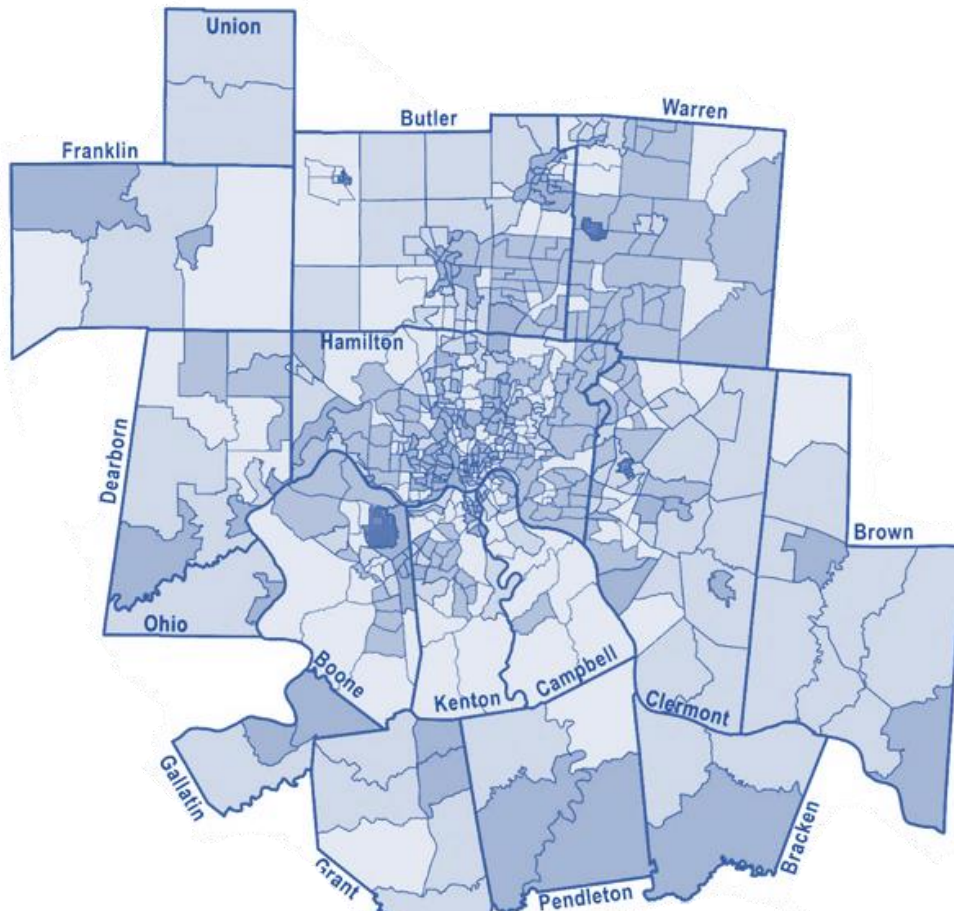# SUMMARY REPORT

Socioeconomic Characteristics:
Cincinnati, OH–KY–IN Metropolitan Statistical Area

Released Fall 2023

Based on Data from the 2021 American Community Survey

Table of Contents

Introduction

The following report uses census data to describe socioeconomic characteristics of the population residing within the 16-county Cincinnati, OH–KY–IN Metropolitan Statistical Area. High-level results for the metropolitan area are used to indicate differences between census tracts within the region. Differences between tracts are measured using the methodology detailed in *The Social Areas of Cincinnati* publications, most recently published by Maloney and Auffrey (2009).[1,2,3,4,5] This report utilizes data collected from the 2021 American Community Survey (ACS) 5-Year Estimates to determine the relative social and economic risk of the population. This is an ongoing analysis that is intended for publication in the sixth edition of *The Social Areas of Cincinnati*.

The Social Areas of Cincinnati

The Social Areas analysis is a statistical method using data from the ACS to classify regions based on their socioeconomic characteristics. Variations in socioeconomic status (SES) follow general patterns and are measurable using public data. In the first edition of *The Social Areas of Cincinnati*, published in 1974, Michael Maloney used census data to conduct a Social Areas analysis on Cincinnati census tracts. Subsequent editions were published in 1986 (2nd ed.), 1997 (3rd ed.), 2004 (4th ed.), and 2013 (5th ed.), which repeated the Social Areas analysis using Cincinnati census data for 1980, 1990, 2000, and 2009, respectively. This method allows researchers to measure and isolate different attributes of the population and how they relate to each other. The product of the Social Areas analysis is the SES Index, which is a composite score determined by five SES indicators. The purpose of the Social Areas analysis is to provide a tool to identify census tracts in Cincinnati with the greatest social needs. The findings can be used as a framework to understand relevant domains affected by SES such as health, labor, academics, and service disparities.

SES Index Methodology

The methodology for the SES index uses five socioeconomic indicators (education, family structure, crowding, occupation, and income) listed in the table below (Table 1). Once obtained, the five indicators are then ranked and combined into a composite SES Index score used to rank each of the tracts on all 5 indicators, simultaneously. The ranking score is used to divide the tracts into SES Quartiles, where lower quartiles (SES 1 and SES 2) represent areas with a higher concentration of risk factors, and the higher quartiles (SES 3 and SES 4) represent areas with relatively fewer risk factors.

Table 1: SES Indicator Variables

SES Indicator	ACS Variable
Income	Median household income/Median household income
Education	Percent of population 25 years of age or older with less education than a high school diploma
Family Structure	Percent of children (under the age of 18) living in married-couple, family households
Crowding	Percent of housing units with more than one person per room
Occupation	Percent of workers in unskilled and semiskilled occupations

At the time of this report, the SES Index and Quartiles are being updated using 2021 American Community Survey (ACS) 5-Year Estimates, and its findings will be used in the upcoming sixth edition. Preliminary results are available, as well as an analysis of the changes in Cincinnati over the past fifty years in a related report (see link in Resources). Additionally, an interactive map has been made available to the public that allows users to view and explore the results of the Social Areas analysis for Cincinnati as of 2021 (see link below and in Resources). The sample map, pictured in Figure 1 shows

census tracts color-coded by SES Quartile (SES 1 - 4). Users may use the online interface to zoom in on areas of the map and click on individual tracts to view their SES Quartile and statistics for each of the five indicators.

Figure 1. Sample of Interactive Map for Social Areas of Cincinnati 2021

Link to interactive map: https://www.arcgis.com/home/item.html?id=59c3ba26e9ee45f08b7fe2f1ab6b28c0
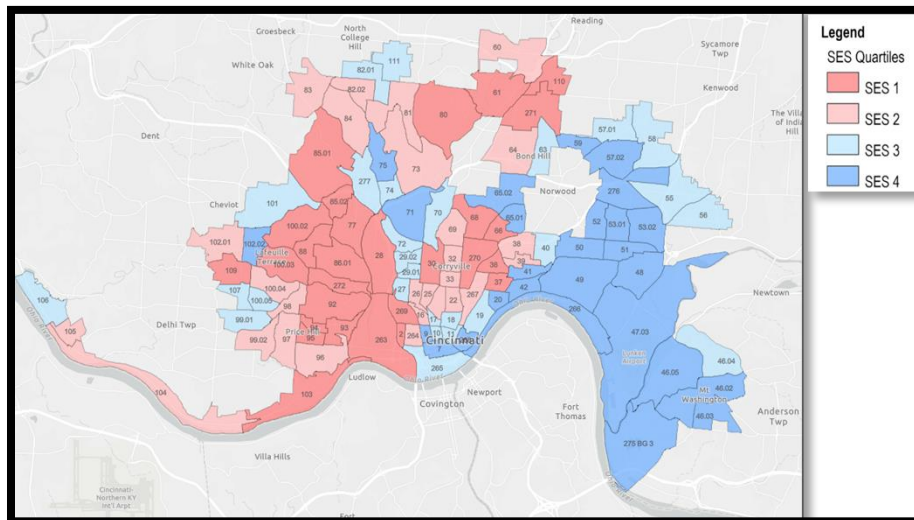
The Cincinnati Metropolitan Area

As of the fifth edition of *The Social Areas of Cincinnati*, the analysis was expanded to a 15-county metropolitan area surrounding Cincinnati, formally named Cincinnati, OH-KY-IN Metropolitan Statistical Area (MSA) by the Census Bureau. This analysis, which used 2009 ACS data, compared SES Index scores of all census tracts within the 15 counties (Hamilton, Brown, Butler, Clermont, and Warren County in Ohio; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton County in Kentucky; and Dearborn, Franklin, and Ohio County in Indiana). The results from the fifth edition operate as a baseline for comparison to the findings of the most recent metropolitan analysis for 2021. One notable difference is that the defined metropolitan area increased to 16 counties as of 2020 with the addition of Union County, Indiana.

Another distinction that must be made is between the results of the Social Areas analysis for Cincinnati and the Social Areas analysis for the Cincinnati metropolitan area. All census tracts in Cincinnati are contained within the metropolitan area but may not share the same SES Quartiles across both analyses. This is because the Social Areas analysis is a relative measure. The Social Areas analysis for Cincinnati measures relative risk within the context of the city, whereas the metropolitan area measures relative risk within the context of all tracts within the 16-county region. Researchers and decision makers who use these findings for data-driven decision-making should use the analysis that best suits their geographic area of interest.

Social Areas Analysis Summary

According to ACS 5-Year Estimates, the total population of the Cincinnati metropolitan area was 2,244,329 in 2021. Table 2 summarizes each of the five indicators by SES quartile to provide perspective on how the quartiles vary on aggregate. The income indicator is summarized as a weighted average of median household income for all census tracts within each quartile. Table 2 indicates that the income and family structure indicators both increase from SES 1 to SES 4, whereas education, crowding, and occupation indicators decrease.

Table 2. SES Indicators by SES Quartile for Cincinnati Metropolitan Area 2021

SES Quartile	Income	Education	Family Structure	Crowding	Occupation
	Median Household Income*	Percent of 25+ year olds with less than a high school diploma	Percent of children living in married-couple households	Percent of housing units with more than one person per room	Percent of workers in unskilled and semiskilled occupations
SES 1	$40,783	16.7%	35.0%	3.3%	81.2%
SES 2	$62,104	9.7%	62.5%	1.5%	74.0%
SES 3	$78,505	6.2%	78.1%	1.2%	66.3%
SES 4	$115,063	3.2%	88.2%	0.5%	54.7%

*Weighted average of census tracts' median household income.

Figure 2 illustrates the intricacies of the findings across all 16 counties in the metropolitan area. The general pattern shows that SES 1 and 2 are highly concentrated in the outer edges of the metropolitan area, primarily in rural areas. Regions closer to Cincinnati such as Boone, Kenton, Campbell, and portions of Dearborn and Clermont, are more often SES 3 and 4. However, Cincinnati itself, in relation to the metropolitan area, is largely SES 1 and 2. The majority of SES 4 tracts in Hamilton County are found to the east and west of Cincinnati in suburban areas. Additionally, a large collection of SES 4 tracts is located in Warren County, as well as in the southeastern region of Butler, the northern region of Boone, northeastern region of Dearborn, and western region of Clermont.

## Figure 2. SES Quartiles for Cincinnati OH-KY-IN Metropolitan Statistical Area in 2021
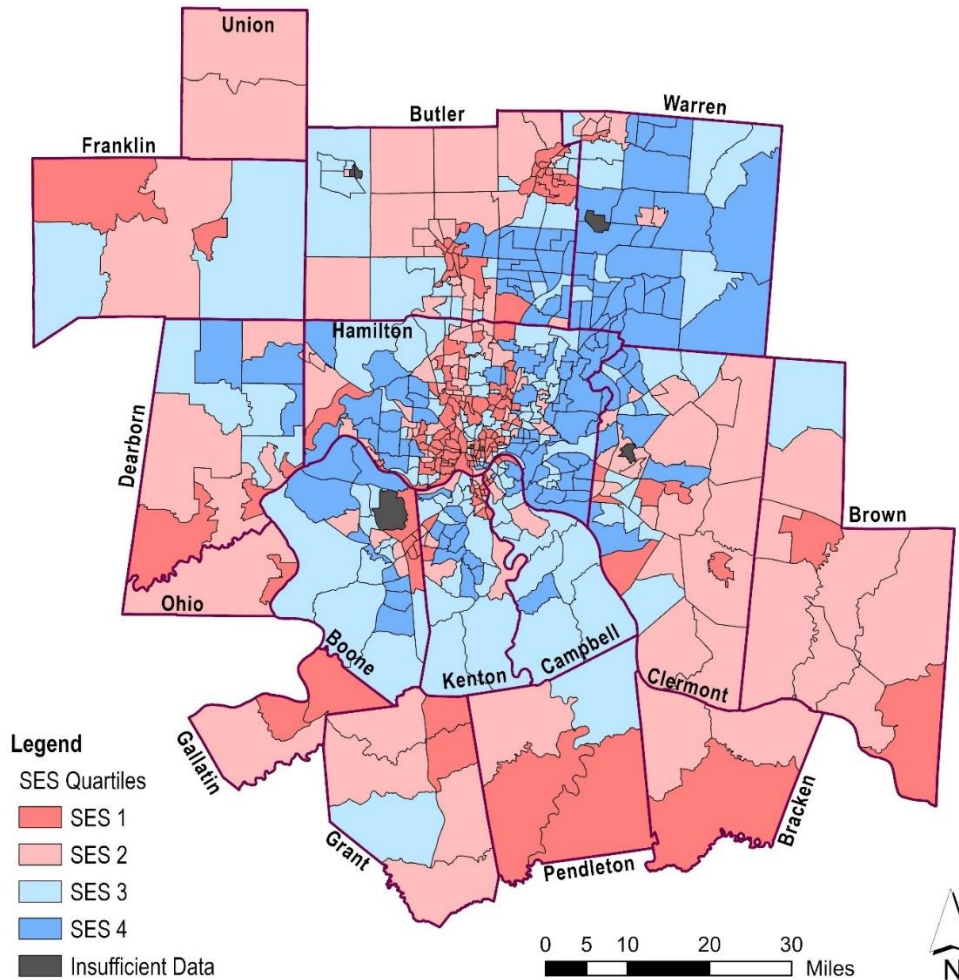
Note. Shows tracts boundaries from Census 2020. SES Quartiles are calculated using 2021 ACS 5-Year Estimates.

Interactive Metropolitan Map

Much like the Social Areas analysis for Cincinnati, an interactive map has been made available to illustrate the findings of the Social Areas analysis for the Cincinnati metropolitan area (link provided below Figure 3 and in Resources). The interactive map provides a visual of the map displayed in Figure 2. Like the previously mentioned interactive map (Figure 1) this map allows users to explore and click on census tracts to obtain their SES indicator data. Selecting a census tract activates a pop-up containing its SES Quartile classification, and its statistics for each of the five indicators obtained from the ACS 2021 5-Year Estimates.

Figure 3. Sample of Interactive Map for Social Areas of Cincinnati OH-KY-IN MSA 2021

Link to interactive map: https://www.arcgis.com/home/item.html?id=9d507eeb47854a97ad69183b620f2f95
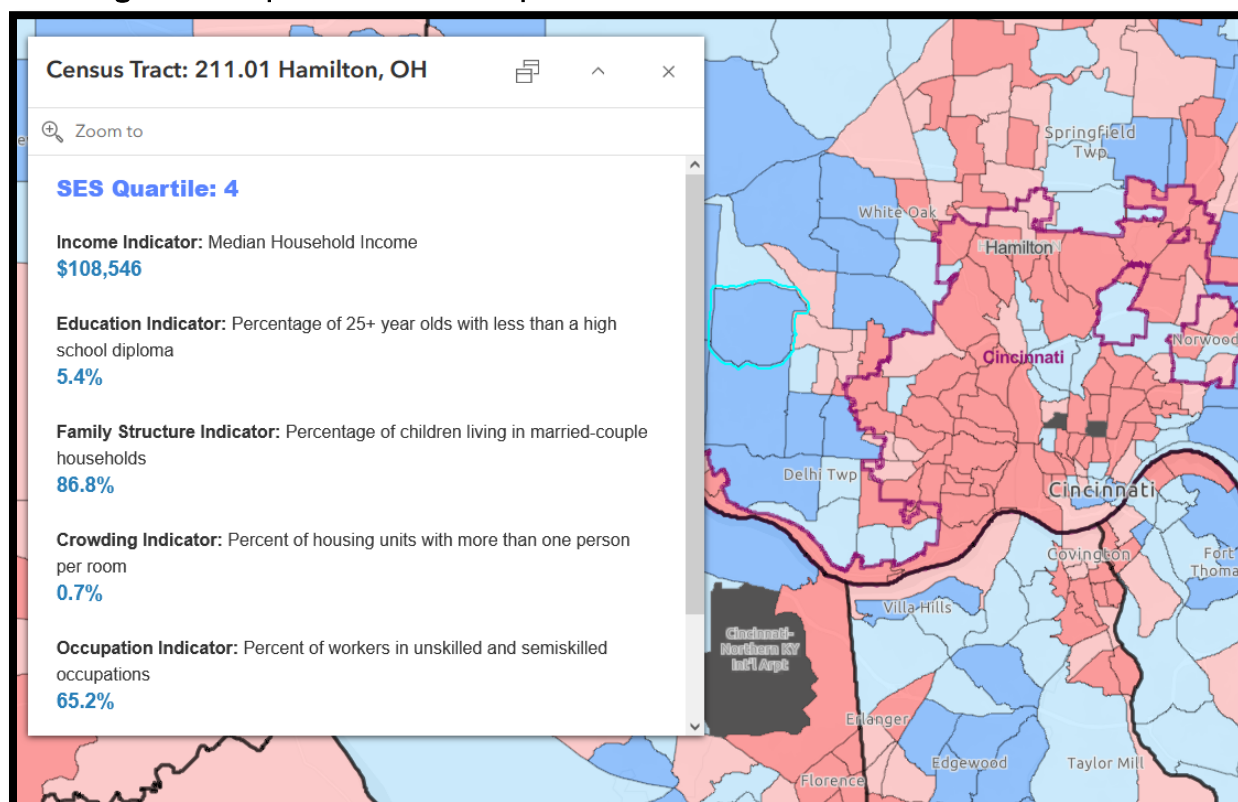
In addition to the interactive features, the map details provide additional resources for statistical and geographic analysis. Users can download a spreadsheet from the map details screen (found in link above) containing the Social Areas analysis results. The file contains tract-level statistics for each of the five indicators, and their SES Index score, rank, and quartile. Users familiar with geographic information systems (GIS) software can also make use of the geographic data used in this interactive map, which are found in the form of a shapefile that can be downloaded from the map details screen.

The contents of this map can be used as a decision-making tool for community leaders, non-profits, and advocacy groups to plan and prepare the allocation of services and resources. Additionally, researchers can conduct spatial analyses of geocoded addresses to group individuals by SES Quartile. SES Quartiles can be used as a proxy for probable income and environmental factors for individuals living within the regions when individual-level data such as income, education, and occupation are not available. This allows SES Quartiles to be used as a categorical variable for statistical analysis to predict other factors (e.g., health, poverty, and academic outcomes).

County-Level Statistics

In this section of the report, high-level county-wide statistics are provided. Data shown below were obtained from the ACS 2021 5-Year Estimates and from the Social Areas analysis for the metropolitan area. Population statistics, SES Quartiles and county-level statistics for each of the five SES indicators are tabulated for your convenience. Additionally, detailed maps are presented to better indicate the distribution of SES Quartiles within each county. An in-depth analysis of the changes that have occurred in the metropolitan area can be expected in the upcoming sixth edition of *The Social Areas of Cincinnati publication*.

Brown County, OH
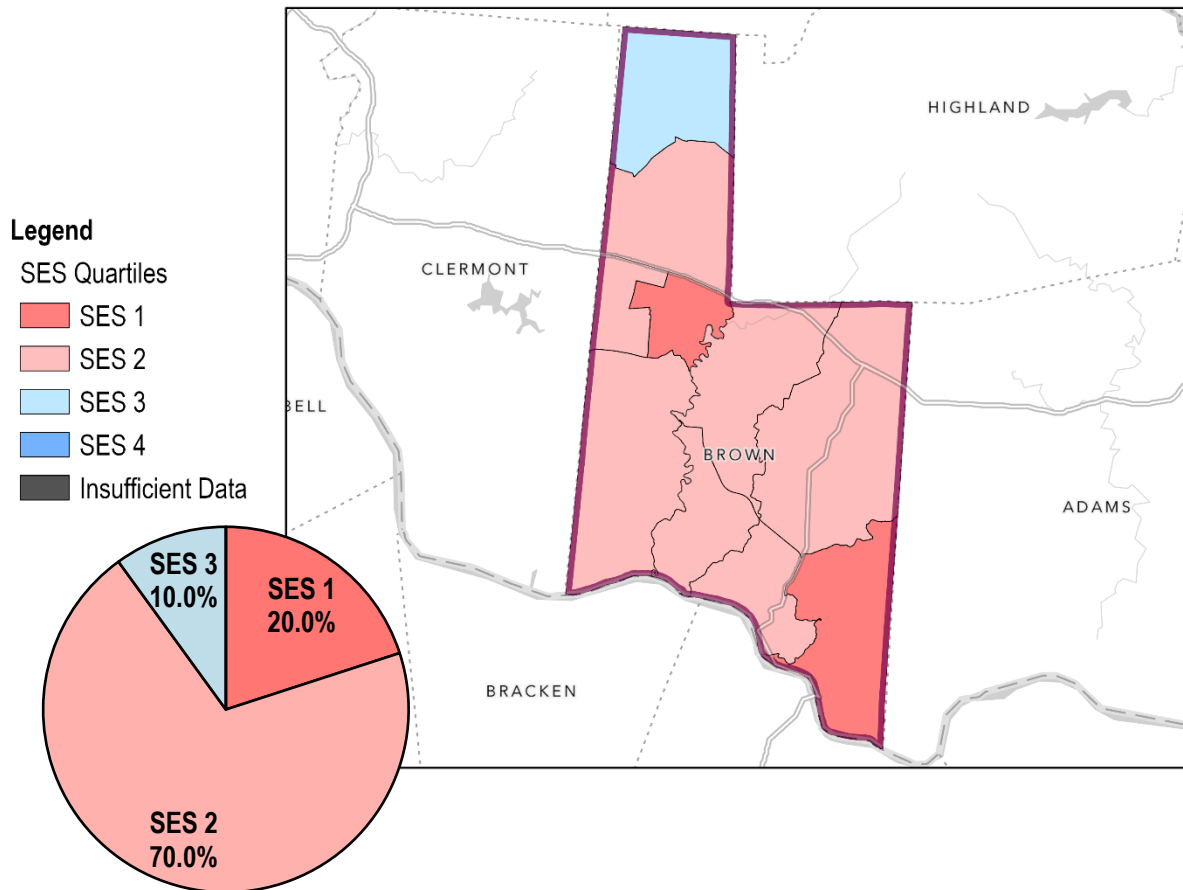
43,694	Total Population
10	Census tracts (excludes those with insufficient data)
90.0%	Tracts in bottom two quartiles (SES 1-2)
10.0%	Tracts in top two quartiles (SES 3-4)
$59,625	Income Indicator: Median Household Income
13.3%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
75.3%	Family Structure Indicator: Percent of children living in married-couple households
1.3%	Crowding Indicator: Percent of housing units with more than one person per room
77.4%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Butler County, OH
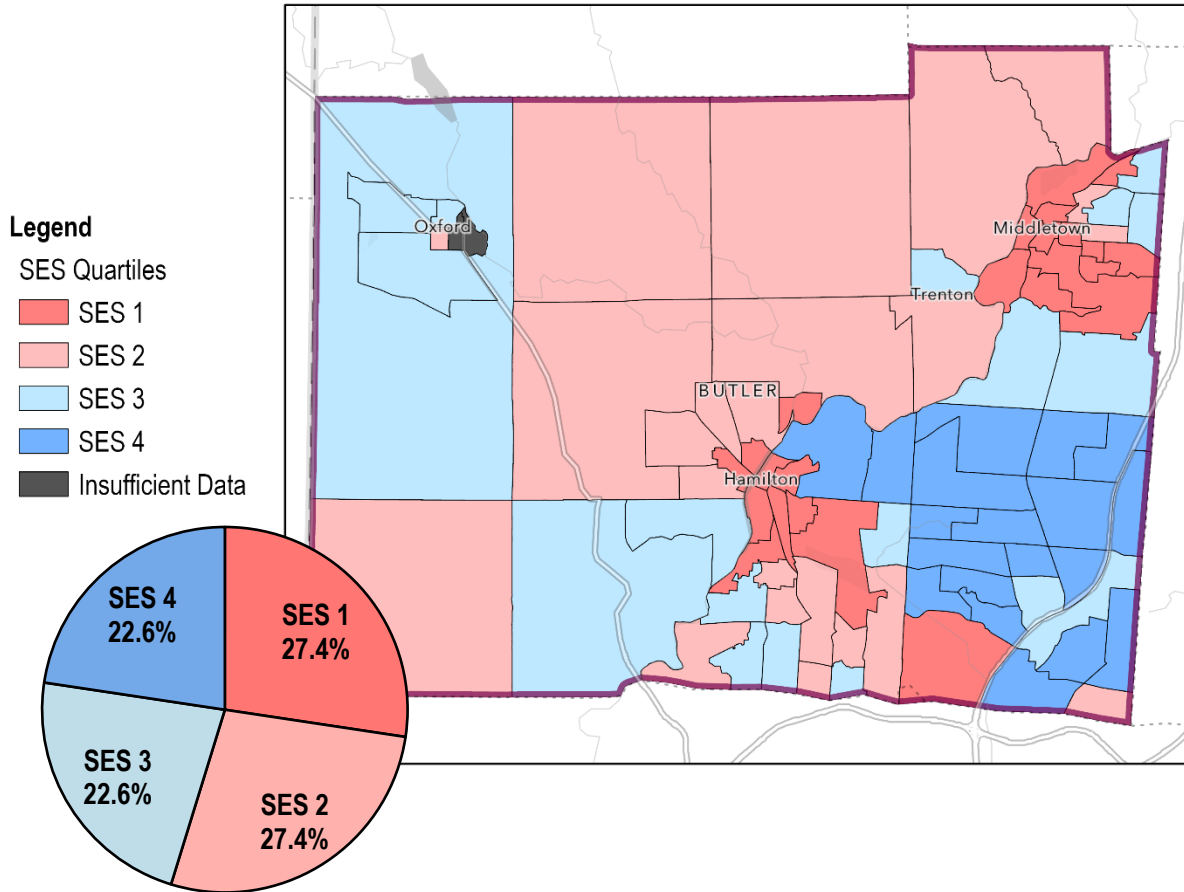
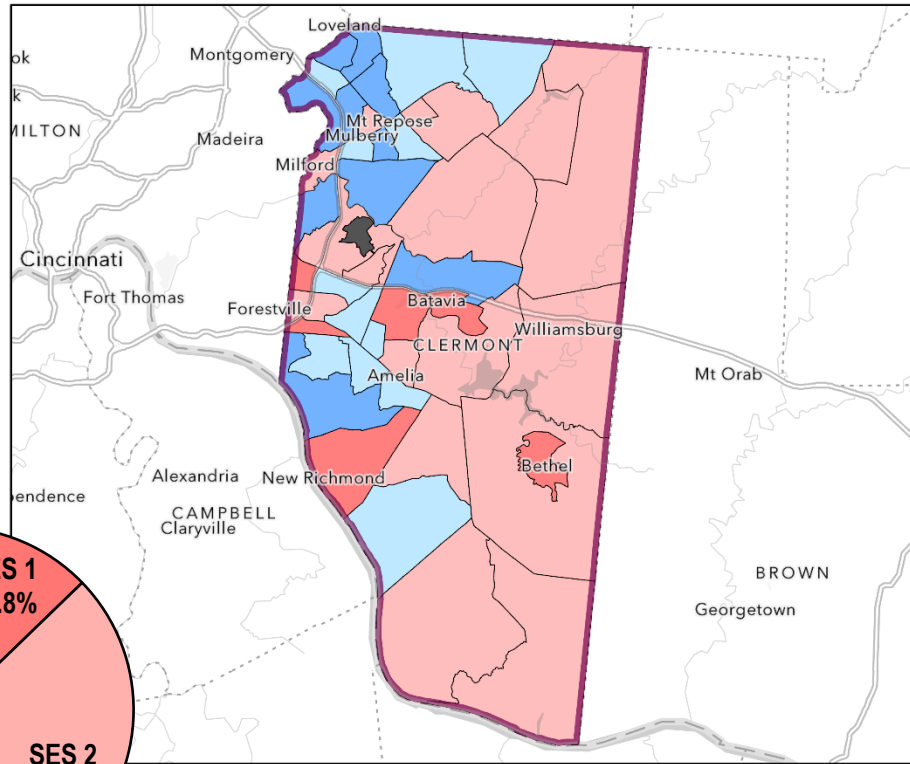|	
387,830	Total Population
84	Census tracts (excludes those with insufficient data)
54.8%	Tracts in bottom two quartiles (SES 1-2)
45.2%	Tracts in top two quartiles (SES 3-4)
$73,216	Income Indicator: Median Household Income
8.5%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
70.8%	Family Structure Indicator: Percent of children living in married-couple households
1.4%	Crowding Indicator: Percent of housing units with more than one person per room
69.5%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Clermont County, OH

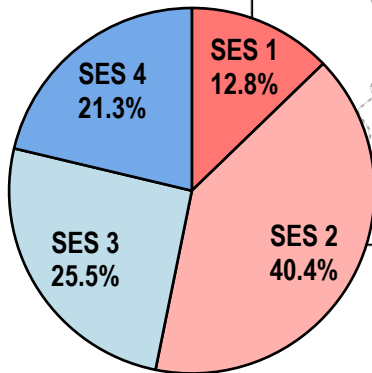|	
207,650	Total Population
47	Census tracts (excludes those with insufficient data)
53.2%	Tracts in bottom two quartiles (SES 1-2)
46.8%	Tracts in top two quartiles (SES 3-4)
$72,804	Income Indicator: Median Household Income
9.5%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
75.2%	Family Structure Indicator: Percent of children living in married-couple households
1.6%	Crowding Indicator: Percent of housing units with more than one person per room
69.5%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Hamilton County, OH

Legend

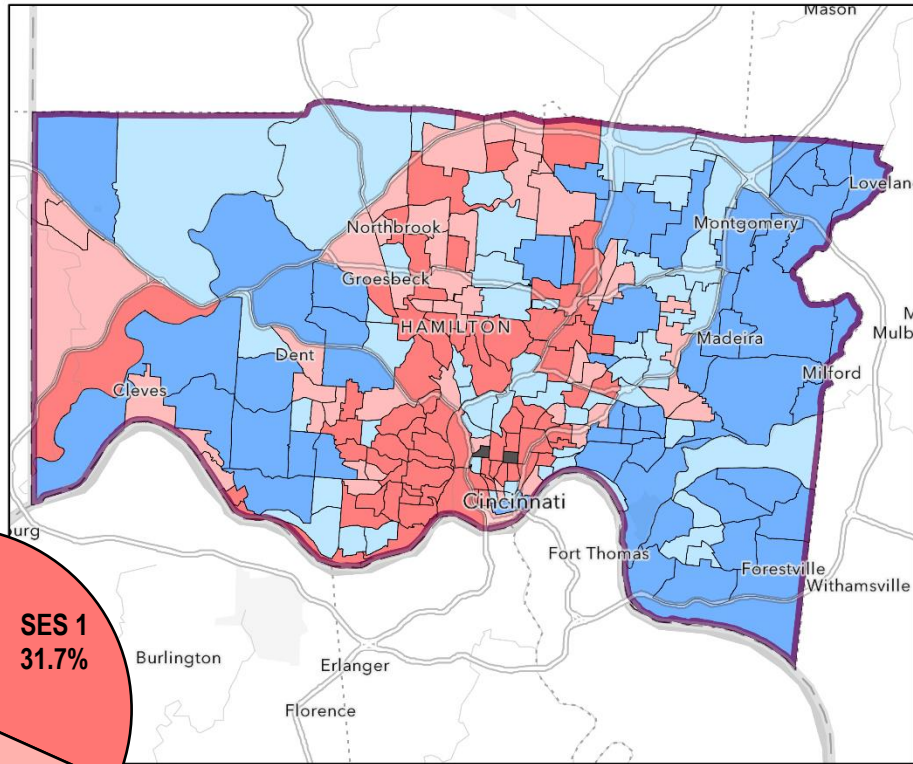SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

Pie chart:
- SES 1: 31.7%
- SES 2: 21.0%
- SES 3: 23.7%
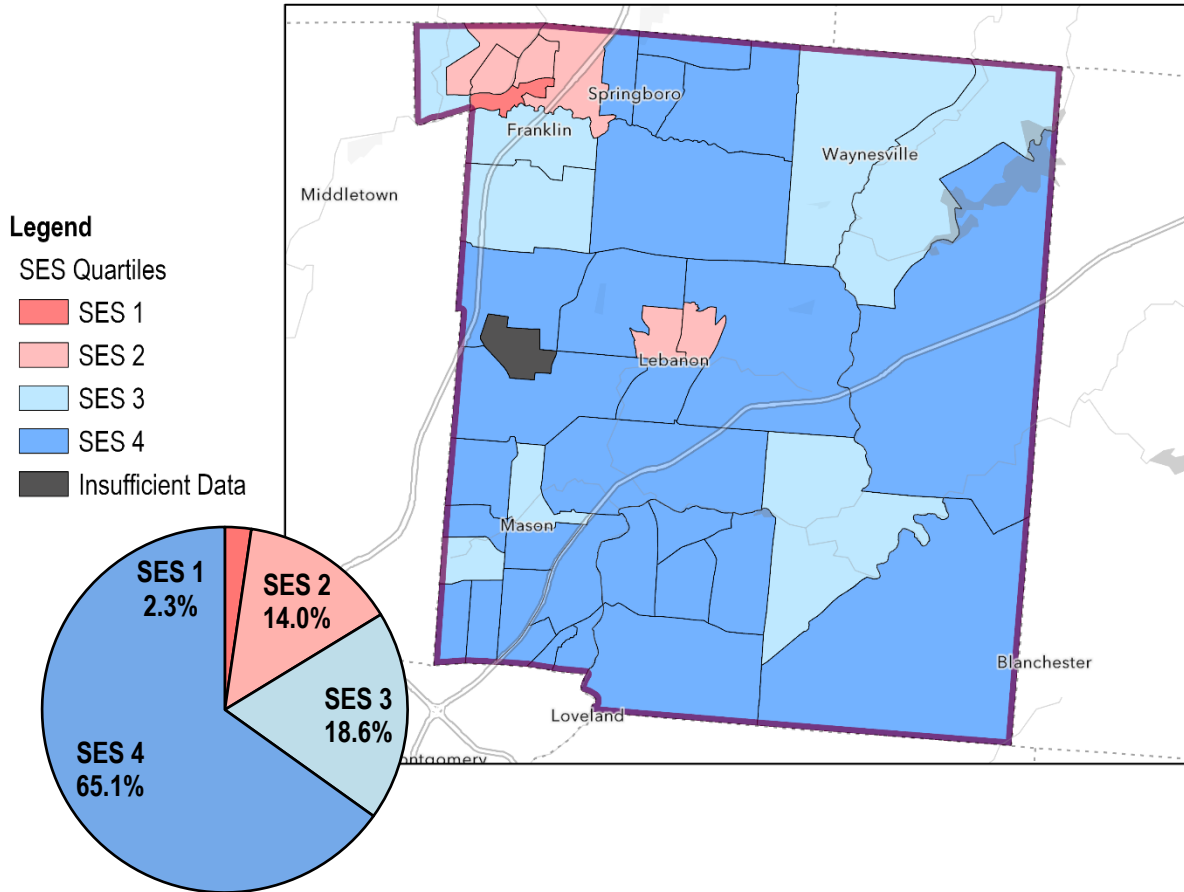- SES 4: 23.7%
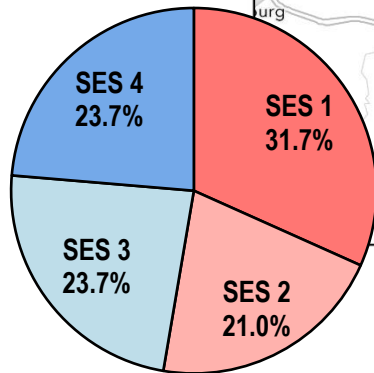
826,790	Total Population
224	Census tracts (excludes those with insufficient data)
52.7%	Tracts in bottom two quartiles (SES 1-2)
47.3%	Tracts in top two quartiles (SES 3-4)
$63,199	Income Indicator: Median Household Income
8.1%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
59.6%	Family Structure Indicator: Percent of children living in married-couple households
1.6%	Crowding Indicator: Percent of housing units with more than one person per room
66.2%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Warren County, OH

Legend

SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

Pie chart:
- SES 1: 2.3%
- SES 2: 14.0%
- SES 3: 18.6%
- SES 4: 65.1%

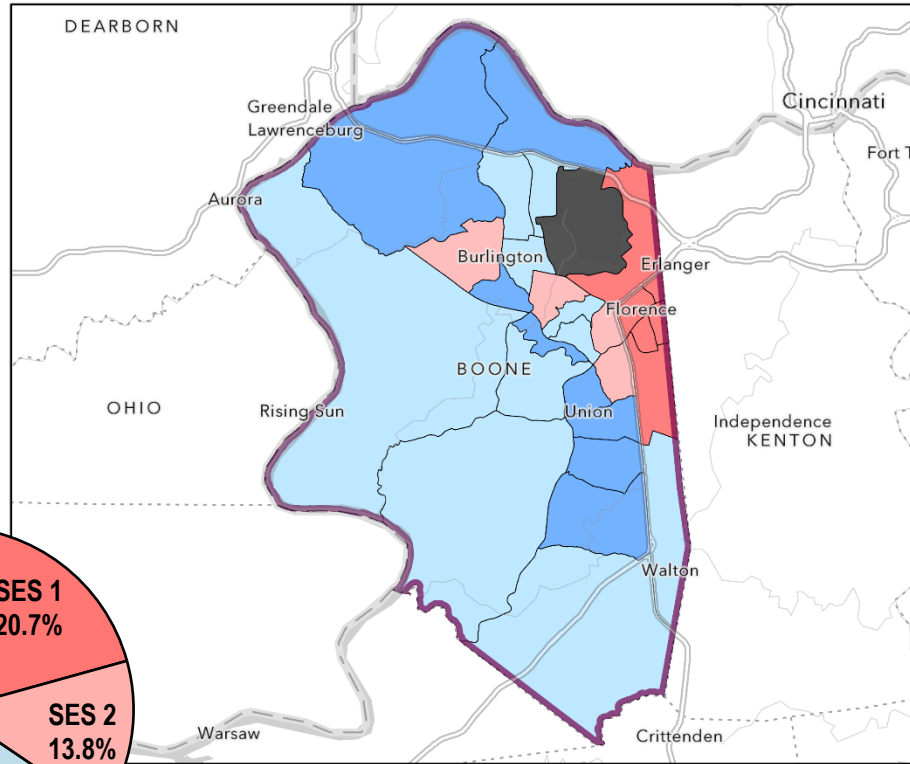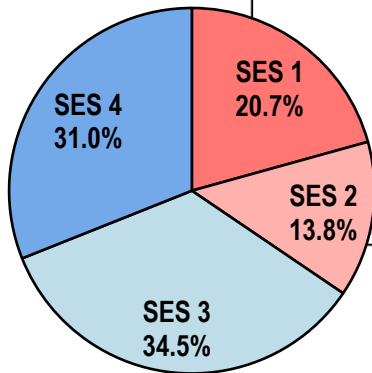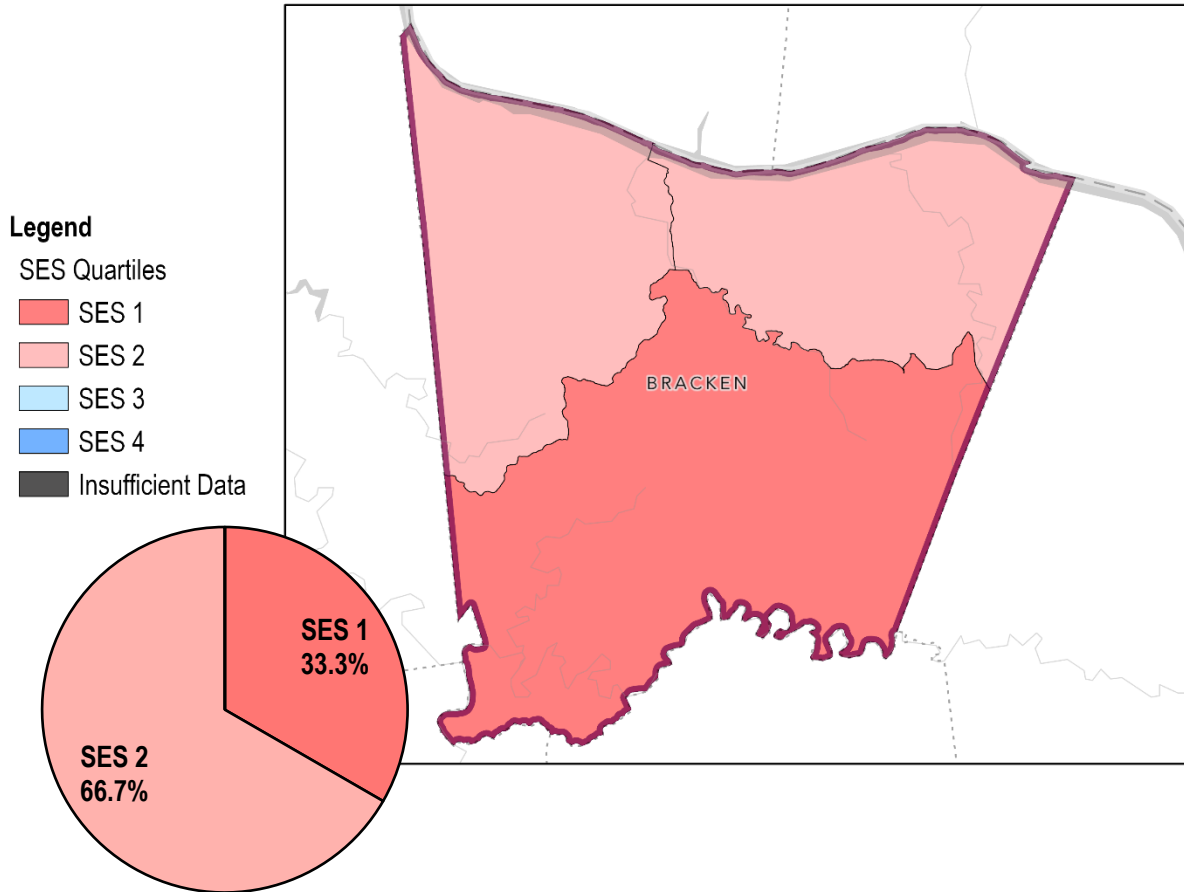|	
239,556	Total Population
43	Census tracts (excludes those with insufficient data)
16.3%	Tracts in bottom two quartiles (SES 1-2)
83.7%	Tracts in top two quartiles (SES 3-4)
$95,336	Income Indicator: Median Household Income
5.4%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
83.8%	Family Structure Indicator: Percent of children living in married-couple households
1.0%	Crowding Indicator: Percent of housing units with more than one person per room
58.4%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Boone County, KY

Legend
SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

Pie chart:
- SES 1 20.7%
- SES 2 13.8%
- SES 3 34.5%
- SES 4 31.0%

134,599	Total Population
29	Census tracts (excludes those with insufficient data)
34.5%	Tracts in bottom two quartiles (SES 1-2)
65.5%	Tracts in top two quartiles (SES 3-4)
$87,776	Income Indicator: Median Household Income
6.8%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
75.5%	Family Structure Indicator: Percent of children living in married-couple households
1.9%	Crowding Indicator: Percent of housing units with more than one person per room
68.7%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Bracken County, KY

Legend

SES Quartiles
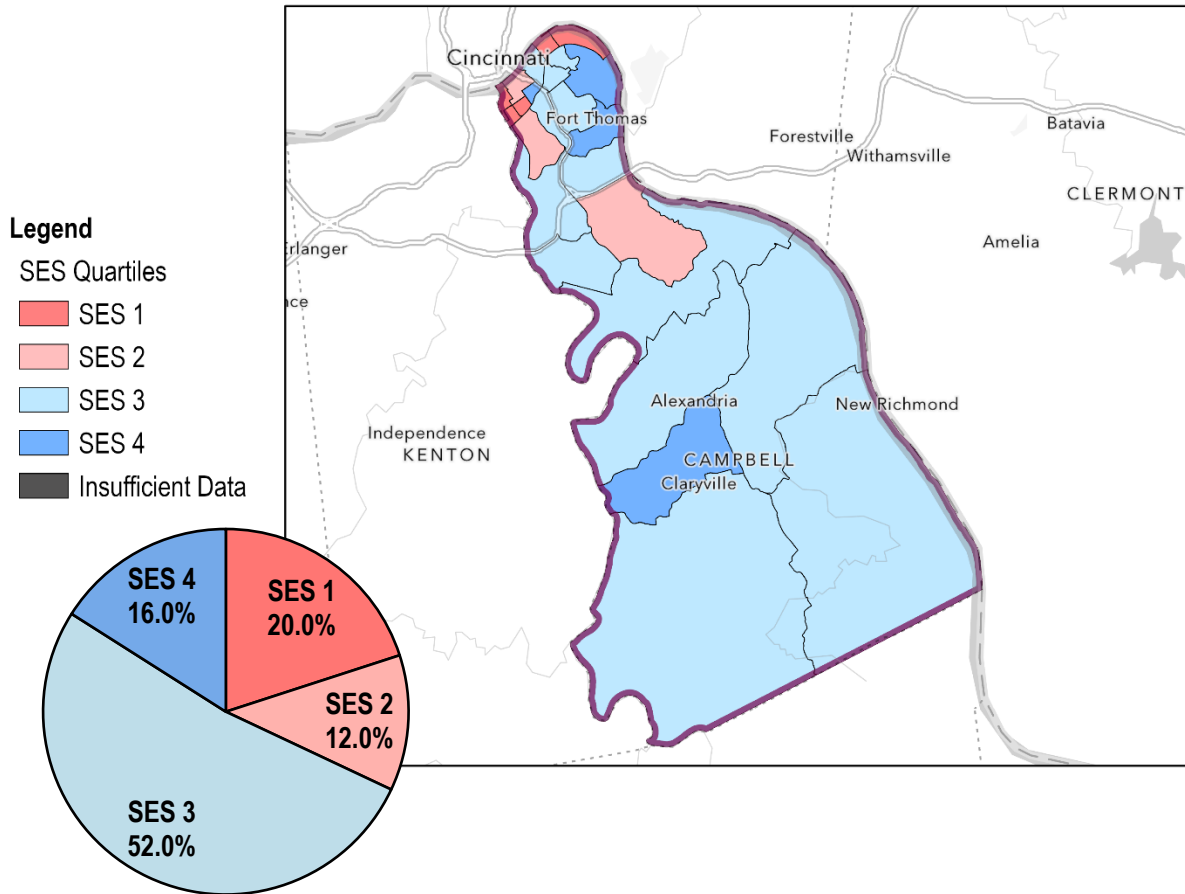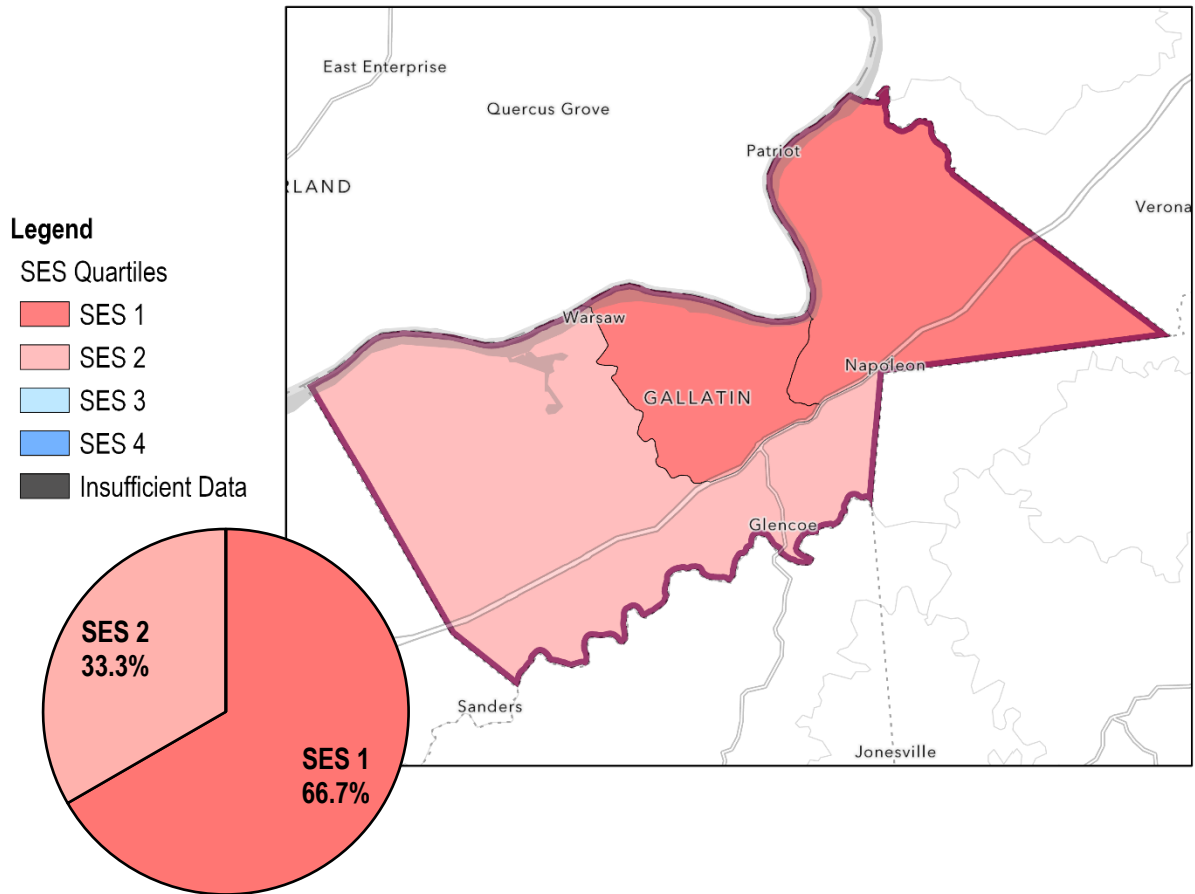- ■ SES 1
- ■ SES 2
- ■ SES 3
- ■ SES 4
- ■ Insufficient Data

BRACKEN

SES 1
33.3%

SES 2
66.7%

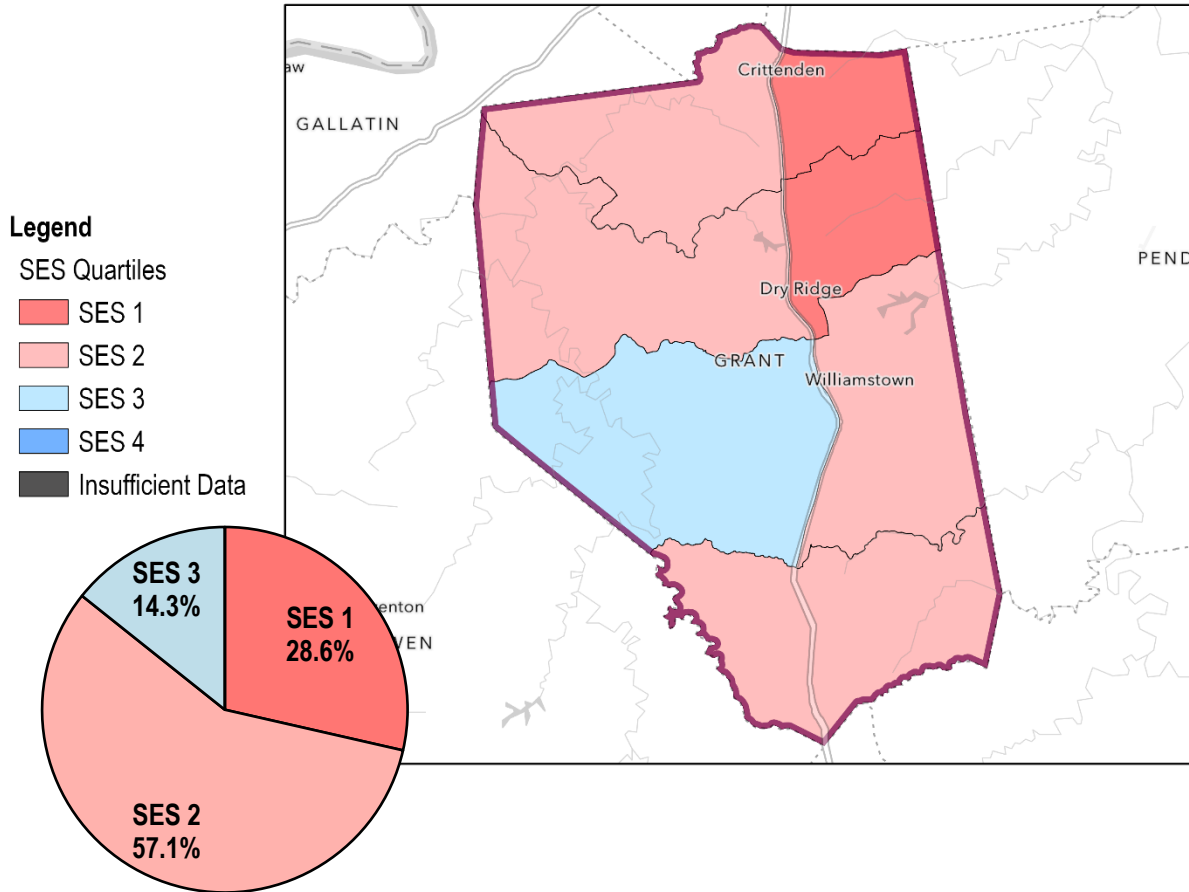|	
8,394	Total Population
3	Census tracts (excludes those with insufficient data)
100.0%	Tracts in bottom two quartiles (SES 1-2)
0.0%	Tracts in top two quartiles (SES 3-4)
$63,277	Income Indicator: Median Household Income
11.1%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
74.6%	Family Structure Indicator: Percent of children living in married-couple households
2.1%	Crowding Indicator: Percent of housing units with more than one person per room
81.0%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Campbell County, KY

Legend

SES Quartiles
- ■ SES 1
- ■ SES 2
- ■ SES 3
- ■ SES 4
- ■ Insufficient Data

Pie chart:
- SES 1 20.0%
- SES 2 12.0%
- SES 3 52.0%
- SES 4 16.0%

93,023	Total Population
25	Census tracts (excludes those with insufficient data)
32.0%	Tracts in bottom two quartiles (SES 1-2)
68.0%	Tracts in top two quartiles (SES 3-4)
$65,626	Income Indicator: Median Household Income
7.0%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
71.7%	Family Structure Indicator: Percent of children living in married-couple households
1.5%	Crowding Indicator: Percent of housing units with more than one person per room
62.9%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Gallatin County, KY

Legend

SES Quartiles

- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

SES 2 33.3%

SES 1 66.7%

8,694	Total Population
3	Census tracts (excludes those with insufficient data)
100.0%	Tracts in bottom two quartiles (SES 1-2)
0.0%	Tracts in top two quartiles (SES 3-4)
$55,330	Income Indicator: Median Household Income
15.0%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
71.1%	Family Structure Indicator: Percent of children living in married-couple households
2.0%	Crowding Indicator: Percent of housing units with more than one person per room
85.2%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Grant County, KY

Legend

SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

SES 1 28.6%
SES 2 57.1%
SES 3 14.3%

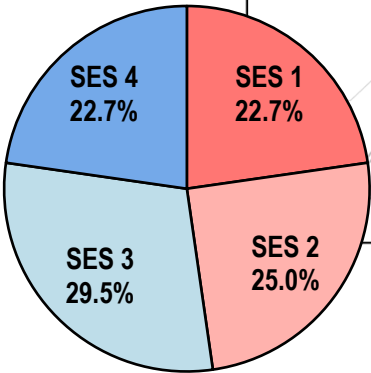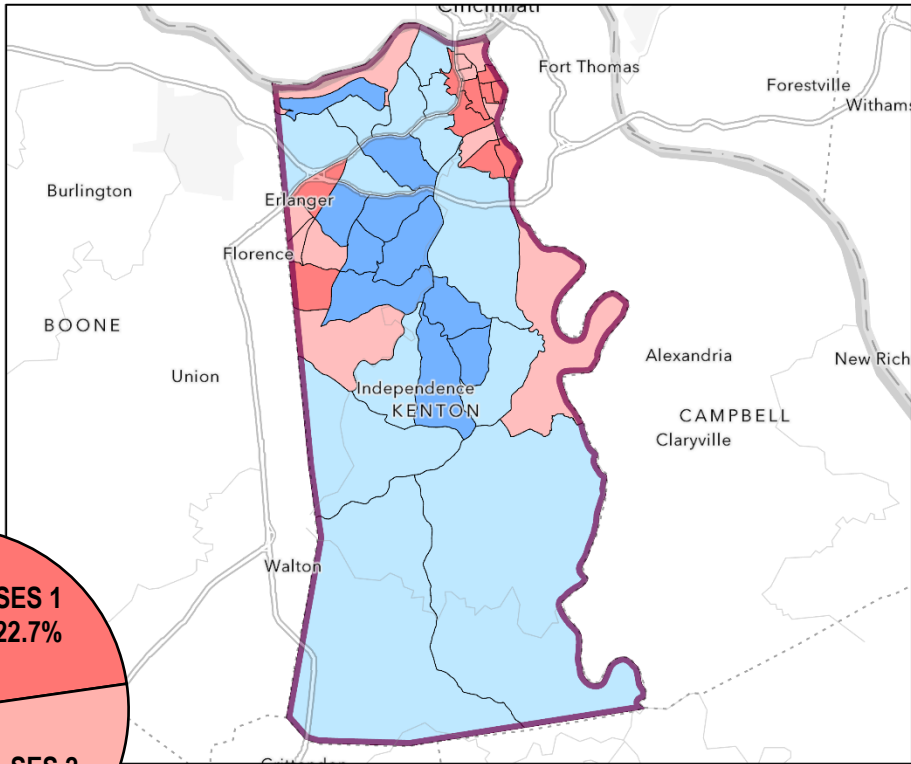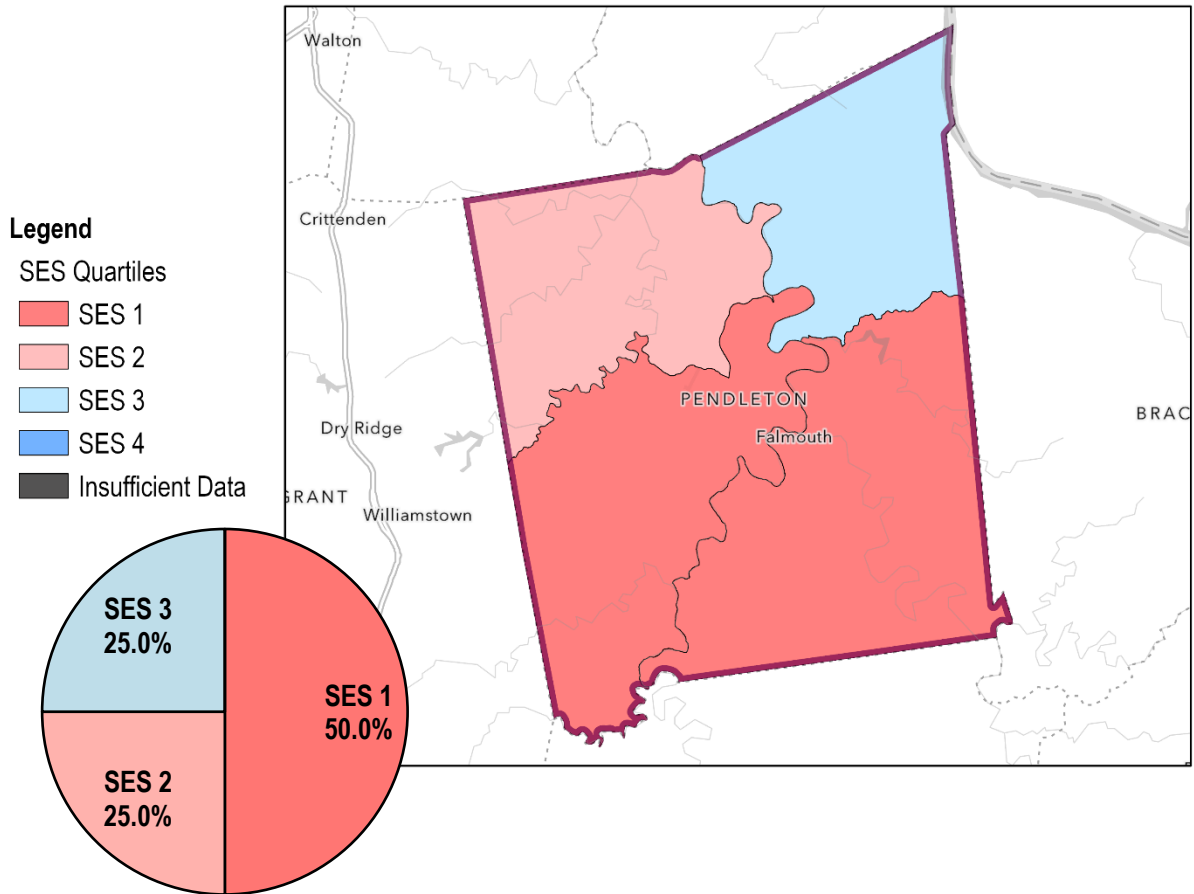|	
24,918	Total Population
7	Census tracts (excludes those with insufficient data)
85.7%	Tracts in bottom two quartiles (SES 1-2)
14.3%	Tracts in top two quartiles (SES 3-4)
$60,195	Income Indicator: Median Household Income
11.7%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
61.6%	Family Structure Indicator: Percent of children living in married-couple households
1.3%	Crowding Indicator: Percent of housing units with more than one person per room
83.6%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Kenton County, KY

Legend

SES Quartiles
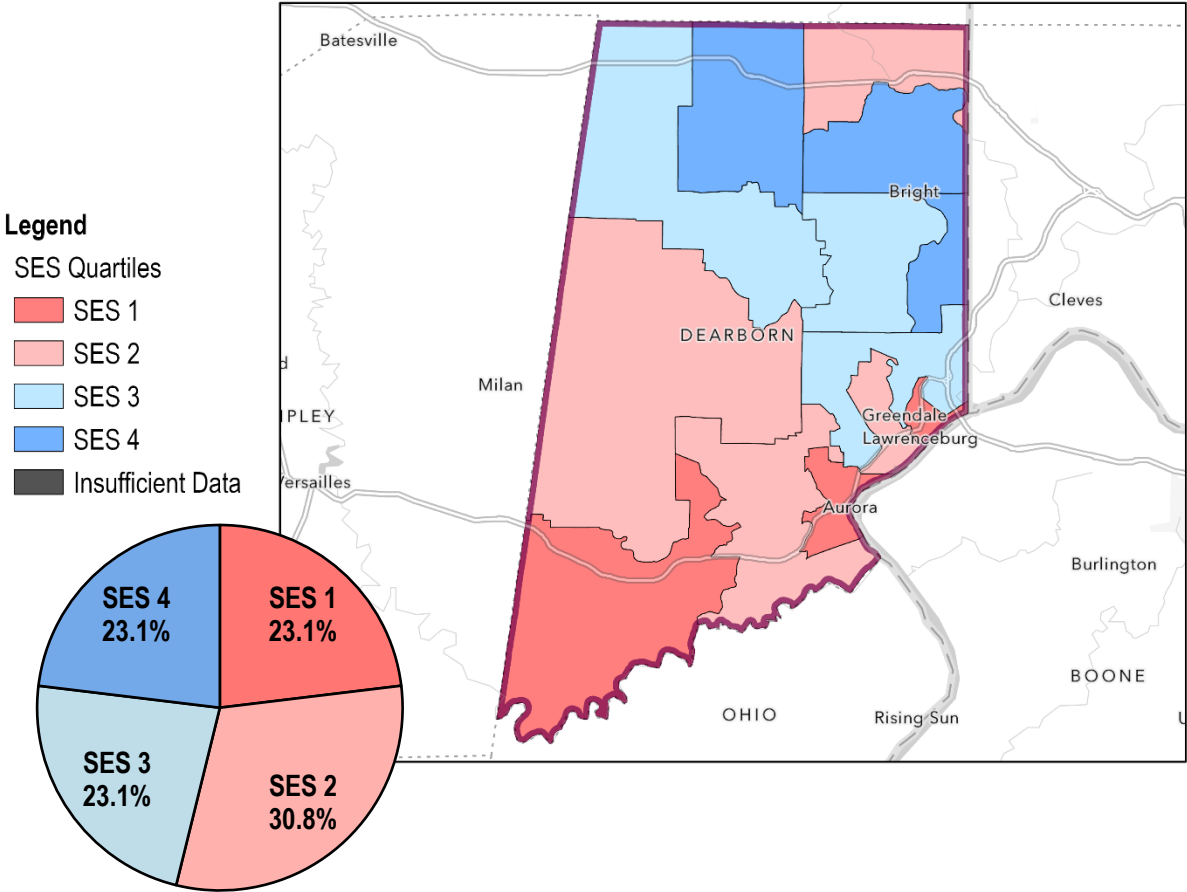- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

Pie chart:
- SES 4: 22.7%
- SES 1: 22.7%
- SES 3: 29.5%
- SES 2: 25.0%

168,264	Total Population
44	Census tracts (excludes those with insufficient data)
47.7%	Tracts in bottom two quartiles (SES 1-2)
52.3%	Tracts in top two quartiles (SES 3-4)
$70,025	Income Indicator: Median Household Income
8.5%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
69.3%	Family Structure Indicator: Percent of children living in married-couple households
1.8%	Crowding Indicator: Percent of housing units with more than one person per room
67.8%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Pendleton County, KY

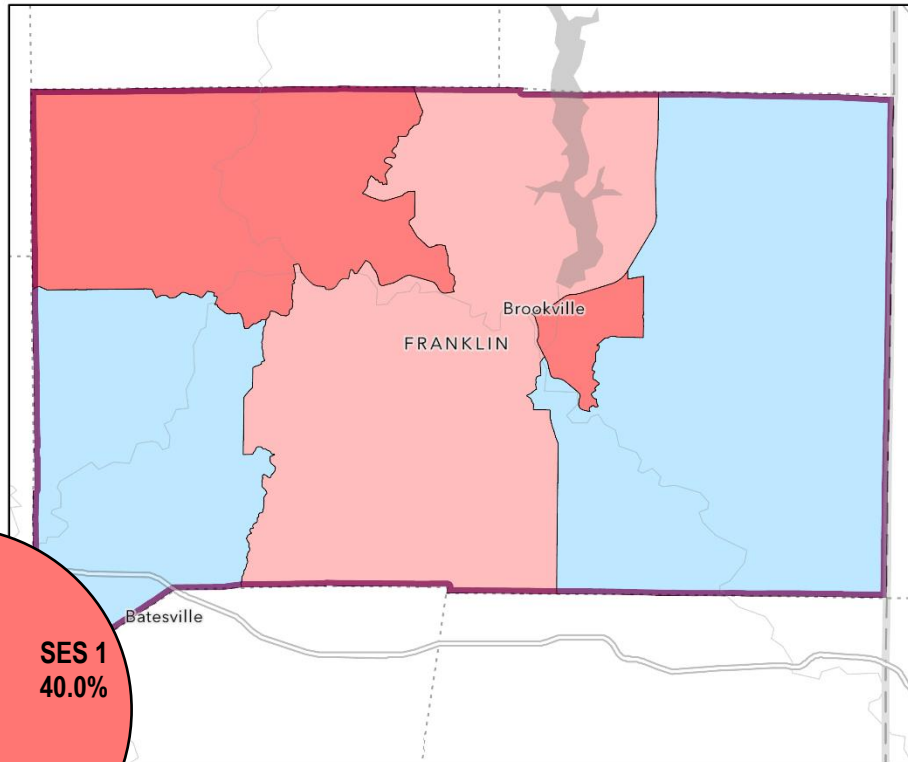|	
14,625	Total Population
4	Census tracts (excludes those with insufficient data)
75.0%	Tracts in bottom two quartiles (SES 1-2)
25.0%	Tracts in top two quartiles (SES 3-4)
$57,619	Income Indicator: Median Household Income
16.6%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
69.0%	Family Structure Indicator: Percent of children living in married-couple households
2.3%	Crowding Indicator: Percent of housing units with more than one person per room
82.5%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Dearborn County, IN

Legend
SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

Pie chart:
- SES 1: 23.1%
- SES 2: 30.8%
- SES 3: 23.1%
- SES 4: 23.1%

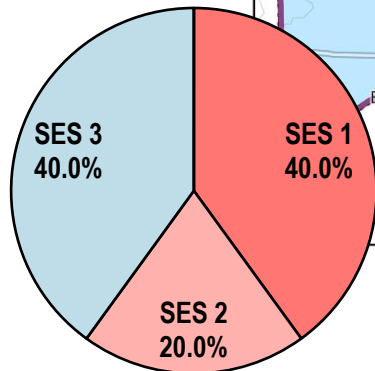|	
50,494	Total Population
13	Census tracts (excludes those with insufficient data)
53.8%	Tracts in bottom two quartiles (SES 1-2)
46.2%	Tracts in top two quartiles (SES 3-4)
$72,855	Income Indicator: Median Household Income
9.2%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
77.3%	Family Structure Indicator: Percent of children living in married-couple households
0.8%	Crowding Indicator: Percent of housing units with more than one person per room
72.3%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Franklin County, IN

Legend

SES Quartiles
- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

22,769	Total Population
5	Census tracts (excludes those with insufficient data)
60.0%	Tracts in bottom two quartiles (SES 1-2)
40.0%	Tracts in top two quartiles (SES 3-4)
$69,445	Income Indicator: Median Household Income
11.7%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
75.3%	Family Structure Indicator: Percent of children living in married-couple households
1.9%	Crowding Indicator: Percent of housing units with more than one person per room
76.1%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Ohio County, IN

Legend

SES Quartiles

- SES 1
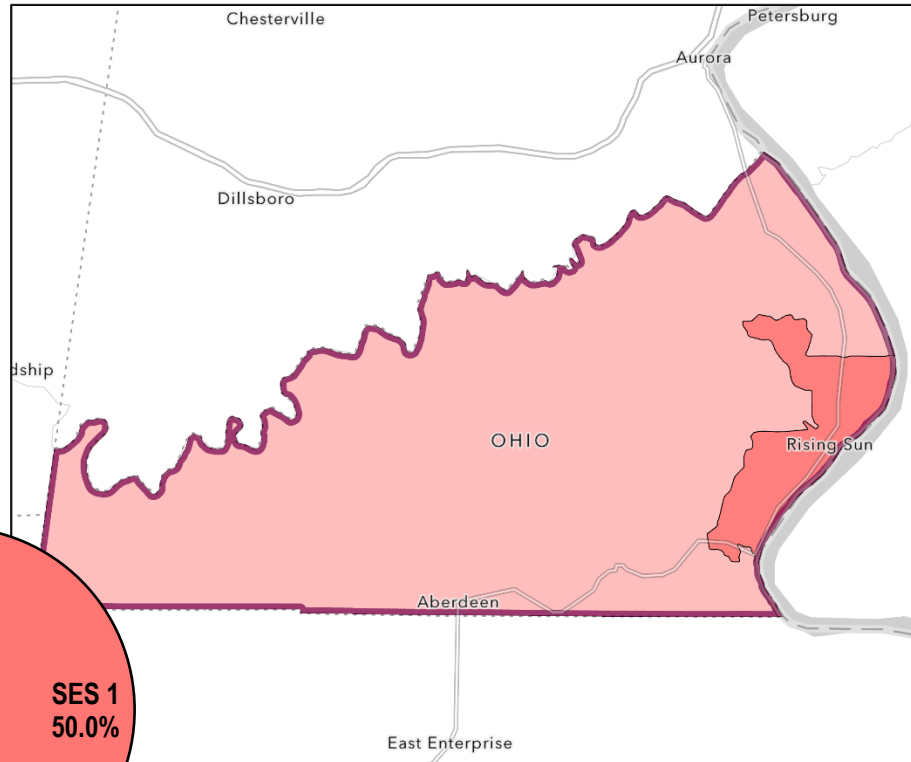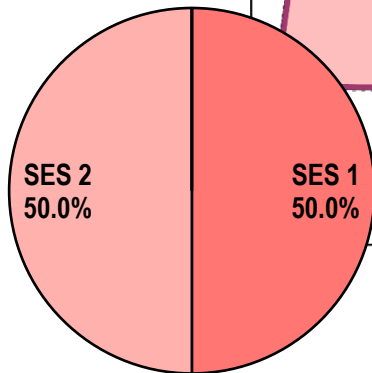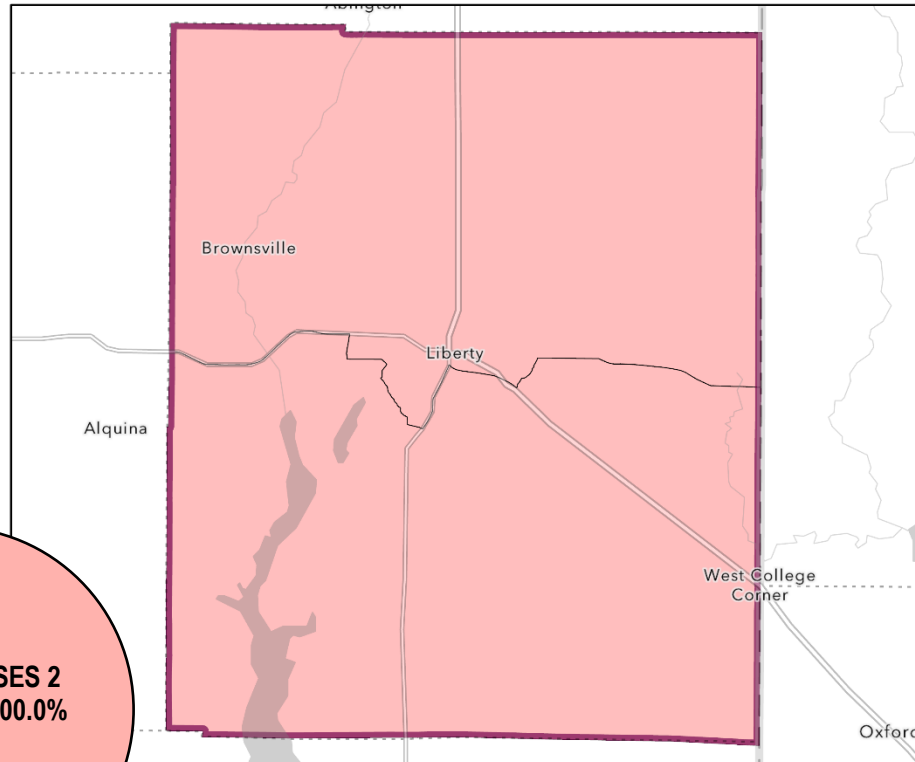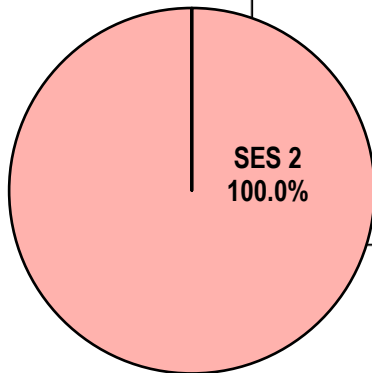- SES 2
- SES 3
- SES 4
- Insufficient Data

SES 2 50.0%	**SES 1** 50.0%

5,931	Total Population
2	Census tracts (excludes those with insufficient data)
100.0%	Tracts in bottom two quartiles (SES 1-2)
0.0%	Tracts in top two quartiles (SES 3-4)
$63,036	Income Indicator: Median Household Income
10.7%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
67.2%	Family Structure Indicator: Percent of children living in married-couple households
0.8%	Crowding Indicator: Percent of housing units with more than one person per room
76.6%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Union County, IN

Legend

SES Quartiles

- SES 1
- SES 2
- SES 3
- SES 4
- Insufficient Data

SES 2
100.0%

7,098	Total Population
2	Census tracts (excludes those with insufficient data)
100.0%	Tracts in bottom two quartiles (SES 1-2)
0.0%	Tracts in top two quartiles (SES 3-4)
$61,107	Income Indicator: Median Household Income
11.8%	Education Indicator: Percent of 25+ year olds with less than a high school diploma
81.0%	Family Structure Indicator: Percent of children living in married-couple households
0.8%	Crowding Indicator: Percent of housing units with more than one person per room
76.2%	Occupation Indicator: Percent of workers in unskilled and semiskilled occupations

Implications for Culture, Diversity and Inclusion

This report highlights the similarities and differences in social factors (e.g., income, education, etc.) within and across the Greater Cincinnati Region, including Northern Kentucky and Western Indiana. The analysis, data, and interactive maps offer context for diversity related to race, ethnicity, geography, and other social, demographic and environmental factors that support cultural understanding, policy and planning. As this report highlights, social context is an important basis for respecting diversity, equity, inclusion and culture and is a critical element for stakeholders to consider when designing, planning, and implementing effective programs and services.

Conclusion

The contents of this document outline the value of the Social Areas analysis for the Cincinnati OH–KY–IN Metropolitan Statistical Area. SES Quartiles and their underlying indicators are a powerful, but accessible tool to understand the differences between the various communities within the metropolitan area. It also simplifies the process of gathering relevant socioeconomic data within the region for use in other analyses. It is encouraged that the results be used by community leaders, non-profits, advocacy groups, and researchers to make data informed decisions and conclusions. It is also recommended that stakeholders utilize the interactive map and its accompanying data, linked in the Resources section. Further in-depth analyses and commentary on the metropolitan area can be expected upon the completion of the sixth edition of *The Social Areas of Cincinnati*.

References

1. Maloney, M., & Auffrey, C. (2013). The social areas of Cincinnati: An analysis of social needs (5th ed.). *School of Planning, University of Cincinnati, United Way of Greater Cincinnati, and UC Institute for Community Partnerships*.
2. Maloney, M., & Auffrey, C. (2004). The social areas of Cincinnati: An analysis of social needs (4th ed.). *School of Planning, University of Cincinnati, and UC Institute for Community Partnerships.*
3. Maloney, M., & Buelow, J. R. (1997). The social areas of Cincinnati, 1990: An analysis of social needs (3rd ed.). Cincinnati, OH: *Urban University Program of the State of Ohio.*
4. Maloney, M. (1986). The social areas of Cincinnati, 1980. Cincinnati, OH: *Cincinnati Human Relations Commission.*
5. Maloney, M. (1974). The social areas of Cincinnati, 1970. Cincinnati, OH: *Cincinnati Human Relations Commission.*

Resources

The Social Areas of Cincinnati: An Analysis of Social Needs Reports
- 5th Edition (2013) http://www.socialareasofcincinnati.org/files/FifthEdition/SASBook.pdf
- 4th Edition (2004) http://www.socialareasofcincinnati.org/files/SocialAreasOfCincinnati2004.pdf

SES Quartiles Interactive Map for the City of Cincinnati (2021)
https://www.arcgis.com/home/item.html?id=59c3ba26e9ee45f08b7fe2f1ab6b28c0

SES Quartiles Interactive Map for the Cincinnati OH-KY-IN Metropolitan Statistical Area (2021)
https://www.arcgis.com/home/item.html?id=9d507eeb47854a97ad69183b620f2f95

Understanding Our Community: Cincinnati Then & Now - 50 Years of Change
https://www.uwgc.org/sites/default/files/2023-11/Understanding%20Community%20Change_Final%20Re.pdf