



Lebanon County Community Hunger Mapping Interim Report

Identifying Localized Food Access Gaps and Increasing Understanding of Intersecting Issues for the Charitable Food System

One in ten Lebanon County residents faces food insecurity. This means that nearly 14,000 individuals do not have certain access to adequate food throughout the year. This interim report is the first major step of the Lebanon County Community Hunger Mapping project, a project that will assist in improving access to charitable food, better understanding the causes of food insecurity in Lebanon County, and ultimately working to end hunger across the county.

The project and report aim to provide actionable, evidence-based recommendations to reduce food insecurity in Lebanon County, with the goal of enabling Lebanon County stakeholders, policymakers, and neighbors to make informed decisions on the direction and priorities of the charitable food system. To this end, the Central Pennsylvania Food Bank, together with several Lebanon County stakeholders, is undertaking a mixed methods research analysis to assess food insecurity and the charitable food landscape in Lebanon County.

The main research questions that this analysis aims to address are as follows:

1. What is the extent of food insecurity in Lebanon County, and in what areas of the county is food insecurity concentrated?
2. Who is most impacted by food insecurity in Lebanon County? How do food insecurity and the main drivers of food insecurity differ by age and race/ethnicity?
3. How accessible is charitable and retail food in Lebanon County and how does access vary in different areas of the county?
4. What barriers do individuals in need face when accessing charitable food services? Where do food distribution gaps exist in Lebanon County?
5. What are the utilization rates of key government nutrition assistance programs, such as SNAP, WIC, and child congregate feeding programs, and how do they vary across the county?
6. What are the underlying causes of food insecurity in Lebanon County? What can the charitable food system and other relevant stakeholders do to better address the root causes of food insecurity in the county?

This secondary and administrative analysis, including analysis of primary client intake data at the largest food pantries in Lebanon County, is one key pillar of the mixed-methods approach to assessing the food security needs and charitable food system in Lebanon County. The CPFB and its charitable food system partners will also undertake an intensive primary data collection process consisting of client surveys, client interviews, client focus groups, partner surveys, and partner listening sessions to supplement the secondary data analyzed in this report. Together, the secondary and primary data analysis and insights will answer the key research questions and provide direction for the charitable food system in Lebanon County.

Table of Contents

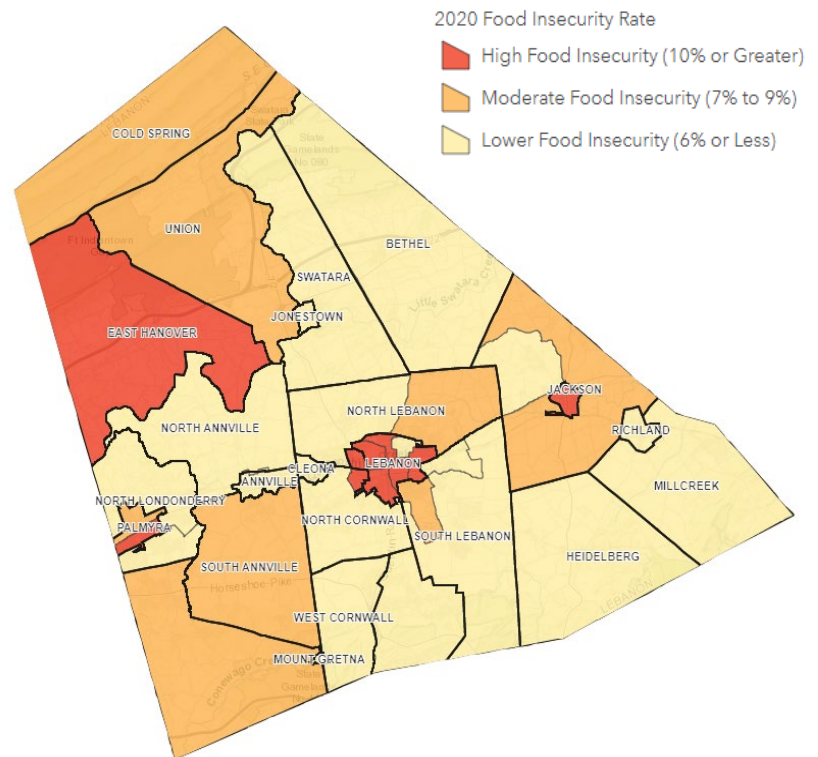
Main Findings	3
Food Insecurity Discussion	6
Sub-County Food Insecurity Rates	7
Food Insecurity at the ZIP Code Level	7
Food Insecurity in Lebanon County Relative to its Neighbors	10
Food Insecurity Differences by Household Type	10
Food Distribution	12
Pantry Access Challenges	14
Geographic-Based Access	15
Number of Pantries within a 15 Minute Drive Time by Census Tract	15
Food Insecure Individuals Per Pantry within 15-Minute Drive Time	16
Food Insecure Individuals Per Food Pantry within Walking Distance	17
Time-Based Access Barriers	18
Food Pantry Utilization Gaps in Lebanon County	18
Ancestry Analysis	21
TEFAP Eligibility Analysis	24
Individuals under 185% FPL	24
Individuals Newly Eligible for TEFAP/SFPP Charitable Food Assistance	25
ALICE and TEFAP Eligibility Analysis	26
SNAP Retailer Access Issues	27
Food Deserts in Lebanon County	27
Utilization Rates of Key Government Programs	28
SNAP Participation Gap Analysis	28
ZIP Code Analysis	30
Census Tract Analysis	30
SNAP Participation among Food Pantry Participants	31
WIC Participation Rate Analysis	32
ZIP Code WIC Participation Gap Analysis	33
Priority Schools for Free and Reduced Meal Programs	34
SFSP Location Analysis	36
Drivers of Food Insecurity	37
Poverty Status by Age, Gender, and Family Type	40
Conclusion	41
Data Sources and Analysis Methods	42
Appendix A: Table of Child Nutrition Program Eligibility and Participation by School Building	43

Main Findings

Food Insecurity is experienced at vastly different rates across place, age, and race in Lebanon County.

- Lebanon County has an overall food insecurity rate of 9.8%, with 13,750 food insecure individuals.
 - Children are 71% more likely to be food insecure than adults in Lebanon County, with a food insecurity rate of 14.4% compared to just 8.4% among adults.
- Lebanon City faces the highest food insecurity rates, with the northwest part of the city experiencing food insecurity rates over 20% while the southwest part of the city has rates between 16% and 20%.
 - Lebanon City has just 18% of the total county population but is home to 39% of all food insecure individuals.
- Other high food insecurity areas include southern Palmyra, East Hanover Township, Myerstown, and West Lebanon Township.
 - High Food Insecurity census tracts make up 26% of the total population countywide, but 53% of the food insecure population.
- Lebanon County has a low food insecurity rate compared to Pennsylvania as a whole (9.8% vs. 10.7%), but its disparity in food insecurity rates between adults and children is among the highest in the state.
 - This issue of child poverty and food insecurity is especially pronounced in Lebanon City.
 - Child poverty is the main differentiating factor between High Food Insecurity and Moderate and Low Food Insecurity areas, with child poverty in High Food Insecurity areas an astounding 39%.

Food Insecurity Rate by Census Tract



Access to both charitable and retail food sources differs by income across the county.

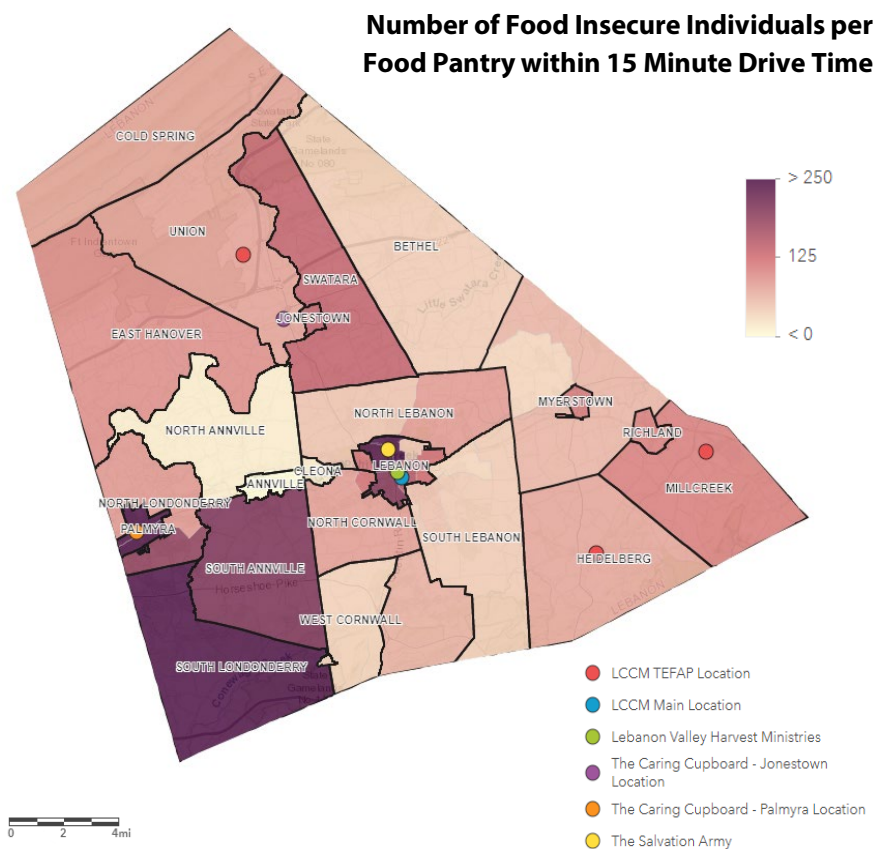
- Around 25% of all Lebanon County households have incomes below 185% of the Federal Poverty Line (FPL) and are thus eligible for federal and state-funded charitable food. A staggering 50% of Lebanon City's population (over 12,500 residents) has incomes below 185% FPL.
- More than 6,000 households (11% of all households) defined by the United Way as ALICE (Asset-Limited Income-Constrained, Employed) do not qualify for state-funded charitable food in Lebanon County. These households live paycheck to paycheck and may need to access charitable food to make ends meet, so efforts should be made to ensure that privately funded charitable food is accessible to individuals in need regardless of income.
- USDA-defined food deserts exist in Lebanon City, West Lebanon Township, Palmyra, and Myerstown. However, traditional food desert measures have flaws in Lebanon County, and recent research has found programs that increase purchasing power have the most impact on people's ability to purchase fresh foods.

Federal nutrition assistance programs like SNAP, WIC, and school-based meal programs are underutilized across the county, including among households who visit food pantries.

- SNAP participation among people who visit food pantries is less than 30%, a staggeringly low rate given that people who visit food pantries are among the most likely to be eligible for SNAP.
- ZIP Code 17078 in Palmyra has the largest SNAP participation gap of all ZCTAs in the county, with over 1,500 individuals likely eligible for but not participating in SNAP. Census tract level analysis reveals that these gaps are concentrated in South Londonderry Township and the northern portion of Palmyra.
- WIC participation in Lebanon County and Pennsylvania statewide is low and has fallen since the pandemic; this is likely due to program administration decisions that can make it more challenging for individuals to participate, such as the requirement that benefits must be loaded onto cards in person rather than remotely.
 - The areas of the county with the biggest WIC participation gaps include 17078 in Palmyra and South Londonderry Township, as well as 17042 and 17046, especially in the western portion of the city and West Lebanon Township.
- There are a number of opportunities around the child meal programs, both inside and outside school hours. Additional Summer Food Service Program sites could be successful in the northwest corner of Lebanon City and West Lebanon Township. In addition, there are opportunities to increase school lunch and particularly breakfast participation across most of the county.

Geographic Gaps in Charitable Food Access and Food Pantry Utilization

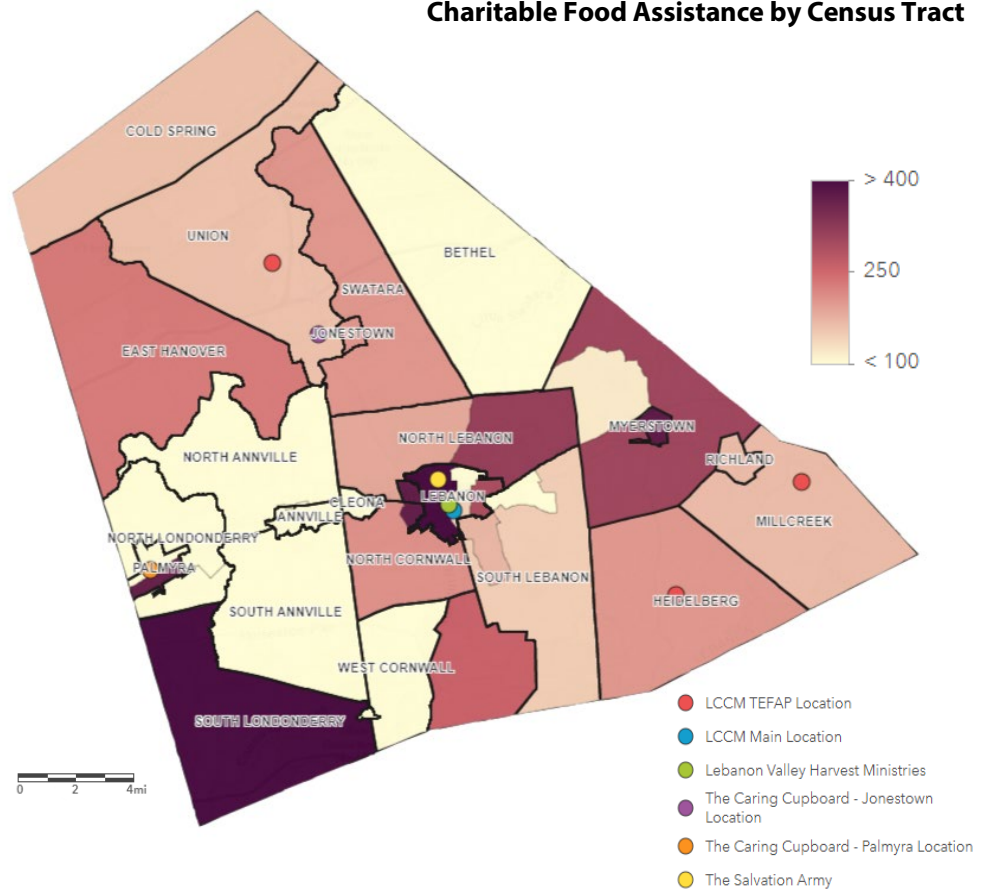
- Geographic analysis of food pantries within a 15-minute drive of census tracts in Lebanon County reveals that Palmyra, South Londonderry, and the western portion of Lebanon City have the highest numbers of food insecure individuals per food pantry in the county.
 - There are over 2,000 food insecure individuals in the Palmyra and South Londonderry Township areas who only have geographic access (within 15 minutes' drive) to one pantry.
 - Although there are three food pantries in Lebanon City, there are so many food insecure individuals living there that the city has an elevated number of food insecure individuals per food pantry compared to most of the rest of the county.
- West Lebanon Township, South Londonderry Township, and the easternmost part of Lebanon City have no food pantries within walking distance, despite each of these census tracts having more than 100 households without vehicle access.



- The largest food pantry utilization gaps among food insecure individuals in the county are found in the southern portion of Palmyra, South Londonderry Township, Myerstown, West Lebanon Township, and the western portion of Lebanon City.

- Each of these areas has 400 or more food insecure individuals who did not visit a food pantry for which data was available between July 2022 and December 2022.

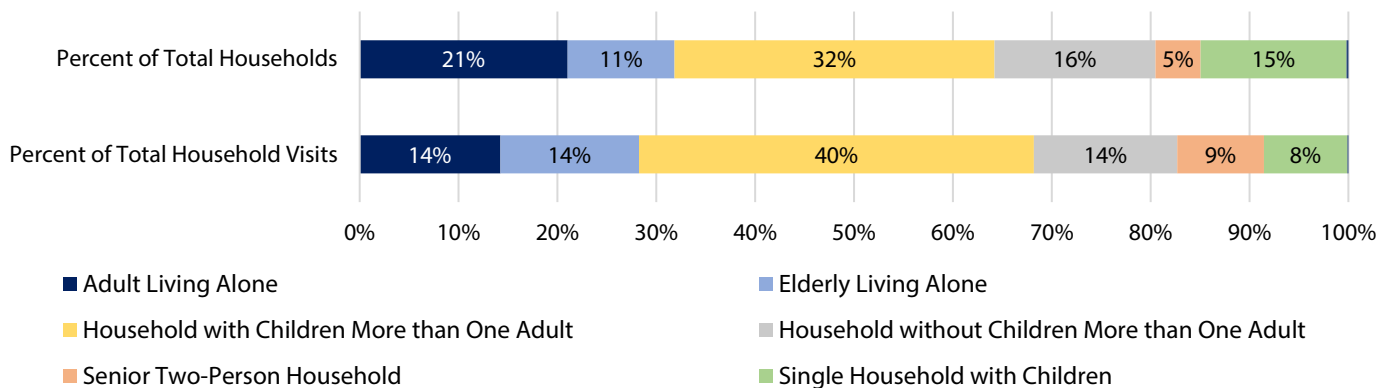
Number of Food Insecure Individuals Not Utilizing Charitable Food Assistance by Census Tract



Household Composition among Food Pantry Visitors

- Households with children and more than one adult made up 32% of unique food pantry participants, compared to 15% for single households with children and 16% for elderly households. Adult households without children made up the remaining 37%.
- Senior households and households with children and more than one adult visited food pantries the most frequently in the six-month span, averaging around once per month. Therefore, these households make up a larger share of total household visits than total households, as shown in the figure below.
- Single-adult households with children visited pantries the least frequently (just over once every three months on average), which is concerning because these households are the most likely to be food insecure and to experience very low food security according to national USDA reports.

Food Pantry Visits by Household Type in Lebanon County

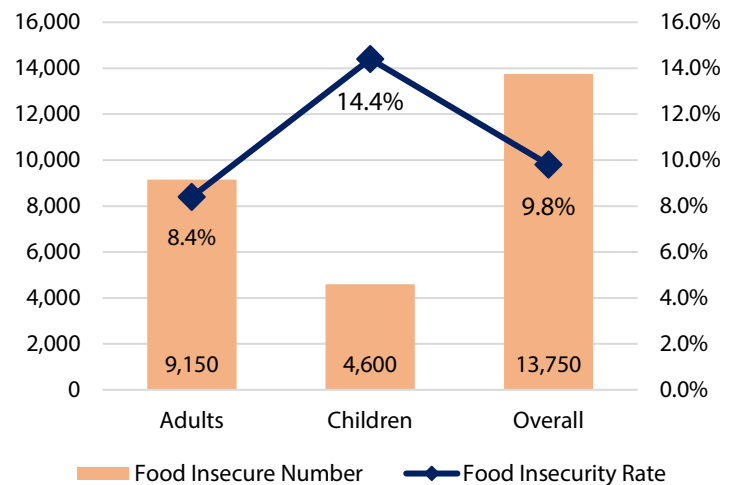


Food Insecurity Discussion

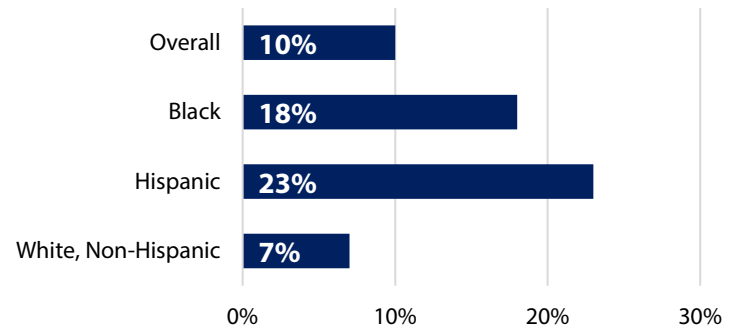
Lebanon County has an overall food insecurity rate of 9.8%, meaning 13,750 individuals in Lebanon County face food insecurity, according to Feeding America Map the Meal Gap 2022 estimates.¹ However, the overall food insecurity rate hides major disparities in the experience of food insecurity across age groups, race/ethnicity, and geography in Lebanon County.

- Children in Lebanon County are 71% more likely to be food insecure than adults, with a food insecurity rate of 14.4% compared to just 8.4% for adults.
 - This is the 14th highest age disparity among all 67 counties in the state, indicating that child food insecurity is a unique challenge in Lebanon County.
- Hispanic individuals in Lebanon County are more than three times as likely to be food insecure as white individuals, with a food insecurity rate of 23% compared to just 7% among white individuals.
 - Of the 52 counties with food insecurity data broken out by ethnicity, Lebanon has the 12th highest food insecurity rate among Hispanic individuals.
- Black individuals in Lebanon County have a food insecurity rate of 18%.

2020 Food Insecurity by Age Group



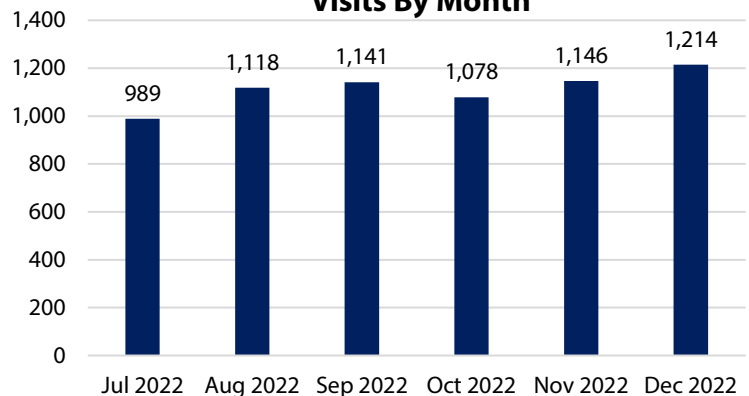
Food Insecurity Rates by Race/Ethnicity



Food insecurity rates in Lebanon County stayed relatively consistent between 2018 and 2020. Of course, the county experienced significant changes in those years due to the COVID-19 pandemic, as did the rest of Pennsylvania and indeed the world. The relatively steady food insecurity rate in 2020 was due to the significant federal supports for individuals and the economy. These stimulus actions had a major positive impact on reducing poverty and food insecurity in 2020 compared to what it could have been without these supports.

Many of these government supports continued into 2021. However, several of them, such as the expanded child tax credit, eviction protections, and increased unemployment compensation, expired in late 2021 and in 2022. This loss of support combined with the high levels of inflation experienced in 2022 has resulted in the rise of food insecurity in 2022. The charitable food system in Lebanon has seen an increase in demand as a result as well, as shown in the figure at right.

Lebanon County Household Food Pantry Visits By Month



¹ Gunderson et al. (2022) [Feeding America Map the Meal Gap](#). Note: 2022 data is not comparable for state/county analyses.

Sub-County Food Insecurity Rates

Differences in food insecurity rates also exist across geographic boundaries such as ZIP Code Tabulation Areas (referred to hereafter as ZIP Codes or ZCTAs) and census tracts. This food insecurity analysis starts with the higher-level ZIP Code analysis and then discusses the more granular census tract level.

ZCTAs are useful units of geography for the food security analysis because they are well known to people who live in them and are easily identifiable through addresses. Some datasets, such as Pennsylvania Department of Human Services and Pennsylvania Department of Health program and administrative data, are only available at the ZIP Code level for this reason. However, ZCTAs also have significant disadvantages. In many cases, especially in areas of high population like Lebanon City, ZIP Code analyses mask disparities at the neighborhood level due to their size and uneven populations.

Therefore, this report analyzes data at the census tract level as default and only conducts ZIP Code level analyses when census tract analysis is not possible. Additionally, census tracts are more equal in population than ZCTAs, largely align with municipality borders in rural and suburban areas, and often represent neighborhoods within municipalities in cities, making them an especially practical geography to use when making program or policy recommendations.

Food Insecurity at the ZIP Code Level

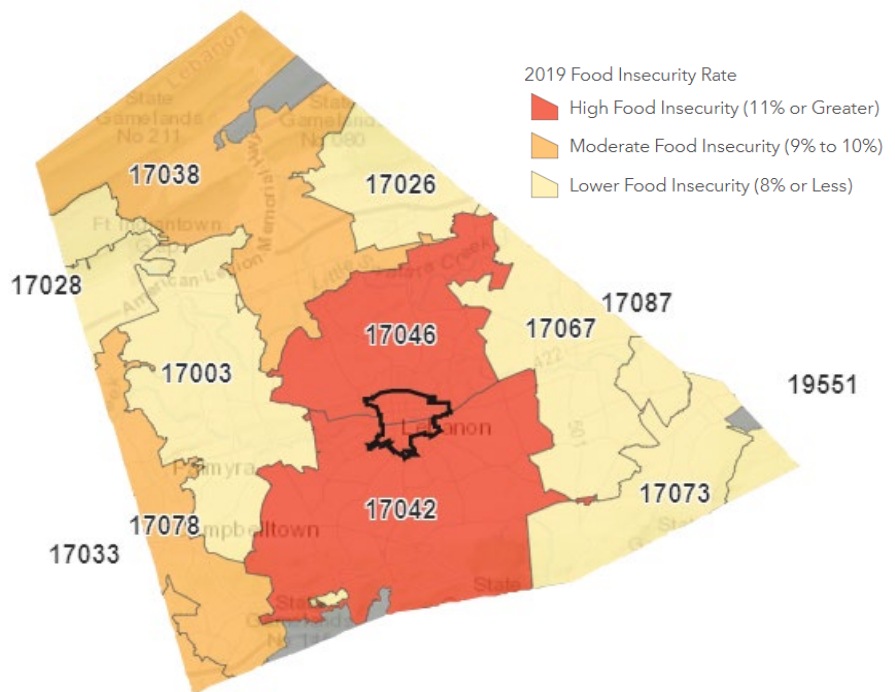
The map to the right shows food insecurity rates by ZIP Code in Lebanon County.

Food insecurity rates are divided into three different typologies spread around the overall Lebanon County rate of 9.8%. ZIP Codes with food insecurity rates of 11% or greater are classified as High Food Insecurity, ZIP Codes with rates of 9% to 10% are classified as Moderate Food Insecurity, and ZIP Codes with rates of 8% or less are classified as Lower Food Insecurity.

Four ZCTAs have food insecurity rates of 11% or above, including both 17046 and 17042 in Lebanon City and its surrounding areas. ZIP Code 17046, which includes the northern half of Lebanon City, has the highest food insecurity rate in the county at 12.8%, while 17042 has a food insecurity rate of 10.5%. Both Lebanon City ZCTAs have around 4,000 food insecure individuals each. The smaller ZIP Codes of 17016 in Cornwall and 17088 in Schaefferstown have food insecurity rates of 11.4% and 10.6%, respectively.

Moderate Food Insecurity ZIP Codes include 17078 in Palmyra and 17038 in Jonestown. These ZIP Codes have food insecurity rates of 9.0% and 10.0%, respectively. ZIP Code 17078 has the third most food insecure individuals of any ZCTA in the county, at 1,950 individuals, while ZIP Code 17038 has 840 food insecurity individuals. Lower Food Insecurity ZIP Codes are concentrated in the eastern portion of the county. The total number of food insecure individuals map at the ZIP Code level largely with the above map, as higher population ZCTAs covering the Lebanon City area tend to have higher food insecurity rates.

Food Insecurity Typology by ZIP Code



Food Insecurity at the Census Tract Level

The map to the right shows food insecurity rates at the census tract level in Lebanon County in 2020. Like the ZIP Code analysis, census tracts were again divided into three different typologies around the county food insecurity rate of 9.8%. Census tracts with food insecurity rates of 10% and above are classified as High Food Insecurity, census tracts with food insecurity rates of 7% to 9% are classified as Moderate Food Insecurity, and census tracts with food insecurity rates of 6% or below are classified as Lower Food Insecurity. Typology ranges are set so that High and Moderate areas make up roughly half of all census tracts in Lebanon County and Lower Food Insecurity areas make up the other half.

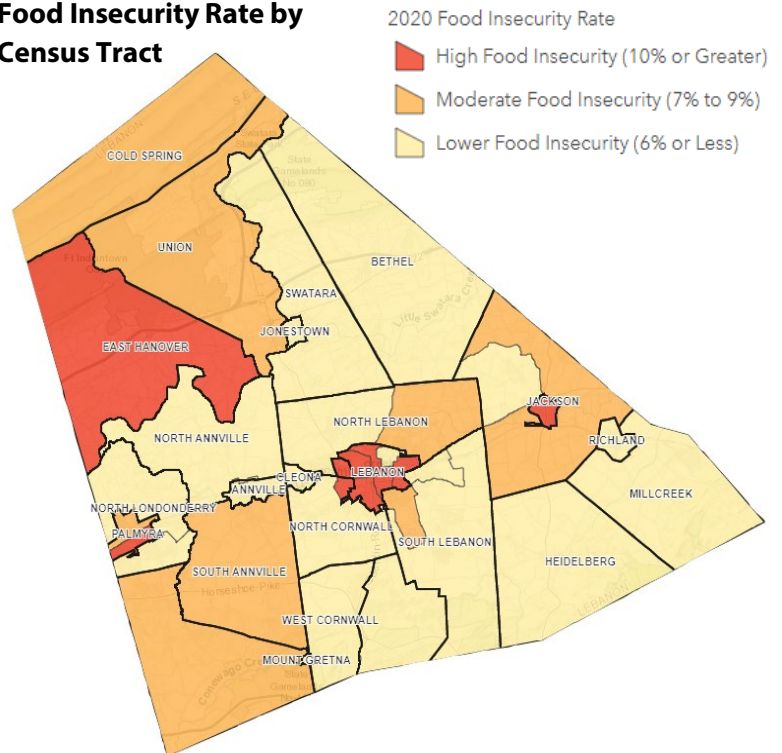
The census tract level map provides much more helpful granularity compared to the ZIP Code level map. For example, the maps to the right and below demonstrate that the High Food Insecurity rates in ZIP Codes 17042 and 17046 in Lebanon are driven fully by Lebanon City. High food insecurity is highly concentrated in Lebanon City and West Lebanon Township. All but one of the census tracts in the northeastern portion of Lebanon City have elevated food insecurity rates.

Similarly, Moderate Food Insecurity rates in ZIP Code 17078 in Palmyra mask significant disparities, as the census tract in the southern portion of Palmyra (south of Main St.) is a High Food Insecurity tract, with a food insecurity rate of 13.0% compared to 8.0% for the northern portion of Palmyra and South Londonderry Township. East Hanover and

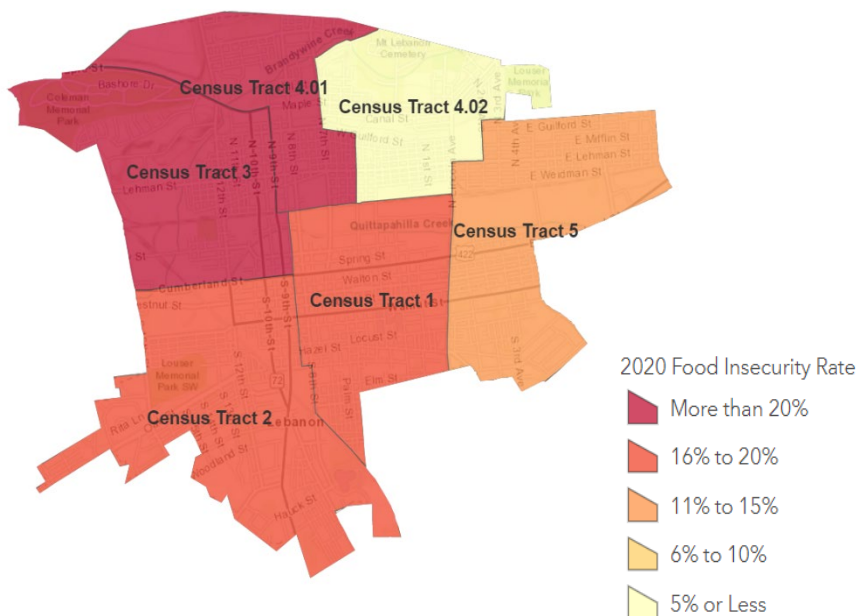
Myerstown round out the High Food Insecurity census tracts with rates of 10.0% and 14.0%, respectively. Moderate Food Insecurity tracts are spread throughout the county, while Lower Food Insecurity tracts surround Lebanon City, Palmyra, and are concentrated in the southern portion of the county.

Lebanon City census tracts have the highest food insecurity rates in the county. Each census tract other than census tract 4.02 has a food insecurity rate of 14.0% or above. However, there are also significant disparities within Lebanon City. Census Tracts 3 and 4.01 in the northwestern portion of the city have food insecurity rates of 22% and 25%, respectively, while census tracts 1 and 2 in the southwestern portion of the city have rates of 18% and 16%, respectively.

Food Insecurity Rate by Census Tract



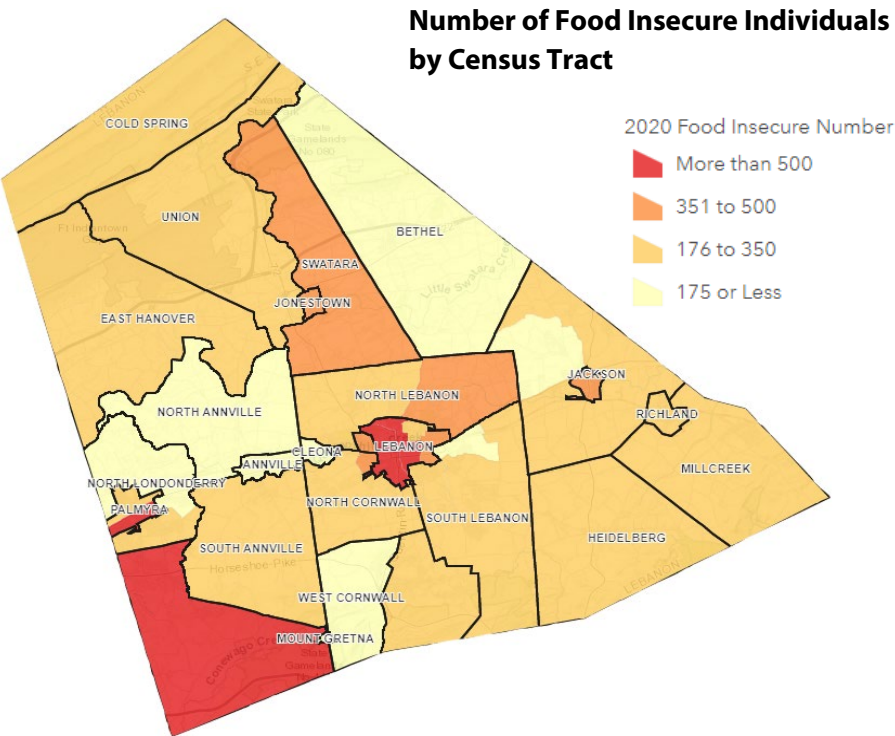
Lebanon City Food Insecurity Rates by Census Tract



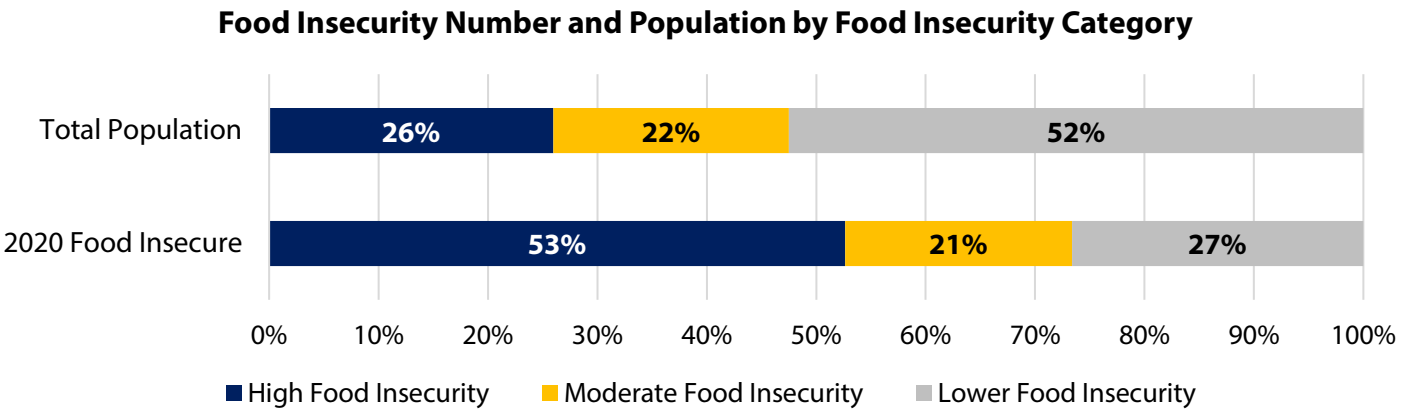
As the map at right shows, the total number of food insecure individuals is largely aligned with the food insecurity percentages.

Lebanon City again has the highest concentration of food insecurity, with over 4,300 food insecure individuals. A staggering 39% of food insecure individuals in Lebanon County live in the city, despite its having just 18% of the total county population.

Additionally, the southern portion of Palmyra and South Londonderry Township each have more than 500 food insecure individuals. Palmyra (both census tracts combined) has 840 total food insecure individuals, and nearby South Londonderry Township has 690 food insecure individuals. Other relatively high populations of food insecure individuals are concentrated in Jonestown and Swatara Township, Myerstown, and West Lebanon Township.



These results indicate that focusing efforts in the specific areas and census tracts identified above would have an outsized impact on reducing food insecurity in Lebanon County. In fact, the seven High Food Insecurity census tracts have just 26% of the county population, but 53% of all food insecure individuals.



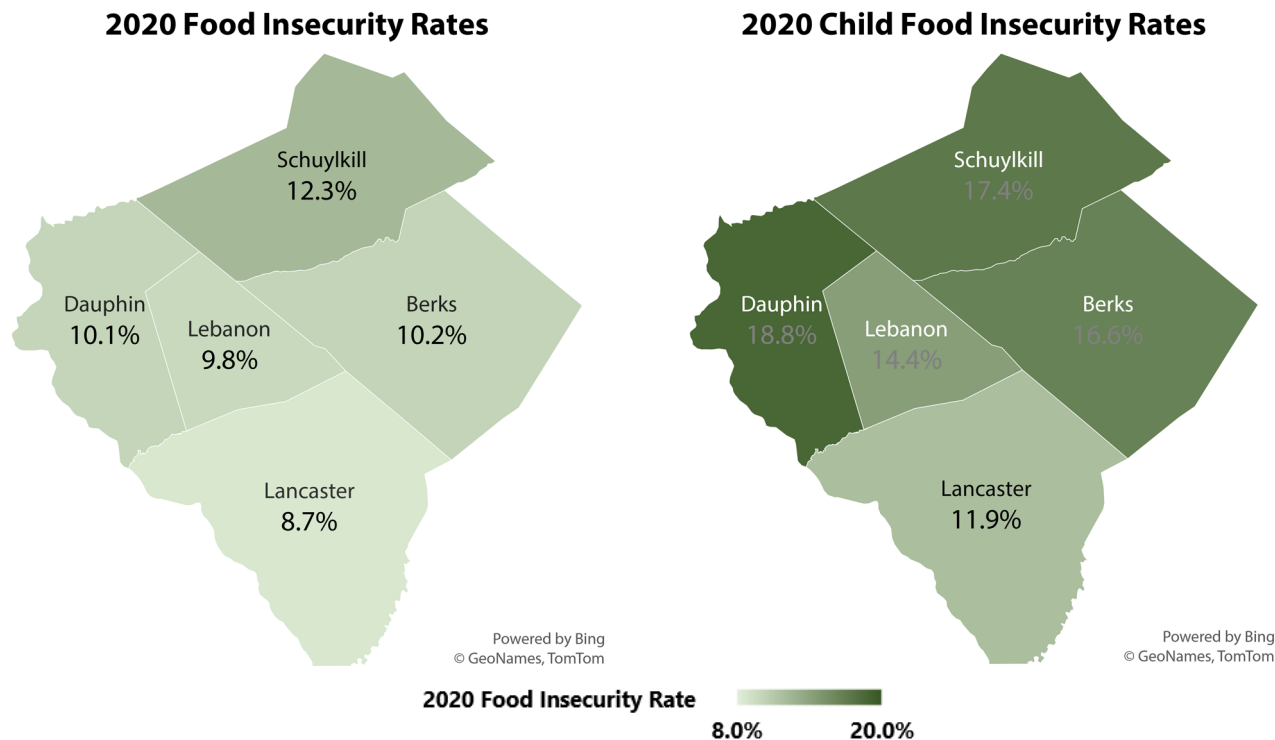
These typologies provide actionable insight into the concentration of food insecurity across Lebanon County, but it remains critical to continue to invest in Moderate and Lower Food Insecurity areas, as they still contain 21% and 27% of all food insecure people in Lebanon County.

These typologies are also useful because they can provide important insight into the main differentiating factors between neighborhoods of various food insecurity rates. These factors and other upstream effects of food insecurity are discussed further in the [Drivers of Food Insecurity](#) section of the report.

Food Insecurity in Lebanon County Relative to its Neighbors

Lebanon County's food insecurity rate is about a percentage point lower than Pennsylvania overall (9.8% compared to 10.7%), and Lebanon ranks 51st in the state (out of 67 total counties) in overall food insecurity rates. However, as discussed above, these county-level rates mask extreme disparities and inequality seen at the sub-county level across Lebanon County.

Lebanon County has an overall food insecurity rate similar to its neighbors and a child food insecurity rate slightly less than Dauphin, Schuylkill, and Berks counties. Each of these three neighbors are in the top half of the state in terms of child food insecurity rates, while Lebanon has just the 46th highest food insecurity rate out of 67 counties. However, it is important to note that Lebanon's disparity between adult and child food insecurity rates remains among the highest in the state.



Food Insecurity Differences by Household Type

While more specific food insecurity data is currently not available at the local level, the USDA annual reports provide breakdowns on the prevalence of food insecurity by household type at the national level.

- Food insecurity rates are highest for single female-headed households with children at 24.3%.
- Single male-headed households with children had lower, but still elevated, food insecurity rates of 16.2%.
- Households with children under 6 years old had a food insecurity rate higher than households with children overall, at 12.9% compared to 12.5% for households with children ages 6 to 17.
- Married-couple families with children had a food insecurity rate of 7.4%.
- Notably, food insecurity rates among single households with children were two to three percentage points lower in 2021 than 2020, due to pandemic-era policies such as the expanded child tax credit.

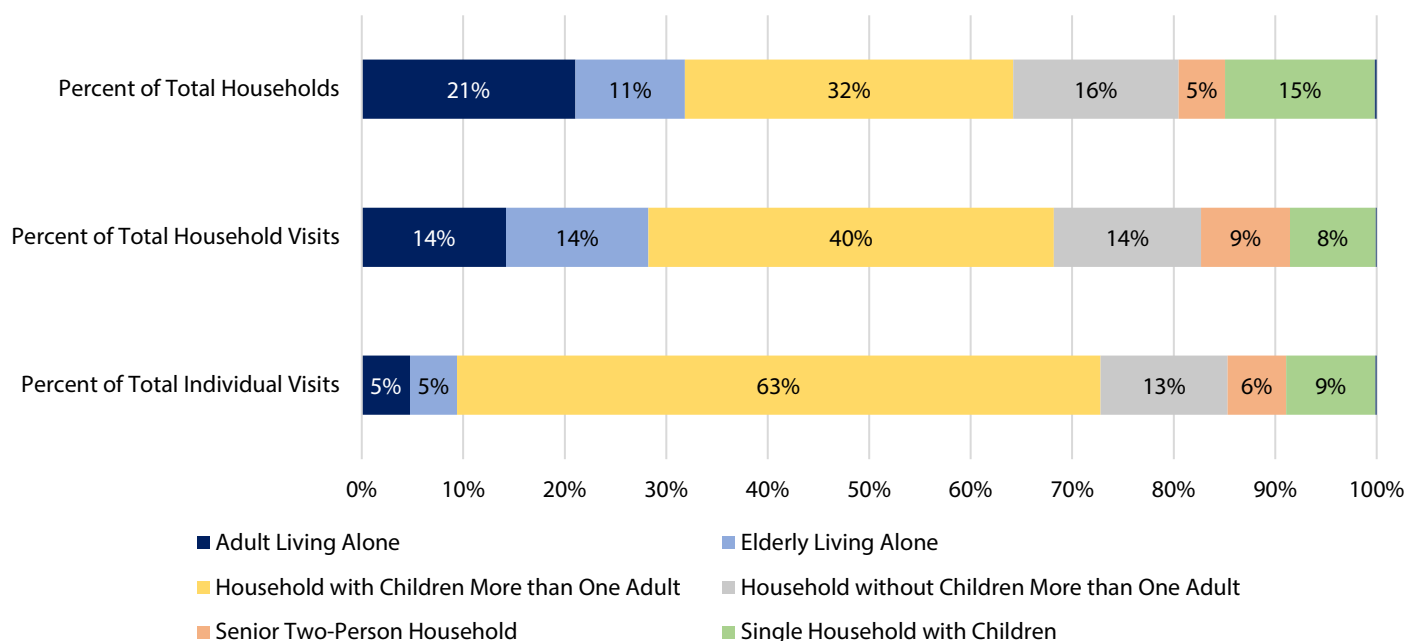
Households without children are much less likely to be food insecure, with food insecurity rates of 9.4%.

- Food insecurity rates are lower for households with more than one adult (6.9%) than for households with men or women living alone (12.3% and 13.2%, respectively).
- Multi-adult households with elderly members have the lowest food insecurity rates of any household type examined by the USDA, at 7.1%, but elderly people living alone have slightly higher rates at 9.5%.

The implementation of Service Insights on MealConnect, a paperless client intake platform provided by Feeding America, at three locations across the county (Lebanon County Christian Ministries' Main Office in Lebanon City, The Caring Cupboard in Palmyra, and Jonestown Outreach Food Pantry (JOY) in Jonestown) provides helpful insight into the utilization of charitable food services by the household types identified and studied by the USDA, especially because these three distributions are operated by the two largest charitable food programs in the county, Lebanon County Christian Ministries and The Caring Cupboard.

The first bar chart on the below figure shows the household types for unique, unduplicated, household level data at Lebanon County Christian Ministries, The Caring Cupboard, and Jonestown Outreach Food Pantry (JOY). The most common household type to visit these food pantries are households with children and more than one adult, followed by adults living alone, and households without children and more than one adult. Elderly households make up 16% of all households who visit these food pantries in Lebanon County while households with children make up 47.0% of all households (including 32% who are multiple-adult households with children and 15% who are single-adult households with children).

Food Pantry Visits by Household Type in Lebanon County

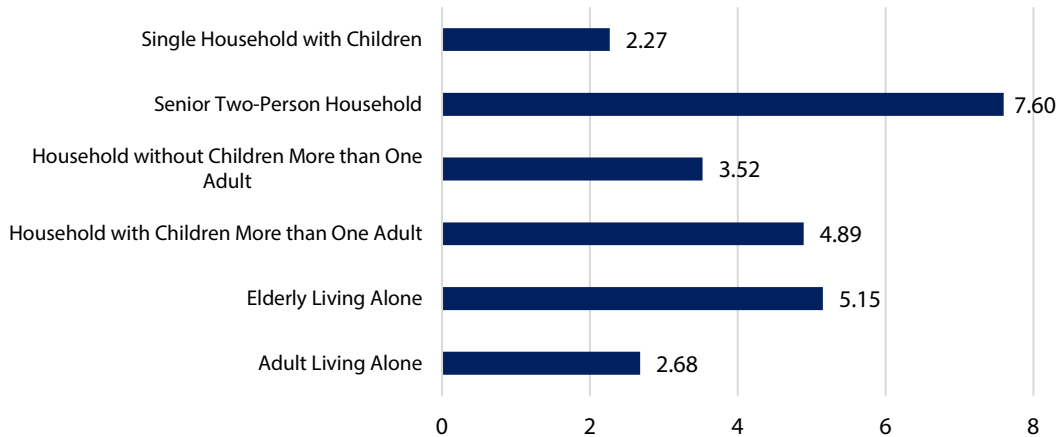


The above chart also shows the percent of total household visits that each household type represented, which is a function of the number of households of each household type and the frequency with which they visited food pantries in Lebanon County. Households with children and more than one adult make up 40% of all household visits. These households have the third highest visit frequency after senior two-person households and elderly living alone households, as shown in the below visit frequency figure.

Senior households are overrepresented in the total household visit data relative to their size (they account for 23% of all household visits and just 16% of all households) because they visit the most frequently. Seniors often live on fixed incomes and are therefore likely to need to visit food pantries frequently to make ends meet.

Single households with children and adults living alone are underrepresented in the total visit data (single households with children account for just 8% of visits but 15% of unique households, while adults living alone account for 14% of visits but 21% of all households).

**Avg. Number of Visits by Household Type
(Jul 2022 to Dec 2022)**



Low visit frequency among single-adult households with children is important to note because these are among the most vulnerable households and are the most likely to be food insecure according to national USDA data.

This national data applies to Lebanon County as well, as will be shown in the [Drivers of Food Insecurity](#) analysis. While food insecurity by household

type data is not available below a national level, poverty by household type data is available at both county and sub-county levels. Poverty is the main predictor of food insecurity status and the disparities in poverty levels at the county and sub-county levels in Lebanon County follow the national patterns in food insecurity status disparities.

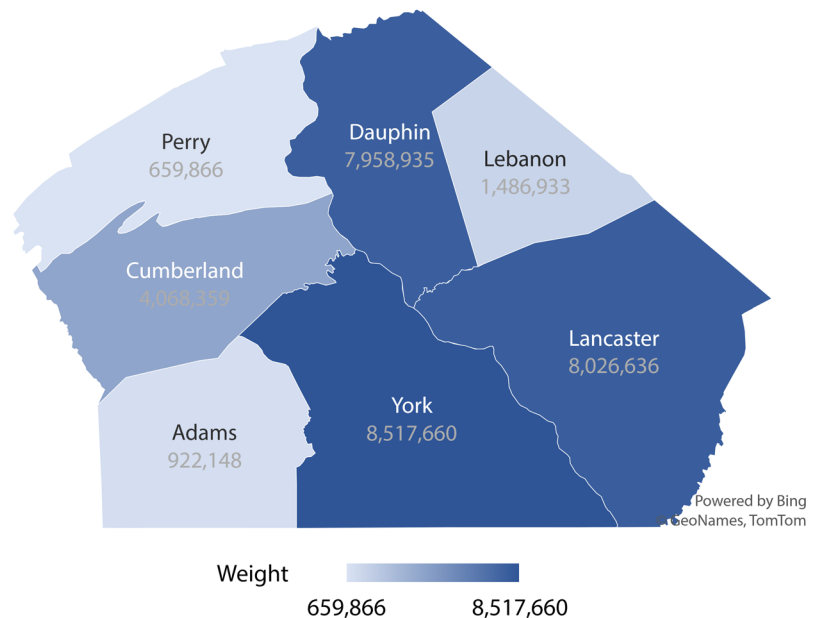
Food Distribution

Using data from Central Pennsylvania Food Bank's (CPFEB) inventory system and Feeding America's Map the Meal Gap estimates, the following analysis compares the distribution of product and both the rate and number of food insecure neighbors in Lebanon County with neighboring counties. County distribution numbers are reflective of all partners and programs of the CPFEB.

All analysis of pounds distributed in this section is inclusive only of product that is ordered from or reported to the CPFEB. At this time, that does not include any products that are privately purchased by the agency or donated pounds that the agency did not report via the online portal. Additionally, the county-level comparative analysis considers data only for programs open to anyone and intended to serve the entire family. This therefore excludes age-restricted programs such as Backpack, School Pantry, and Senior Programs as well demographic-specific distributions such as MilitaryShare and Fresh Express programs operating in housing complexes.

While Lebanon County is less populous than most of its neighboring counties, the food insecurity rate is second only to Dauphin County in the region at 9.8%. Pounds distributed by county in FY22 are mapped to the right. Neighboring Dauphin County, which has just over double the food insecure population of Lebanon County, has a distribution more than four times greater than in Lebanon County.

Charitable Pounds Distributed by County

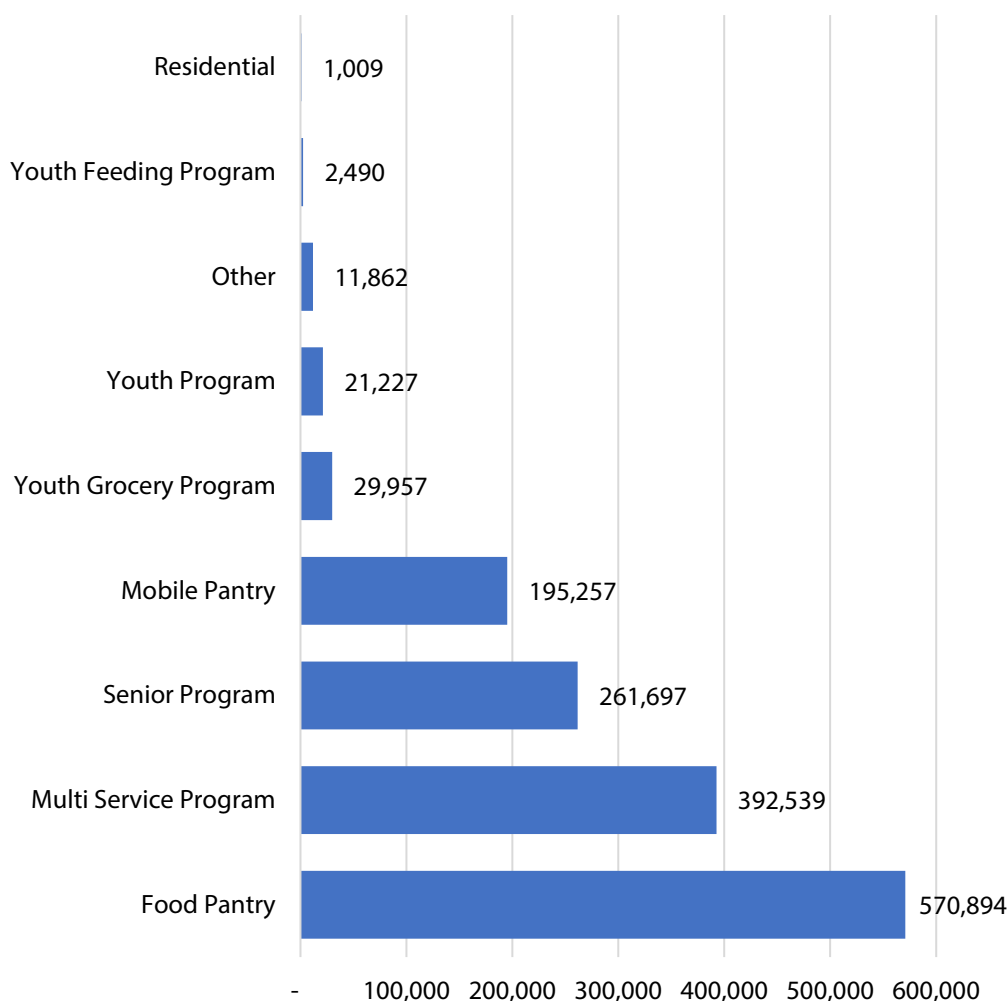


Additional detail regarding the relative populations, pounds distributed, and food insecurity rates among Lebanon County and its neighboring counties that lie in the CPFb's service territory can be found in the table below.

County	Weight	Population	Food Insecurity Rate	Food Insecure Number
Adams County	922,148	104,127	8.2%	8,410
Cumberland County	4,068,359	262,919	8.0%	20,020
Dauphin County	7,958,935	287,400	10.1%	28,100
Lancaster County	8,026,636	543,040	8.7%	47,150
Lebanon County	1,486,933	140,410	9.8%	13,750
Perry County	659,866	45,986	8.6%	3,950
York County	8,517,660	458,696	8.9%	39,970

Pounds distributed is by no means a definitive indicator of access or quality of services, but the analysis does begin to establish the need for targeted and strategic efforts to bridge potential food distribution gaps in Lebanon County. It is also possible that there are simply gaps in reporting. In this case, improving data collection would be a simple way to increase understanding of the food distribution situation in the county.

Lebanon County Food Distribution by Program Type



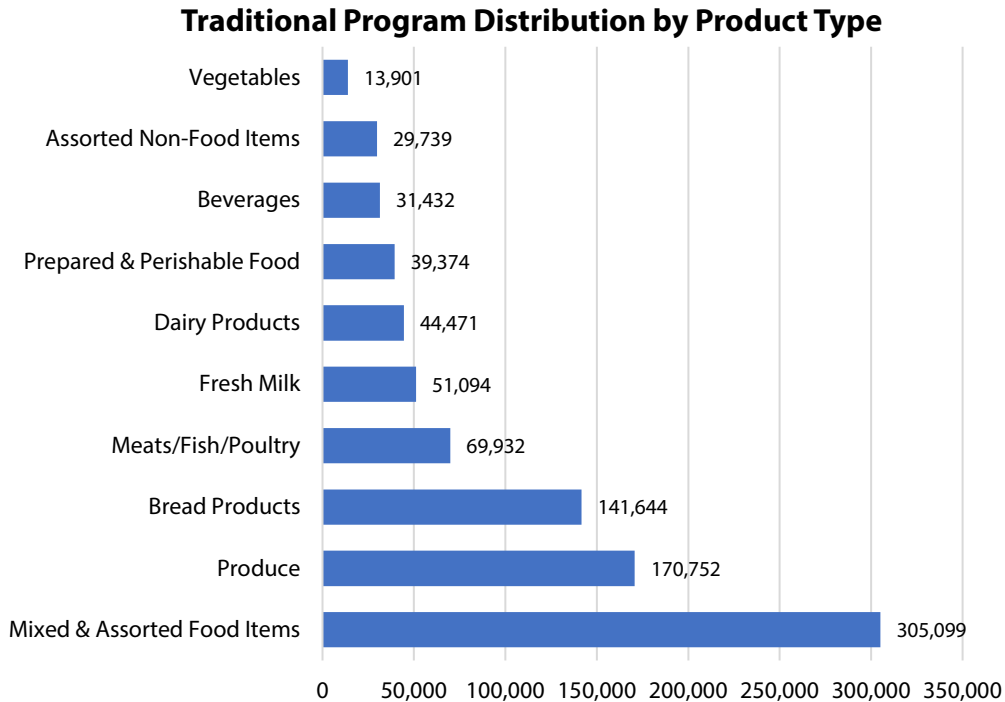
Within Lebanon County, distribution of food can be analyzed both by program type and product type. Program types vary by target audience, distribution method and more, which has an impact on the volume of food distributed. Due to the programmatic constraints of youth grocery, residential, and senior programs, they generally tend to distribute less to each individual or household than traditional food pantries and to therefore distribute fewer pounds overall than traditional pantries.

As seen in the graph at left, Lebanon County differs in this regard due to the prevalence of multiservice programs like Lebanon County Christian Ministries and senior program sites that offer monthly groceries to seniors via the Pennsylvania Senior Food Box Program and CPFb's privately funded supplemental program, ElderShare.

Even with robust programs such as these, traditional food pantries distributed nearly 600,000 pounds of product to Lebanon County neighbors last fiscal year, more than any other reported category. When limited to traditional programs, which are those that are open to all and intended as family grocery programs, analysis of distribution by product category, analysis of the types of food distributed by product category can shed light on the kinds of groceries most often provided by the charitable food network.

CPFEB utilizes product categories to gather the thousands of products sourced through and reported to CPFEB into a limited number of recognizable groups. As shown in the figure below, the top product categories in Lebanon County include mixed & assorted food items, produce, and bread products. Each of these top three categories is a common reporting category for externally donated product that is reported to CPFEB.

Donated product reported to CPFEB consists of items from retail donors, farms, private food donation drives, and other individual donations made either to CPFEB itself or directly to a partner agency. Additionally, these top three categories are primarily made up of low or no-cost product and items that are frequently requested by neighbors. High distribution of low-cost and high value products is indicative of programs that make best efforts to meet their clients' basic needs while also responsibly stewarding their finances.



While not top categories, there are also substantial amounts of meats/fish/poultry and fresh milk moving through the Lebanon County charitable food network. Proteins and dairy are both costly for clients to buy and of high nutritional value, so their availability at food pantries is especially valuable. However, opportunities remain to increase the distribution of these products.

Pantry Access Challenges

Access to charitable food is a multifaceted issue in Lebanon County. Access includes both concrete geographic components, such as drive and walk times to food pantries as well as less tangible aspect like hours of operation, service territories, frequency of allowable visits, income limits, documentation requirements, the variety and types of foods available, and the pantry's distribution model.

The following section will address several of these components via an analysis of geographic access to charitable food, an ancestry analysis of where different people groups are concentrated across Lebanon County, and an income analysis based on United Way Asset Limited, Income Constrained, Employed (ALICE) and U.S. Census American Community Survey (ACS) data. In the final version of this report, results from partner agency surveys and client surveys/interviews will allow further analysis of other components like hours and service models as well as the unquantifiable aspects of access based on the lived expertise of the neighbors the charitable food system serves.

In addition, because several of the largest charitable food distributors in Lebanon County use Service Insights on MealConnect for client intake and service tracking, this analysis assesses gaps in charitable food utilization based on the number of food insecure people in a census tract and the number of people who have visited a food pantry in Lebanon from that census tract in the last six months.

Geographic-Based Access

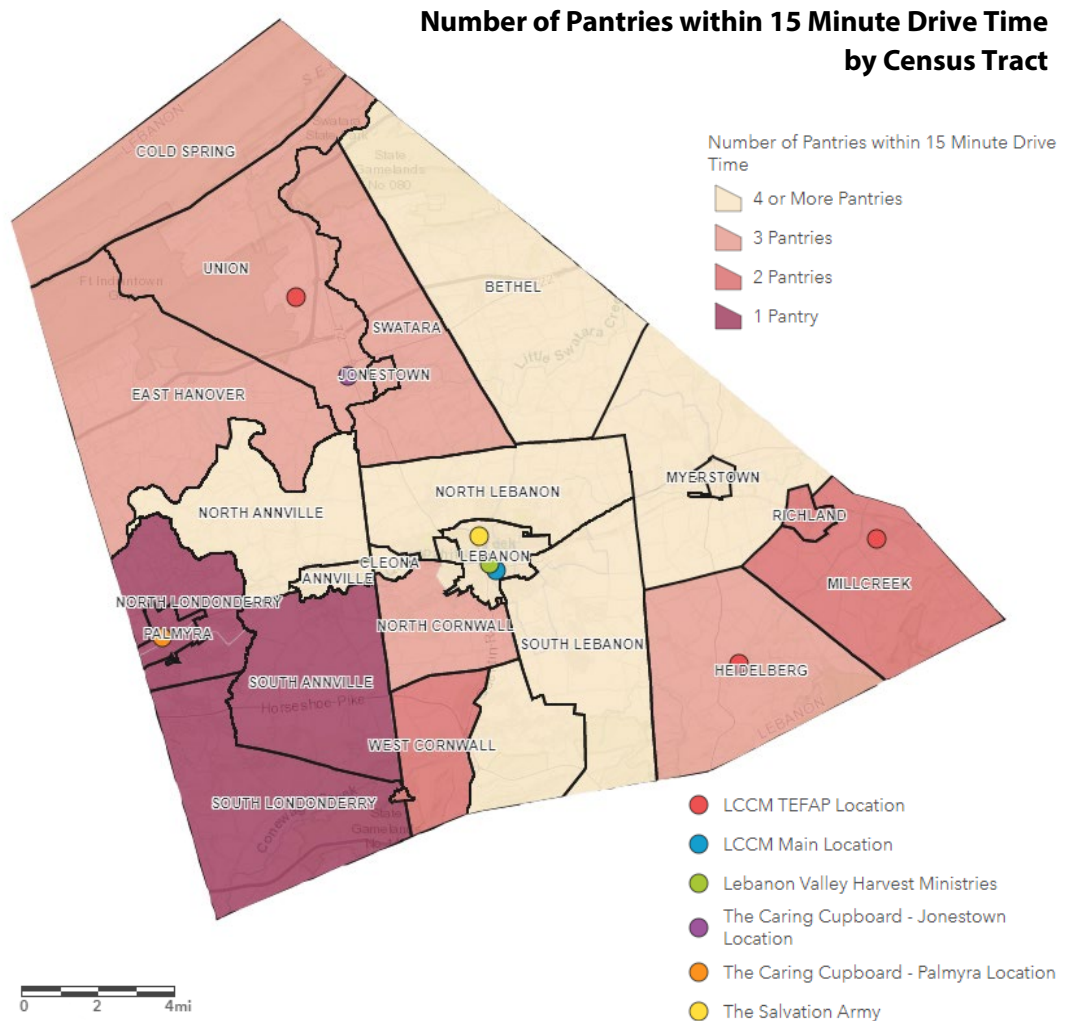
Number of Pantries within a 15 Minute Drive Time by Census Tract

To understand pantry access at a sub-county level, this analysis examines the number of CPFB partners within 15 minutes' drive of each census tract center of population in Lebanon County. The analysis' parameters are limited to food pantries that everyone can access regardless of age or military history. Therefore, youth programs, MilitaryShares, and senior programs such as CSFP and ElderShare are not included in the following maps and discussions.

The map to the right shows that areas around Lebanon City, Annville, Cleona, and the northeastern portion of Lebanon County have the most pantries within 15 minutes-drive, while the southwestern portion of the county, including Palmyra and North Londonderry Township has access to just one food pantry (The Caring Cupboard – Palmyra Location).

Of course, this analysis reveals just one part of the total access equation. For example, The Caring Cupboard is the only pantry serving a large swath of Lebanon County, but it is open every day of the week (except Sunday) for three hours per day.

In contrast, there are other parts of the county, such as Millcreek Township and Richland, with physical access to more pantries, but these pantries are open less frequently, so individuals living in this area may have a more challenging time receiving services than the geographical data suggests. This topic will be discussed at more length later in this report, and the overall analysis will be extended to include less tangible access components like distribution frequency in the next stage of the project.



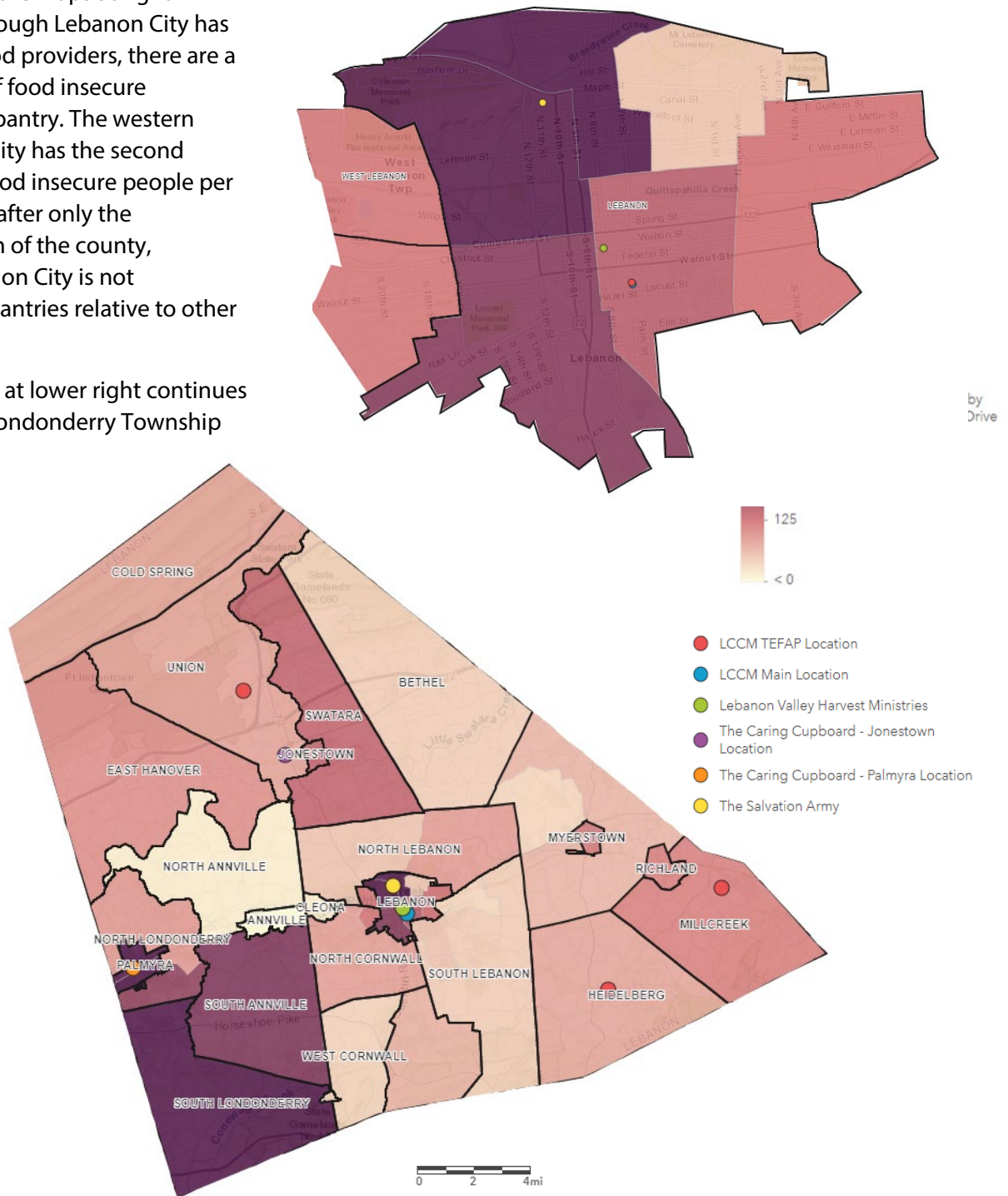
Food Insecure Individuals Per Pantry within 15-Minute Drive Time

Another key access component is the number of food insecure individuals per geographically accessible food pantry, which this analysis continues to define as pantries within a 15-minute drive. This analysis expounds on the solely geographic method used previously to consider population and need.

The results shown in the maps at right indicate that even though Lebanon City has several charitable food providers, there are a significant number of food insecure individuals per food pantry. The western portion of Lebanon City has the second highest number of food insecure people per pantry in the county after only the southwestern portion of the county, indicating that Lebanon City is not overserved by food pantries relative to other parts of the county.

The countywide map at lower right continues to show that South Londonderry Township and Palmyra are areas of high need per available food pantry, with the Caring Cupboard being the only nearby access point in Lebanon County for these areas. In fact, there are over 2,000 food insecure individuals in these areas who only have geographic access to Caring Cupboard's Palmyra location. As mentioned earlier, census tracts in the western portion of Lebanon City also have more than 250 food insecure people per pantry despite having more food pantry options due to the extremely high need in Lebanon City.

Number of Food Insecure Individuals per Pantry within 15-Minute Drive Time by Census Tract



Food Insecure Individuals Per Food Pantry within Walking Distance

While geographic access metrics based around drive times are highly informative, they do not paint a full picture of physical access to charitable food on their own as there are many people who need charitable food assistance and do not have a personal vehicle they can use to get to a pantry.

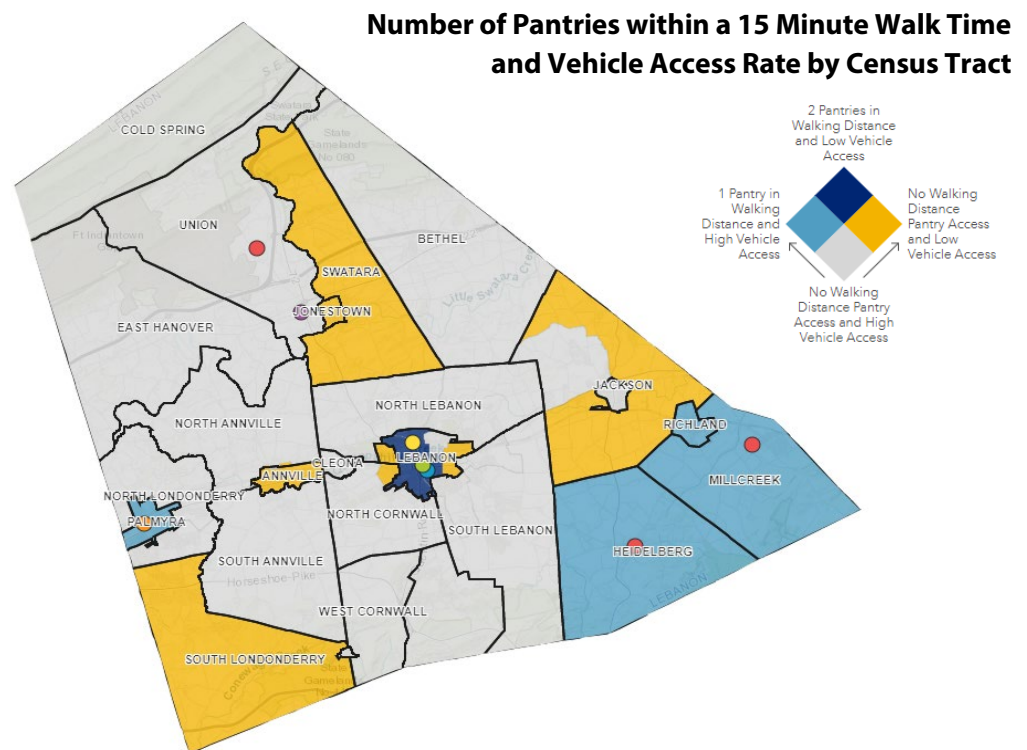
Indeed, there are a significant number of households in Lebanon County who do not have vehicle access. Lebanon City accounts for more than 50% of the non-Amish households in Lebanon County without access to vehicles (again this is despite Lebanon City having under 20% of the total number of households). Four of Lebanon City's six census tracts have more than 10% of their households who lack vehicle access. Jackson Township around Myerstown is the only other census tract in the county with vehicle access rates in this range, and that is because it is a heavily Amish area.² In Lebanon City, census tracts 1 and 4.01 in the center part of the city have the most severe access issues, with 20% and 30% of all households having no access to a vehicle, respectively.

Therefore, this report also conducts a 15-minute walk time analysis to better understand charitable food access for households without vehicles. The results in the map below show that the four census tracts in the western portion of Lebanon City are the only ones in the entire county that are within walking distance of two pantries. These tracts also have the most households that lack transportation; Census Tracts 1 and 2 in southwest Lebanon City have between 300 and 400 households without vehicles, while Census Tract 4.01 in the north central portion of Lebanon City has nearly 500 households without vehicle access.

Palmyra, Heidelberg Township, and Millcreek Township are each within walking distance of one food pantry and are areas where fewer than 100 households do not have vehicle access. No other census tract has a food pantry within walking distance.

The census tracts shown in yellow have no food pantry within walking distance and have more than 100 households without vehicle access. South Londonderry Township and Swatara Township/Jonestown are barely over the 100-household threshold while West Lebanon Township, Annville, and census tract 5 in southeast Lebanon City each have around 125 households without vehicle access.

A potential resolution to these access gaps could include a mobile food pantry or pop-up distribution in a walkable area in these locations. Another option could be to ensure pantry opening times are in sync with bus routes serving these areas of the county, especially since South Londonderry Township is the only one without a bus route available.³



² Elizabethtown College. (2022). [Amish Population in the United States by State, County, and Settlement, 2022](#)

³ Lebanon Transit (2023). [Lebanon Transit](#)

Time-Based Access Barriers

As described in the previous sections, there are some clear geographic barriers to access, but there are also less visible barriers such as available hours of service. The below table begins to assess time-based barriers that might exist in parts of Lebanon County by analyzing the operating hours of agencies that are open to the public and provide grocery distributions to serve the whole family, rather than specific age groups or demographics.

These hours are self-reported by agencies to CPFB and kept as records on CPFB's internal operational software, Primarius. Due to the limitations of the software, we are unable to differentiate in this table between afternoon and evening distributions. This table also assumes a scenario in which clients are not subject to service territories, programmatic policies limiting visits, have schedule availability when the program in their area is open, and that each program is open weekly.

City	Mon AM	Mon PM	Tue AM	Tue PM	Wed AM	Wed PM	Thr AM	Thr PM	Fri AM	Fri PM	Sat AM	Sat PM	Sun AM	Sun PM	Total
LEBANON	2	2	1	1	2	1	1	1	1	1	0	0	0	0	13
MYERSTOWN	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
PALMYRA	1	1	1	1	0	1	1	1	1	1	1	0	0	0	10
JONESTOWN	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	3	3	2	2	2	2	2	3	2	3	2	0	0	0	

The above data, even given its limitations, demonstrates clear intangible barriers related to distribution times. For example, Lebanon City has the highest number of physical access points during the week but does not have weekend hours available. Indeed, the only weekend access points in the county are on Saturday mornings in Myerstown and Palmyra. Overall, the best opportunities for access to the charitable food network are Monday, Thursday PM, and Friday PM.

The table above and the overall discussion of time-based access barriers will be updated and expanded upon following CPFB's intensive primary data collection process. Specifically, the Partner Agency Survey will provide hours of operation data in a format that allows for more granular analysis.

Food Pantry Utilization Gaps in Lebanon County

Using Service Insights data from Caring Cupboard and LCCM, the following section analyzes actual experienced food pantry utilization gaps for the final six months of the calendar year 2022. This analysis is likely the first documented instance in the nation of a Feeding America food bank leveraging Service Insights on MealConnect (SI-MC) service data to estimate census tract level food pantry access gaps.

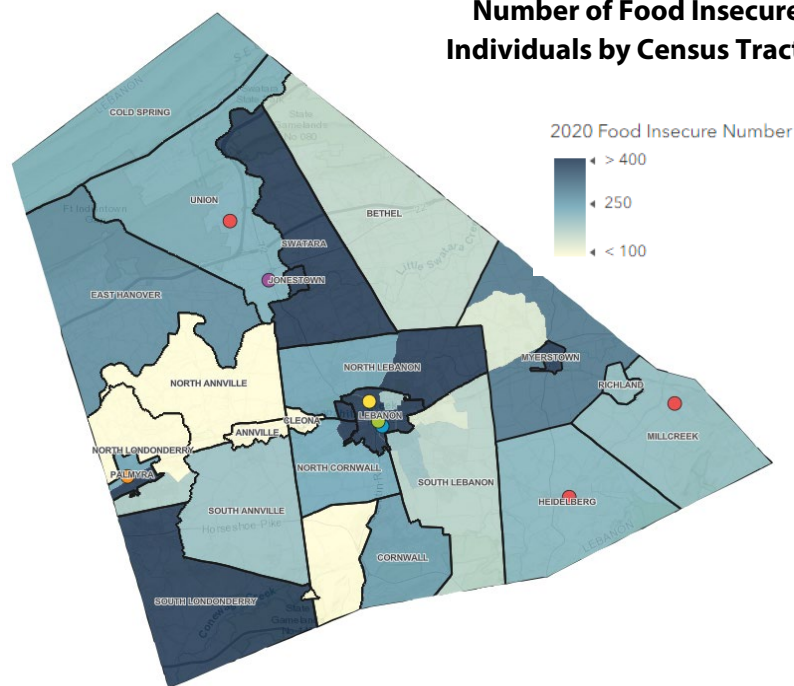
The analysis proceeds in two steps. First, the below maps show both the number of food insecure people by census tract in Lebanon County and the number of unique individuals who visited an SI-MC pantry at least once by census tract in Lebanon County between July 2022 and December 2022. Second, the analysis subtracts the number of people who visited food pantries in Lebanon County from the number of food insecure individuals in that census tract to determine the number of food insecure individuals not utilizing food pantries.

It is important to note that the food pantry service data is only from the Caring Cupboard in Palmyra, Jonestown Outreach Pantry (JOY) and the LCCM Main Office in Lebanon City. Therefore, LCCM TEFAP locations, The Salvation Army - Lebanon, Lebanon Valley Harvest Ministries, and other distributions are not included. This partially explains why utilization rates in the southeastern portion of Lebanon County are so low. As more sites in Lebanon County onboard to SI-MC over time, the county will be able to see in real time which areas of Lebanon County are underserved and adjust food distributions accordingly. The final report will also include manual geocoding using anonymized partner records, where possible.

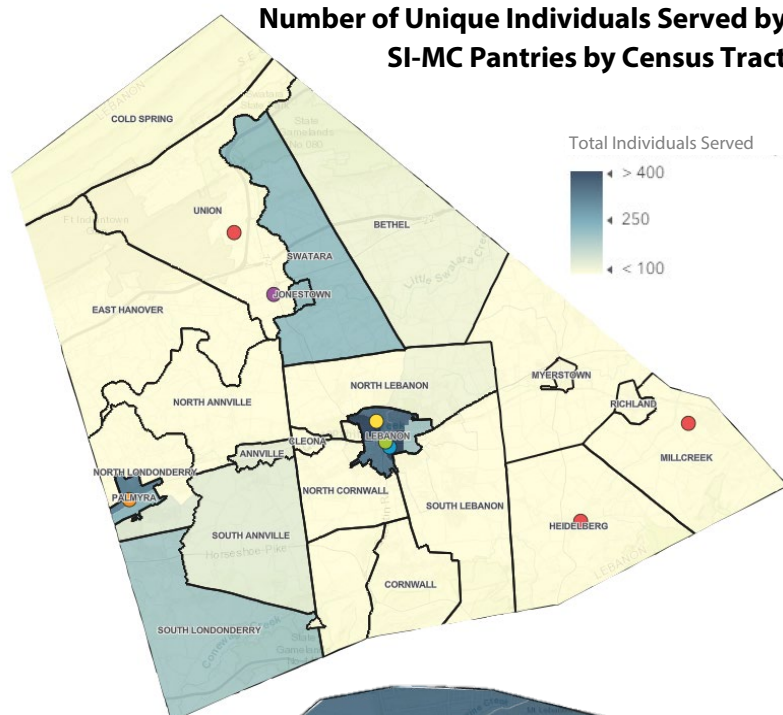
As shown in the map to the right, the greatest numbers of food insecure individuals are concentrated in western and southern Lebanon City, southern Palmyra, South Londonderry Township, Swatara Township, Jonestown, and North Lebanon Township. The outskirts of Lebanon City, East Hanover Township, and Jackson Township/Myerstown also have a significant number of food insecure individuals.

However, upon turning to the food pantry utilization map below, it becomes clear that individuals who visited food pantries between July 2022 to December 2022 primarily live in northern Palmyra and the northwest corners of Lebanon City. Utilization is higher in Jonestown/Swatara Township than in South Londonderry Township, although South Londonderry has more food insecure individuals.

Number of Food Insecure Individuals by Census Tract

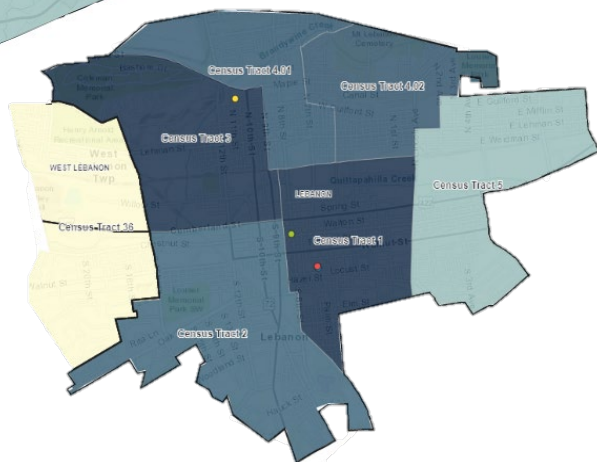


Number of Unique Individuals Served by SI-MC Pantries by Census Tract



West Lebanon Township is also important to point out because there were only around 100 individuals served at an SI-MC pantry between July and December 2022, despite nearly 500 food insecure individuals living in this area. Even though these individuals may be visiting the Salvation Army Lebanon or Lebanon Valley Harvest Ministries, the gap is still striking because census tract 3, which includes the Salvation Army Lebanon, has such high food pantry utilization.

Finally, it is striking that the southeastern portion of Lebanon County has low utilization rates in this calculation, but this is likely due at least in part to the fact that LCCM TEFAP locations are not using SI-MC at this time. Anonymized LCCM TEFAP data will be added manually before the final report.

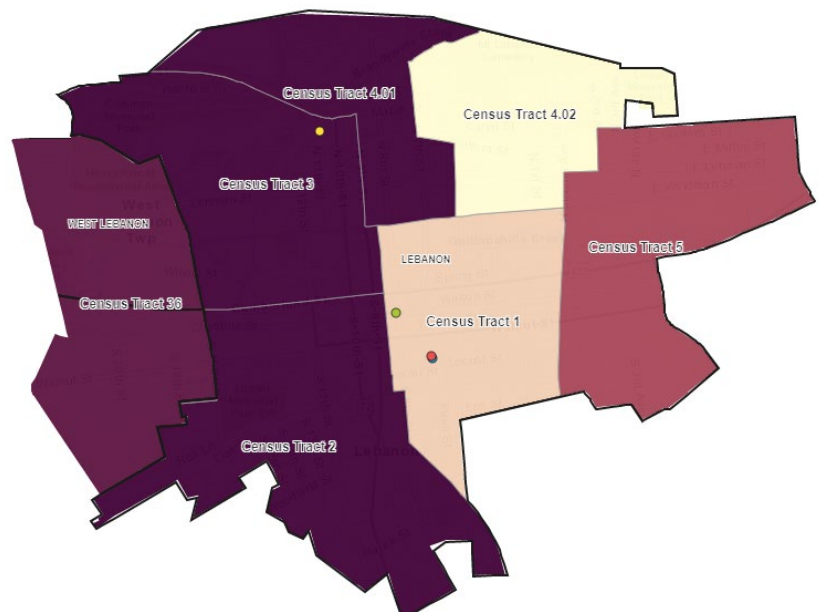
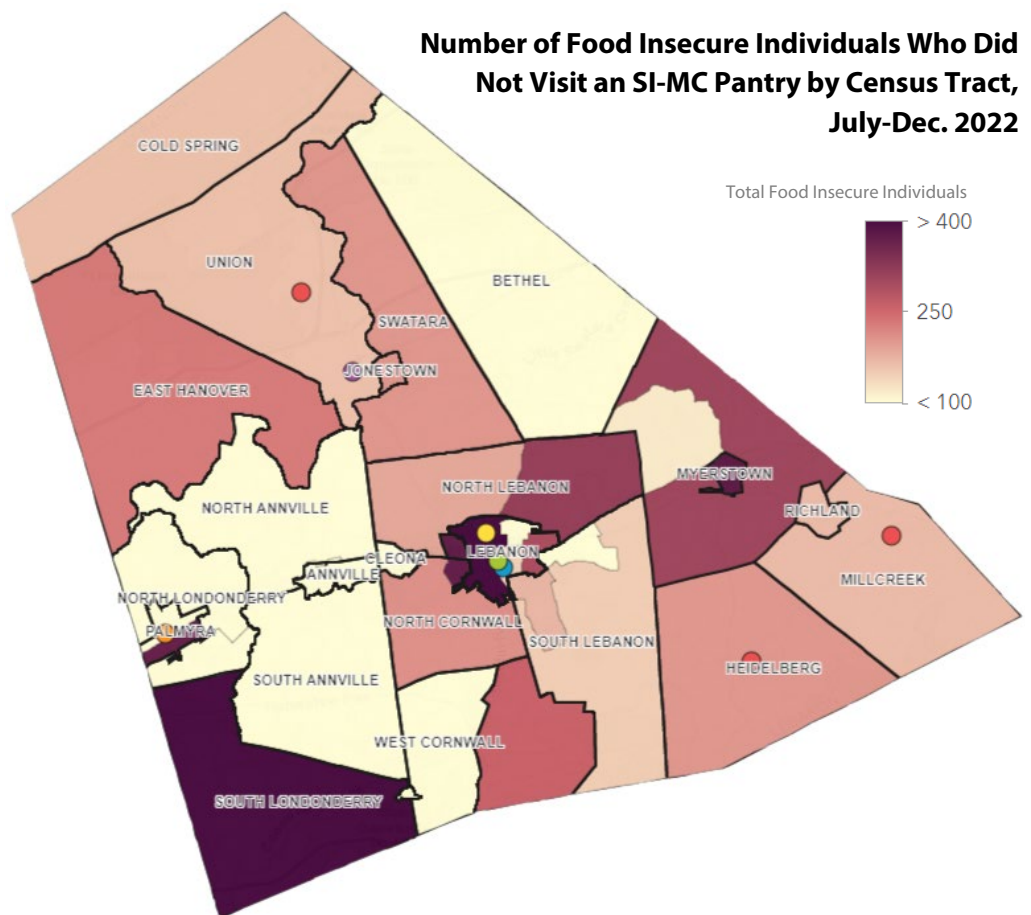


Combining these two maps in the map to the right reveals that the southern end of Palmyra, South Londonderry Township, West Lebanon Township, Myerstown, and census tracts 2, 3, and 4.01 in the western half of Lebanon City have the highest food pantry utilization gaps.

A closer look at Lebanon City also shows significant utilization gaps. There are simply so many food insecure individuals in Lebanon City that even food pantry utilization between 300 and 400 individuals in each of these census tracts leaves more than 400 food insecure individuals unserved.

It is possible that some or many of these individuals were served at pantries not currently using SI-MC, but it is likely not all of them. In addition to efforts to bring Lebanon agencies not on SI-MC on board so that any gaps can be accurately assessed, outreach efforts should increase in these areas to ensure that people who are food insecure but may not visit pantries feel comfortable accessing resources.

It is also important to note that accessing a food pantry at least once in the six-month period does not necessarily mean that these individuals received sufficient food assistance to avoid going hungry. Frequency of utilization and the amount of food accessed also matters and will for this reason be examined in depth in the final report.



Ancestry Analysis

To equitably serve people of all backgrounds, the charitable food network in Lebanon County must first seek to understand which people groups live in Lebanon County and where they live. This effort is highly important because Lebanon County is, like the rest of the United States, becoming increasingly diverse (Lebanon's Hispanic population has grown 64% in the last 10 years, from 9.3% to 14.2% of the county population), and because people from historically marginalized communities are disproportionately likely to be food insecure.⁴ This section intends to assist in this effort by analyzing U.S. Census and American Communities Survey data to shed light on areas that have particularly concentrated populations of people of non-Western European descent as a first step towards further work on topics like culturally relevant food sourcing and cultural competency within the charitable food network.

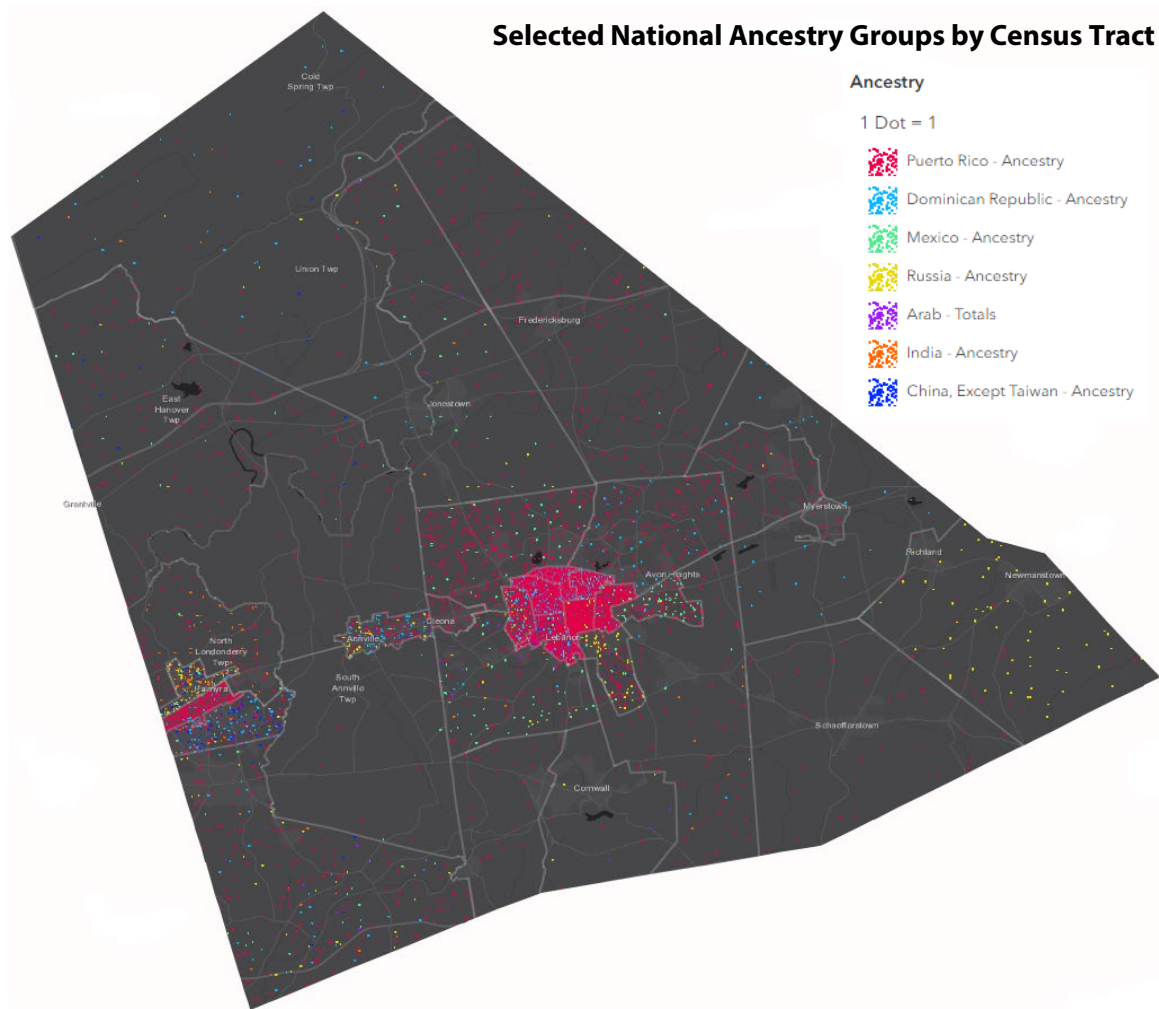
The following table shows the 20 largest non-Western European nationality groups in Lebanon County that have foreign-born rates of more than 20%, plus Puerto Rico. In fact, Puerto Rican people comprise the largest non-Western European ancestry group by far in Lebanon County, at over 13,000 individuals, accounting for more than 9% of the county's total population. Next largest are the Dominican and Mexican communities which account for 2,500 individuals and 1,300 individuals respectively (2% and 1% of the county population) All other nationalities listed make up less than 0.5% of the overall population of the county.

Rank	Country Of Origin	Ancestry	Foreign Born	Percent Foreign Born
1	Puerto Rico	13,423	N/A	N/A
2	Dominican Republic	2,586	596	23.0%
3	Mexico	1,334	472	35.4%
4	Russia	591	181	30.6%
5	India	479	271	56.6%
6	China, Except Taiwan	397	299	75.3%
7	Peru	295	388	131.5%
8	Morocco	386	290	75.1%
9	Vietnam	369	209	56.6%
10	Haiti	366	249	68.0%
11	Cambodia	282	209	74.1%
12	Guatemala	230	230	100.0%
13	Honduras	206	166	80.6%
14	Philippines	171	163	95.3%
15	Korea	153	169	110.5%
16	Colombia	73	136	186.3%
17	Nigeria	12	136	1,133.3%
18	Brazil	129	50	38.8%
19	Egypt	126	43	34.1%
20	Canada	110	93	84.5%

People from different ancestry groups are not evenly distributed across Lebanon County. This section will describe areas in which the six most common non-Western European ancestry groups are concentrated. In order, the seven largest ancestry groups are Puerto Rican (13,423 individuals), Dominican (2,586 individuals), Mexican (1,334 individuals), Russian (591 individuals), Indian (479 individuals) and Chinese except Taiwanese (397 individuals.)

⁴ Gunderson et al. (2022) [Feeding America Map the Meal Gap](#). Note: 2022 data is not comparable for state/county analyses.

Additionally, a seventh group, the total Arab population, is included in this analysis. Nationalities within the overall Arab population as defined by the Census Bureau include Egyptian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, and Syrian, and other Arab nationalities including the Gulf states. The decision to discuss Arab populations in aggregate rather than broken out by nationality was made because when all countries are aggregated, Arabs are the sixth largest non-Western European group at 621 individuals (0.4% of total Lebanon County population), and their presence must be considered in the context of culturally competent services and food sourcing. However, it is important to note that Arab is a broad category, and the people and cultures contained within it are not a monolith. While the Arab population has been mapped as a group, the discussion will disaggregate by nationality where possible and appropriate.



The map of Lebanon County to the left uses a plotting method in which one dot represents one individual residing in a census tract and each color represents a different ancestry group, so it shows both the relative sizes and densities of different non-Western European ancestry groups living in that area.

Like the overall population, non-Western European populations in Lebanon County are primarily concentrated in and around the city of Lebanon and

secondarily concentrated in the Palmyra area. Both Lebanon City and Palmyra and surrounding North Londonderry Township will be shown and discussed in more detail below.

The county level view also shows that the Puerto Rican population far outnumbers all other non-Western European ancestry groups and tends to predominate in most census tracts countywide, though not all. Annville Borough is broadly diverse, including a significant number of Puerto Rican, Dominican, and Russian individuals. Further away from Lebanon City, the census tract covering Richland Borough and Millcreek Township in the southeastern portion of the county is predominantly Russian (133 individuals).

A tighter focus on Lebanon City reveals several notable non-Western European communities in the city that are not visible at the countywide level due to the much larger overall size of the Puerto Rican population. Over 8,000 Puerto Rican individuals live in the city limits, which is 60% of the Puerto Rican community countywide.

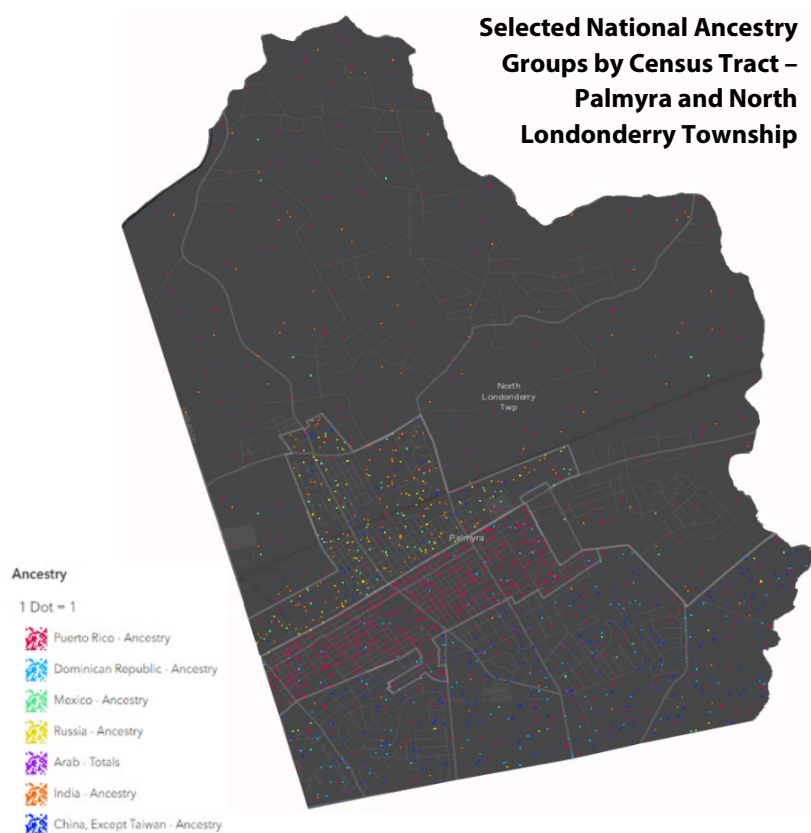
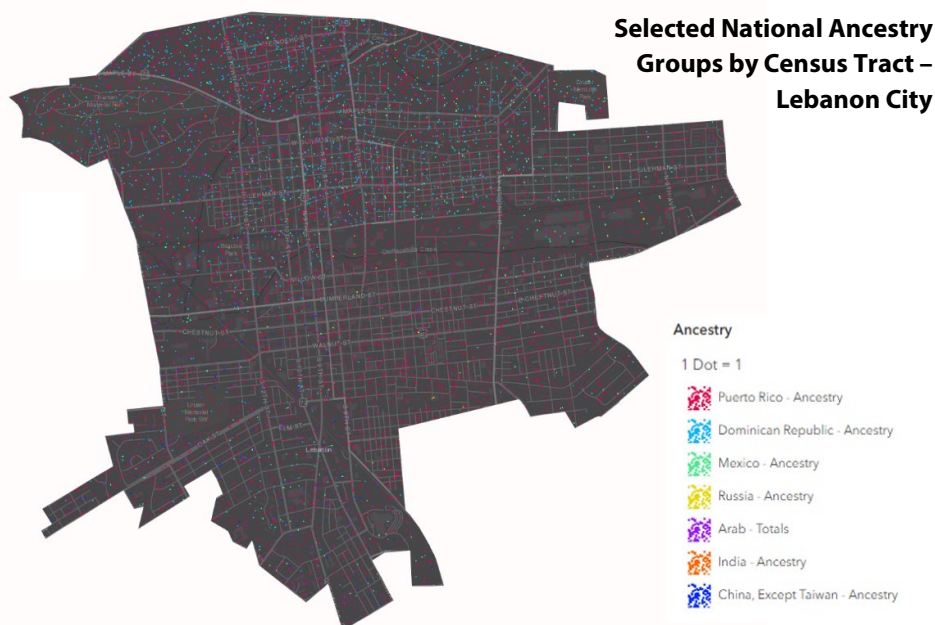
People of Dominican descent have a substantial presence in Lebanon City. There are 1,762 people of Dominican descent, accounting for nearly 70% of all Dominican individuals living in Lebanon County. Dominican people living in Lebanon City mostly reside north of Walnut St (US Route 422). Census Tract 4.01 contains just over 650 Dominican residents, or about a quarter of the countywide Dominican community.

The Arab community in Lebanon County is also primarily located in Lebanon City and appears to mostly live in the western half of the city, though it is less geographically clustered than the Dominican population. Two census tracts, numbers 2 and 3, both lie west of 8th St and contain around 200 and 150 Arab people respectively. Overall, just over 500 individuals of Arab descent live in the city, accounting for 85% of the countywide Arab population. The two largest nationalities represented within the Arab population of the city are Moroccan (250 individuals) and Egyptian (125 individuals).

The Palmyra area, including Palmyra Borough and surrounding North Londonderry Township, shows clear

geographical concentrations of different people groups, and it also is more Asian than much of the rest of Lebanon County. Overall, the Palmyra area is home to about 60% of Lebanon County residents with Chinese ancestry (around 250 of 400 individuals countywide) and to about 55% of those with Indian ancestry (over 250 of around 500 individuals countywide).

In Palmyra proper, the census tract immediately south of Main Street (U.S. Route 422) is predominantly Puerto Rican with a small Dominican presence, while the tract north of Main Street is more diverse, with visible Indian, Russian, Mexican, and Chinese communities. In North Londonderry Township, the tract south of Palmyra Borough has a large Chinese population along with substantial Puerto Rican and Dominican communities. The remainder of North Londonderry Township is covered by a single census tract that lies north and east of Palmyra. This tract is mostly Puerto Rican but has a sizable Indian community as well.



TEFAP Eligibility Analysis

Another potential access barrier to accessing charitable food is income requirements. Benefits cliffs, which occur when people have incomes slightly above the eligibility threshold for a program and therefore do not qualify for help but still struggle to make ends meet, are a well-documented issue with government assistance programs. Unfortunately, the charitable food system is not immune from this issue, as it often utilizes government-funded programs with income eligibility requirements to source food. This section analyzes three different components of charitable food access related to the number of people who can receive TEFAP (The Emergency Food Assistance Program) or SFPP (State Food Purchase Program). These are the two largest federal and state governmental charitable food supports.

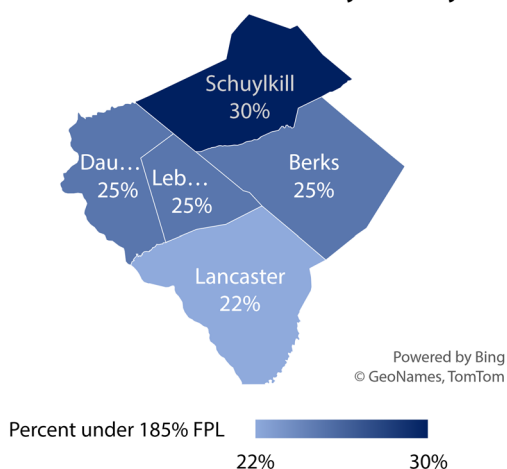
The Pennsylvania Department of Agriculture determines eligibility criteria for both programs and currently allows anyone with an income below 185% of the federal poverty level to access services that are supported by these programs' foods and funds. Each fiscal year, anyone who visits a pantry that distributes TEFAP and/or SFPP products must complete a Self-Declaration of Need form attesting that their income is under 185% of the federal poverty level to qualify for food pantry services using these products. The three components of the analysis are as follows:

1. Analysis of the number and percentage of individuals who have incomes that would qualify them for TEFAP/SFPP across Lebanon County.
2. Analysis at the ZIP Code/census tract levels of the impact of the May 2022 Pennsylvania Department of Agriculture policy change that raised the TEFAP/SFPP income eligibility threshold to 185%, up from 150% of the federal poverty line. This analysis aims to show where in Lebanon County increased outreach about the expanded eligibility would be most impactful.
3. Estimates of the number and percentage of people who are classified as Asset-Limited, Income-Constrained, Employed (ALICE) by the United Way, but who do not qualify for TEFAP/SFPP charitable food assistance. ALICE is a measure of the working poor, including those who live paycheck-to-paycheck and may struggle to meet their basic needs but are above the poverty line. The resulting estimates aim to identify which areas of Lebanon County may have the most households who are in need but do not qualify for TEFAP/SFPP charitable food assistance. This may indicate where non-TEFAP/SFPP service offerings would be most useful.

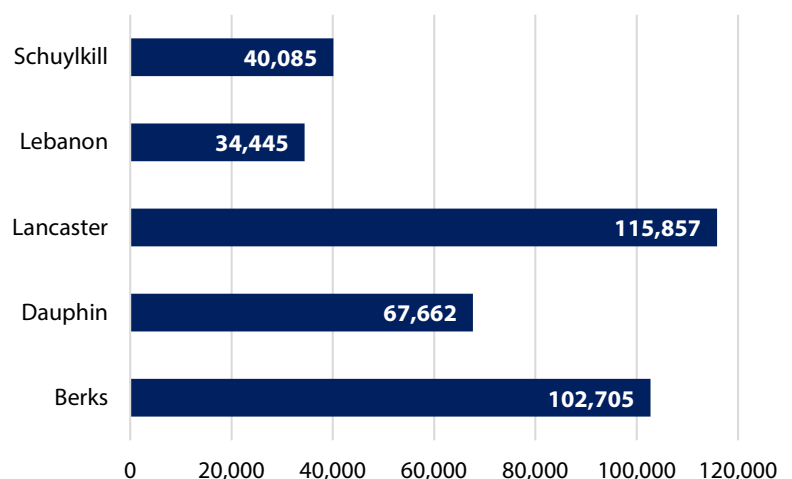
Individuals under 185% FPL

One in four Lebanon County residents (25.2%) qualifies for federal and state-funded charitable food assistance. This is around the median value for all counties in the state and matches the overall state average. The map and figure below show the percentage and number of individuals who qualify for charitable food assistance in Lebanon County and its neighboring counties. Lebanon has the fewest number of individuals who qualify for charitable food assistance of these counties, but this is solely a function of its relatively small population.

Percent under 185% FPL by County



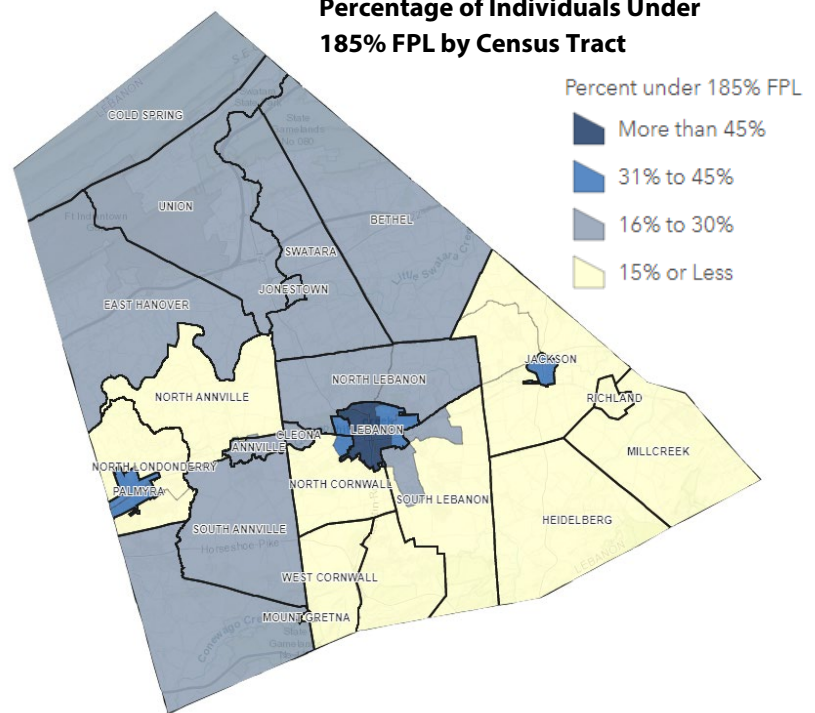
Number under 185% FPL



Turning to the census tract level, the highest concentration of individuals eligible for TEFAP/SFPP is in the western portion of Lebanon City. In fact, more than 60% of the residents of two census tracts in the northwestern corner of Lebanon City around the Salvation Army (census tracts 3 and 4.01) have incomes below 185% FPL. The rest of Lebanon City, West Lebanon Township, Palmyra, and Myerstown all have between 31% to 45% of their residents under 185% FPL, while the northern and southwestern reaches of Lebanon County have between 16% and 30% under 185% FPL. The southern portion of Lebanon County has the lowest proportion of its residents under 185% FPL.

50% of the population of Lebanon City (12,500 residents) are eligible for TEFAP/SFPP. In the county overall, 36% of all TEFAP/SFPP eligible individuals live in Lebanon City, double the proportion of the city's population to the countywide population. North Lebanon Township, Palmyra, and South Londonderry Township are the only other municipalities with more than 2,000 individuals eligible for TEFAP/SFPP.

Percentage of Individuals Under 185% FPL by Census Tract



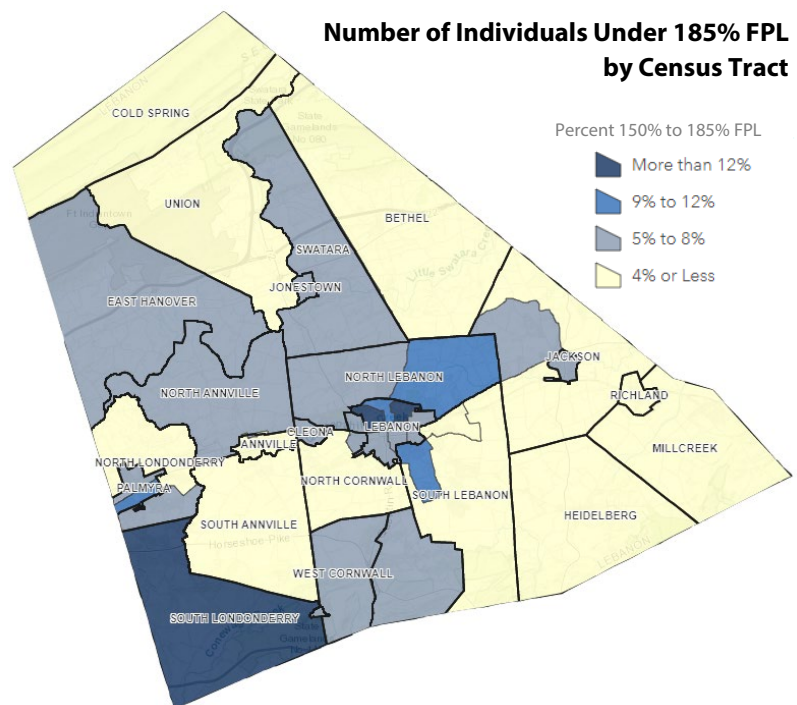
Individuals Newly Eligible for TEFAP/SFPP Charitable Food Assistance

An additional 9,414 Lebanon County residents are newly eligible for TEFAP/SFPP as of May 2022. This is a 38% increase on top of the 25,031 residents previously, due to a Pennsylvania Department of Agriculture rule change that raised the income eligibility guidelines from 150% to 185% FPL for TEFAP/SFPP.

At the census tract level, South Londonderry Township (Census Tract 40), has by far the most newly eligible individuals, at nearly 1,100. South Londonderry Township is also one of just three census tracts with more than 12% of its population newly eligible at 13%. The other two census tracts have 17% of their residents newly eligible and are both in Lebanon City, in the northeast corner (Census Tract 4.02) and northwest corner (Census Tract 3) respectively. These tracts have 670 and 735 newly eligible individuals. Altogether, Lebanon City has nearly 3,000 newly eligible individuals, while North Lebanon Township has around 950 and Swatara Township/Jonestown and Palmyra each have about 550 newly eligible individuals.

Special outreach efforts should be conducted in these areas to inform people of the new rules, particularly in South Londonderry Township and in Lebanon City given the high numbers and percentages of newly eligible individuals in these areas. If someone has attempted to go to a pantry before but was turned away because their income was too high, it will take targeted outreach to convince them to try again given their initial experience.

Number of Individuals Under 185% FPL by Census Tract



In addition, Lebanon County charitable food providers should work together to set clear and consistent policies to avoid turning away those who are over the TEFAP/SFPP income thresholds. Pantries should serve everyone who visits regardless of income and provide them with privately funded food if their income is over the guidelines. Lebanon County should also have designated pantries that do not primarily receive government-funded food and therefore do not need to have income requirements. These coordinated policies would ensure that the charitable food system does not have a benefit cliff, unlike many other programs. Because food pantries are often the most accessible support, it is crucial that they do everything they can to avoid turning people who are seeking help away.

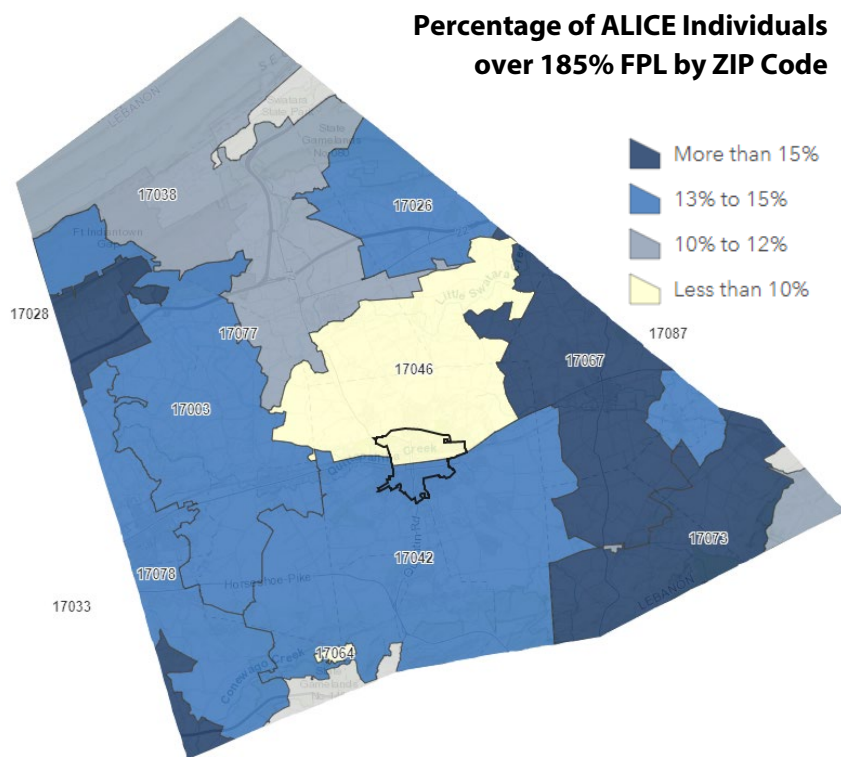
ALICE and TEFAP Eligibility Analysis

To determine areas of Lebanon County where there may be a significant need for charitable food assistance for individuals who are not eligible for TEFAP/SFPP (i.e. their incomes are above 185% FPL), this analysis utilizes ZIP Code level data from the United Way of Pennsylvania's ALICE Study (United Way does not produce ALICE estimates at the census tract level), in combination with ACS ratio of income to poverty level data.

It is necessary to consider ALICE households because they are above the poverty line but still living paycheck to paycheck and are likely struggling to get by.⁵ The ALICE population may therefore need charitable food assistance but are ineligible for government-funded assistance.

The ZIP Code level map to the right shows that the areas of Lebanon County with the highest percent of ALICE but TEFAP/SFPP ineligible individuals are 17073 (19.7%) and 17033 (18.4%). ZIP Codes 17028 and 17067 each have 16% of their populations ALICE but ineligible for TEFAP/SFPP.

ZIP Code 17042 in Lebanon has the largest number of ALICE individuals over 185% FPL at around 4,500. This is due in large part to the fact it is the largest ZIP Code by population in the county. ZIP codes 17073 and 17078 have the second highest number of ALICE individuals over 185% FPL, at just over 3,000. Each of these ZCTAs has more individuals in this category than 17046 despite having 10,000 fewer people. This is likely because 17046 in Lebanon has by far the highest percentage of individuals under 185% FPL at nearly 50% of its population. These results indicate that there should be pantries located in ZIP Codes 17073, 17042 and 17078 in Lebanon County that do not restrict charitable food access based on income.



⁵ United for ALICE. (2020-21). [Research Center: Pennsylvania](https://researchcenter.pennsylvania.edu/). ALICE Threshold 2007-2018, ACS 2007-2018.

SNAP Retailer Access Issues

Another key food access component is whether neighbors can get to grocery stores with sufficient choices of nutritious and affordable foods. Research has found that low-income communities have far fewer accessible supermarkets and easier access to convenience stores than do middle or high-income neighborhoods.⁶ These physical differences have meaningful impacts on shopping habits as more SNAP dollars are spent at smaller stores in low-income areas, which is important since small stores often have fewer fresh options and higher prices than supermarkets.⁷

However, despite the impact of access on shopping habits, research has also shown that residents of low-income areas without easy grocery access find ways to travel and spend most of their SNAP benefits at supermarkets.⁸ Additionally, SNAP participants do not spend most of their benefits at the retailer nearest to their house.⁹ Recent research has indicated that income-based solutions to access issues have greater results than supply-side solutions like building new grocery stores.¹⁰

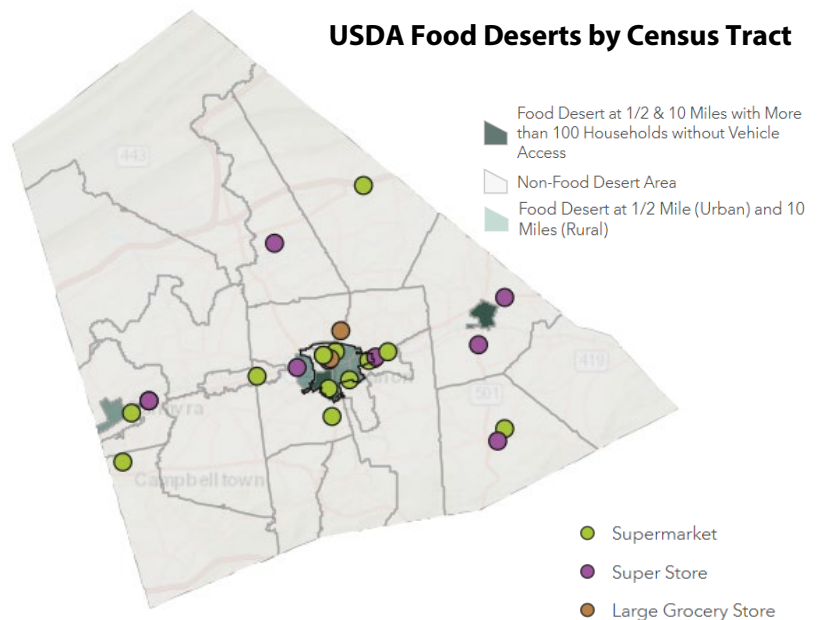
Food Deserts in Lebanon County

The USDA has several food desert definitions for low-income census tracts. The least severe is a low-access food desert, which is defined as census tracts in which 500 people, or 33% of the population, live further than one-half mile (in urban areas) or ten miles (in rural areas) from their nearest grocery store.¹¹ The most severe are census tracts that meet the same distance and population criteria but also have 100 or more households without access to a vehicle.¹²

In Lebanon County, seven census tracts meet the less severe low-access definition, including four in Lebanon City, one in West Lebanon Township, one in Palmyra, and one in Myerstown. Two of these seven are also low-vehicle access areas, meaning they meet the second, more severe desert definition, including Census Tract 2 in southwest Lebanon City and the entire borough of Myerstown.

However, there are significant drawbacks to the USDA food desert methodology. The USDA definitions are area-based analyses with firm distance cutoffs, so they present a black and white dichotomy not reflective of real experiences. For instance, as shown on the map at right, most census tracts in Lebanon City are relatively close to a supermarket, but most of their centers of population are slightly more than half a mile from the nearest grocery store, making them far enough to be flagged by the USDA criteria cut-off but not far enough to make a major difference.

Even the low-vehicle access food desert in southwest Lebanon City has a Weis Markets within its boundaries and just a five-minute walk from its center of population. Myerstown has the most severe grocery access issue, but the high number of households without vehicle access is likely due to the Amish population in that area of the county.



⁶ Larson, et al. (2009). [Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S.](#)

⁷ Desmond, M. (2016). *Evicted: Poverty and Profit in the American City*.

⁸ Schwartz, et al. (2017). [Supermarket Shopping and the Food Retail Environment Among SNAP Participants](#).

⁹ Ibid.

¹⁰ Fielding-Singh, P. (2021). *How the Other Half Eats: The Untold Story of Food and Inequality in America*.

¹¹ USDA Economic Research Service. (2022). [Food Access Research Atlas: Documentation](#).

¹² Ibid.

New research in the field of food access has shown that demand-side solutions, like increasing purchasing power and income, are more effective food access interventions than placing a new grocery store in a neighborhood. As shown by the above discussion, this is especially the case in Lebanon County. Therefore, income-based solutions like Double-Up Food Bucks (DUFB), a program that integrates with SNAP to match purchases of fresh produce dollar-for-dollar up to a certain limit, could improve access more than would adding additional retail locations.¹³ DUFB programs have been proven to increase fruit and vegetable consumption¹⁴ and do so in a way that promotes choice and dignity. Over half of all states implement DUFB, but Pennsylvania is not one of them. While there are some smaller efforts at farmers' markets across Pennsylvania, a DUFB program in Lebanon in partnership with grocery stores, corner stores, and farmers markets would give households additional choice and help address inequities in access to sufficient nutritious foods.

Utilization Rates of Key Government Programs

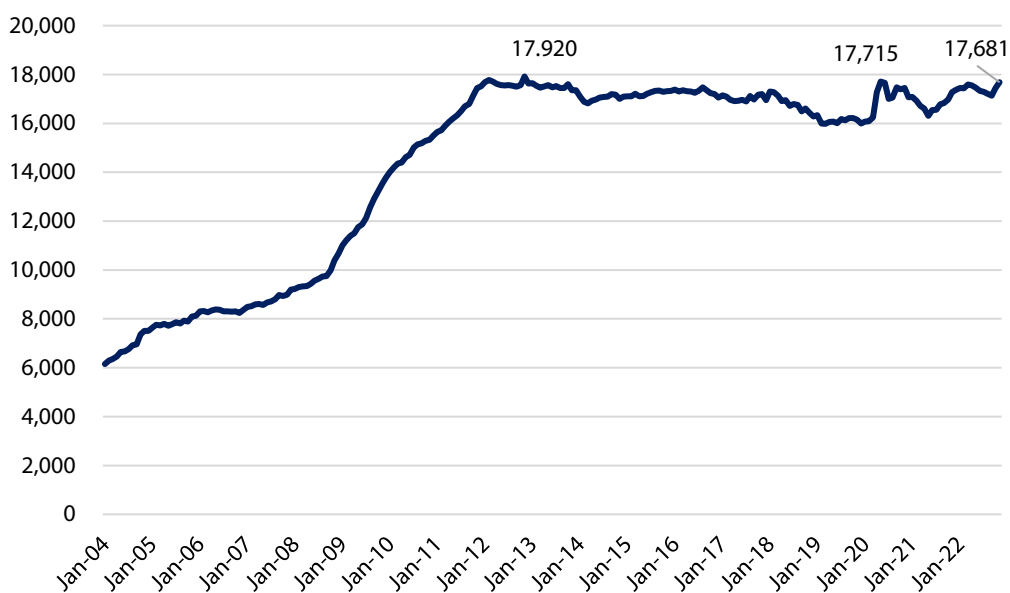
Food assistance offered through the charitable food system is just one of many programs and initiatives available to reduce food insecurity in Lebanon County. Several government programs, most notably the Supplemental Nutrition Assistance Program (SNAP), provide far more meals to families in need than the charitable food system. In fact, for every meal the charitable food system provides, SNAP provides nine.¹⁵ School-based child nutrition programs, including but not limited to the National School Lunch Program (NSLP), School Breakfast Program (SBP), and Summer Food Service Program (SFSP), are the second largest nutrition assistance programs when aggregated. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) rounds out the top three in terms of federal expenditures on permanent nutrition programs.¹⁶

Therefore, to achieve the goal of reducing food insecurity, the charitable food system must actively encourage participation in federal programs among the client population. This report provides a deep dive into the state of participation for these key government programs in Lebanon County and provides recommendations on specific areas for focused geographic programmatic outreach.

SNAP Participation Gap Analysis

SNAP is a vital resource for low-income households in Pennsylvania. Eligibility is determined by household size and income, with benefits made available via an Electronic Benefits Transfer (EBT) card, which can be used to buy fresh and frozen foods at many grocery/supermarket retailers. Because EBT works like cash, recipients have the freedom to choose items that suit their preferences, meet specific dietary needs, and budget spending over time.

Lebanon County SNAP Participation over Time



¹³ Double Up Food Bucks (2021). <https://doubleupamerica.org/>

¹⁴ Steele-Adjognon, M. & Weatherspoon, D. (2017). [DUFB program effects on SNAP recipients' fruit and vegetable purchases.](#)

¹⁵ Feeding America. (2022). [Supplemental Nutrition Assistance Program \(SNAP\).](#)

¹⁶ USDA Economic Research Service. (2022). [Spending on USDA's food and nutrition assistance programs reached a new high in 2021.](#)

A total of 17,681 individuals, or approximately 12.3% of the total Lebanon County population, participated in SNAP as of November 2022. This is nearly equal to the pandemic peak of 17,715 in May 2020 and just below the all-time peak of 17,920 individuals at the height of the Great Recession in November 2012. The Lebanon County participation rate in 2012 was nearly a percentage point higher (13.2%) due to the lower county population at that time. In Lebanon County, as in nearly every other county across Pennsylvania, SNAP participation increased dramatically in the Great Recession and fell very gradually during the slow economic recovery. SNAP participation has remained elevated in the past several years both due to increased need post-Great Recession and due to SNAP program changes that expanded eligibility and made it easier to apply in Pennsylvania.

Pennsylvania is one of the highest performing states in terms of SNAP participation rates, outperforming 42 other states according to a recent USDA report.¹⁷

- Lebanon County specifically is in the top half of SNAP participation rates in the state – ranked 26th out of 67 counties in Pennsylvania with a family SNAP participation rate of 93%.
 - This participation rate number is most helpful for comparisons across counties and states rather than absolute terms and does not mean that only 7% of families eligible for SNAP are not participating.
- Lebanon County's participation rate is significantly higher than those of Lancaster and Dauphin but is lower than both Berks and Schuylkill counties.
- Despite the comparatively strong SNAP participation rate, there is still room for improvement with SNAP participation in Lebanon County.
 - The charitable food system can therefore leverage increased SNAP outreach to reduce food insecurity in Lebanon County outside of its core food banking and pantry work.

This analysis uses ACS 2016-2020 data for family SNAP participation and family ratio of income to poverty levels to analyze SNAP participation gaps at the county and sub-county levels. The analysis uses families (a group of two or more related people living together)¹⁸ as the main unit of analysis to avoid under-estimating SNAP participation in areas with significant college populations.

The analysis was validated at the ZIP Code level using individual level Pennsylvania Department of Human Services (PA DHS) data. The results are largely in line with the USDA measures, and likely produces an overestimate of participation, similar to USDA measures. This likely overestimation bias provides even more confidence that any participation gaps identified in the analysis are significant.

¹⁷ Cunyningham, K. (2019). [Estimates of State Supplemental Nutrition Assistance Program Participation Rates in 2016](#).

¹⁸ U.S. Census Bureau. (2021). [Subject Definitions](#).

ZIP Code Analysis

Using Pennsylvania DHS data only available at the ZIP Code level, this analysis finds that ZIP Codes in the northern and western portions of the county have the lowest SNAP participation rates. **ZIP Code 17078 in Palmyra has the largest SNAP participation gap of all ZIP Codes in the county, with over 1,500 individuals likely eligible for but not participating in SNAP.**

This is corroborated by the family SNAP participation gap calculations, which find that 17078 is second only to 17067 in family SNAP participation gaps. ZIP Codes 17067 and 17078 also have among the top five highest participation gaps in both measures. The large SNAP participation gaps and low SNAP participation rates indicate that geographic-based outreach (through geo-targeted advertisements, in-person advertising events, pantry referrals, or other methods) would yield the most return on investment in these areas.

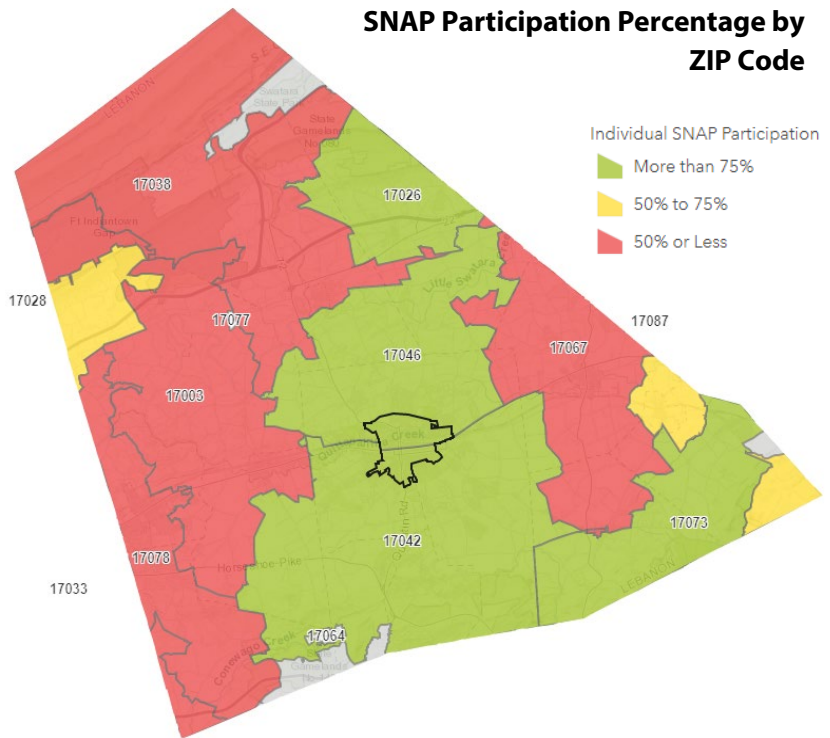
The ZIP Codes that include Lebanon City, 17042 and 17046, both have high SNAP participation rates. However, since they are the largest ZIP Codes in the county by population by more than 10,000 individuals, they also have some of the highest individual participation gaps, trailing only 17078 in Palmyra and 17033 in Hershey. ZIP Code 17033 is mostly in Dauphin County, with the exception of a portion in South Londonderry Township.

Census Tract Analysis

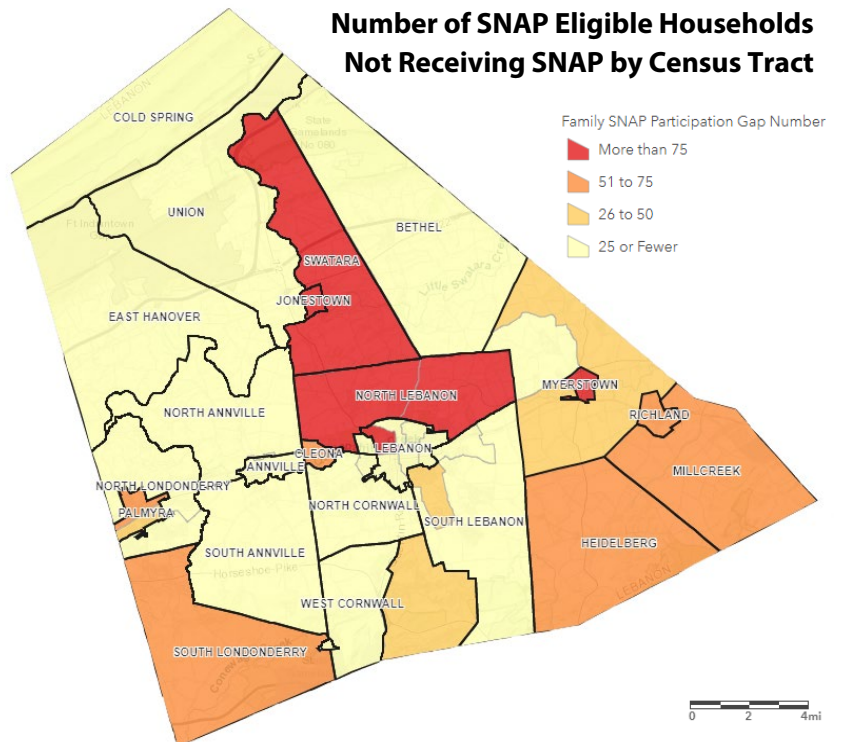
Analysis at the census tract level using family SNAP participation gaps (since PA DHS data is not available for census tracts) corroborates the findings at the ZIP Code level. However, the census tract level analysis provides further granularity for where geographic based SNAP outreach would be most impactful.

In particular, North Lebanon, Swatara/Jonestown, Myerstown, and census tract 3 in northwest Lebanon City have the highest family SNAP participation gaps. Heidelberg, Millcreek, and Richland each have relatively large participation gaps, but these may be in part due to the Amish population in this part of the county around the Myerstown area, which is currently around 1,400 people according to the most recent Elizabethtown College estimates.¹⁹

SNAP Participation Percentage by ZIP Code



Number of SNAP Eligible Households Not Receiving SNAP by Census Tract



¹⁹ Elizabethtown College. (2022). [Amish Population in the United States by State, County, and Settlement, 2022](#)

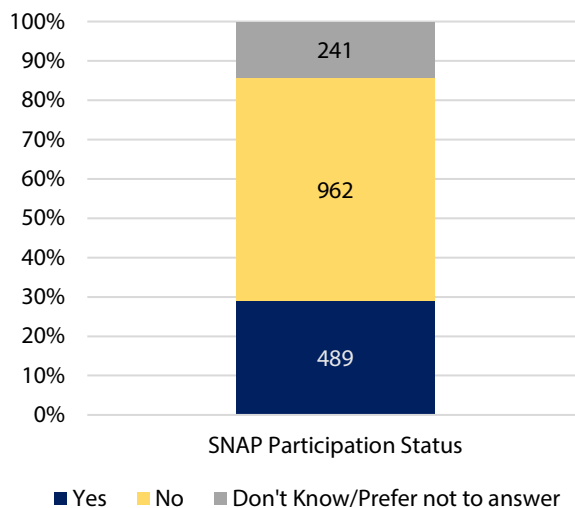
The analysis also shows that in ZIP Code 17078, which has the largest individual participation gap in the entire county, the main sources of the large participation gaps include Palmyra and South Londonderry township. While these two SNAP participation gap calculations (individual and family level) are both estimates, they provide strategic insight into where in the county are the greatest opportunities for SNAP outreach and their consistency across methods and geographies are increases confidence in the results.

SNAP Participation among Food Pantry Participants

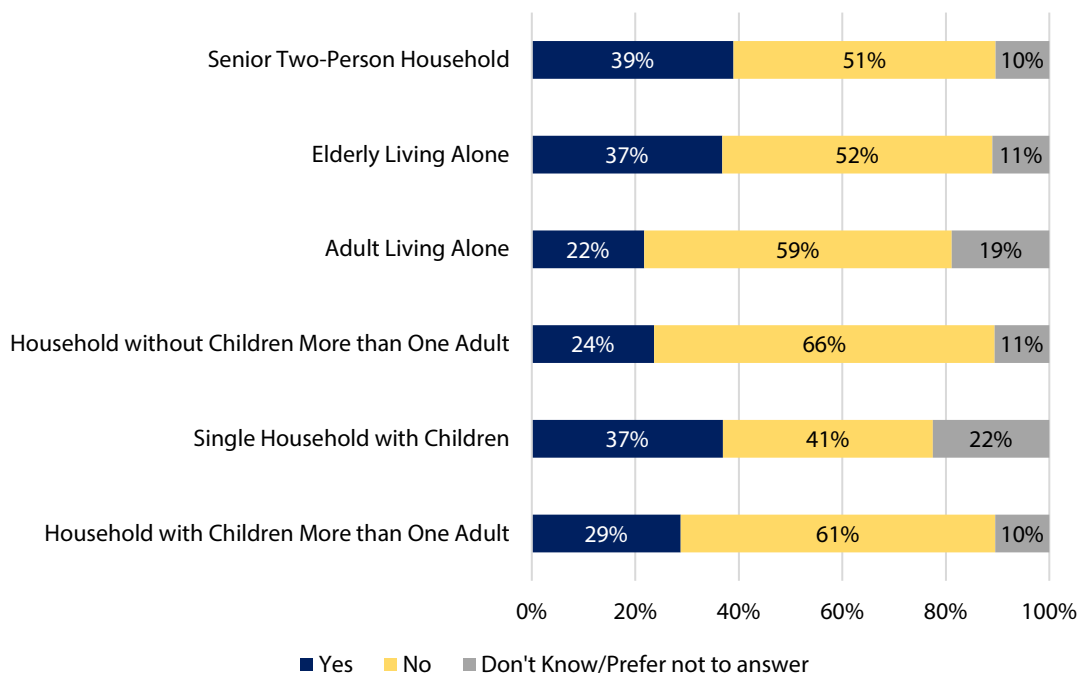
There is also a significant opportunity to increase SNAP participation among households who visit food pantries in Lebanon County. SI-MC data from the three onboarded pantries in Lebanon County shows that SNAP participation is just 29% at food pantries in Lebanon County, and no pantry has a participation rate over 43%. A total of 962 households who visited SI-MC user pantries in Lebanon County between July and December 2022, representing nearly 2,700 individuals, reported that they do not participate in SNAP. An additional 241 households representing nearly 650 individuals did not know or preferred not to answer during their food pantry intake process.

Analysis of SNAP participation by household type is somewhat surprising, as elderly individuals have the highest participation rates (albeit still less than 40%), followed by single households with children. Nationally and at the state level, elderly households have lower SNAP participation rates than other households.²⁰ However, among households who visited a food pantry in Lebanon County, adult households without children have the lowest participation, both below 25%.

SNAP Participation at Food Pantries in Lebanon County



SNAP Participation SI-MC at Pantries by Household Type



This data indicates that the charitable food system in Lebanon County has a major opportunity to increase SNAP participation among households visiting food pantries. SNAP outreach programs onsite would be incredibly impactful. In addition, SNAP mailers or text messages to participants could include eligibility information and direct participants who think they are eligible to SNAP helplines, such as the one run by the CFPB.

²⁰ Pickren, E. (March 2019). [SNAP Participation Lags Among Eligible Seniors in Every State, Putting Them at Greater Risk of Hunger](#)

WIC Participation Rate Analysis

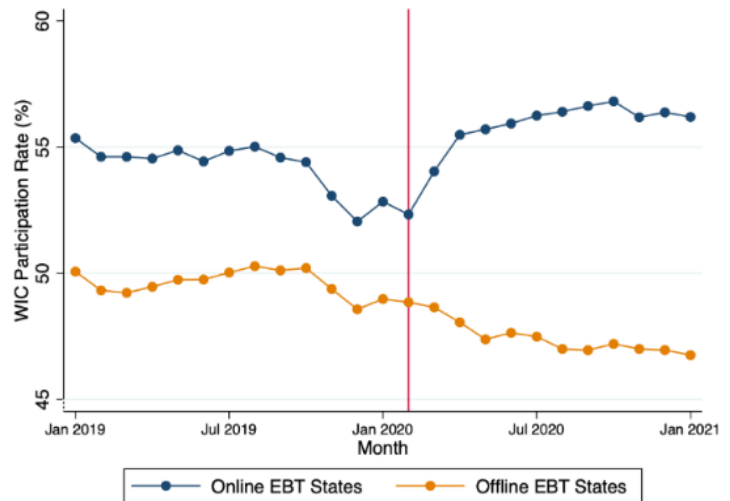
Unlike with SNAP, Pennsylvania underperforms in WIC participation at the state level. In 2019, Pennsylvania ranked 32nd in the U.S., with an estimated coverage rate of only 54.7%.²¹ Pennsylvania WIC participation and eligibility were both decreasing before the pandemic. In 2019, participation was 17.5% lower than in 2005.

Since the pandemic, participation has fallen even further for the nine states, including Pennsylvania, that still utilize offline electronic benefits transfer (EBT) systems for WIC.²² This means that WIC participants must bring their cards into the county office every three or four months to recharge their benefits.²³

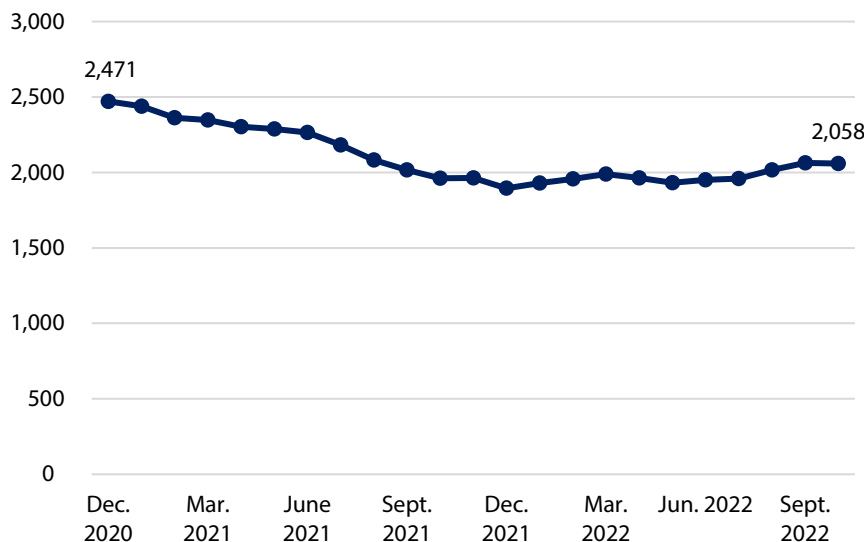
For the other 41 states that offer online EBT systems and virtual reloading of cards, participation actually increased after the pandemic.²⁴ The added administrative burden in offline states like Pennsylvania not only makes it more difficult for participants to reload benefits, but it also discourages participation overall.

The drop in benefits over the last couple of years also occurred despite the recent switch to the eWIC program in 2019, which provides participants with EBT debit cards instead of paper checks to purchase food.²⁵ Pennsylvania was one of the last states to transition to eWIC and typically when states switch, they experience an increase in participation between 5% and 9%.²⁶ However, the disadvantages of the offline EBT reloading system combined with the pandemic to counteract any potential benefits of switching to eWIC.

WIC Participation Rates in Online vs. Offline EBT States



Lebanon County WIC Participation Over Time



Lebanon County has not been immune to the decline in WIC participation seen across the state. Participation fell 16.7% between December 2020 and October 2022. This was the 13th largest percent drop out of any county in the state and was 11 percentage points more severe than the statewide drop of 5.4%, although participation has risen slightly recently.²⁷

²¹ USDA Food and Nutrition Service. (2022). [WIC 2019 Eligibility and Coverage Rates](#).

²² Vasan, A. (2021). [The Impact of In-person Benefit Reloading on WIC Participation During the COVID-19 Pandemic](#).

²³ Lubrano, A. (2021). [WIC's Plan to Get Food to Low-Income Kids is Criticized for Increasing COVID-19 Exposure Risk](#).

²⁴ Vasan, A. (2021). [The Impact of In-person Benefit Reloading on WIC Participation During the COVID-19 Pandemic](#).

²⁵ Moselle, A. (2019, Oct). [Safety net program for Pa. women and children is switching out paper for plastic](#).

²⁶ Penn Medicine (2021). [WIC Child Nutrition Program Saw a Boost in Enrollment After Shift from Paper Vouchers to Electronic Benefit Cards](#).

²⁷ Pennsylvania Department of Health WIC (2022). [PA WIC Program Data](#).

ZIP Code WIC Participation Gap Analysis

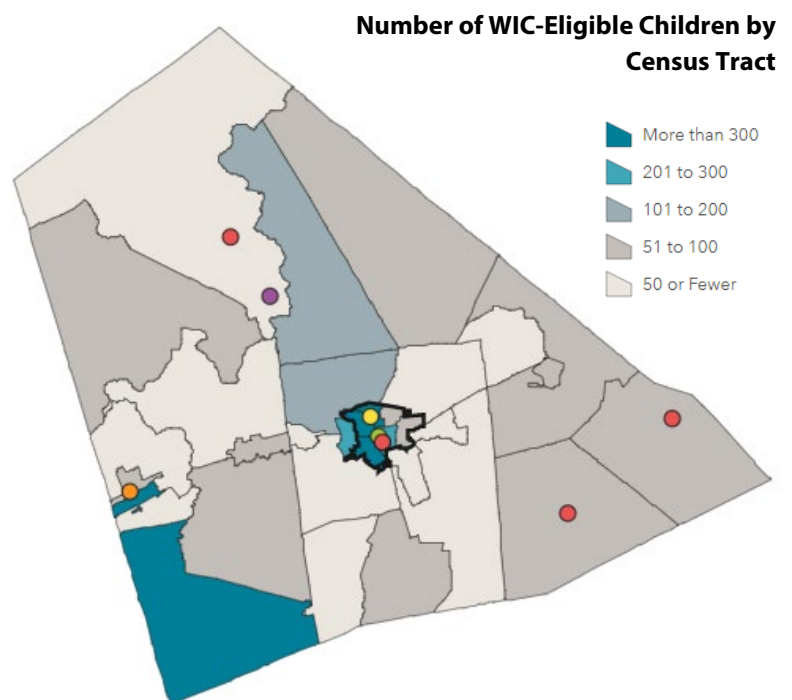
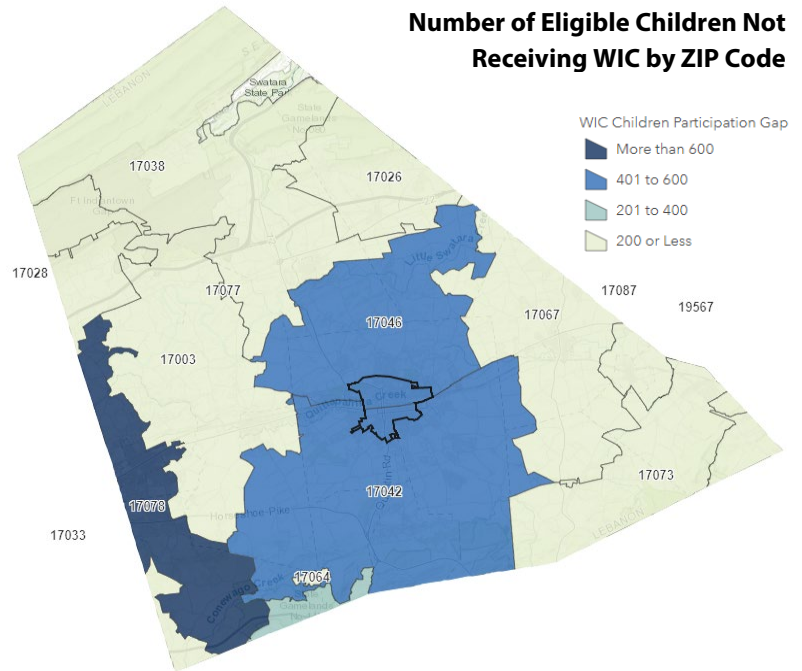
To pinpoint the areas with the greatest possibility for WIC uptake, this analysis examines May 2022 WIC ZIP Code level participation data from the Pennsylvania Department of Health in conjunction with ACS income and poverty level ratios for children under 6.

As depicted in the map to the right, ZIP Code 17078 in Palmyra has the largest WIC participation gap for children, with an estimated 630 children likely eligible but not participating in WIC. This gives Palmyra a WIC participation rate of just 13%.

ZIP Codes 17042 and 17046 in Lebanon City have the next largest WIC children participation gaps in the county at around 500, but they have some of the highest participation rates in the county at 48% and 61%, respectively. Therefore, their high participation gaps are due mainly to the high populations of these ZIP Codes.

Other WIC participation gaps above 100 children include 17067 in Myerstown with 137, 17003 in Annville with 151, and 17010 in Campbelltown with 170. 17067 in Myerstown has a participation rate of 37%, while 17003 in Annville has a lower participation rate of 26%. ZIP Code 17010 in Campbelltown has one of the lowest participation rates in the county with only 1% of eligible children receiving WIC.

Using census tract level analysis of the number of children under 6 who are eligible for WIC as shown in the map to the right, WIC outreach efforts should be focused on the southern end of Palmyra (south of Main Street), South Londonderry Township, and the western portion of Lebanon City. Jonestown and Swatara Township also have a significant number of children eligible for WIC. Although WIC participation data is not available at this level of specificity, the likely eligible data at the census tract combined with the ZIP Code WIC participation gap data above provides excellent insight into where to focus geographically targeted outreach efforts.



Priority Schools for Free and Reduced Meal Programs

The federal Child Nutrition Programs (CNP) are critically important to ensuring that all children get the nutrition they need to live healthy lives. The largest of these are the National School Lunch Program (NSLP) and the School Breakfast Program (SBP), which provide free or low-cost lunches and breakfasts to school-aged children in participating public and private schools. The Child and Adult Care Food Program (CACFP) provides free or low-cost meals and snacks to children in daycares and afterschool programs, children in emergency shelters, and some adults in day care programs. The Summer Food Service Program (SFSP) and Seamless Summer Option (SSO) allow community organizations and school food authorities to provide meals in the summer when school is closed.

The following analysis was conducted using 2019-2020 NSLP and SBP participation data for public schools provided by the Pennsylvania Department of Education, which oversees the CNP at the state level, as well as poverty level data from the 2016-2020 American Community Survey (ACS). Due to data collection limitations as a result of the COVID-19 pandemic and the child nutrition waivers put in place to respond to it, it was not possible to use more recent data.

Lebanon County schools were identified as targets for child nutrition program outreach if more than 25% of school-aged children living in the school district lived in households with incomes below 185% of the federal poverty line per the 2016-2020 American Communities Survey and if building-level participation rates for lunch or breakfast were below the statewide averages of 57.3% and 42.2% respectively. 185% FPL is used as the poverty threshold for the purposes of this analysis because it is the maximum income eligible for reduced-price breakfast and lunch by federal standards while 150% FPL is the maximum for free breakfast and lunch.

Lunch participation rates have been calculated by dividing the average number of meals served per day by total enrollment, in accordance with the Food Research and Action Center's (FRAC) methods. Breakfast participation is calculated by dividing breakfasts served by lunches served, which is also in accordance with FRAC. Ultimately, this means that in a school with 100 students, a 50% lunch participation rate, and a 40% breakfast participation rate, 50 children ate lunch on an average day and 20 ate breakfast. A list of schools meeting all these criteria can be found in the table on the next page. Target schools are displayed in alphabetical order by school district.

School District	School-Aged Children in District	School-Aged Children Under 185% FPL in District	Pct. School-Aged Children Under 185% FPL in District	School Building Name	Building Enrollment	Building Free and Reduced Enrollment	Percent of Total Enrollment Free and Reduced	Lunch Participation Rate (Avg. Lunches Served per Day over Enrollment)	Breakfast Participation Rate (Breakfasts Served over Lunches Served)
Cornwall-Lebanon School District	5,395	1,816	33.66%	Cedar Crest HS	1,624	592	36.5%	38.6%	30.8%
				Cedar Crest MS	1,201	435	36.2%	55.8%	22.9%
				Cornwall Elem.	549	132	24.0%	45.6%	15.1%
				Ebenezer Elem.	634	281	44.3%	49.1%	38.8%
				South Lebanon Elem.	649	241	37.1%	44.3%	33.5%
Northern Lebanon School District	2,558	878	34.32%	Fredericksburg Elem.	195	64	32.8%	53.1%	10.4%
				Jonestown Elem.	505	200	39.6%	38.3%	30.7%
				Lickdale Elem.	184	56	30.4%	51.6%	30.6%
				Northern Lebanon Senior HS	1,255	425	33.9%	46.9%	10.7%
Palmyra Area School District	3,906	1,334	34.15%	Forge Road Elem.	376	102	27.1%	51.3%	8.4%
				Lingle Avenue Elem.	614	125	20.4%	36.8%	6.9%
				Northside Elem.	256	100	39.1%	53.7%	28.4%
				Palmyra Area MS	919	248	27.0%	47.6%	10.6%
				Palmyra Area Senior HS	1,166	260	22.3%	38.2%	10.3%
				Pine Street Elem.	372	118	31.7%	52.6%	10.3%

In addition, it should be highlighted that while the Lebanon County Career and Technical School (CTC) is a public school and does participate in the National School Lunch Program, it does not participate in the School Breakfast Program and should therefore be considered a target school as well.

School breakfast participation rates are low across the board, but they are even lower in schools in Palmyra School District and Northern Lebanon Senior High School. Administrators at these school district should consider alternative breakfast models such as breakfast after the bell models (breakfast offered to students at the beginning of the school day) to increase school breakfast participation.

SFSP Location Analysis

The Summer Food Service Program (SFSP) is a federally funded child congregate meal program intended to alleviate child food insecurity in the summer, when schools are not open and school breakfasts and lunches are not available. Both school districts and community organizations may sponsor SFSP sites and school districts can also take advantage of the Seamless Summer Option (SSO) in order to provide year-round meal service with a minimum of administrative barriers. The experience for children receiving meals at SFSP or SSO sites is similar, so in the below analysis, SFSP or “summer feeding” will be used to refer to both programs

In general, SFSP sites are located within census tracts in which at least 50% of resident children are at or below 185% of the federal poverty level and would therefore be eligible for free or reduced-price school lunches. Sites can also become individually eligible if they are close enough to an individual school building that would qualify for the program or if a sponsor can prove that 50% or more of participating children who attend a site meet the income thresholds, though this last option often requires the collection of individual income eligibility applications and can create significant administrative burden. For more information about how sites can become eligible for SFSP, please see [this chart from the Pennsylvania Department of Education](#).

In 2022, Lebanon County had just four SFSP sites that were in operation at any point in the summer, and one of these was open for only one day. Excluding this outlier, which was not mapped due to its extremely brief time of operation, sites were open for about six weeks, with the longest running for nearly ten weeks, from mid-June to mid-August.

There were three SFSP sponsors in Lebanon County in 2022. One sponsor, the Cornwall-Lebanon School District, sponsored two sites. Two sponsors, the Lebanon Valley Family YMCA and the Lebanon County Commission on Drug and Alcohol Abuse, each sponsored one site. All sites operated under SFSP rather than SSO, and all were considered “open sites,” meaning that any child was eligible to attend the site without needing to pre-register or be part of a specific summer activity program.

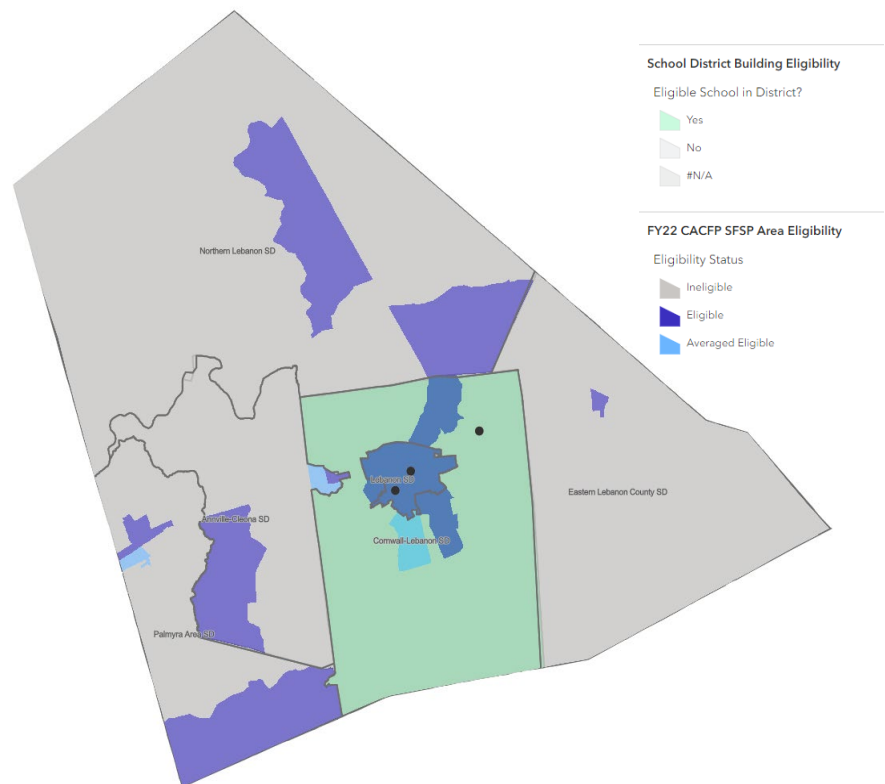
SFSP sites were concentrated in a small area in Lebanon County. Two sites were located in Lebanon School District and two, including the site that only operated for one day, were located in Cornwall-Lebanon School District.

School districts with at least one eligible census tracts and/or eligible building and no SFSP sites in 2022 included: Northern Lebanon School District, Annville-Cleona School District, Palmyra Area School District, and Eastern Lebanon County School District. It is worth noting that in some districts without SFSP sites, such as Palmyra and Annville-Cleona, [community organizations such as the Caring Cupboard provided summer meals for children independent of the federal child nutrition programs](#).

Therefore, while it is concerning, a lack of SFSP sites does not necessarily imply a total inability for children to access summer food in any given place. However, northwest

Lebanon City may be an especially good place to consider for an additional SFSP site, as the Salvation Army does not conduct regular food distributions over the summer months, and there was no SFSP site in this part of the city in 2022.

2022 SFSP Sites and Eligibility by School District



Drivers of Food Insecurity

Food insecurity is a household-level economic and social condition largely resulting from economic insecurity and the related factors of household income, employment status, disability status, and race/ethnicity.^{28,29} The prevalence of food insecurity is inversely related with household income, making poverty status and ratio of income to the poverty level one of the strongest predictors of food insecurity status.³⁰ Homeownership and housing insecurity are also strong predictors of household food insecurity.³¹ To better understand the root causes of food insecurity and their relationship to food insecurity in Lebanon County, this analysis examines how several socioeconomic variables differ by the three food insecurity typologies defined in the food insecurity section of this report.

The table below confirms the strong relationship between poverty and food insecurity, as poverty rates in High Food Insecurity census tracts are at least three times higher those of Moderate and Lower Food Insecurity tracts.

Homeownership is more prevalent in Lower and Moderate Food Insecurity census tracts, while the rate of renters is almost double for High Food Insecurity tracts compared to the others. Severe housing burden rates are relatively similar among renters and homeowners across food insecurity categories. However, homeownership status is the major differentiator, as renters are three times more likely to be severely housing burdened than homeowners and renting is far more prevalent in High Food Insecurity areas.

Finally, the percent of individuals with a college degree is slightly higher in Lower Food Insecurity tracts and vehicle access is significantly lower in High Food Insecurity tracts.

Category	High Food Insecurity	Moderate Food Insecurity	Lower Food Insecurity
Total Census Tracts	9	7	17
Poverty Rate	24%	8%	5%
Percent Under 18	25%	22%	22%
Poverty Rate for Under 18	38%	9%	7%
Percent 18-65	60%	56%	57%
Poverty Rate for 18-65	21%	9%	5%
Percent 65+	15%	21%	21%
Poverty Rate for 65+	11%	4%	4%
Percent White	61%	90%	88%
Percent Black	3%	1%	2%
Percent Hispanic	31%	6%	8%
Percent Asian	1%	2%	1%
Percent Renters	53%	24%	20%
Percent with a College Degree	13%	23%	24%
Percent without Vehicle Access	13%	5%	3%
Percent Renters Severely Housing Burdened	24%	22%	15%
Percent Homeowners Severely Housing Burdened	8%	7%	5%

²⁸ Gunderson, et al. (2011). The Economics of Food Insecurity in the United States. Applied Economic Perspectives and Policy.

²⁹ U.S. Dept. of Health and Human Services. (2020). [Healthy People 2030: Food Insecurity](#).

³⁰ Gunderson, et al. (2011). The Economics of Food Insecurity in the United States. Applied Economic Perspectives and Policy.

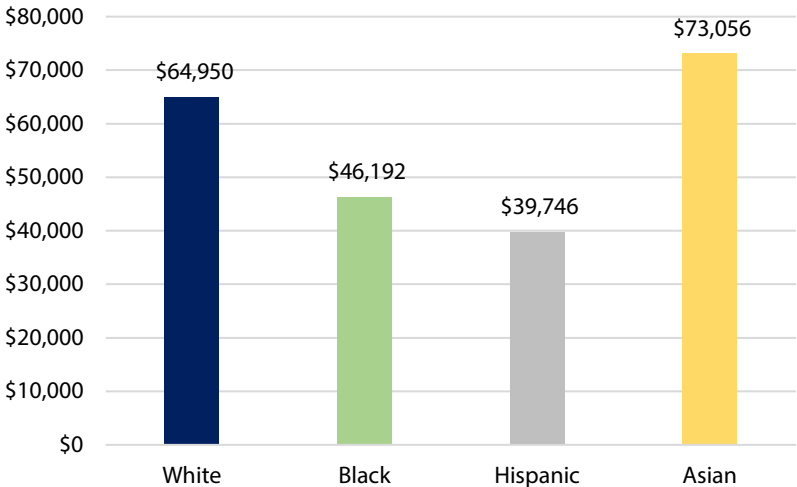
³¹ Ibid.

Substantive differences appear when looking at food insecurity rates by race/ethnicity. The percent of the population that is Hispanic in High Food Insecurity census tracts is more than double that of Moderate and Low Food Insecurity census tracts combined. In contrast, the percent of the population that is white is significantly lower in High Food Insecurity tracts (61%), compared to Moderate (90%) and Low (88%) Food Insecurity tracts. This is unsurprising due to the underlying differences in the five main economic drivers of food insecurity by race/ethnicity. These differences in the economic drivers of food insecurity are a direct result of systemic racism and the policies that perpetuate it, such as redlining, housing and employment discrimination, and disparities in educational opportunities, among others.³²

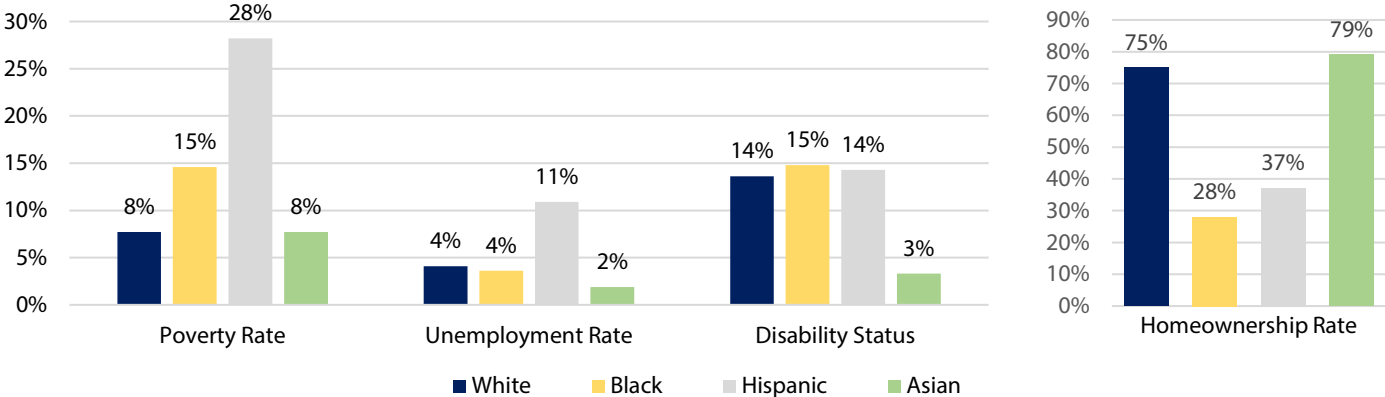
Median household income is highly stratified by race. Black and Hispanic households have the lowest median incomes compared to white and Asian households. The disparate median household income levels align with disproportionate rates of homeownership by race: White (75%), Black (28%), Hispanic (36%), and Asian (78%). These disparities are the legacy of historic and current housing discrimination at both individual and systemic levels that still impact homeownership rates.³³

Hispanic individuals have the highest poverty and unemployment rates of any people group in Lebanon County by far, with a poverty rate almost four times higher than those of white and Asian individuals, and an unemployment rate more than double those of white and Black individuals. Black individuals in Lebanon County experience twice the rate of poverty as white individuals, but experience unemployment at a margin slightly lower than white individuals.

Median Household Income by Race



Drivers of Food Insecurity by Race/Ethnicity



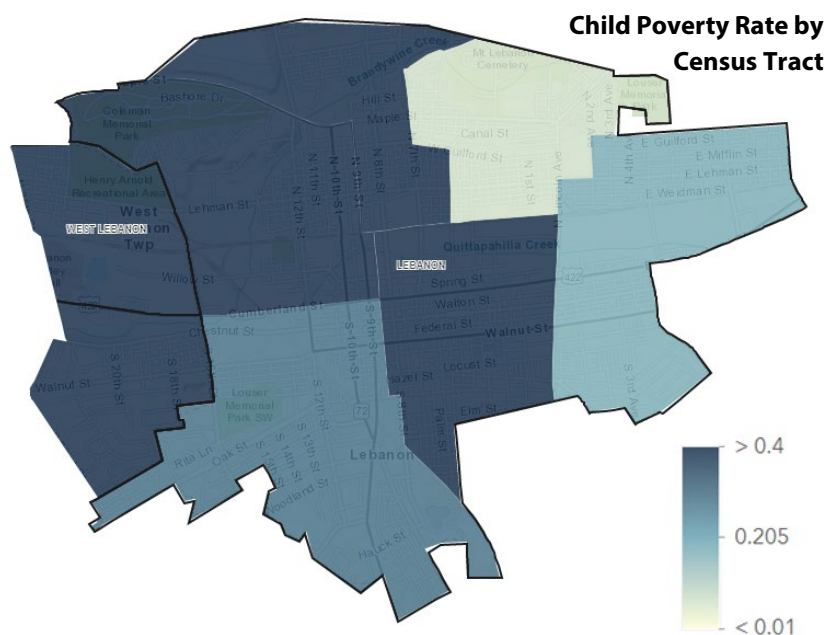
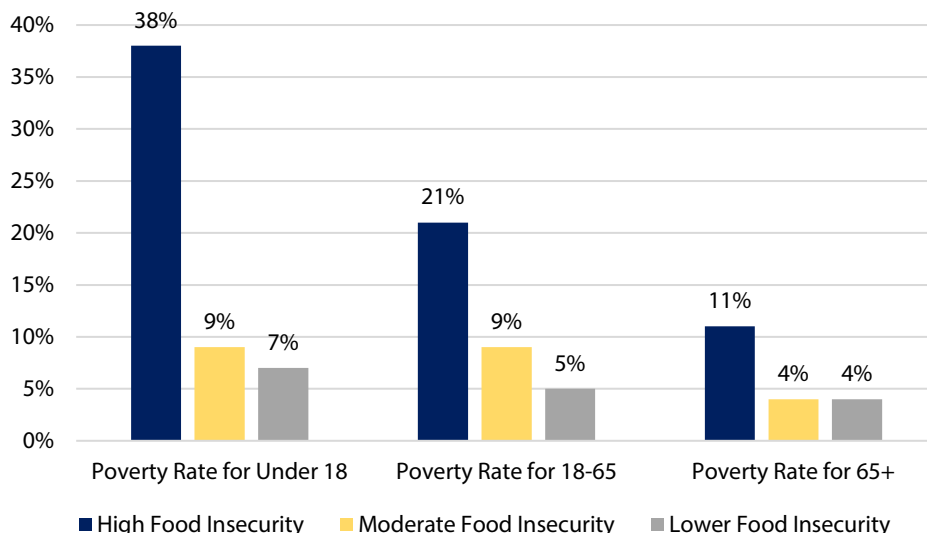
In census tract-level analyses using Feeding America and ACS 2016-2020 data, poverty stands out as a main explanatory variable of food insecurity. This is consistent with USDA findings on annual household reports.³⁴ This strong explanatory relationship allows use of localized data on poverty by age and household type as a proxy for food insecurity even though food insecurity data by age and household type is unavailable below the national level.

³² Odoms-Young, A. (2019, April). Examining the Impact of Structural Racism on Food Insecurity.
³³ Federal Reserve Bank of St. Louis. (2021). [Neighborhood Redlining, Racial Segregation, and Homeownership](#).
³⁴ USDA. (Sept. 2022). [Household Food Security in the United States in 2021](#).

In Lebanon County, the most striking and important differentiator between High Food Insecurity and Moderate and Lower Food Insecurity tracts is the staggering differences in poverty by age, particularly for children under 18. Underlying poverty rates vary dramatically, despite all three food insecurity typologies containing similar age compositions. These differences are most prevalent for children, who face the highest poverty rates in the county.

In High Food Insecurity areas, poverty rates are an astonishing 39% among children under 18, compared to just 9% and 7% in Moderate and Lower Food Insecurity areas, respectively. There are also significant differences for poverty rates in different food insecurity typologies for ages 18-65 and 65+. However, they are not nearly as striking or severe in magnitude as the poverty differences for children under 18. This indicates that in Lebanon County specifically it is incredibly important to ensure that families with children have access to sufficient food.

Poverty Rate by Age Group in Lebanon for Census Tract Food Insecurity Typologies



All but one Lebanon City census tract (Census Tract 4.02) is categorized as a High Food Insecurity area. These Lebanon City census tracts are the primary source of the extremely high child poverty rates among High Food Insecurity areas in Lebanon County.

Three census tracts in the city of Lebanon have child poverty rates over 40%, as does census tract 36 in West Lebanon Township and a portion of North Cornwall Township. When considered together, the city of Lebanon and Census Tract 36 in West Lebanon Township are home to just 23.3% of the county's children under 18, but account for 51.3% of all children in poverty in Lebanon County.

Poverty Status by Age, Gender, and Family Type

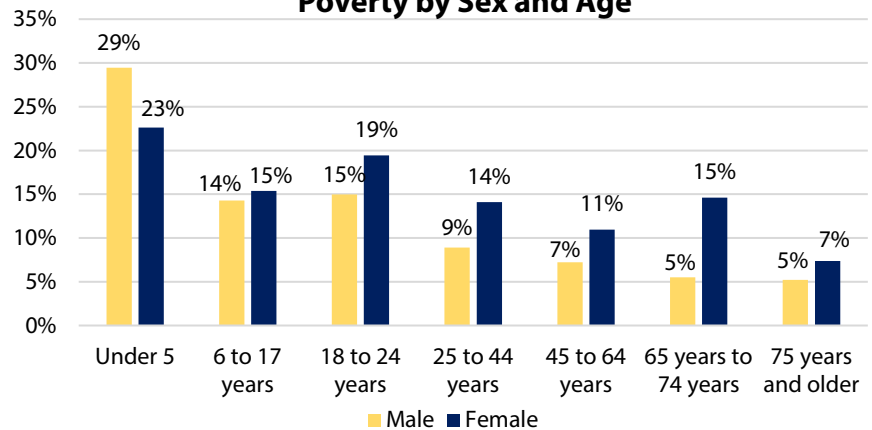
Women are consistently poorer than men throughout adulthood due to a variety of factors. Women are overrepresented in low-wage jobs such as retail, administrative assistance, and childcare, and may face discrimination in hiring or social pressure away from higher-paying fields.³⁵ Women are also underrepresented in management, and female managers are underpaid as compared to male managers.³⁶ Finally, and significantly, working-age women bear the bulk of costs and responsibilities of raising children, which often includes the need for a more flexible schedule and more time away from work. A large portion of the overall gender pay gap is the result of such “child penalties” that fall on mothers but not fathers.³⁷ The wage gap is even wider for women of color, who experience intersectional compounding of gender bias and historic marginalization based on race and ethnicity.³⁸

In adulthood, women are most likely to live in poverty between the ages of 18 and 24, with high poverty rates remaining between the ages of 25 to 44 years. Women also face a spike in poverty rates at ages 65 to 74; the poverty rate for women of that age is more than double that of men in the same age group.

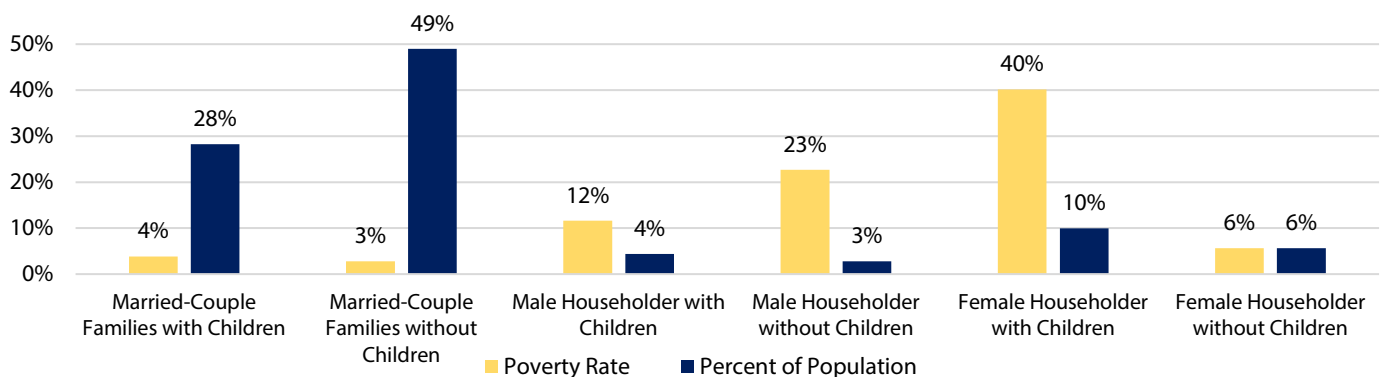
Poverty rates also differ by family type. For the purpose of this analysis, families are defined as a specific subset of all households that only includes a group of two or more related people residing together. Individuals living alone or in other styles of housing were not counted in this category.

Married-couple families with children are the second most common family type in Lebanon County and have low poverty rates at just under 4%. Female householders with children but no spouse experience poverty at a rate more than 10 times that of married-couple families with children. It is also worth noting that when compared to male householders who are also single parents, single female householders are nearly four times more likely to experience poverty, although poverty rates for single male parents are still quite high. This is consistent with USDA national food insecurity studies, which found female householders with children have the highest food insecurity rates of any household type (24.3%), followed by male householders with children (16.2%).³⁹

Poverty by Sex and Age



Poverty and Population Percent by Family Type



³⁵ Rho, D. (February 24, 2021). [What Causes the Wage Gap?](#)

³⁶ Government Accountability Office. (December 15, 2022). [Women in the Workforce: The Gender Pay Gap Is Greater For Certain Racial And Ethnic Groups and Varies by Education Level](#)

³⁷ Klevin, H. (January 2017). [Gender Inequality and Economic Development: Fertility, Education, and Norms](#)

³⁸ Government Accountability Office. (December 15, 2022). [Women in the Workforce: The Gender Pay Gap Is Greater For Certain Racial And Ethnic Groups and Varies by Education Level](#)

³⁹ USDA. (Sept. 2022). [Household Food Security in the United States in 2021.](#)

Conclusion

This interim report, which is based primarily on secondary/administrative analyses, provides deep insight into the food insecurity situation in Lebanon County, including where food insecurity exists and who it impacts the most. Through the use of secondary data, this report identifies participation gaps in key government nutrition programs, provides suggestions for improving services for those who are not eligible for food assistance but still struggling to make ends meet, and discusses the main underlying drivers of food insecurity.

With the implementation of Service Insights on MealConnect (SI-MC), Feeding America's paperless client intake and service tracking platform, at the three largest food pantry locations across the county, this interim report also provides initial analyses of food pantry utilization in Lebanon County. These analyses helped identify areas that may be currently underserved by food pantries and household types who may be underutilizing the charitable food system. Analysis of SI-MC data also identified low SNAP participation as a main barrier to increasing food security among households who visit food pantries.

The next steps in the research process will involve the collection of primary data from a variety of different sources which will provide more opportunities for tailoring the analysis contained in the report even more closely to the charitable food system situation in Lebanon County. This process will include both quantitative and qualitative data gathering efforts such as neighbor surveys, focus groups, neighbor and partner interviews, as well as partner agency surveys and brainstorming sessions.

Together, all of these data collection and analysis processes will allow the final report to incorporate the lived experience and expertise of neighbors, partners, and other stakeholders, depict the charitable food network in living color, provide action-oriented main findings and recommendations for improving food access, and ultimately, begin to make progress toward ending hunger in Lebanon County.

Data Sources and Analysis Methods

This administrative/secondary data analysis draws upon a variety of administrative and programmatic data sources to better understand the state of food insecurity and access in Lebanon County. Food insecurity data is from Feeding America's 2021 and 2022 Map the Meal Gap reports, while other demographic and attribute data is from the 2020 American Community Survey and 2020 U.S. Census. The Supplemental Nutrition Assistance Program (SNAP) and Women, Infants, and Children (WIC) participation data are provided by the Pennsylvania Department of Human Services (DHS) and the Pennsylvania Department of Health (DOH), respectively. In addition, the analysis uses data from United Way 211 and the United Way's Asset-Limited, Income-Constrained, Employed (ALICE) project to understand trends in indicators of need. The analysis also uses data from the Pennsylvania Department of Education (PDE) and the United States Department of Agriculture (USDA) to understand school and summer meal participation and retail food access across Lebanon County. Finally, data collected using Feeding America's Service Insights on MealConnect (SI-MC) paperless client tracking tool was used to conduct pantry visit analyses where possible.

It is important to note that this analysis uses 2019 food insecurity data from Feeding America at the ZIP Code level from due to data limitations with the 2020 sub-county food insecurity data produced by Feeding America. The 2019 data more closely approximates the county level food insecurity rates, while the 2020 data represents a severe undercount compared to the county level data. At the census tract level, due to shifts in census tract boundaries in 2020 with the new decennial census, 2019 rates could not be used for analysis. Therefore, this report utilizes 2020 food insecurity rates, with lower thresholds to adjust for the fact that 2020 methodology significantly underestimated food insecurity for units of geography smaller than a county.

Proximity analyses presented in the report use ArcGIS network analysis tools to assess how access and drive times differ for census tracts across Lebanon County. The U.S. Census Bureau's 2020 census tract centers of population data provide the proxy for average access time within a census tract (typically a neighborhood in high-density areas or part or full municipalities in lower-density areas). SNAP participation estimation methodology was developed by the Central Pennsylvania Food Bank (CPFEB) utilizing American Community Survey (ACS) data and Pennsylvania DHS data. WIC participation estimation methodology follows similar logic to the SNAP participation methodologies but uses ACS and Pennsylvania DOH data instead.

Appendix A: Table of Child Nutrition Program Eligibility and Participation by School Building

School District	School-Aged Children in District	School-Aged Children Under 185% FPL in District	Pct. School-Aged Children Under 185% FPL in District	School Building Name	Building Enrollment	Building Free and Reduced Enrollment	Percent of Total Enrollment Free and Reduced	Lunch Participation Rate (Average Lunches Served per Day over Enrollment)	Breakfast Participation Rate (Breakfasts Served over Lunches Served)
Annville-Cleona School District	1612	316	19.60%	Annville Cleona HS	479	141	29.44%	50.00%	13.72%
				Annville Cleona MS	224	68	30.36%	49.39%	8.34%
				Annville Elem.	425	147	34.59%	42.75%	27.95%
				Cleona Elem.	265	100	37.74%	36.78%	28.17%
Cornwall-Lebanon School District	5395	1816	33.66%	Cedar Crest HS	1624	592	36.45%	38.64%	30.81%
				Cedar Crest MS	1201	435	36.22%	55.79%	22.93%
				Cornwall Elem.	549	132	24.04%	45.62%	15.06%
				Ebenezer Elem.	634	281	44.32%	49.11%	38.85%
				South Lebanon Elem.	649	241	37.13%	44.28%	33.47%
				Union Canal Elem.	430	226	52.56%	51.07%	63.63%
Eastern Lebanon County School District	4254	516	12.13%	ELCO MS	582	207	35.57%	73.83%	16.57%
				ELCO SHS	738	241	32.66%	55.05%	9.61%
				Elco Intermed.	671	230	34.28%	61.52%	29.48%
				Fort Zeller Elem	346	151	43.64%	38.27%	38.24%
				Jackson Elem.	222	58	26.13%	38.14%	11.76%
Lebanon County CTC	#N/A	#N/A	#N/A	Lebanon County AVTS/CTC	290	129	44.48%	36.29%	0.00%
Lebanon School District	4167	2526	60.62%	Harding Elem.	660	660	100.00%	84.96%	59.88%
				Houck Elem.	387	387	100.00%	81.01%	60.10%
				Lebanon MS	1147	1147	100.00%	87.12%	58.39%
				Lebanon SHS	1403	1403	100.00%	76.30%	47.62%
				Northwest Elem.	690	690	100.00%	86.71%	61.46%
				Southeast Elem.	486	486	100.00%	82.22%	67.67%
				Southwest Elem.	523	523	100.00%	78.93%	67.66%
Northern Lebanon School District	2558	878	34.32%	East Hanover Elem.	169	62	36.69%	58.53%	19.30%
				Fredericksburg Elem.	195	64	32.82%	53.15%	10.44%
				Jonestown Elem.	505	200	39.60%	38.26%	30.72%
				Lickdale Elem.	184	56	30.43%	51.63%	30.62%
				Northern Lebanon SHS	1255	425	33.86%	46.89%	10.69%
Palmyra Area School District	3906	1334	34.15%	Forge Road Elem.	376	102	27.13%	51.28%	8.37%
				Lingle Avenue Elem.	614	125	20.36%	36.82%	6.94%
				Northside Elem.	256	100	39.06%	53.69%	28.41%
				Palmyra Area MS	919	248	26.99%	47.56%	10.58%
				Palmyra Area SHS	1166	260	22.30%	38.23%	10.31%
				Pine Street Elem.	372	118	31.72%	52.63%	10.29%
Yellow Breeches Education Center	#N/A	#N/A	#N/A	Yellow Breeches Educational Center - Annville	24	21	87.50%	64.29%	123.15%