

## GSRP Sites and Median Federal Poverty Level, 2022-2023

The estimated number of four-year-olds within each median FPL level was calculated by first calculating the ratio of four-year-olds (4YOs) in households with children under the age of six (U.S. Census Bureau, 2022a; U.S. Census Bureau, 2022b). Four-year-olds were estimated by dividing the Census's category of three-year-olds (3YOs) and 4YOs in households by two (U.S. Census Bureau, 2022b), assuming that the number of 3YOs and 4YOs is distributed across the population evenly by income relative to all children under the age of six. After the ratio of 4YOs to all children under the age of six is estimated, it is multiplied by the number of children under six-year-olds in each FPL category.

Using the column labels and data provided by the Census (U.S. Census Bureau, 2022a; U.S. Census Bureau, 2022b), the formulas for the estimated number of 4YOs for each FPL levels in a census tract are:

- **Ratio of 4YOs to children under the age of six (Ratio):**  $(B09001\_004E / 2) / (B09001\_003E + B09001\_004E + B09001\_005E)$ .
- **No Kids:**  $B09001\_003E + B09001\_004E + B09001\_005E = 0$ .
- **Number of 4YOs in 0 to 49% FPL:**  $\text{Ratio} * B17024\_003E$ .
- **Number of 4YOs in 50 to 99% FPL:**  $(\text{Ratio} * B17024\_004E) + (\text{Ratio} * B17024\_005E)$ .
- **Number of 4YOs in 100 to 149% FPL:**  $(\text{Ratio} * B17024\_006E) + (\text{Ratio} * B17024\_007E)$ .
- **Number of 4YOs in 150 to 199% FPL:**  $(\text{Ratio} * B17024\_008E) + (\text{Ratio} * B17024\_009E) + (\text{Ratio} * B17024\_010E)$ .
- **Number of 4YOs in 200 to 299% FPL:**  $\text{Ratio} * B17024\_011E$ .
- **Number of 4YOs in 300 to 399% FPL:**  $\text{Ratio} * B17024\_012E$ .
- **Number of 4YOs in 400 to 499% FPL:**  $\text{Ratio} * B17024\_013E$ .
- **Number of 4YOs in 500% FPL and Up:**  $\text{Ratio} * B17024\_014E$ .

The estimated median FPL for four-year-olds for each census tract was calculated as following:

- **No Kids:** The number of estimated 4YOs is 0.
- **0 to 49%:** 50%+ of the total estimated 4YOs have a household income of 0 to 49% of the FPL.
- **50 to 99%:** 50%+ of the total estimated 4YOs have a household income between 0 to 99% of the FPL.
- **100 to 149%:** 50%+ of the total estimated 4YOs have a household income between 0 to 149% of the FPL.
- **150 to 199%:** 50%+ of the total estimated 4YOs have a household income between 0 to 199% of the FPL.
- **200 to 299%:** 50%+ of the total estimated 4YOs have a household income between 0 to 299% of the FPL.
- **300 to 399%:** 50%+ of the total estimated 4YOs have a household income between 0 to 399% of the FPL.
- **400 to 499%:** 50%+ of the total estimated 4YOs have a household income between 0 to 499% of the FPL.
- **500% and Up:** 50% of the total estimated 4YOs have a household income between 0 to 499% of the FPL.

The geographic type of each census tract was determined using the Department of Education's (2021) classification of ZIP codes' geography. The proportion of a census tract's intersection with a ZIP code was determined using the R Statistic software. This proportion was assumed to mirror a ZIP code's classification as either a city, suburb, rural area, or town. Census tracts were classified based on their largest proportion of a specific geographic classification (as either a city, suburb, town or rural).

### References:

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U.S. Census Bureau (2022a). Age by Ratio of Income to Poverty Level in the Past 12 Months. *American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B17024*. Retrieved October 22, 2024, from <https://data.census.gov/table/ACSDT5Y2022.B17024?q=B17024&g=050XX00US26127>.

U.S. Census Bureau (2022b). Population Under 18 Years by Age. *American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B09001*. Retrieved October 22, 2024, from <https://data.census.gov/table/ACSDT5Y2022.B09001?q=B09001&g=050XX00US26127>.

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