Map the Meal Gap 2024 – Dataset User Guide

Contents

What is this document?

This document is intended to serve as a guide to help users access, understand, and communicate the data available in the MMG 2024 dataset (2019-2022 data). This document is subject to be updated, so please check back regularly for the newest version. We strongly recommend reading this document in full before using the new data.

About *Map the Meal Gap*

Map the Meal Gap (MMG) is Feeding America's annual study that provides data and insights on local food insecurity and food prices across the United States. This work allows Feeding America and its partners to improve our understanding of people and communities at risk of hunger, influence policy and practice, and inspire others to take action to improve food security and end hunger in America.

Map the Meal Gap 2024 marks the 14th consecutive year that Feeding America has produced this study, **Data from MMG 2024 will be accessible to the public as of Wednesday, May 15, 2024. As with previous years, Feeding America provides the MMG dataset and supporting materials to network members under embargo in advance of the public release to allow food banks to explore the local data and ask any clarifying questions. Feeding America will continue its review of the data and supporting materials until the public release.**

Recent changes/updates

Food insecurity estimates for seniors and older adults

At this time, state level food insecurity estimates for seniors (age 60+) and older adults (age 50-59) for 2022 are not yet available but will be added to this dataset once available. We also do not have plans to provide estimates at the metro area level for 2022.

Note that the MMG 2024 dataset will continue to include estimates for these populations for prior years (i.e. through 2021), which we began including in the MMG dataset beginning in 2023 so that end users can more easily access information about various geographies and populations in one place. However, it is important to note that **there are different methodologies used to estimate food insecurity for seniors and older adults versus local estimates for *Map the Meal Gap***. Estimates for seniors and older adults are produced directly from responses to the Current Population Survey, while estimates from *Map the Meal Gap* are derived using a model based on the relationship between state-level food insecurity and select economic and demographic variables.

For additional information about senior food insecurity, visit this page on HungerNet.

Local estimates of food insecurity by race and ethnicity for select groups

For the third year in a row, *Map the Meal Gap 2024* includes food insecurity estimates (percentages only) by race and ethnicity for the following three populations[1]:

- Black individuals (all ethnicities)
- Latino/Hispanic[2] individuals (all races)
- White, non-Hispanic individuals

[1] The estimates for Black individuals (all ethnicities) and Latino individuals (all races) are not mutually exclusive, insofar as individuals who identify as both Black and Latino are included in both sets of estimates.
[2] Throughout this and other documentation, we will use the term "Latino" to describe this population, rather than terms such as "Hispanic". This practice aligns with Feeding America's language guidelines.

Estimates for these racial and ethnic groups are now available for 2019, 2020, 2021, and 2022. While estimates for the overall population and for the child population are provided for all states, counties, districts, and service areas, estimates by race/ethnicity are only provided for geographies with sufficient sample sizes.[3] Any given geography may have estimates for one, two, or all three of the populations listed above. Additionally, there are instances where a geography has estimates for one group in one year but not in the other. In rare cases, estimates are available for the overall population, but not for any racial/ethnic subgroup.

Food insecurity estimates are not available for individuals who identify as Asian, Native American, Pacific Islander, other races or ethnicities, or multiple races. There are two main reasons for the lack of data. First, the federal government does not provide the requisite local data by race/ethnicity for all of the variables included in the MMG model. In virtually all states, the unemployment rates for groups other than Black, Hispanic, and white non-Hispanic individuals are not available via the Bureau of Labor Statistics (BLS). Second, these groups have small populations, limiting the number of available state-year observations in the Current Population Survey (CPS) for the generation of reliable estimates. In other words, in most states and years, there are not enough people who identify as Asian, Native American, Pacific Islander, another race or ethnicity, or multiple races to accurately estimate food insecurity.

Despite the lack of data on local food insecurity by race and ethnicity, there are other data and tools available that can support messaging around disparities faced by these populations. For example, in April 2024, the USDA released a report that examines household-level food insecurity by race and ethnicity which can be found here. Additionally, Feeding America has created a Racial Disparities Dashboard, which provides data on the many drivers of food insecurity at the local level for different populations and is updated with new data as part of the Map the Meal Gap release. More information about our methodology for computing food insecurity rates by race and ethnicity is available in the *Food Insecurity by Race/Ethnicity: Methodology and Frequently Asked Questions*.

Nationwide subcounty data for Census Tracts and Zip Code Tabulation Areas (ZCTAs)

For the third year in a row, the MMG dataset includes nationwide food insecurity estimates for every census tract and ZCTA in the U.S. Historically, these have been the two most requested subcounty geographies. These results are available for the overall population only (and not for children or by race/ethnicity). We continue to offer results for additional subcounty geographies (e.g., school districts, state legislative districts, and census places (municipalities)) by request. Please see the sub-county request page on HungerNet for information on how to make a request.

An important note about data by race/ethnicity and at the sub-county level:

While all local estimates within the *Map the Meal Gap* study are approximations, it should be noted the more the data are disaggregated by race, place, or other characteristics, the lower the confidence that can be had in the accuracy of the estimates. Because of this, the estimates for specific race or ethnicity groups as well as the estimates by census tract and ZCTA are less certain than the overall population level estimates. At this time, we have opted to exclude the estimated number of people experiencing food insecurity by race or ethnicity and are sharing only rates that have been rounded. We have made this decision to avoid conveying a false sense of precision and to encourage users of the data

[3] For more information on sample size requirements, please see *Food Insecurity by Race/Ethnicity: Methodology and Frequently Asked Questions,*

to focus on relative disparities, both within and across geographies.

Estimated Income Eligibility among the Food Insecure Population

Historically, the MMG dataset included the estimated percentage of food insecure individuals in households with incomes a) at or below their state's gross income limit for SNAP (i.e., 130%, 160%, 165%, 185% or 200% of the Federal Poverty Level); b) above the federal gross income limit for other federal nutrition programs such as WIC (i.e., 185% of FPL); and c) between these two income thresholds (e.g., between 130% and 185% of FPL). Beginning in 2023 (2021 data), however, the dataset no longer includes these latter income eligibility estimates for the middle thresholds since it was determined that changes in these estimates were more attributable to the methodology used to derive estimates for the lower and upper thresholds than to actual changes in household and/or community characteristics.

Because the most recent income eligibility estimates for the overall food insecure population found in this dataset now focus exclusively on SNAP eligibility, the MMG 2024 dataset now includes three new columns that clarify the estimated share of food insecure individuals living with incomes above and below the SNAP threshold for each state.

Geography updates

Connecticut County Equivalents

Beginning with 2022 data, the Census Bureau adopted Connecticut's nine planning regions as county equivalents, replacing the eight counties that formerly made up Connecticut. It should be noted that the geographic boundaries of the planning regions and counties do not align. Because Connecticut Foodshare serves the entire state, however, this change does not impact comparability at the service area or larger geographies.

Please note for county level estimates, MMG typically uses the Bureau of Labor Statistics annual average unemployment rates to produce food insecurity estimates. However, the Bureau of Labor Statistics has not adopted Connecticut's planning regions as county equivalents. Thus, the 2022 ACS 1-year unemployment rates for Connecticut were used in place of the 2022 BLS 1-year unemployment rate. All other counties used the BLS unemployment rate.

For the reasons stated above, local estimates of food insecurity and other measures for the new county-equivalent planning regions within Connecticut for 2022 are less directly comparable to estimates from previous years than they otherwise would be and we advise user to exercise extra caution when analyzing food insecurity estimates over time.

The Census Bureau offers more information regarding the update here.

Congressional Boundary Updates

Please note *Map the Meal Gap 2024* congressional district data reflect geographic boundaries for the 118th Congress, as specified by the Census Bureau here.

Rural Urban Continuum Codes

The USDA Economic Research updated the Rural-Urban Continuum codes in 2023. All counties in the U.S., including outlying territories, receive a code, which distinguishes metropolitan counties by population size and nonmetropolitan counties by degree of urbanization and proximity to a metro area. These codes can assist in analyzing county level data by more nuanced residential groups when analyzing trends.

While MMG 2024 utilizes 2022 data, both the 2013 and 2023 rural urban continuum codes were included in this year's dataset. Nearly 24% of counties' (744 out of 3,135) RUCC codes changed in the 2023 update. Roughly 10% (72 out of 744) of those updated counties saw a change from a non-metro to a metro code, while 7% of those counties (52 out of 744) saw a change from a metro code to a non-metro code.

The USDA ERS offers more information here.

How to access the MMG dataset

The *Map the Meal Gap 2024* dataset is available on the *Map the Meal Gap* HungerNet page within the Data Archive page. Here you can access both data from this year's release as well as the datasets from past releases. For your convenience, the 2024 dataset includes data from 2019 through 2022.

How to interpret data within the MMG dataset

Navigating the dataset

The table below summarizes the data by population and geography that can be found in the MMG 2024 dataset:

Table 1: Food Insecurity and related estimates from Feeding America, 2022

Measure	Geography					
Food insecurity	**Nation**	**State**	**District**	**Service Area**	**County**	**Census Tract + ZCTA[3]**
Overall (all ages)	Y	Y	Y	Y	Y	Y
Black (all ethnicities)	Y	Y	Y	Y	Y	N
Hispanic (all races)	Y	Y	Y	Y	Y	N
White, non-Hispanic	Y	Y	Y	Y	Y	N
Asian[1]	Y	N	N	N	N	N
Native Hawaiian or Other Pacific Islander[1]	Y	N	N	N	N	N
American Indian or Alaska Native[1]	Y	N	N	N	N	N
People identifying as other or multiple races[1]	Y	N	N	N	N	N
Child (<18)	Y	Y	Y	Y	Y	N
Income eligibility[2]	Y	Y	Y	Y	Y	N
Meal cost[2]	Y	Y	N	Y	Y	N
Food budget shortfall[2]	Y	Y	N	Y	Y	N
Meal gap[2]	Y	Y	N	Y	Y	N

[1] Food insecurity estimates for seniors (60+) and older adults (50-59) in 2022 at the national and state levels will be produced using data directly from the Current Population Survey. These estimates are currently in development and will be shared in spring 2024 (exact timing is TBD).
[2] Estimates of income eligibility are available for all individuals and children experiencing food insecurity. Shortfall and meal gap estimates are available for overall food insecure population only. Meal cost estimates reflect reported spending among people who are food secure.
[3] The USDA releases rates of food insecurity for the overall and child populations, as well as for select racial and ethnic populations, in its annual report released each fall. More information can be found on HungerNet.
[4] Nationwide census tract and ZCTA estimates for the overall population are now included in the network dataset; estimates for other geographies are available upon request.

The MMG 2024 dataset file contains a "Read Me" tab that includes a variety of important information, including a description about the different columns found in each subsequent tab. Estimates by race/ethnicity are found in the respective geography tabs but are not available by tract or ZCTA. Note there are estimates for states, districts, metropolitan areas with populations over 1,000,000 people, service

areas, and counties for 2019-2022 (see "year" column in each tab).[4] Estimates for tracts and ZCTAs are included for the years 2020, 2021, and 2022.

In the following sections, we provide high-level examples of how to interpret the estimates, along with guidance and suggestions related to telling a story using *Map the Meal Gap*. Additional resources for communicating MMG estimates are available on the Network Toolkit page on HungerNet.

Example Interpretations

Example 1 – Simple interpretation of the estimates
Geography: **Barbour County, Alabama**
Available estimates: Estimates are available for all populations from 2019 to 2022. There is no estimate available for Latino individuals for 2019.

Table 2: Estimated food insecurity status for the overall and child population, 2019-2022

Column Label:	Overall Food Insecurity Rate (1 Year)	Ratio (1 in X)	# of Food Insecure Persons Overall (1 Year)	Child Food Insecurity Rate (1 Year)	Ratio (1 in X)	# of Food Insecure Children (1 Year)
Result (2022):	19.0%	5	4,730	34%	3	1,740
Result (2021):	17.8%	6	4,500	29.8%	3	1,570
Result (2020):	19.5%	5	4,870	33.4%	3	1,740
Result (2019):	20.7%	5	5,250	32.4%	3	1,720

Example interpretations:

- In Barbour County, **19% of individuals (or 1 in 5 people)** were estimated to be food insecure in 2022.
- In Barbour County, **34% of children (or 1 in 3 kids)** were estimated to be food insecure in 2022.

Table 3: Estimated food insecurity status for select racial and ethnic groups, 2019-2021

Column Label:	Food Insecurity Rate among Black Persons (all ethnicities)	Ratio (1 in X)	Food Insecurity Rate among Hispanic Persons (any race)	Ratio (1 in X)	Food Insecurity Rate among White, non-Hispanic Persons	Ratio (1 in X)
Result (2022):	33%	3	28%	4	12%	8
Result (2021):	31%	3	20%	5	12%	8
Result (2020):	32%	3	24%	4	11%	9
Result (2019):	34%	3	NA	NA	14%	7

Example interpretations:

[4] Estimates at the metropolitan area level are included for seniors and older adults for 2019, 2020, and 2021.

- In 2022, **1 in 3 Black individuals** in Barbour County were estimated to be food insecure (approximately 31%).
- In 2022, **1 in 5 Latino individuals** in Barbour County were estimated to be food insecure (approximately 20%).
- In 2022, **1 in 8 white, non-Hispanic individuals** in Barbour County were estimated to be food insecure (approximately 12%).

Example 2 – Interpretation of a food insecurity rate of 0.0%
Geography: **Williamson County, Tennessee**
Available estimates: Estimates are available for all populations in 2019 through 2022.

Table 3: Estimated food insecurity status for the overall and child population, 2019-2022

Column Label:	Overall Food Insecurity Rate (1 Year)	Ratio (1 in X)	# of Food Insecure Persons Overall (1 Year)	Child Food Insecurity Rate (1 Year)	Ratio (1 in X)	# of Food Insecure Children (1 Year)
Result (2022):	8.8%	11	21,790	4.0%	29	2,300
Result (2021):	5.5%	18	13,320	0.0%	NA	NA
Result (2020):	6.1%	16	14,280	2.3%	43	1,450
Result (2019):	6.5%	15	14,580	3.4%	29	2,120

Example interpretation:

- In Williamson County, **8.8% of individuals (or 1 in 11 people)** were estimated to be food insecure in 2022.
- In Williamson County, **4% of children** were estimated to be food insecure in 2022.
- In Williamson County, **0% of children** were estimated to be food insecure in 2021.*

**Note about this interpretation:* All local estimates of food insecurity from *Map the Meal Gap* are approximations with varying levels of uncertainty surrounding each estimate and therefore should not be interpreted literally. This applies to any food insecurity estimate of 0% or 0 individuals. In our 2023 technical brief, we discuss how we quantify this uncertainty and include language about how to interpret our estimates. For example, on average, we can say with 90% certainty that the actual food insecurity rate among the child population for a given county in 2021 was within 3.7 percentage points of the estimated value (there's a 10% chance that the true value was outside of this range). While the child food insecurity confidence interval for Williams County, TN in 2021 may be larger or smaller than the mean confidence interval, the broader point is that our reported estimates exist within a range of probable values. For Williams County, TN, the estimated child food insecurity rate and count of 0% and 0 children in 2021 can be communicated as "less than 1%" and "fewer than 10 children", respectively.

Getting clear about the question you're trying to answer

One of the most important parts of using *Map the Meal Gap* is starting with a clear question. MMG can aid in answering different types of questions, and the way you use the data depends on what question is important to you.

For example, you might want to answer questions like:

What can we say to our potential funders about food insecurity in our area?
MMG can help you answer this question by providing you with an estimate of the level of food insecurity in your food bank's service area.

Or

What changes should we be considering for our strategic plan?
MMG can help you answer this question by providing you with information about differences in the level of food insecurity between communities and over time.

The types of questions MMG IS designed to answer include:
For all the people living in your area: • What is the estimated level of food insecurity in my area based on 2022 data? • What is the trend over time of estimated food insecurity in my area? • How does estimated food insecurity in my area compare to food insecurity in other areas? For people of specific races or ethnicities living in your area: • What is the estimated food insecurity level for Black, Latino, or white individuals in my area based on 2022 data? • How does the estimated food insecurity level of Black, Hispanic, and white individuals in my area compare?

The types of questions MMG IS NOT designed to answer include:
• How many people are getting assistance from my food bank? • What are the causes of food insecurity specific to my area? • Is my local initiative making a difference on food insecurity in my area? • Does a person's race make them inherently more or less food insecure? • How is food insecurity likely to change if I start an initiative to improve poverty, employment, housing, etc?

Making comparisons using MMG estimates

We commonly receive questions about comparing and interpreting estimates provided through *Map the Meal Gap*. Below, we provide information on this topic. To access other FAQs visit HungerNet.

Q: Can I use estimates from *Map the Meal Gap* to make comparisons?

A: Yes, No, and Maybe:

Local food insecurity estimates from *Map the Meal Gap* are ***primarily designed*** to make comparisons across similar geographies in a given year (e.g., County A to County B in 2022 or State A to State B in 2021).

Users are encouraged to ***exercise caution*** when comparing estimates over time (e.g., County A in 2022 to County A in 2021), especially when differences are small since they may not be statistically significant. In fact, most geographies will see statistically insignificant changes in estimated food insecurity from one year to the next, especially when the national changes in food insecurity rates are small. That said, the magnitude of those changes may be relatively large and potentially meaningful. Users should consider how differences for one geography compare to differences for other comparable geographies (e.g., how much did estimated food insecurity in County A change from 2021 to 2022 relative to all other counties in the state). Users may also want to look at comparable estimates from more than two years when available (e.g., County A in 2022 compared to County A in 2021, 2020, or 2019).

With the caveats above in mind, county and service area food insecurity estimates may be compared to other data from the most recent five studies - *Map the Meal Gap 2024* (2022 data), *Map the Meal Gap 2023* (2021 data), *Map the Meal Gap 2022* (2020 data), *Map the Meal Gap 2021* (2019 data), or *Map the Meal Gap 2020* (2018 data). District and state food insecurity estimates can be compared, with the exception of district/state data from *Map the Meal Gap 2022* (2020 data). More information about this is available in the section below.

We ***do not recommend*** comparing food insecurity estimates for any geography from the most recent five studies – *Map the Meal Gap 2024* (2022 data), *Map the Meal Gap 2023* (2021 data), *Map the Meal Gap 2022* (2020 data), *Map the Meal Gap 2021* (2019 data), or *Map the Meal Gap 2020* (2018 data) – to estimates from *Map the Meal Gap* 2019 (2017 data) or any previous year due to the changes in the methodology made in 2020 (i.e., updated poverty variable and new disability variable). Estimates from *Map the Meal Gap* 2013 (2011 data) through *Map the Meal Gap* 2019 (2017 data) are more directly comparable.

Additionally, **food insecurity estimates for congressional districts and states in 2020 *are not directly comparable* to estimates for other years** (e.g., 2019, 2021, or 2022). The apparent increase in food insecurity at the district and state levels between 2020 and 2021 was largely due to the fact that we used 1-year (2021) congressional district data to produce our 2021 district and state estimates instead of the 5-year (2016-20) averages we had to use to produce our 2020 estimates (as a reminder, the

U.S. Census Bureau only released 5-year district data for 2020 in lieu of 1-year data due to data quality concerns related to Covid-19). Unemployment, for example, is a key variable in our food insecurity model and was generally lower in 2021 than 2020. Since, in our model, lower unemployment generally means lower food insecurity, one would expect our estimates of food insecurity to have fallen in 2021, as they did for many counties and service areas. However, unemployment in 2021 was relatively high when compared to the prior 5-year average of 2016-20 since the latter timeframe includes several years of historically low unemployment. As a result, our 2021 district and state estimates appear to be higher than our 2020 district and state estimates. As noted above, however, these two sets of estimates are not directly comparable and should not be interpreted as suggesting that food insecurity increased for districts and states, but not for counties or service areas.

To make a more apples-to-apples comparison of state-level food insecurity between 2020 and 2021, users can aggregate county estimates up to the state level. In other words, add the estimated numbers of food insecure individuals for every county in a state for 2020 and 2021 and divide those sums by the total state population found in the MMG network dataset on HungerNet. This approach will result in state food insecurity rates that, while different from the state-level district aggregates, are more directly comparable to each other and to county rates. One limitation to this approach, however, is that the underlying county data we use to produce our county and service area estimates aren't as timely or current as the district data we use to produce our district and state estimates, at least with respect to 2021 data. This is because most of the underlying county data we use to produce our county and service area estimates reflect 5-year averages, not the 1-year averages we were able to use again for our 2021 district and state estimates (the one exception to this is 1-year county unemployment, which we get from the BLS instead of the ACS).

If users are interested in making comparisons *across districts or states* using the most recent data available, we recommend using 2021 district and state estimates; if users are more interested in making state comparisons *over time*, we recommend using state-level county averages or simply comparing district or state estimates for 2021 to those from 2019.

Additional information & Contact Information

HungerNet

The *Map the Meal Gap* HungerNet landing page is where all information about the study can be found, including the dataset and supporting materials. Especially during the period between the network embargoed release (April 12, 2024) and the public release (May 15, 2024), the Feeding America Research & Innovation Department will be making updates to existing documentation and providing new resources, so **please check back often to ensure you are using the latest available information**.

Contact

For questions related to *Map the Meal Gap,* please contact the Research team at research@feedingamerica.org.