appalachian Kentucky	69,650	62,900	54,890	-21.2%	26.1%	24.%	21.5%	-4.6
Non-Appalachian Kentucky	144,930	133,100	118,970	-17.9%	19.8%	17.7%	15.8%	-4.0
Maryland	212,820	218,210	185,110	-13.0%	15.9%	16.2%	13.8%	-2.1
Appalachian Maryland	12,090	11,610	7,810	-35.4%	22.9%	22.2%	15.4%	-7.5
Non-Appalachian Maryland	200,730	206,600	177,300	-11.7%	15.6%	15.9%	13.7%	-1.9
Mississippi	194,850	182,740	150,890	-22.6%	26.2%	24.8%	21.3%	-4.9
Appalachian Mississippi	45,060	38,080	28,650	-36.4%	29.3%	25.4%	19.9%	-9.4
Non-Appalachian Mississippi	149,790	144,660	122,240	-18.4%	25.4%	24.7%	21.7%	-3.7
New York	847,170	794,040	754,560	-10.9%	19.6%	18.7%	18.5%	-1.1
Appalachian New York	47,880	46,520	33,680	-29.7%	21.4%	21.8%	17.%	-4.4
Non-Appalachian New York	799,290	747,520	720,880	-9.8%	19.6%	18.5%	18.6%	-1.0
North Carolina	545,680	506,250	432,440	-20.8%	24.7%	22.2%	18.8%	-5.9
Appalachian North Carolina	114,300	98,110	75,520	-33.9%	27.3%	23.8%	18.7%	-8.6
Non-Appalachian North Carolina	431,380	408,140	356,920	-17.3%	24.1%	21.8%	18.8%	-5.3
Ohio	645,770	564,190	477,680	-26.0%	23.7%	21.2%	18.4%	-5.3
Appalachian Ohio	128,950	107,810	84,630	-34.4%	27.4%	24.%	19.7%	-7.7
Non-Appalachian Ohio	516,820	456,380	393,050	-23.9%	23.%	20.7%	18.1%	-4.9
Pennsylvania	521,480	465,160	436,010	-16.4%	18.8%	17.1 %	16.5%	-2.3
Appalachian Pennsylvania	238,090	212,310	179,520	-24.6%	20.%	18.5%	16.4%	-3.6
Non-Appalachian Pennsylvania	283,390	252,850	256,490	-9.5%	17.9%	16.%	16.5%	-1.4
South Carolina	261,640	221,100	159,330	-39.1%	24.9%	20.4%	14.4%	-10.5
Appalachian South Carolina	70,760	57,800	35,120	-50.4%	25.6%	20.3%	11.9%	-13.7
Non-Appalachian South Carolina	190,880	163,300	124,210	-34.9%	24.6%	20.5%	15.3%	-9.3
Tennessee	337,850	315,490	260,860	-22.8%	23.1%	21.1%	17.3%	-5.8
Appalachian Tennessee	149,000	135,850	97,490	-34.6%	24.9%	22.5%	16.2%	-8.7
Non-Appalachian Tennessee	188,850	179,640	163,370	-13.5%	21.9%	20.2%	18.%	-3.9
Virginia	275,290	258,540	nd	nd	15.2%	13.9%	nd	nd
Appalachian Virginia	33,270	28,680	21,470	-35.5%	22.4%	19.8%	15.8%	-6.6
Non-Appalachian Virginia	242,020	229,860	nd	nd	14.6%	13.4%	nd	nd
West Virginia	78,180	78,520	69,430	-11.2%	20.6%	20.6%	19.%	-1.6

Map 2. Percentage of Children Who Are Food Insecure (2020)

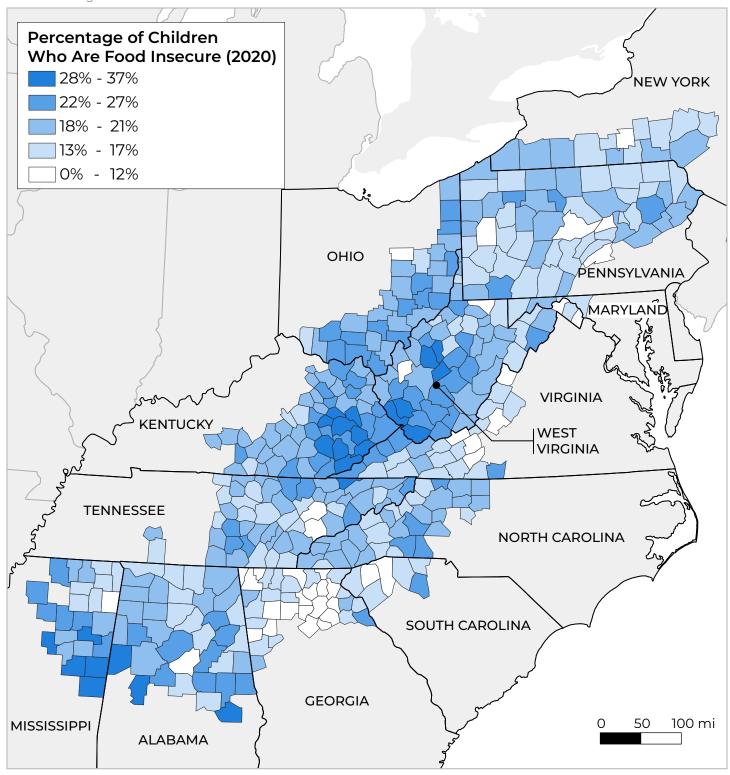


Table 3. Number and Share of Households Receiving SNAP $(2006-2010\ to\ 2016-2020)$

	Numbe	umber of households receiving SNAP			Percentage of households receiving SNAP					
	2006-2010	2011-2015	2016-2020	Percentage change from 2006-2010 to 2016-2020	2006-2010	2011-2015	2016-2020	Percentage point change from 2006-2010 to 2016-2020		
United States	10,583,720	15,399,651	13,892,407	31.3%	9.3%	13.2%	11.4%	+2.1		
Appalachian Region	1,135,112	1,553,647	1,368,345	20.5%	11.4%	15.5%	13.3%	+1.9		
Subregions										
Northern Appalachia	344,841	465,569	473,475	37.3%	10.4%	14.1%	14.2%	+3.8		
North Central Appalachia	131,221	165,200	159,402	21.5%	13.1%	16.4%	15.8%	+2.7		
Central Appalachia	149,034	177,715	151,726	1.8%	20.1%	23.9%	20.7%	+0.6		
South Central Appalachia	234,284	316,563	246,850	5.4%	11.7%	15.7%	11.9%	+0.2		
Southern Appalachia	275,732	428,600	336,892	22.2%	9.6%	14.6%	10.9%	+1.3		
County Types										
Large Metros (pop. 1 million +)	191,001	291,182	259,573	35.9%	8.6%	12.8%	10.9%	+2.3		
Small Metros (pop. <1 million)	456,990	631,470	559,489	22.4%	10.8%	14.8%	12.7%	+1.9		
Nonmetro, Adjacent to Large Metros	115,074	155,635	137,641	19.6%	12.9%	17.5%	15.3%	+2.4		
Nonmetro, Adjacent to Small Metros	209,364	273,958	244,430	16.7%	13.2%	17.5%	15.4%	+2.2		
Rural (nonmetro, not adj. to a metro)	162,683	201,402	167,212	2.8%	16.3%	20.4%	17.0%	+0.7		
Appalachian States										
Alabama	206,852	297,919	252,316	22.0%	11.4%	16.1%	13.4%	+2.0		
Appalachian Alabama	116,949	180,072	150,246	28.5%	10.0%	15.1%	12.4%	+2.4		
Non-Appalachian Alabama	89,903	117,847	102,070	13.5%	13.9%	17.9%	15.2%	+1.3		
Georgia	344,023	552,985	468,521	36.2%	9.9%	15.5%	12.2%	+2.3		
Appalachian Georgia	79,980	139,634	104,412	30.5%	7.9%	13.4%	9.2%	+1.3		
Non-Appalachian Georgia	264,043	413,351	364,109	37.9%	10.7%	16.3%	13.5%	+2.8		
Kentucky	234,426	295,954	227,276	-3.1%	14.0%	17.3%	13.0%	-1.0		
Appalachian Kentucky	95,932	114,529	94,072	-1.9%	21.2%	25.0%	20.7%	-0.5		
Non-Appalachian Kentucky	138,494	181,425	133,204	-3.8%	11.3%	14.5%	10.3%	-1.0		
Maryland	127,819	236,656	224,592	75.7%	6.0%	10.9%	10.1%	+4.1		
Appalachian Maryland	9,446	15,668	15,199	60.9%	9.8%	16.3%	15.8%	+6.0		
Non-Appalachian Maryland	118,373	220,988	209,393	76.9%	5.8%	10.7%	9.8%	+4.0		
Mississippi	159,806	200,366	162,478	1.7%	14.8%	18.3%	14.6%	-0.2		
Appalachian Mississippi	32,239	44,654	31,943	-0.9%	13.6%	18.8%	13.5%	-0.1		
Non-Appalachian Mississippi	127,567	155,712	130,535	2.3%	15.1%	18.1%	14.8%	-0.3		
New York	806,295	1,120,886	1,057,725	31.2%	11.2%	15.4%	14.3%	+3.1		
Appalachian New York	45,379	62,155	60,998	34.4%	10.7%	14.9%	14.5%	+3.8		
Non-Appalachian New York	760,916	1,058,731	996,727	31.0%	11.2%	15.5%	14.2%	+3.0		
North Carolina	372,066	552,539	482,394	29.7%	10.3%	14.6%	12.0%	+1.7		
Appalachian North Carolina	77,946	115,731	92,851	19.1%	9.9%	14.7%	11.3%	+1.4		
Non-Appalachian North Carolina	294,120	436,808	389,543	32.4%	10.3%	14.6%	12.1%	+1.8		
Ohio Appalachian Ohio	498,685	688,962	593,108	18.9%	11.0%	15.0%	12.6%	+1.6 +2.3		
Non-Appalachian Ohio	107,207 391,478	140,348	125,334 467,774	16.9% 19.5%	13.5% 10.4%	17.7%	15.8% 11.9%	+2.3		
Pennsylvania	445,506	548,614 637,866		50.6%	9.0%	12.9%	13.1%	+4.1		
Appalachian Pennsylvania	230,981	310,943	670,877 329,210	42.5%	9.9%	13.4%	13.1%	+4.0		
Non-Appalachian Pennsylvania	214,525	326,923	341,667	59.3%	8.2%	12.4%	12.5%	+4.3		
South Carolina	199,824	273,306	220,503	10.3%	11.5%	15.1%	11.2%	-0.3		
Appalachian South Carolina	46,564	64,240	50,291	8.0%	10.2%	13.6%	9.9%	-0.3		
Non-Appalachian South Carolina	153,260	209,066	170,212	11.1%	11.9%	15.6%	11.7%	-0.2		
Tennessee	338,254	428,497	332,009	-1.8%	13.8%	17.1%	12.6%	-1.2		
Appalachian Tennessee	156,151	199,276	154,907	-0.8%	14.0%	17.7%	13.2%	-0.8		
Non-Appalachian Tennessee	182,103	229,221	177,102	-2.7%	13.7%	16.6%	12.0%	-1.7		
Virginia	204,729	295,767	251,747	23.0%	6.9%	9.7%	7.9%	+1.0		
Appalachian Virginia	38,559	47,125	37,590	-2.5%	12.5%	15.4%	12.6%	+0.1		
Non-Appalachian Virginia	166,170	248,642	214,157	28.9%	6.2%	9.0%	7.4%	+1.2		
West Virginia	97,779	119,272	121,292	24.0%	13.2%	16.1%	16.5%	+3.3		

Map 3. Percentage of Households That Received SNAP Benefits (2016–2020)

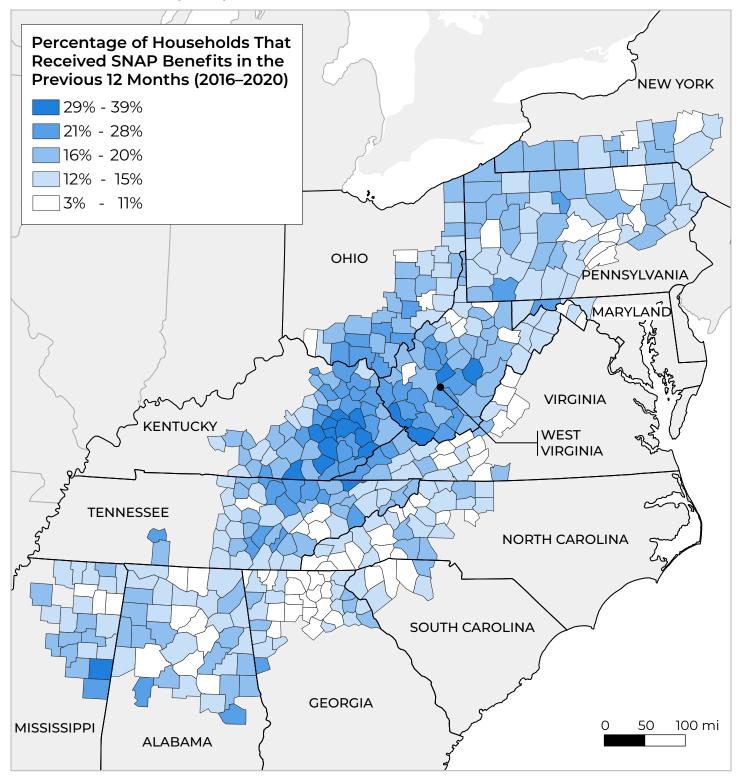


Table 4. Households Receiving SNAP by Poverty Status (2016-2020)

	Households w below pove		Households w at or above po		Households receiving SNAP		
	Number receiving SNAP	Percent receiving SNAP	Number receiving SNAP	Percent receiving SNAP	Percent below poverty level	Percent at or above poverty level	
United States	6,370,420	41.6%	7,521,987	7.0%	45.9%	54.1%	
Appalachian Region	705,614	46.9%	662,731	7.6%	51.6%	48.4%	
	705,014	40.5%	002,731	7.070	51.070	70.770	
Subregions	22 / 716	F1.00/	2/0150	0.6%	47.40	F2 C0/	
Northern Appalachia	224,316	51.0%	249,159	8.6%	47.4%	52.6%	
North Central Appalachia	87,152	53.3%	72,250	8.6%	54.7%	45.3%	
Central Appalachia	93,958	55.4%	57,768	10.2%	61.9%	38.1%	
South Central Appalachia Southern Appalachia	128,992 171,196	42.3% 40.2%	117,858	6.6%	52.3% 50.8%	47.7% 49.2%	
	171,196	40.2%	165,696	6.2%	50.8%	49.2%	
County Types							
Large Metros (pop. 1 million +)	116,892	43.0%	142,681	6.7%	45.0%	55.0%	
Small Metros (pop. <1 million)	287,684	45.7%	271,805	7.2%	51.4%	48.6%	
Nonmetro, Adjacent to Large Metros	71,639	50.2%	66,002	8.7%	52.0%	48.0%	
Nonmetro, Adjacent to Small Metros	129,415	50.4%	115,015	8.7%	52.9%	47.1%	
Rural (nonmetro, not adj. to a metro)	99,984	49.4%	67,228	8.6%	59.8%	40.2%	
Appalachian States							
Alabama	135,864	44.8%	116,452	7.3%	53.8%	46.2%	
Appalachian Alabama	80,515	44.4%	69,731	6.7%	53.6%	46.4%	
Non-Appalachian Alabama	55,349	45.4%	46,721	8.5%	54.2%	45.8%	
Georgia	218,672	41.7%	249,849	7.6%	46.7%	53.3%	
Appalachian Georgia	44,717	34.9%	59,695	5.9%	42.8%	57.2%	
Non-Appalachian Georgia	173,955	43.9%	190,154	8.3%	47.8%	52.2%	
Kentucky	135,081	46.8%	92,195	6.3%	59.4%	40.6%	
Appalachian Kentucky	61,055	55.4%	33,017	9.6%	64.9%	35.1%	
Non-Appalachian Kentucky	74,026	41.5%	59,178	5.3%	55.6%	44.4%	
Maryland	83,514	42.0%	141,078	6.9%	37.2%	62.8%	
Appalachian Maryland	7,110	56.2%	8,089	9.6%	46.8%	53.2%	
Non-Appalachian Maryland	76,404	41.1%	132,989	6.8%	36.5%	63.5%	
Mississippi	93,876	43.7 %	68,602	7.6%	57.8%	42.2%	
Appalachian Mississippi	19,533	41.4%	12,410	6.6%	61.1%	38.9%	
Non-Appalachian Mississippi	74,343	44.3%	56,192	7.9%	57.0%	43.0%	
New York	506,327	50.4%	551,398	8.6%	47.9%	52.1%	
Appalachian New York	31,345	49.2%	29,653	8.3%	51.4%	48.6%	
Non-Appalachian New York	474,982	50.5%	521,745	8.6%	47.7%	52.3%	
North Carolina	228,890	42.3%	253,504	7.3%	47.4%	52.6%	
Appalachian North Carolina	47,144	40.0%	45,707	6.5%	50.8%	49.2%	
Non-Appalachian North Carolina	181,746	42.9%	207,797	7.4%	46.7%	53.3%	
Ohio	311,175	49.3%	281,933	6.9%	52.5%	47.5%	
Appalachian Ohio	68,688	54.6%	56,646	8.5%	54.8%	45.2%	
Non-Appalachian Ohio	242,487	48.0%	225,287	6.6%	51.8%	48.2%	
Pennsylvania	298,992	49.7%	371,885	8.3%	44.6%	55.4%	
Appalachian Pennsylvania	149,061	50.8%	180,149	8.7%	45.3%	54.7%	
Non-Appalachian Pennsylvania	149,931	48.5%	191,736	7.9%	43.9%	56.1%	
South Carolina	113,308	39.8%	107,195	6.4%	51.4%	48.6%	
Appalachian South Carolina	26,431	37.9%	23,860	5.4%	52.6%	47.4%	
Non-Appalachian South Carolina	86,877	40.4%	83,335	6.7%	51.0%	49.0%	
Tennessee	172,204	45.5%	159,805	7.1%	51.9%	48.1%	
Appalachian Tennessee	83,439	47.0%	71,468	7.2%	53.9%	46.1%	
Non-Appalachian Tennessee	88,765	44.1%	88,337	7.0%	50.1%	49.9%	
Virginia	116,542	37.1%	135,205	4.7%	46.3%	53.7%	
Appalachian Virginia	20,393	39.5%	17,197	7.0%	54.3%	45.7%	
Non-Appalachian Virginia	96,149	36.6%	118,008	4.5%	44.9%	55.1%	
West Virginia	66,183	52.8%	55,109	9.0%	54.6%	45.4%	

Table 5. SNAP Households and Age, Disability, and Employment (2016-2020)

Appalachian Region 478,842 10,7% 623,290 21,2% 725,233 22,8% 631,942 11,67		Households with one or more people age 60 or older		or more	Households with one or more children under the age of 18		s with one ople with a oility	Families with one or more workers							
Appalachian Region 478,842 10.7% 623,290 21.2% 725,233 22.8% 631,942 11.67		receiving	receiving	receiving	receiving	receiving	receiving	receiving	receiving						
Northern Appalachia 774,998 11,6% 191,047 22,1% 25,158 25,6% 204,665 12,0% Central Appalachia 55,652 12,3% 69,933 24,9% 99,161 25,7% 67,654 13,3% Central Appalachia 50,442 15,3% 69,933 30,7% 91,773 28,5% 60,983 1813 Southern Appalachia 80,022 9,2% 18,007 21,0% 129,497 20,2% 18,393 113 Southern Appalachia 111,478 9,0% 176,082 77,4% 162,871 18,3% 180,107 30,10 3	United States	4,937,008	10.0%	6,836,559	18.2%	6,501,994	20.7%	7,466,423	10.9%						
Norther Appalachia 174,998 116/8 1910/7 221% 251531 25.8% 204,665 1207 North Central Appalachia 55,852 12.3% 69,936 24.9% 90,616 25.7% 67,654 13.37 Central Appalachia 54,492 15.3% 68,198 30.7% 90,173 28.5% 60,553 16.67 South Central Appalachia 86,022 9.2% 118,027 21.0% 129,497 20.2% 118,933 1115 Souther Appalachia 147/89 90% 175,092 174% 162,821 18.3% 180,107 1017 County Types Large Metros (opp. Inilition +1 94,843 9.9% 118,928 16.1% 131,800 21.1% 129,007 9.55 Small Metros (opp. Inilition +1 94,843 9.9% 118,928 16.1% 131,800 21.1% 129,007 9.55 Small Metros (opp. Inilition +1 190,198 10.1% 263,357 21.3% 286,999 21.8% 267,525 11.67 Normetro, Adjacent to Small Metros 87,000 11.7% 107,733 24.9% 138,966 24.6% 107,271 13.27 Appalachian States Alabama 80,308 10.3% 12.7% 73,310 26.2% 93,535 25.3% 67,570 13.97 Appalachian Alabama 46,964 9.4% 74,705 26.6% 173,412 19.6% 174,399 12.4% Non-Appalachian Ceorgia 159,619 11.4% 269,184 19.6% 207,037 21.4% 49,642 14.33 Ceorgia 159,619 11.4% 269,184 19.6% 207,037 21.4% 49,642 14.33 Ceorgia 159,619 11.4% 269,184 19.6% 207,037 21.4% 49,642 14.33 Non-Appalachian Ceorgia 123,009 12.6% 19.9% 11.270 20.8% 12.7% 19.9% 19.	Appalachian Region	478,842	10.7%	623,290	21.2%	725,233	22.8%	631,942	11.6%						
North Central Appalachia 55,852 12.3% 68,99 30,7% 90,10 25,7% 60,953 168 168 168 169 172 26.5% 60,953 168 168 169 174	Subregions														
Central Appalachia 50,492 15,3% 68,196 30,7% 91,173 28,5% 60,583 16,68 South Central Appalachia 86,022 9,2% 18,077 21,0% 129,497 20,2% 18,935 11,11 11,1	Northern Appalachia	174,998	11.6%	191,047	22.1%	251,581	25.8%	204,665	12.0%						
South-Central Appalachia 86,022 9.2% 118,027 21.0% 129,497 20.2% 118,933 118 118,007 10.18 118,007 1	North Central Appalachia	55,852	12.3%	69,936	24.9%	90,161	25.7%	67,654	13.3%						
Southern Appalachia 111,478 9.0% 176,082 17.4% 162,821 18.3% 180,107 101.	Central Appalachia	50,492	15.3%	68,198	30.7%	91,173	28.5%	60,583	16.8%						
County Types	South Central Appalachia	86,022	9.2%	118,027	21.0%	129,497	20.2%	118,933	11.1%						
Large Metros (pop. 1 million) 94,843 9.9% 118,922 16.1% 131,820 211% 129,007 9.55 5mall Metros (pop. 4 million) 190,158 10.1% 263,357 21.3% 265,999 21.8% 627,325 11.65 11.0% 10.0% 263,357 21.3% 265,999 21.8% 627,325 11.65 11.0% 10.0% 263,357 21.3% 24.9% 138,366 24.6% 107,217 13.21 107,733 24.9% 138,366 24.6% 107,217 13.21 107,733 24.9% 138,366 24.6% 107,217 13.21 107,733 24.9% 138,366 24.6% 107,217 13.21 107,733 24.9% 138,366 24.6% 107,217 13.21 10.0% 25.9% 25.3% 675,70 13.99 21.4% 25.3% 25.3% 675,70 23.99 21.4% 24.99 24.4% 24.99 24.4% 24.99 24.4% 24.99 24.4% 24.99 24.4% 24.99 24.4% 25.8% 24.55,77 22.1% 24.9642 14.3% 25.9% 24.99 24.4% 25.8% 24.55,77 22.1% 24.9642 14.3% 24.998 25.9% 24.9984 26.9% 27.9	Southern Appalachia	111,478	9.0%	176,082	17.4%	162,821	18.3%	180,107	10.1%						
Small Metros (pop. 4 million) 190,158 10.1% 263,357 21.3% 286,999 21.8% 267,325 11.66 Nonmetro, Adjacent to Large Metros 48,710 12.0% 59,962 23.4% 74,495 24.8% 60,823 12.9% Rural (nonmetro, not adj. to a metro) 57,631 12.7% 73,310 26.2% 93,553 25.3% 67,570 13.9% Appalachian Alabama 80,308 10.3% 125,121 22.4% 118,949 20.5% 124,399 12.4% Appalachian Alabama 46,964 9.4% 74,705 20.6% 73,412 19.6% 74,757 11.4% Non-Appalachian Alabama 43,344 11.8% 50,416 25.8% 45,537 22.1% 49,642 14.3% Appalachian Georgia 159,619 11.4% 249,184 19.6% 207,037 21.4% 265,777 12.0% Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.77 Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.77 Appalachian Kentucky 69,676 9.9% 112,702 20.8% 126,315 21.8% 106,070 11.4% Appalachian Kentucky 39,409 7.8% 70,106 17.6% 71,113 18.4% 68,528 9.7% Appalachian Maryland 85,717 9.5% 109,419 13.5% 105,688 20.7% 127,120 9.77 Appalachian Maryland 80,541 9.5% 102,626 15.1% 88,849 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 88,849 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26,7% 23,708 11.4% Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26,7% 23,708 11.4% Appalachian New York 22,621 12.1% 23,345 21.3% 30,2994 23,7% 23,708 11.4% Appalachian North Carolina 33,370 12.8%	County Types														
Small Metros (pop. 4 million) 190,158 10.1% 263,357 21.3% 286,999 21.8% 267,325 11.66 Nonmetro, Adjacent to Large Metros 48,710 12.0% 59,962 23.4% 74,495 24.8% 60,823 12.9% Rural (nonmetro, not adj. to a metro) 57,631 12.7% 73,310 26.2% 93,553 25.3% 67,570 13.9% Appalachian Alabama 80,308 10.3% 125,121 22.4% 118,949 20.5% 124,399 12.4% Appalachian Alabama 46,964 9.4% 74,705 20.6% 73,412 19.6% 74,757 11.4% Non-Appalachian Alabama 43,344 11.8% 50,416 25.8% 45,537 22.1% 49,642 14.3% Appalachian Georgia 159,619 11.4% 249,184 19.6% 207,037 21.4% 265,777 12.0% Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.77 Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.77 Appalachian Kentucky 69,676 9.9% 112,702 20.8% 126,315 21.8% 106,070 11.4% Appalachian Kentucky 39,409 7.8% 70,106 17.6% 71,113 18.4% 68,528 9.7% Appalachian Maryland 85,717 9.5% 109,419 13.5% 105,688 20.7% 127,120 9.77 Appalachian Maryland 80,541 9.5% 102,626 15.1% 88,849 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 88,849 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian Maryland 80,541 9.5% 102,626 15.1% 9.6840 20.2% 119,743 9.5% Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26,7% 23,708 11.4% Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26,7% 23,708 11.4% Appalachian New York 22,621 12.1% 23,345 21.3% 30,2994 23,7% 23,708 11.4% Appalachian North Carolina 33,370 12.8%		94 843	9.9%	118 928	161%	131 820	21.1%	129 007	9.5%						
Nonmetro, Adjacent to Large Metros 48,710 12.0% 59,962 23.4% 74,495 24.8% 60,823 12.99 Nonmetro, Adjacent to Small Metros 87,500 11.7% 107,733 24.9% 138,366 24.6% 107,217 13.22									11.6%						
Non-Appalachian Kentucky 30,068 15.4% 20,06% 17.5%									12.9%						
Rural (nonmetro, not adj. to a metro) 57,631 12.7% 73,310 26.2% 93,553 25.3% 67,570 13.9% Appalachian States									13.2%						
Appalachian States									13.9%						
Appalachian Alabama															
Appalachian Alabama 46,964 9.4% 74,705 20.6% 73,412 19.6% 74,757 11.4% Non-Appalachian Alabama 33,344 11.8% 50.416 25.8% 45,557 21.1% 49,642 14.3% Ceorgia 159,619 11.4% 249,184 19.6% 207,037 21.4% 255,777 11.2% Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.7% Non-Appalachian Georgia 123,029 12.6% 188,929 22.3% 157,981 23.1% 202,061 13.7% Appalachian Kentucky 69,676 9.9% 112,702 20.8% 126,315 21.8% 106,070 11.4% Appalachian Kentucky 30,268 15.4% 42,596 30.0% 55,202 28.5% 37,542 16.7% Non-Appalachian Maryland 85,711 9.6% 109,419 15.5% 105,688 20.7% 127,120 9.7% Appalachian Maryland 5,170 12.3% 6,793 24.1% 8,848 28.7% 1,7377 14.2% Non-Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Non-Appalachian Maryland 80,541 9.5% 86,802 24.2% 77,249 21.5% 84,296 13.9% Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.6% Non-Appalachian New York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.2% Appalachian New York 469,280 16.0% 392,907 19.4% 514,351 29.0% 492,152 12.2% Appalachian New York 469,280 16.0% 392,907 19.4% 514,351 29.0% 492,152 12.2% Non-Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 468,444 12.3% Non-Appalachian Ohio 193,729 10.2% 270,782 19.8% 302,994 23,798 11.8% Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 468,444 12.3% Non-Appalachian Ohio 43,539 12.2% 54,712 24,436 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,436 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Ohio 43,539 12.2% 54,712 24,496 69,496 26.8% 53,873 15.0% Non-Appalachian Pennsylvani	• • • • • • • • • • • • • • • • • • • •	90.709	10.7%	125 121	22 69/	110 0/0	20 E%	127 700	12 69/						
Non-Appalachian Alabama 33,344 11.8% 50,416 25.8% 45,537 22.1% 49,642 14.35		-				-		•							
Ceorgia 159,619 11.4% 249,184 19.6% 207,037 21.4% 265,717 12.09 Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,656 8.7% Non-Appalachian Georgia 123,029 12.6% 188,829 22.3% 157,981 23.1% 202,061 13.79 Kentucky 69,676 9.9% 112,702 20.8% 126,315 21.8% 106,070 11.49 Appalachian Kentucky 30,268 15.4% 42,596 30.0% 55,202 28.5% 37,542 16.7% Non-Appalachian Kentucky 39,408 78% 70,106 17.6% 71,113 18.4% 68,528 9.7% Maryland 85,711 9.6% 109,419 15.5% 105,688 20.7% 127,120 9.73 Appalachian Maryland 5,170 12.3% 6,793 24.1% 8.848 28.7% 7,377 14.2% Appalachian Maryland 80,541 9.5% 102,626 15.1% 86,802 24.2% 77,249 21.5% 84,296 13.99 Appalachian Mississippi 52,178 11.4% 86,802 24.2% 77,249 21.5% 84,296 13.99 Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.6% Non-Appalachian Mississippi 41,754 11.7% 71,167 24.7% 62,035 22.1% 69,966 14.5% Appalachian New York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.28 Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26.7% 23,708 11.4% Non-Appalachian New York 469,280 16.0% 392,907 19.3% 42,044 29.1% 46,8444 12.3% Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.7% Non-Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.7% Non-Appalachian North Carolina 35,359 12.2% 54,712 24,4% 69,496 26.6% 53,873 13.0% Appalachian Ohio 43,539 12.2% 54,712 24,4% 69,496 26.6% 53,873 13.0% Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 139,807 1.4% Non-Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 139,807 1.4% Appalachian Pennsylvania 131,072 19.6	·	,													
Appalachian Georgia 36,590 8.5% 60,255 14.2% 49,056 17.1% 63,6556 8.75 Non-Appalachian Georgia 123,029 12.6% 188,929 22.3% 157,981 23.1% 202,061 13.75 Kentucky 69,676 9.9% 112,702 20.8% 126,315 21.8% 106,070 11.4% Appalachian Kentucky 30,268 15.4% 42,596 30.0% 55,202 28.5% 37,542 16.75 Non-Appalachian Kentucky 39,408 7.8% 70,106 17.6% 71,113 18.4% 66,528 9.75 Mon-Appalachian Kentucky 39,408 7.8% 70,106 17.6% 71,113 18.4% 66,528 9.75 Appalachian Maryland 51,700 12.3% 6,793 24.1% 8,848 28.7% 73,777 14.2½ Non-Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Non-Appalachian Mississippi 52,178 11.4% 86,802 24.2% 15,213 19.5% 14,330 11.66 Non-Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.66 Non-Appalachian Mississippi 41,754 11.7% 71,167 24.7% 62,036 22.1% 69,966 14.55 New York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.2% Appalachian New York 22,621 12.1% 23,345 213% 32,307 26,7% 23,708 11.4% Non-Appalachian New York 469,280 16.0% 392,907 19.3% 482,044 29.1% 468,444 12.3% North Carolina 152,113 10.9% 20,0732 19.9% 173,757 21.3% 214,009 12.00 Non-Appalachian North Carolina 132,113 10.9% 20,0732 19.9% 173,757 21.3% 214,009 12.00 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 22,803 10.9% Appalachian Chic 155,288 11.6% 289,367 20.3% 353,608 25.4% 32,238 11.6% 289,367 20.3% 353,608 25.4% 32,238 11.6% 289,367 20.3% 353,608 25.4% 32,238 11.6% 289,367 20.3% 353,608 25.4% 32,238 11.6% 289,367 20.3% 353,608 25.4% 19,809 11.4% 25,447 11.6% 289,367 20.3% 353,608 25.4% 119,809 11.4% 25,447 11.6	• • • • • • • • • • • • • • • • • • • •														
Non-Appalachian Georgia 123,029 12.6% 188,929 22.3% 157,981 23.1% 202,061 13.75				-		-									
Rentucky						,									
Appalachian Kentucky 39,068 15,4% 42,596 30,0% 55,202 28,5% 37,542 16,75 Non-Appalachian Kentucky 39,408 7,8% 70,106 17,6% 71,113 18,4% 68,528 9,75 Appalachian Maryland 5,170 12,3% 6,793 24,11% 105,688 20,7% 127,120 9,77 Non-Appalachian Maryland 80,541 9.5% 102,626 15,11% 96,840 20,2% 119,743 9,55 Mississippi 52,178 11,4% 86,802 24,2% 77,249 21,5% 84,296 13,99 Appalachian Mississippi 10,424 10,4% 15,635 22,2% 15,213 19,5% 14,330 11,65 Non-Appalachian Mississippi 41,754 11,7% 71,167 24,7% 62,036 22,11% 69,966 14,55 New York 491,901 15,8% 416,252 19,4% 514,351 29,0% 492,152 12,29 Appalachian New York 469,280 16,0% 392,907 19,3% 482,044 29,11% 468,444 12,33 North Carolina 165,483 10,4% 244,378 20,0% 219,436 20,8% 259,187 10,87 Appalachian North Carolina 133,170 8,9% 43,646 20,2% 45,679 19,11% 45,178 10,77 Non-Appalachian North Carolina 132,113 10,9% 200,732 19,9% 302,994 23,7% 281,966 11,3% Appalachian Ohio 43,539 12,2% 54,712 24,4% 69,496 26,8% 53,873 13,05 Non-Appalachian Ohio 43,539 12,2% 54,712 24,4% 69,496 26,8% 53,873 13,05 Non-Appalachian Ohio 150,190 9,7% 216,070 18,9% 33,608 25,4% 322,38 11,7% Appalachian Pennsylvania 154,226 11,6% 131,045 21,6% 177,677 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 179,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 11,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 17,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 17,77,67 25,4% 178,888 11,66 South Carolina 17,500 8,4% 25,487 16,6% 25,140 17,77,67 25,4% 178,888 11,66 South Caroli															
Non-Appalachian Kentucky 39,408 7.8% 70,106 17.6% 71,113 18.4% 68,528 9.75	-	-		-		-		-							
Maryland 85,711 9.6% 109,419 15.5% 105,688 20.7% 127,120 9.78 Appalachian Maryland 5,170 12.3% 6,793 24.1% 8,848 28.7% 7,377 14.25 Non-Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Mississippi 52,178 11.4% 86,802 24.2% 77,249 21.5% 84,296 13.99 Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.65 Non-Appalachian Mississippi 41,754 11.7% 71,67 24.7% 62,036 22.1% 69,966 14.5% Morn-Appalachian Mew York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.29 Appalachian New York 496,280 16.0% 392,907 19.3% 482,044 29.1% 468,444 12.3% Appalachian New York 469,280 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>															
Appalachian Maryland															
Non-Appalachian Maryland 80,541 9.5% 102,626 15.1% 96,840 20.2% 119,743 9.5% Mississippi 52,178 11.4% 86,802 24.2% 77,249 21.5% 84,296 13.99 Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.65 11.6% 11.7% 11.7% 17,167 24.7% 62,036 22.1% 69,966 14.55 14,530 11.65 14,535 11.6% 14,555 14,330 11.65 14,555 14,535 12.0% 492,152 12.29 12															
Mississippi 52,178 11.4% 86,802 24.2% 77,249 21.5% 84,296 13.99															
Appalachian Mississippi 10,424 10.4% 15,635 22.2% 15,213 19.5% 14,330 11.65 Non-Appalachian Mississippi 41,754 11.7% 71,167 24.7% 62,036 22.1% 69,966 14.55 New York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.29 Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26.7% 23,708 11.4% Non-Appalachian New York 469,280 16.0% 392,907 19.3% 482,044 29.1% 468,444 12.3% North Carolina 165,483 10.4% 244,378 20.0% 219,436 20.8% 259,187 11.89 Appalachian North Carolina 133,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.7% Non-Appalachian North Carolina 132,113 10.9% 200,732 19.9% 173,757 21.3% 214,009 12.0% Appalachian Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,559 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.0% Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.9% Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 143,350 11.6% South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% Tenessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,266 11.9% Non-Appalachian Tennessee 55,131 10.3% 91,481 19,603 15.7% 139,476 7.6% 139,476 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19,698 82,911 21.2% 97,222 11.7% 130,476 15.0% 150,476 15															
Non-Appalachian Mississippi		-		-				-							
New York 491,901 15.8% 416,252 19.4% 514,351 29.0% 492,152 12.29															
Appalachian New York 22,621 12.1% 23,345 21.3% 32,307 26.7% 23,708 11.49 Non-Appalachian New York 469,280 16.0% 392,907 19.3% 482,044 29.1% 468,444 12.39 North Carolina 165,483 10.4% 244,378 20.0% 219,436 20.8% 259,187 11.89 Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.79 Non-Appalachian North Carolina 132,113 10.9% 200,732 19.9% 173,757 21.3% 214,009 12.09 Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 131,072 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 South Carolina 77,827 9.3% 113,045 21.6% 177,767 25.4% 178,888 11.69 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.66 Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% 1ennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.99 Non-Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.15 Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.79 Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.69															
Non-Appalachian New York 469,280 16.0% 392,907 19.3% 482,044 29.1% 468,444 12.35						-									
North Carolina 165,483 10.4% 244,378 20.0% 219,436 20.8% 259,187 11.89 Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.79 Non-Appalachian North Carolina 132,113 10.9% 200,732 19.9% 173,757 21.3% 214,009 12.0% Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.9% Appalachian Pennsylvania 124,226 11.6% 289,367 20.3% 353,608 25.4% 143,350 11.6% Non-Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.6% Non-Appalachian South Carolina															
Appalachian North Carolina 33,370 8.9% 43,646 20.2% 45,679 19.1% 45,178 10.79 Non-Appalachian North Carolina 132,113 10.9% 200,732 19.9% 173,757 21.3% 214,009 12.09 Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 Non-Appalachian South Carolina															
Non-Appalachian North Carolina 132,113 10.9% 200,732 19.9% 173,757 21.3% 214,009 12.09 Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500		-						-							
Ohio 193,729 10.2% 270,782 19.8% 302,994 23.7% 281,966 11.39 Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 143,350 11.89 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327															
Appalachian Ohio 43,539 12.2% 54,712 24.4% 69,496 26.8% 53,873 13.09 Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% Tennessee 108,133															
Non-Appalachian Ohio 150,190 9.7% 216,070 18.9% 233,498 22.9% 228,093 10.99 Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.69 Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.19 Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.99 Appalachian Tennessee						-									
Pennsylvania 255,298 11.6% 289,367 20.3% 353,608 25.4% 322,238 11.79 Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.69 Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.19 Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.99 Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.19 Non-Appalachian Tennessee 5															
Appalachian Pennsylvania 124,226 11.6% 131,045 21.6% 175,841 25.4% 143,350 11.89 Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.69 South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.9% Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% <td <="" colspan="6" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td>	<td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>														
Non-Appalachian Pennsylvania 131,072 11.6% 158,322 19.4% 177,767 25.4% 178,888 11.6% South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.4% Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.9% Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%	-							,							
South Carolina 77,827 9.3% 113,284 20.0% 101,473 18.4% 119,807 11.49 Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.1% Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.9% Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%															
Appalachian South Carolina 17,500 8.4% 25,487 16.6% 25,140 17.0% 27,364 9.6% Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.19 Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.99 Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.19 Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.79 Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.69								,							
Non-Appalachian South Carolina 60,327 9.6% 87,797 21.2% 76,333 19.0% 92,443 12.19 Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.9% Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%									9.6%						
Tennessee 108,133 10.3% 166,485 20.9% 168,708 21.6% 171,286 11.99 Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%															
Appalachian Tennessee 53,002 10.4% 75,004 22.7% 85,797 22.1% 74,064 12.1% Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.7% Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%															
Non-Appalachian Tennessee 55,131 10.3% 91,481 19.6% 82,911 21.2% 97,222 11.79 Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%				-		-			12.1%						
Virginia 88,373 7.1% 130,218 13.1% 119,603 15.7% 139,476 7.6%															
									7.3%						
									14.2%						

Table 6. SNAP Households and Race/Ethnicity (2016-2020) Data: American Community Survey

		Percent of h	ouseholds re	ceiving SN	AP, by race/	ethnicity of h	ouseholder	
	White alone, not Hispanic or Latino	Black or African American alone	American Indian or Alaskan Native alone	Asian alone	Native Hawaiian or Pacific Islander alone	Other race alone	Two or more races alone	Hispanic or Latino (Any Race)
United States	7.7%	24.4%	23.3%	7.1%	18.5%	19.7%	16.3%	18.5%
Appalachian Region	11.9%	24.8%	20.4%	6.0%	14.8%	18.3%	20.9%	17.4 %
Subregions								
Northern Appalachia	12.5%	36.3%	30.6%	7.6%	10.0%	30.6%	27.2%	30.0%
North Central Appalachia	15.4%	26.3%	34.8%	7.2%	19.8%	17.2%	23.9%	15.3%
Central Appalachia	20.5%	27.5%	34.7%	3.4%	33.9%	17.6%	28.8%	21.8%
South Central Appalachia	10.5%	25.7%	16.2%	5.8%	16.8%	19.0%	19.9%	16.2%
Southern Appalachia	7.9%	21.5%	14.5%	5.1%	12.2%	13.7%	14.6%	12.5%
County Types								
Large Metros (pop. 1 million +)	8.6%	22.1%	18.5%	5.5%	9.2%	13.0%	15.9%	11.8%
Small Metros (pop. <1 million)	10.9%	26.2%	19.0%	5.9%	16.3%	22.3%	21.2%	19.5%
Nonmetro, Adjacent to Large Metros		26.2%	27.6%	9.5%	19.9%	19.9%	27.7%	22.7%
Nonmetro, Adjacent to Small Metros	14.2%	27.1%	17.8%	11.2%	16.6%	21.6%	27.7%	22.7%
Rural (nonmetro, not adj. to a metro)	16.1%	27.4%	29.0%	3.2%	7.6%	13.4%	27.1%	15.8%
	10.170	27.470	25.0%	5.270	7.070	15.470	27.170	15.0%
Appalachian States								
Alabama	8.3%	26.5%	16.9%	3.4%	6.7%	17.7%	16.5%	15.3%
Appalachian Alabama	8.4%	24.5%	14.5%	3.6%	8.2%	18.8%	17.6%	16.3%
Non-Appalachian Alabama	8.0%	29.0%	20.3%	3.2%	0.0%	14.4%	14.3%	12.9%
Georgia		22.2%	16.2%	5.1%	16.4%	14.5%	12.4%	12.8%
Appalachian Georgia	7.9%	14.3%	13.4%	5.6%	16.8%	12.4%	11.5%	11.6%
Non-Appalachian Georgia	6.7%	23.5%	17.5%	4.8%	16.3%	15.9%	12.9%	13.9%
Kentucky		23.0%	24.8%	7.5%	19.2%	16.3%	20.1%	16.8%
Appalachian Kentucky	20.5%	27.9%	32.1%	2.7%	15.2%	12.3%	29.7%	21.6%
Non-Appalachian Kentucky	8.4%	22.8%	20.5%	7.9%	19.7%	16.7%	18.0%	16.3%
Maryland	6.1%	17.7%	16.3%	6.4%	8.8%	12.8%	13.2%	11.4%
Appalachian Maryland	14.6%	33.8%	40.6%	7.5%	0.0%	18.1%	26.4%	17.9%
Non-Appalachian Maryland	5.4%	17.6%	15.8%	6.4%	9.1%	12.8%	12.9%	11.3%
Mississippi	7.4%	26.5%	20.0%	3.4%	9.5%	12.2%	16.6%	12.7%
Appalachian Mississippi	7.9%	25.8%	18.7%	0.1%	2.9%	7.5%	21.9%	9.2%
Non-Appalachian Mississippi	7.2%	26.7%	20.1%	4.0%	14.9%	13.7%	15.2%	13.5%
New York		26.2%	29.8%	13.1%	18.5%	32.0%	20.3%	27.9%
Appalachian New York	13.5%	39.7%	32.5%	4.4%	0.0%	35.3%	22.3%	31.1%
Non-Appalachian New York	7.8%	26.1%	29.6%	13.2%	19.2%	32.0%	20.2%	27.9%
North Carolina	7.6%	24.7%	25.7%	6.1%	12.0%	14.8%	17.6%	15.1%
Appalachian North Carolina	9.5%	25.4%	12.4%	7.5%	21.2%	17.7%	20.9%	15.5%
Non-Appalachian North Carolina	6.9%	24.6%	27.8%	5.9%	9.3%	14.3%	17.0%	15.1%
Ohio		28.6%	25.2%	7.5%	10.8%	23.5%	22.9%	20.3%
Appalachian Ohio	14.6%	32.0%	39.2%	12.0%	0.0%	21.7%	31.4%	26.3%
Non-Appalachian Ohio	8.5%	28.4%	22.5%	7.3%	12.3%	23.6%	21.6%	19.7%
Pennsylvania	9.4%	32.0%	28.9%	10.5%	20.1%	37.3%	24.6%	33.1%
Appalachian Pennsylvania	12.1%	36.7%	26.6%	8.4%	13.7%	31.0%	27.0%	30.1%
Non-Appalachian Pennsylvania	6.4%	30.6%	30.1%	11.1%	23.4%	38.5%	23.4%	33.8%
South Carolina	6.5%	23.4%	20.4%	3.4%	12.9%	14.2%	14.9%	13.4%
Appalachian South Carolina	6.9%	22.3%	16.0%	4.9%	15.5%	11.1%	16.7%	11.2%
Non-Appalachian South Carolina	6.3%	23.6%	21.7%	2.8%	9.8%	15.4%	14.1%	14.4%
Tennessee		24.4%	20.3%	4.4%	13.6%	17.8%	16.4%	15.0%
Appalachian Tennessee	12.1%	27.4%	26.0%	5.4%	22.4%	21.2%	20.7%	18.1%
Non-Appalachian Tennessee	7.7%	23.9%	15.7%	3.9%	7.1%	16.5%	13.5%	13.5%
Virginia		17.0%	11.2%	5.0%	6.4%	10.0%	10.7%	9.4%
Appalachian Virginia	12.3%	19.9%	23.3%	2.1%	0.0%	18.3%	17.3%	10.0%
Non-Appalachian Virginia	4.4%	17.0%	10.2%	5.0%	6.9%	9.8%	10.4%	9.4%
West Virginia	16.1%	27.6%	31.0%	3.2%	43.8%	18.6%	21.7%	18.6%

Table 7. Food Access (2019) and Access to SNAP Retailers (2022)¹

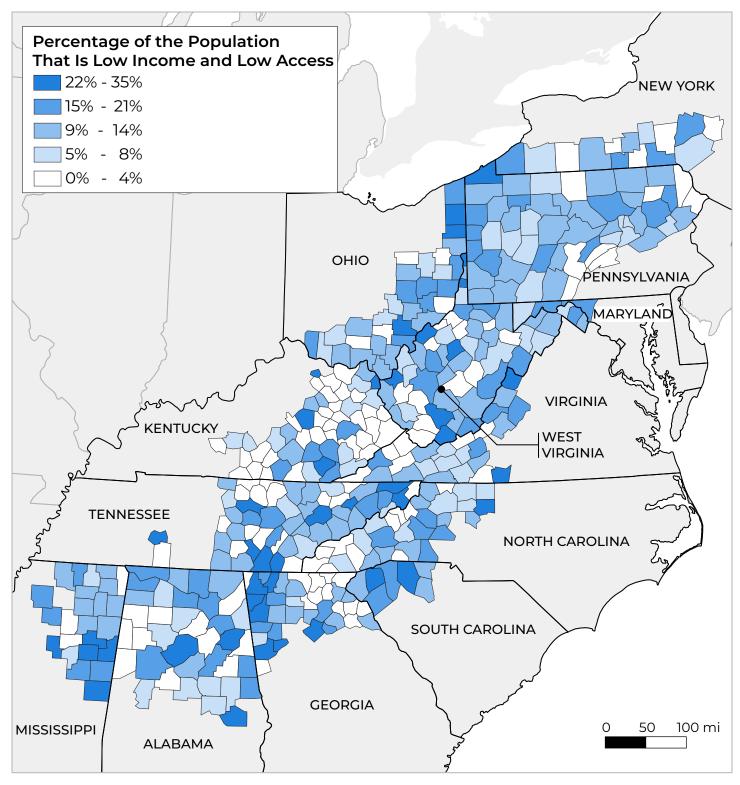
Data: USDA

	Total Population with Low Access*	Percent of Population with Low Access	Low-Income Population with Low Access	Percent of Population with Low Income* and Low Access	Number of SNAP Retailers	SNAP Retailers per 1,000 SNAP Households	SNAP Retailers per 10,000 Food Insecure Population
United States	46,247,139	15.0%	154,094,088	49.9%	251,543	18.1	6.7
Appalachian Region	3,674,957	14.4%	10,561,676	41.4%	25,339	18.5	7.5
Subregions					,		
Northern Appalachia	1,113,255	13.5%	3,446,657	41.8%	7,234	15.3	7.4
North Central Appalachia	335,572	13.1%	911,984	35.7%	2,760	17.3	8.2
Central Appalachia	144,164	7.5%	318,567	16.6%	2,447	16.1	7.5
South Central Appalachia	790,711	15.9%	2,109,752	42.4%	5,240	21.2	7.4
Southern Appalachia	1,291,255	16.5%	3,774,716	48.2%	7,658	22.7	7.6
County Types	,,				.,222		
Large Metros (pop. 1 million +)	938,214	16.0%	3,364,117	57.5%	4,680	18.0	7.1
Small Metros (pop. <1 million)	1,870,521	17.3%	5,188,637	48.0%	10,668	19.1	7.1
Nonmetro, Adjacent to Large Metros	272,390	17.5%	633,816	27.4%	2,395	17.4	7.3
Nonmetro, Adjacent to Small Metros	377,034	9.4%	896,285	22.4%	4,528	18.5	8.0
Rural (nonmetro, not adj. to a metro)	216,798	8.5%	478,821	18.7%	3,068	18.3	7.6
Appalachian States	210,750	0.570	170,021	10.770	5,000	10.5	7.0
Apparacinan States Alabama	813,901	17.0%	2,128,037	44.5%	4,842	19.2	6.7
Appalachian Alabama	477,649	15.6%	1,327,607	43.3%	2,923	19.5	6.6
Non-Appalachian Alabama	336,252	19.6%	800,430	46.7%	1,919	18.8	7.0
Georgia	1,866,835	19.3%	5,404,018	55.8%	9,741	20.8	8.2
Appalachian Georgia	486,407	16.6%	1,598,938	54.5%	2,736	26.2	8.3
Non-Appalachian Georgia	1,380,428	20.4%	3,805,080	56.3%	7,005	19.2	8.2
Kentucky	609,401	14.0%	1,749,767	40.3%	4,486	19.7	7.4
Appalachian Kentucky	99,881	8.4%	215,571	18.2%	1,566	16.6	7.6
Non-Appalachian Kentucky	509,520	16.1%	1,534,196	48.6%	2,920	21.9	7.4
Maryland	645,096	11.2%	3,191,642	55.3%	3,692	16.4	6.3
Appalachian Maryland	40,967	16.2%	131,234	52.0%	221	14.5	6.4
Non-Appalachian Maryland	604,129	10.9%	3,060,408	55.4%	3,471	16.6	6.3
Mississippi	572,110	19.3%	1,268,685	42.8%	3,184	19.6	6.4
Appalachian Mississippi	86,753	13.8%	179,504	28.5%	674	21.1	6.4
Non-Appalachian Mississippi	485,357	20.8%	1,089,181	46.6%	2,510	19.2	6.4
New York	1,306,267	6.7%	5,747,452	29.7%	16,776	15.9	7.3
Appalachian New York	109,815	10.3%	314,823	29.5%	1,042	17.1	8.1
Non-Appalachian New York	1,196,452	6.5%	5,432,629	29.7%	15,734	15.8	7.3
North Carolina	1,530,769	16.1%	4,423,146	46.4%	9,116	18.9	6.8
Appalachian North Carolina	282,203	14.5%	747,457	38.3%	1,915	20.6	6.7
Non-Appalachian North Carolina	1,248,566	16.5%	3,675,689	48.5%	7,201	18.5	6.8
Ohio	1,988,194	17.2%	6,264,233	54.3%	9,924	16.7	6.6
Appalachian Ohio	303,383	14.9%	787,600	38.6%	2,026	16.2	6.8
Non-Appalachian Ohio	1,684,811	17.7%	5,476,633	57.7%	7,898	16.9	6.5
Pennsylvania	1,549,629	12.2%	5,994,467	47.2%	10,200	15.2	7.4
Appalachian Pennsylvania	760,446	13.1%	2,500,798	43.2%	4,830	14.7	7.4
Non-Appalachian Pennsylvania	789,183	11.4%	3,493,669	50.6%	5,370	15.7	7.5
South Carolina	803,111	17.4%	2,313,634	50.0%	5,099	23.1	10.1
Appalachian South Carolina	240,446	20.0%	668,667	55.7%	1,325	26.3	10.1
Non-Appalachian South Carolina Tennessee	562,665	16.4% 17.9%	1,644,967	48.0% 49.5%	3,774 6.506	22.2 19.6	10.1 7.4
Appalachian Tennessee	1,138,220 459,229	16.5%	3,141,357 1,228,695	44.1%	6,506 3,069	19.8	7.4
Non-Appalachian Tennessee	678,991	19.1%	1,912,662	53.7%	3,437	19.4	7.3
Virginia	940,054	11.7%	3,959,884	49.5%	6,318	25.1	8.7
Appalachian Virginia	82,941	10.8%	212,369	27.6%	882	23.5	8.8
Non-Appalachian Virginia	857,113	11.9%	3,747,515	51.8%	5,436	25.4	8.7
West Virginia	244,837	13.2%	648,413	35.0%	2,130	17.6	9.1

Individuals are considered **low access** if they are living more than a half mile from a large food store in an urban setting, or more than 10 miles from a large food store in a rural setting. Individuals are counted as **low income** if their annual family income is at or below 200% of the Federal poverty line for their family size.

Map 4. Percentage of the Population That Is Low Income and Low Access¹

Data: USDA



¹ Individuals are considered **low access** if they are living more than a half mile from a large food store in an urban setting, or more than 10 miles from a large food store in a rural setting. Individuals are counted as **low income** if their annual family income is at or below 200% of the Federal poverty line for their family size.

Appendix D: State Profiles

Alabama

TOTAL POPULATION*

TOTAL HOUSEHOLDS

3,159,772 1,215,227



64% of the state's population lives in the Appalachian Region. It represents 12% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

444,410

FOOD INSECURITY RATE



14.7%

13.0%

11.5%

App. AL

AL Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN



-2.5

FOOD INSECURITY RATE FROM 2010-2020

-2.2

-3.8

App. AL

AL Overall

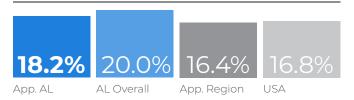
App. Region

n USA

FOOD INSECURE CHILDREN

126,480

CHILDHOOD FOOD INSECURITY RATE



SNAP

NUMBER OF HOUSEHOLDS RECEIVING SNAP

150,246

PERCENT OF HOUSEHOLDS RECEIVING SNAP

12.4%

13.4%

13.3%

11.4%

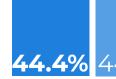
App. AL

AL Overall

App. Region

USA

PERCENT OF HOUSEHOLDS BELOW POVERTY LINE RECEIVING SNAP









USA

App. AL

AL Overall

App. Region

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on five-year estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

Georgia

TOTAL POPULATION*

TOTAL HOUSEHOLDS

3,375,098 1,138,451



32% of the state's population lives in the Appalachian Region. It represents 13% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

330,680

FOOD INSECURITY RATE

10.1%

11.3%

13.0%

11.5%

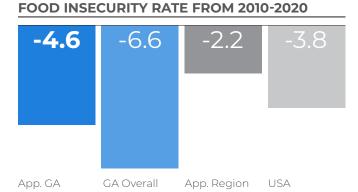
App. GA

GA Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN



FOOD INSECURE CHILDREN

85,230

CHILDHOOD FOOD INSECURITY RATE



SNAP

NUMBER OF HOUSEHOLDS RECEIVING SNAP

104,412

PERCENT OF HOUSEHOLDS RECEIVING SNAP

9.2%

12.2%

13.3%

11.4%

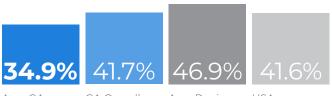
App. GA

GA Overall

App. Region

USA

PERCENT OF HOUSEHOLDS BELOW POVERTY LINE RECEIVING SNAP



App. GA GA O

GA Overall

App. Region

USA

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on five-year estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

Kentucky

TOTAL POPULATION*

TOTAL HOUSEHOLDS

1,156,745 454,072



 $\stackrel{\circ}{\mathbb{R}}_{0}^{\circ}$ 26% of the state's population lives in the Appalachian Region. It represents 4% www of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

207,190

FOOD INSECURITY RATE



13.0%

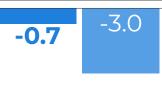
App. KY

KY Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



App. KY

KY Overall

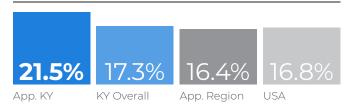
App. Region

USA

FOOD INSECURE CHILDREN

54,890

CHILDHOOD FOOD INSECURITY RATE



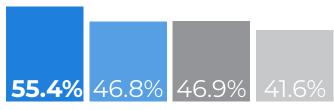
NUMBER OF HOUSEHOLDS RECEIVING SNAP

94,072

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



App. KY KY Overall

App. Region

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



Maryland

TOTAL POPULATION*

250,055

TOTAL HOUSEHOLDS

96,481



40/0 of the state's population lives in the Appalachian Region. It represents 1% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

34,730

FOOD INSECURITY RATE



9.8%

3.0%

App. MD

MD Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



-1.8

App. MD

MD Overall

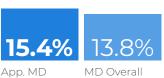
App. Region

USA

FOOD INSECURE CHILDREN

7,810

CHILDHOOD FOOD INSECURITY RATE



MD Overall

App. Region

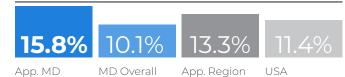
16.8%

USA

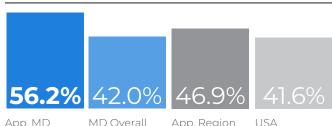
NUMBER OF HOUSEHOLDS RECEIVING SNAP

15,199

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



App. MD

MD Overall

App. Region

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

Mississippi

TOTAL POPULATION*

621,228

TOTAL HOUSEHOLDS 235,767



21% of the state's population lives in the Appalachian Region. It represents 2% \mathbb{V} of the entire Appalachian population.

Food Insecurity

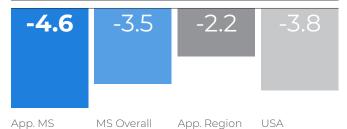
FOOD INSECURE POPULATION*

104,990

FOOD INSECURITY RATE



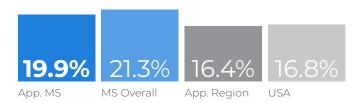
PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



FOOD INSECURE CHILDREN

28,650

CHILDHOOD FOOD INSECURITY RATE

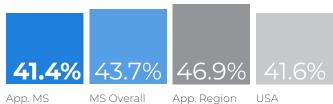


NUMBER OF HOUSEHOLDS RECEIVING SNAP

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



MS Overall USA App. Region

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.

SNAP RETAILERS PER 1,000 SNAP HOUSEHOLDS



*Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

New York

TOTAL POPULATION*

TOTAL HOUSEHOLDS

1,008,502 420,761



5% of the state's population lives in the Appalachian Region. It represents 4% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

128,260

FOOD INSECURITY RATE



11.8%

13.0%

11.5%

App. NY

NY Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN FOOD INSECURITY RATE FROM 2010-2020

-0.2

-1.4

-2.2

-3.8

App. NY

NY Overall

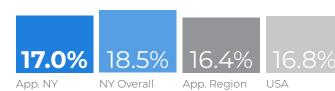
App. Region

USA

FOOD INSECURE CHILDREN

33,680

CHILDHOOD FOOD INSECURITY RATE



SNAP

NUMBER OF HOUSEHOLDS RECEIVING SNAP

60,998

PERCENT OF HOUSEHOLDS RECEIVING SNAP

14.5%

14.3%

13.3%

11.4%

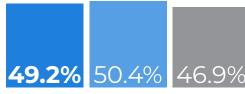
USA

App. NY

NY Overall

App. Region

PERCENT OF HOUSEHOLDS BELOW POVERTY LINE RECEIVING SNAP



App. NY

NY Overall

App. Region

USA

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on five-year estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

North Carolina

TOTAL POPULATION*

TOTAL HOUSEHOLDS

2,043,154 818,301



 190_0 of the state's population lives in the Appalachian Region. It represents 8% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

286,980

FOOD INSECURITY RATE



App. NC

NC Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



App. NC NC Overall

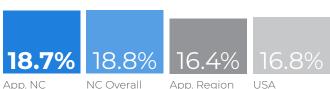
App. Region

USA

FOOD INSECURE CHILDREN

75,520

CHILDHOOD FOOD INSECURITY RATE



NC Overall App. Region

SNAP

NUMBER OF HOUSEHOLDS RECEIVING SNAP

92,851

PERCENT OF HOUSEHOLDS RECEIVING SNAP

11.3%

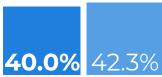
App. NC

NC Overall

App. Region

USA

PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



App. NC

NC Overall

App. Region

USA

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



TOTAL POPULATION*

TOTAL HOUSEHOLDS 1,979,210 794,547



17% of the state's population lives in the Appalachian Region. It represents 8% \mathbb{W} of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

298,660

FOOD INSECURITY RATE



Арр. ОН

OH Overall

App. Region

USA

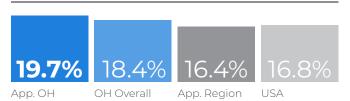
PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



FOOD INSECURE CHILDREN

84,630

CHILDHOOD FOOD INSECURITY RATE



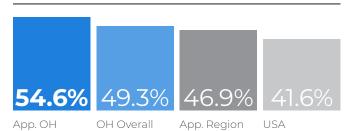
NUMBER OF HOUSEHOLDS RECEIVING SNAP

125,334

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

nnsylvania

TOTAL POPULATION*

TOTAL HOUSEHOLDS

5,619,275 2,371,292



 $\dot{\dot{q}}\dot{\dot{q}}\dot{\dot{q}}\dot{\dot{q}}\dot{\dot{q}}$ of the state's population lives in the Appalachian Region. It represents 22% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

652,710

FOOD INSECURITY RATE



Арр. РА

PA Overall

App. Region

USA

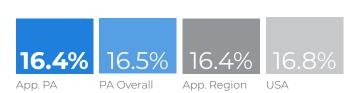
PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



FOOD INSECURE CHILDREN

179,520

CHILDHOOD FOOD INSECURITY RATE



NUMBER OF HOUSEHOLDS RECEIVING SNAP

329,210

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

South Carolina

TOTAL POPULATION*

TOTAL HOUSEHOLDS

1,355,349 508,887



26% of the state's population lives in the Appalachian Region. It represents 5% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

131,130

FOOD INSECURITY RATE

10.0%

9.9%

13.0%

11.5%

App. SC

SC Overall

App. Region

USA

50,291

PERCENT OF HOUSEHOLDS RECEIVING SNAP

NUMBER OF HOUSEHOLDS RECEIVING SNAP

9.9%

SNAP

11.2%

13.3%

11.4%

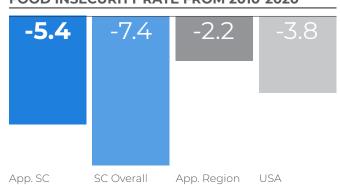
App. SC

SC Overall

App. Region

USA

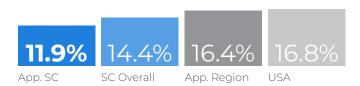
PERCENTAGE POINT CHANGE IN FOOD INSECURITY RATE FROM 2010-2020



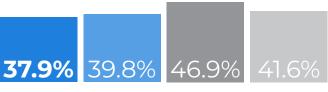
FOOD INSECURE CHILDREN

35,120

CHILDHOOD FOOD INSECURITY RATE



PERCENT OF HOUSEHOLDS BELOW POVERTY LINE RECEIVING SNAP



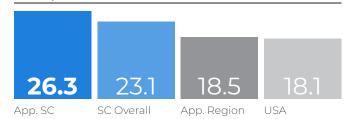
App. SC

SC Overall

App. Region

USA

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on five-year estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

ennessee

TOTAL POPULATION*

TOTAL HOUSEHOLDS

2,964,813 1,169,561



 $\dot{\dot{m}}\dot{\dot{m}}$ 43% of the state's population lives in the Appalachian Region. It represents 11% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

407,610

FOOD INSECURITY RATE



App. TN

TN Overall

App. Region

USA

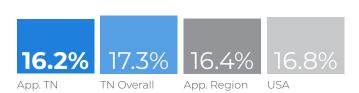
PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



FOOD INSECURE CHILDREN

97,490

CHILDHOOD FOOD INSECURITY RATE



NUMBER OF HOUSEHOLDS RECEIVING SNAP

154,907

PERCENT OF HOUSEHOLDS RECEIVING SNAP



2.6%

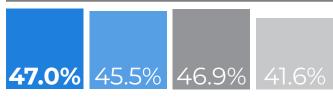
App. TN

TN Overall

App. Region

USA

PERCENT OF HOUSEHOLDS **BELOW POVERTY LINE RECEIVING SNAP**



App. TN

TN Overall

App. Region

USA

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

TOTAL POPULATION*

740,746 298,361

TOTAL HOUSEHOLDS



 $90\!\!/\!\!0$ of the state's population lives in the Appalachian Region. It represents 3% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

100,640

FOOD INSECURITY RATE



App. VA

VA Overall

App. Region

USA

PERCENTAGE POINT CHANGE IN **FOOD INSECURITY RATE FROM 2010-2020**



FOOD INSECURE CHILDREN

21,470

CHILDHOOD FOOD INSECURITY RATE



(No Data) VA Overall App. VA

App. Region

NUMBER OF HOUSEHOLDS RECEIVING SNAP

37,590

PERCENT OF HOUSEHOLDS RECEIVING SNAP



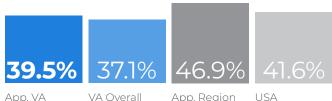
7.9%

App. VA

VA Overall

App. Region USA

PERCENT OF HOUSEHOLDS



App. VA

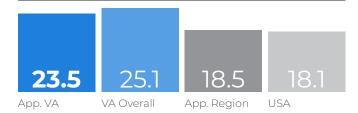
VA Overall

BELOW POVERTY LINE RECEIVING SNAP

App. Region

The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.

SNAP RETAILERS PER 1,000 SNAP HOUSEHOLDS



*Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on fiveyear estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.

West Virginia

TOTAL POPULATION*

TOTAL HOUSEHOLDS

1,784,787 734,235



100% of the state's population lives in the Appalachian Region. It represents 7% of the entire Appalachian population.

Food Insecurity

FOOD INSECURE POPULATION*

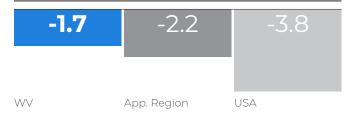
234,520

FOOD INSECURITY RATE

13.0% 13.0% 11.5%

WV App. Region USA

PERCENTAGE POINT CHANGE IN FOOD INSECURITY RATE FROM 2010-2020



FOOD INSECURE CHILDREN

69,430

CHILDHOOD FOOD INSECURITY RATE



SNAP

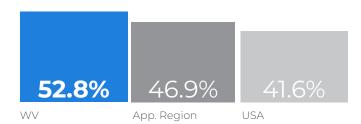
NUMBER OF HOUSEHOLDS RECEIVING SNAP

121,292

PERCENT OF HOUSEHOLDS RECEIVING SNAP



PERCENT OF HOUSEHOLDS BELOW POVERTY LINE RECEIVING SNAP



The percent of households below poverty that receive SNAP benefits is an indicator of the extent to which households that are likely eligible for SNAP are receiving those benefits. A higher percentage indicates that more households are accessing SNAP benefits they are eligible for, while a lower percentage indicates that likely-eligible people are not accessing those benefits, suggesting that more robust or effective outreach efforts could maximize benefit utilization.



^{*}Total population numbers are 1-year estimates for 2020, while all other numbers, including Food Insecure Population, are based on five-year estimates for 2016-2020. Therefore, percentage calculations may not perfectly align.